

Tahoe Valley South Subbasin (6.5.01) Groundwater Management Plan

MEETING NOTES

Tuesday, October 9, 2018 1:30-4:30 p.m.

Location: 1275 Meadow Crest Drive, South Lake Tahoe CA

ATTENDEES:

Patricia Sussman for Ken Payne, P.E., (El Dorado County Water Agency); Karen Bender (via phone), REHS, RD (El Dorado County -EMD); Jason Burke (City of South Lake Tahoe); Scott Carroll (CA Tahoe Conservancy); Brian Grey, P.G. (Lahontan Regional Water Quality Control Board); Jeff Brooks (Lahontan Regional Water Quality Control Board); Bob Loding (via phone) (Lakeside Park Water Co.); Jennifer Lukins (Lukins Brothers Water Co); Rick Robillard, P.E. (Tahoe Keys Water Co.); Harold Singer (Community Rate Payer); Ivo Bergsohn, P.G., HG (South Tahoe PUD); Shannon Cotulla, (South Tahoe PUD); Richard Solbrig (South Tahoe PUD); Harold Singer (public); Sachi Itagaki (Kennedy Jenks); Gary Kvistad (via phone), Counsel (Brownstein Hyatt Farber Schrek);

BASIN MANAGEMENT OBJECTIVES:

Ivo opened the meeting with a brief explanation of the workshop objectives.

1. Maintain a sustainable long-term groundwater supply.
2. Maintain and protect groundwater quality.
3. Strengthen collaborative relationships with local water purveyors, governmental agencies, businesses, private property owners and the public.
4. Integrate groundwater quality protection into local land use planning activities.
5. Assess the interaction of water supply activities with environmental conditions.
6. Convene an on-going Stakeholders Advisory Group (SAG) as a forum for future groundwater issues.
7. Conduct technical studies to assess future groundwater needs and issues.
8. Identify and obtain funding for groundwater projects.

WORKSHOP OBJECTIVES

1. Discuss the progress of on-going activities in response to the South Y Plume.
2. Discuss the Draft 2018 Basin Prioritization Basin Results for the TVS Basin. Looking for feedback and thoughts. Ranking lowered to a Very Low Priority. We need to review and discuss and address questions Ivo sent out earlier.

DISCUSSION

TVS Basin (6-5.01) - Open Forum

Ivo asked if there were any topics outside the agenda outline that anyone wanted to discuss now or bring up for another meeting. There were none.

South Y Activity Updates

Ivo ran through South Y Feasibility study

We are currently working under Prop 1 groundwater cleanup grant with State Water Board. We are conducting predesign investing to determine the best way to provide hydraulic control and removal of PCE from groundwater.

Ivo briefly described the slides provided in the meeting packet:

- Major Milestones COMPLETED list.
- Predesign Investigation Objectives.
 - Assess vertical extent of contamination;
 - Collect water quality and engineering information useful for design.

Drilling test hole and logging from ground surface to depth (150'). NOTING aquitards that subdivide Section into zones (3 aquitards); the upper zones is where most of contamination is found (Zone B and Upper Zone C). The lower aquitard is believed to be a regional feature (94'-100') which locally separates the contaminated upper zones from the lower most zone (Zone D). Trace amounts of TCE was detected in Zone D (secondary by-



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product of PCE degradation). Two shallow test wells were designed and constructed for use during aquifer testing and possible future use as shallow extraction wells.

Ivo ran through a series of slides providing background and data for findings from our investigative work to date. Baseline sampling was completed in May to provide contemporaneous PCE water quality data for South Y Area.

These were supplemented by water quality monitoring results provided by LBWC and TKWC. Surprising results from this sampling were the high concentrations (60 ppb) detected in samples collected from LBWC #5.

KJC developed initial contour plot showing the highest concentrations of PCE detected in groundwater samples collected from shallow wells (<100' depth) between 2016 – 2018. District and KJC are working to get this water quality data incorporated into the South Y PCE groundwater model.

Another item reflected in the contour map; is detail of plume geometry; this is not reflected in the groundwater model.

