

Bacteria Water Quality Objectives Evaluation Project, Public Information Meeting August 5, 2020 6:00 p.m. – Meeting Notes

6pm	Ed Hancock	<p>Meeting Start- Welcome</p> <p>Presents Meeting Materials</p> <p>Project Website</p> <p>Introduces Marina Perez</p>
	Marina Perez	<p>Introductions of panel (Ed Hancock, Marissa Van Dyke, Dan Sussman)</p> <p>Presentation Start</p> <p>Logistics/ Meeting Details</p> <p>November 2020 Board Meeting Noted</p>
6:08pm	Ed Hancock	<p>Project Overview Slide</p> <p>Timeline</p> <p>Top Priority project identified in November 2018</p> <p>Project informational item at November 2020 Lahontan Board Meeting Noted</p> <p>February 2021 CEQA begins</p> <p>Summary of three potential project options</p> <p>Collaboration between interested parties and project staff encouraged</p>
6:19pm	Marina Perez	<p>Opening Q &A Session</p>
6:22pm	Cindy Wise	<p>Presents Questions to the panel that have been previously submitted by attendees</p> <p>Lauri Kemper: concerned resident of South Lake Tahoe; submitted via email on Tuesday</p> <p>1. In option 2, what does a guideline really do? I get that the region won't have to list waters as impaired, but will you be able to take any regulatory actions based on a guideline? Would you be able to reduce existing grazing in an area, for example? Would the board be able to prevent new activities which might contribute to bacterial contamination such as new development on septic systems, increased grazing, horse stables, etc.?</p>