District and KJC will be looking to see if this level of detail may be present in the updated model for the 2016-2018 periods. The contour map also showed high concentrations of PCE along the west side of the map which decrease in concentration eastward back toward the center of the contaminant plume. This could be an area for further investigation

Contours help us define locations for putting together remedial alternatives to address the mid-plume regions to match what we see in the field rather than relying on the models doing that for us.

Another thing we did as part of the predesign investigation was to update well survey and shared that information with the Regional Board. We are working with El Dorado County to identify different wells near or within the plume. We have identified names, addresses and parcel numbers for these wells to notify well owners of the potential for water quality contamination through this area and need for water quality testing, if well is currently used for drinking water. Results of this well testing could then be used to supplement the water quality data used for plume delineation, notify well owners of current well water quality and verify the specific wells which are currently in-use.

Jason B. inquired if there were any regulatory requirements that required private well owners to have their wells tested? That is correct; also that may also be true for small water system wells regulated by the County, as they are not required to test for PCE. Motel is under lower regulation than an apartment complex. They are only required to test for bacteria quarterly and nitrates (K. Bender, EDCEMD). Jason expressed that this makes it all that much more important that these private well owners get notification

Health and Safety top of list for importance. We have water well driller's reports on some of the private wells and know they may be at a depth penetrating the aquitard and serving as vertical conduits themselves for pathways for this contaminant to travel. Jen identified Jalapeno's restaurant and one private well located on Eloise or James as "active"—LBWC annually tests both of these wells and both have been non-detect for PCE contamination. A lot of the identified private wells are likely not active; LBWC crew have seen inactive wells at one site in a garage covered with plywood.

J. Lukins expressed concern that property owners may hesitate to acknowledge an existing well on their property; costs for possible well abandonment may be a funding issue. Ivo promised to send-out the current private well survey list to the SAG for comment. (Following the workshop, the South Y Area Wells List was sent to J. Lukins, R. Robillard, J. Burke and J. Brooks).

PDI Technical Report – currently working on completing the data analysis and preparing draft Report; hope to have this work completed by the end of October We would then circulate the draft report to for comments from the TAC by end of November.

Modeling Evaluation- currently working on prelim modeling runs and defining remedial alternatives.

LOOK AHEAD: list presented and discussed.

- TAC/SAG meeting set for 10/23, and by SAG meeting 3 some of the preliminary remedial alternatives will have been defined so they can be discussed with the group on the 23rd.
- One thing to do for groundwater analysis—would be helpful to coordinate collecting water levels: Tahoe Keys Wells, Lukins Bros Well 1 and Well 5, monitoring wells used in the predesign investigation, the test wells and groundwater elevations from nearby District wells in order to generate groundwater water level



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elevation contours for the South Y Area. This is a large hole in the data, but we can easily address; we just need to schedule a specific day. Discussions ensued regarding scheduling this groundwater level data collection effort.

- SC raised concern about TCE as a breakdown of PCE and smaller molecular size. TCE being deeper, as it is a finer particle is it able to penetrate the deep aquitard more quickly than the PCE, are we doing any modeling to look at the decay rate since it appears to travel more easily, and is it a greater threat to contaminate other wells that have not been impaired. Have we done any evaluation on the TCE front as part of the feasibility study? Good question. Ivo: The model uses literature values for decay rates as default values. Decay could be removed from model in order to show worst-case scenario for contaminant plume extent. Second concern - plume character could change from a PCE to a TCE down gradient plume (SC). As this is not covered under the Feasibility Study, could this be included as a topic of investigation under the SB445 scope? BG indicated that this was a really good point, in terms of remedial alternatives analysis, and what will be done if things start to be reductively de-chlorinated, and what are potential effects. Right now data shows we are fighting a lot of that, we don't have high organics, and we have a highly oxygenated aquifer; but if things change or we do something different it could exacerbate the problem. JB raised issue of TCE vapors as a possible consequence of PCE degradation.
- **Look ahead for second half of the project (refer to Slide Look Ahead)**
- Public Workshop 3 in November and then roll out remedial alternatives that have been defined, roll out to the public for edification and explain where we are going and give idea how it fits together and will benefit us all.
- Fate transport model complete in January 2019
- Public Workshop 3 – February 2019
- Feasibility Study - March 2019
- Remedial Action Plan – May 2019
- Project Completion – July 2019

Water Suppliers' PCE Action Request - Handout (S. Cotulla)

- 72% of South Lake Tahoe's community water supply is in danger of contamination from this plume. Eye opening awareness! Prompted us to take a look at steps on back of sheet. Immediate and Interim Actions.
- Looking outside Feasibility Study work and work Lahontan is doing. We need to do something to protect our water supply. Lead us to put together a list of things, one being a Multi-Agency Emergency Response Plan (consisting of agencies affected by the plume). We are still working on those issues.
- Also put together a list of other needs such as 1) installation of sentinel wells between the plume and the uncontaminated wells, 2) well destruction program, Lukins and some deep residential wells, 3) zone testing on Tahoe Keys W#2 in order to determine contaminant depth at which PCE is entering the TKWC #2 Well, 4) Test hole at Colorado Court for potential water supply well location. Initially installed as a sentinel well, but constructed in such a way as to be a test well for identifying potential future water production at a public water supply well drilled at this location.
 - Colorado Court well – Scott Carroll indicated that he thought it wasn't feasible because it was in the 100 year flood plan (Scott Carroll). District is not aware of this constraint, but will look more closely at that.
 - District is preparing a detailed list prioritizing these actions down to which sentinel well we need to have happen first for consideration by Lahontan as part of their SB445 Investigation request.

Lahontan (B. Grey, J. Brooks)

- Since last meeting in December, as reminder we originally put in SB445 request for source area evaluation by 7-11 Shopping Center in relation to detections in the Rockwater well, etc. We expanded that scope of



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work (upon request from SWRCB) to include more comprehensive investigation, vertical conduit evaluation, soil sampling, perimeter sentry well network, management and communication tools, etc. Written generally to allow us some flexibility so we can adapt, as currently uncertain what actions will be completed by responsible party. May – requested input from water purveyors; June After we got a consultant, solicited additional comments and another meeting to discuss scope of work and developing an accompanying cost estimate for funding. September meeting with SWRCB-DFA to discuss updated work scope and funding. October – received conceptual approval from the SB445 program. Final approval to follow shortly.

- Original consultant who developed cost estimate is not the consultant we will be using for this fiscal year. AECOM out of Sacramento will be taking the lead. They are the consultant associated with the SB445 special program and will be developing a more detailed scope of work and cost estimate based on the updated work scope provided by LRWQCB.
- Shannon indicated that the hope is to take some of these immediate action items and have them incorporated in the SB445 Program.
- There is a timing issue, but we were happy to see that some of these items lined up with the SB445 scope; focus is, in part, to not duplicate efforts, etc.
- Hopefully this will be an opportunity to relieve some of the financial burden that has been placed on the public.

Lukins Brothers Water Company (Jennifer Lukins)

- Good news is that all efforts at state level are helping move forward the applications. Currently they are working on getting the environmental and financial clearances and then will proceed to technical clearances. Then will move on the funding application.
- Optimistic for February or March 2019 funding, allowing for solicitation of Construction Bids.
- Also moving forward James Avenue Waterline project in the James and Patricia Avenues area.

Other Related Items

- Follow up meeting is scheduled with Patty Kouyomdjian next week (?) to further discuss Water Suppliers request (S. Cotulla).
- LTLW Phase 1 workplan was distributed a couple weeks ago (I. Bergsohn). BG indicated there was no formal comment period, but given the interest and number of moving parts they would welcome comments on the workplan. LRWQCB is expecting weekly planning and progress report meetings and will post summaries of the meetings on line (boring logs, analytical results, etc.) and thereby providing this information before the six-month period. They completed their transect no. 2 and have begun the last 3 monitoring well installations; transect 3 and 4 borings are set for November. Tentatively they are scheduled to provide a draft weekly report by end of day Tuesday and we will meet Thursday. Their 6-month technical report is due by the end of March 2019.
Transect borings are proposed to go to a depth of 80'. GW-11 refusal limited boring to 76' (B. Grey).