	<p>Ed Hancock - <i>Numeric guideline detailed in Option 2 is not designed to reduce current land use activities in the Lahontan Region. The E. coli objective adopted by the State Water Board is designed to set an acceptable risk of sickness in humans, but this objective is not the best tool to apply to high-quality Lahontan surface waters. A numeric benchmark as presented in Option 2 is designed to retain institutional memory for future Basin Plan users, and to provide future permit writers with a numeric threshold to begin antidegradation analyses. Option 2 provides an approach to protect high-quality surface waters from bacteria pollution which many not impair the Water Contact Recreation beneficial uses but which is above expected water quality conditions in the waterbody where the numeric guideline is designated.</i></p> <p>2. I'm a little confused between option 3 and 4...</p> <p>In one option, will the 18 <i>E. coli</i> objective be applied everywhere in the region that currently identifies rec-1 as a beneficial use? And the other option, it will only be applied to set number of water bodies?</p> <p>Ed Hancock- <i>Option #3 Statewide E. coli/Rec 1 beneficial use as human health backstop.</i></p> <p><i>Fecal coliform (FC) objective in the Basin Plan would be updated to use E. coli (EC) as the indicator. Updated objective would also be de-designated from specific surface waters where bacteria conditions preclude the achievement of current Basin Plan objective.</i></p> <p><i>Examples given- Tallac Creek (natural wildlife) and Bridgeport Valley (long-standing grazing) where FC objective is rarely obtained.</i></p> <p><i>Option #4-Statewide E. coli/REC-1 use (human health backstop) and new beneficial use for high quality waters. New use protected with a new objective developed from Lahontan collected E. coli data. Based on data review, it is likely that new objective would be similar to present Basin Plan objective.</i></p> <p><i>Example of use: Recreational/Cultural where “superior microbial water quality” supports an enhanced use.</i></p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p><i>Use R6 historical bacteria data set to come up with a new numeric standard (pertaining to areas with low level bacteria only)</i></p> <p><i>EC REC-1 objective would be used for heavily impacted areas, such as high-traffic recreation areas and grazing lands.</i></p> <p>3. What about an option that sets 18 <i>E.coli</i> for all Sierra Nevada waters above 5000 ft elevation or above the base of the eastern escarpment? And maybe additional high-quality waters in the San Bernardino, San Gabriel, Warner mountains?</p> <p>Ed Hancock – <i>Thanks for this suggestion. Something staff have been considering; an option such as this would need to determine a beneficial use also. Similar to Option #4 in terms of a high-quality use. Also, issues related to solely pursuing elevation-based protections because of impacts to certain surface waters at elevation. We will add this option to the potential options list for analysis.</i></p> <p>Comment from Lauri Kemper – I’m concerned about relaxing bacteria water quality standards in the Lahontan Region. I support an <i>E. coli</i> standard that correlated to the existing fecal coliform standard</p> <p>Ed Hancock – <i>Thanks for that comment. It gets at a major issue for this project. The current E. coli objective has limited utility for ecological and cultural uses associated with high quality waters in the Region. Lahontan surface waters are an important resource for other parts of State and state neighbors. This comment has been noted.</i></p> <p>Nathan Reade: Agricultural Commissioner/Director of Weights & Measures Inyo and Mono Counties</p> <p>1.Option 4 was briefly mentioned that allows for certain waters to be identified as high quality which would have different standards for them. Who would make the determination and how?</p> <p>Dan Sussman - <i>Approach would be internally developed based on land use and beneficial uses then presented to public</i></p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>Ed Hancock - <i>Would be data driven/land use assessment followed by public process. The goal would be to protect high quality waters</i></p> <p>Eric Miller: interested party in the event R6 actions are taken up by R 4, 8, & 9:</p> <p>1. Does "superior microbial quality" of natural waters account for naturally occurring microbial contamination from natural wildlife?</p> <p>Marisa Van Dyke – <i>wildlife does contribute fecal material and natural contamination is considered. Refers to Ed to address “superior microbial quality”</i></p> <p>Ed Hancock - <i>“superior microbial quality” has not been specifically defined by R6, although perhaps it should be as part of this project. I used this term to refer to waters with low to ND (non-detect) bacteria counts, usually occurring in the mountainous and undisturbed watersheds in the region.</i></p> <p>Marisa Van Dyke – <i>In summary, yes naturally occurring wildlife is considered for high-quality waters determination.</i></p> <p>2. How does adopting the State's metric endanger R6's waters? Fecal and E. coli are not interchangeable, so lower fecal does not = E. coli?</p> <p>Ed Hancock – <i>E. coli is a subset of fecal coliform, so they are related. An issue we have is the E. coli objective was developed for human health protection, but the regional dataset for Lahontan shows significantly lower E. coli counts than the statewide objective threshold for impairment. Relying only on the statewide objective could lead to unregulated degradation of surface waters before REC-1 use is impaired. EC & FC are two separate organisms but are related</i></p> <p>Marisa Van Dyke - <i>Addressing EC vs. FC</i></p> <p><i>FC is a large group of bacteria with EC being one member of the FC group (a subset)</i></p> <p>Dan Sussman – <i>I want to note that the State Board metric already does apply to R6 waterbodies, as it is a statewide REC-1 objective. Therefore adopting it would not be the</i></p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

case, it would be a process of amending the Basin Plan to include the objective in the Basin Plan.

Cindy Wise – Acknowledges hands up in the room. We will get to your questions.

3. How has the water board attempted to separate American beaver fecal coliform contributions from sources that pose human health concerns?

Marisa Van Dyke - Use of Microbial Source tracking (MST) allows for genetic tracing of fecal sources. This applies to Beaver. These studies have been applied in CA. There are ways to determine where fecal sources come from by MST but is also requires some data interpretation and MST is not always definitive.

Ed Hancock – Useful to understand if you, Mr. Miller, have a specific waterbody in mind. MST is one way to separate source contributions in a waterbody. We are interested to continue this conversation with you.

4. At what level does the fecal coliform contamination result in human health impacts similar to the *E. coli* metric?

Marisa Van Dyke – earlier slides described how EC vs FC objectives were derived. FC objective derived to prevent one of less illnesses per thousand exposures; EC objective allows more illnesses – 32 illnesses/thousand. Each objective developed a little differently. We would have to go back to dataset to determine exactly how.