Draft 2018 SGMA Basin Prioritization (I. Bergsohn)

2014 CASGEM Basin Prioritization – Initial prioritization used for SGMA was the 2014 CASGEM Prioritization completed by DWR. The data components, ranking criteria and ranking values for this prioritization were explained. According to this initial prioritization, DWR ranked the TVS Basin as a medium-priority basin.

Under the SGMA, adjustments to basin boundaries completed in 2016 required DWR to conduct a new basin prioritization. Preliminary draft results from this new prioritization were issued by DWR in May 2018. Under the new prioritization the ranking for the TVS Basin was lowered from medium to very low. Components used in the ranking



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exercise are in the State regulations (and are similar or the same as were used in 2014). In 2018, a "Statewide Adjustment" criteria was added--applied to basins using between 2000 af and 9500 af with no documented impacts. If the basin met these criteria the basin was reclassified as very low priority. There were several other Basins which were also reclassified through this latest prioritization. Definition of documented impacts (H. Singer)? Documented impacts include land subsidence, declining groundwater level elevations, reductions in groundwater storage, seawater intrusion, water quality (based on number of wells that had exceedances over a given threshold, such as PHG, MCL, etc.) caused by overdraft conditions within a basin. It is Ivo's understanding that application of the Statewide Adjustment zeros out the ranking values based on all previous data components (such as well density and groundwater use/reliance) used in the ranking process.

How will Change in Status affect the current groundwater management process?

- Does District need to continue groundwater management as a GSA? DWR is encouraging GSA's to comply/follow with SGMA. It is unclear if District is still required to prepare and implement a GSP.
- How does the District's Authority under SGMA change if it is no longer a GSA? Would management responsibilities change as a GSA for a low-priority basin? Would scheduling and reporting requirements change?. District is seeking clarification on these questions.

Options

- Comply and adopt GSP under SGMA.
 - GSA is responsible for preparing and implementing a GSP. District has expended significant resources to form a GSA. The District has entered into an MOU to sustainably manage groundwater resources across the full extent of the groundwater basin with the El Dorado County Water Agency (also a GSA).
 - Significant resources have been expended preparing an AB3030-compliant groundwater management plan (2014 GWMP) and completing an Analysis of Basin Conditions (ABC). At end of 2016 the District submitted both the 2014 GWMP and ABC as Alternative Plans to DWR for review and evaluation in lieu of having to develop a GSP. Should the existing plan alternative (2014 GWMP) be approved, the District could continue to manage groundwater resources in accordance with the existing 2014 GWMP. Approval would allow the District to update and amend the 2014 GWMP in a manner that could eventually evolve the 2014 GWMP into a DWR-approved GSP. This is still on the table as the District assumes DWR is still moving forward with considering the District's submitted Alternative Plans.
- Leave or no longer voluntarily comply with GSA – Would allow the District to update our 2014 GWMP and continue groundwater management under AB3030 Plan. Is this statewide adjustment in code, or a whim of someone at the State Board (SC). GK: in their implementation regulations, not the statute itself. Not sure where it came from. Developed the adjustment but not sure where it came from. SC; concern if this is a whim, what stops it from going away at the whim in the future and us having to restart this process. GK: No way to predict what the State Board will do in that regard. JL: where are we in the whole SGMA process? Have we met the requirements so far? Yes. Why should we stop doing what we're doing? Why should we cease to follow SGMA? What are the consequences? JL: good point about the change on a whim, and having to start over (at a whim of someone at the State Board). JL: other water basins required to contributed x\$/year. Is there a reason to stop? Part of the decision is based on cost, past and future.

How does change in status affect Districts ability to receive Funding?