Ed Hancock – Building on what Marisa said, fecal coliform has a long history dating back to early 20th century. There have not been as many epidemiological studies for fecal coliform when compared with *E. coli*. *E. coli* has a large body of evidence related to cause/effect in recent scientific history. This is part of the reason for this project – modern science support *E. coli* as an indicator, and a goal of this project is to look at fecal coliform in light of this evidence.

5. I read an Executive Officers report from R6 citing a prior report by the Sierra Nevada Aquatic Research Lab (SNARL) that concluded the cattle was the main source. I would note that they did not use a bovine-specific genetic test, but rather one for ruminants in general. Furthermore, their method of parsing out the vertebrate contributions was

		<p>inconsistent with modern science and reports from SCCWRP as MST results are not comparable between test types. Results from one MST for ruminants cannot be directly compared to MST results for birds. The MST results are each on a separate scale.</p> <p>Ed Hancock – <i>Elaborates on SNARL work. Ruminant marker was used, not specific bovine. Clarifies that a relationship analysis was used looking at concentrations of fecal indicator bacteria next to MST concentrations. Agrees with Miller, results from MST markers are not comparable between test types. SNARL did not compare MST markers between each other but used a relationship analysis with indicator bacteria.</i></p>
7:00pm	Marina Perez	<p>Begins to field live questions from participants with raised hands</p> <p>Tess Dunham: Representing Livestock interest in the Bridgeport Valley and Centennial Livestock</p> <p>1.Question addressing options presented and application of antidegradation policy. Does not believe that the antidegradation policy as a backstop has been properly considered by staff. None of the options have not included a further explanation of how antidegradation policy would be applied.</p> <p>Ed Hancock – <i>Thanks Ms. Dunham. We are early in process. Notes that no options are final. Presented as potential ways. How does 68-16 Policy fit into our process? Very valuable question. Has been part of the conversation, but we are still working on it. Option 2 guideline is just that – an explicit flag to help guide antidegradation analyses.</i></p> <p>Dan Sussman - <i>regarding the 68-16 Policy and how we would apply it if only the Statewide objective was relied upon. For permit development, what should allowable water quality be in watersheds where water quality is better than the Statewide objective? Option 2 is one was of addressing this question and sets an explicit level. It is only one option. Another option could be to require a period of monitoring in a waterbody prior to permit issuance. We are early in process, but we do need to account for high-quality waters in the region. There are several ways to do that: within the Basin Plan, or outside the Basin Plan.</i></p>

		<p>Lauri Kemper: resident of Sierra Nevada</p> <p>1. Regarding Outreach -How has the water board reached out to Native Americans and Tribes within the region (unsure if any representatives are on the call)</p> <p>Ed Hancock - <i>R6 has noticed the regions tribes via email and paper mailers. Noting that BryAnna Vaughan from the Bishop Paiute Tribe is on the call.</i></p> <p>Lauri Kemper comment- <i>notes that the new State Board standard is a risk based standard and not protective of human health and would cause 32x more risk of getting ill. Not fair to describe the Statewide standard as protective of human health because it allows 32x more illnesses that the current Basin Plan objective. Not acceptable for R6 as it has heavy recreational (rec1 contact) users including backcountry users that travel from all over the world to visit our region. Backcountry users (using hand-held filters) are depending on clean water source with minimal contamination.</i></p> <p>Ed Hancock – <i>Thanks for your comment, and for recognizing some of the issues we have with this project and the complexity of the assignment.</i></p> <p>Tess Dunham: Representing Livestock interest in the Bridgeport Valley</p> <p>1.Question addressing the process and follow up timeline (for further questions/comments)</p> <p>Ed Hancock - <i>Sooner the better but always open to talk. November Board Meeting items will need to be submitted by end of September, referring to Dan to confirm a date</i></p> <p>Dan Sussman - <i>End of September for inclusion in November Board meeting.</i></p>
7:20pm	Marina Perez	Confirms No Further Questions -Closes Q & A Session
7:21pm	Ed Hancock	Contact Info/Webpage/Emailer List
7:23pm	Ed Hancock	Closes Meeting