- If funding is based on basin prioritizations, the first monies released will be based on high priority basins, then medium. We do not believe that will change. Ivo does not believe the Low Priority Basin ranking hurts us. For the Groundwater Cleanup program, the change in status does not have an effect. District's Grant Coordinator added that the only funding based on basin rank is DWR. Only Proposition



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1 funding for SGMA is tied to the ranking, and she does not see that changing. DWR will be affected, other funders not so much. Low Priority rating basically means we have less hoops to jump through as far as providing additional studies etc. (LN).

How does this change our authority if we are no longer a GSA within the basin?

- Ivo looked at authority for GSA under the SGMA, and AB3030—Under AB3030, District could become a Groundwater Management District (GMD) . Under AB3030 GMDs have authority to collect fees and assessments to finance and support groundwater management activities within the basin. GSAs have additional authority to require metering water use from wells above a minimum amount, (some private wells excluded). So we could require small community water systems to meter their groundwater production and report it to the GSA, and could impose civil penalties to limit the amount of water they were producing in a basin if the water use was close with respect to recharge, etc. Fortunately we are nowhere near that condition. Recharge is not an issue. Groundwater use represents less than 20% of the total average annual groundwater recharge.
- District has not had to exercise any regulatory fee authority. Ivo believes the greatest costs for complying with SGMA have been met over past 3 years. The difference with staying under SGMA or continuing groundwater management under AB3030 structure doesn't look like we would be losing a lot of authority to implement groundwater management within the TVS basin.
- Gary K. believes that the decision on which route to take depends on whether the District's GWMP Alternatives is accepted as an Alternative by DWR. Because then we can continue under GWMP or opt out and still operate under SGMA. And then you can amend the GWMP, in either instance to conform to whatever you need to do in the Basin. Hopefully a decision on Alternatives will be presented by DWR in November. At that time decision on the best option forward can be made In the meantime we need to get clarification from DWR.

Draft Questions

- Handout at end of meeting materials packet includes 6 draft questions prepared in anticipation of a meeting with DWR. Idea is to contact DWR Project Manager for Basin Prioritization seeking clarification on how the TVS Basin ranking was lowered to VL priority. The new scoring does not seem to be consistent with the 2014 Basin Prioritization although little has changed. The new scoring also does not appear to be consistent with the methods presented in DWR's process document. Ivo is expecting to hear back from the DWR PM shortly after October 10th. DWR is expected to make a decision on submitted Alternative Plans in November 2018.

Draft Questions (slide)

- First question would be regarding the Statewide Adjustment and how it was applied in our case. With respect to the total priority point calculation; question on what they call information determined to be relevant.
- Other information determined to be relevant. First half of Workshop was spent discussing PCE groundwater contamination. Ivo does not believe any of the information provided to DWR about groundwater contamination issues within the TVS Basin was reviewed (e.g., 2014 GWMP, ABC, and Water Year Annual Reports). Although, if they do review it, we may qualify again as a Medium Priority basin. Not sure that's what we want either.
- Question about the status of alternatives and DWR's assessment--is that going to continue as before. Should we expect something back in November?
- Responsibilities for GSA, if we continue as GSA, not required to develop and impellent a GSP etc. if we stay in the program as a Low Priority Basin what are our responsibilities to DWR.



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- Ivo asked that meeting participants read through the questions and provide input as soon as possible. He asked that attendees also provide any other questions we might like to have answered by DWR so Ivo can be as productive as possible when he hears from the DWR.

Additional Questions from SAG

- What prompted them to do the statewide adjustments?
- Do they reassess at regular intervals, what prompts? For example (SC) Oroville Dam situation prompted a lot more and greater and stricter regulations....etc.
- Shannon brought up the topic of the consideration for the on-going costs to the District as a GSA or as a GMD.
- Gary suggested that when we get some answers, we should do a cost analysis so we can objectively weigh which is the best route to take moving forward.
- The issue was brought up again with respect to Shannon having asked if they took into consideration the groundwater contamination issues. We need to ask that question sooner than later so we don't go too far down the wrong road. We would not want to find out that they missed that piece of information and "made a mistake" by changing our ranking.

