

# LONG VALLEY

## HYDROLOGIC ADVISORY COMMITTEE

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### DRAFT MEETING MINUTES

Wednesday, August 5, 2020

Public Meeting – 10 a.m.

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#### PUBLIC MEETING ATTENDEES

Ormat: Mark Hanneman

BLM: Dale Johnson, Jason Titus

CalGEM: Amar Rao, Jerry Salera, Charlene Wardlow, Jack Hollander

MCWD: Mark Busby, Betty Hylton, Garrett Higerd

ToML: Sandra Moberly

GBUAPCD: Luke Eisenhardt, Tom Channo (?)

Mono County Staff: Nick Criss

Lahontan RWQCB: Kirk Hancock

CA Energy Commission Grant & Loan Program: Elisabeth de Jong

Mono County Supervisor Candidate: Rhonda Duggan

USGS: Bill Evans

Inyo NF: Gordon Martin

Other: Matt Wilson (?) (could not understand his name or the name of his company or organization)

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1. Call to order & attendee introductions: The meeting was called to order shortly after 10am by Nick Criss in the Zoom meeting room.
2. Public comment
  - a. Charlene Wardlow: Is Mark Spendel still at the BLM and what happened to John Peterson at the Water District?
    - i. John has retired from the water district, still consulting.
    - ii. Mark transferred to the Forest Service in Oregon.
3. Review/approve minutes of February 5, 2020
  - a. Received emailed comments back from Bill Evans about the minutes. Any other changes? Melissa Bell shared her screen to show the changes: some corrections on wells, spelling and grammar.
  - b. Betty Hylton's name spelled incorrectly.
  - c. In number 7, the last sentence- not USW, should be USDW (under ground source of drinking water).
  - d. Approve the minutes – any objections? No objections heard, minutes approved.

4. Subcommittee status reports

- a. Nick Criss: Ormat went over their injection and production well pressure data, some slight pressure changes due to curtailment of G3 and well maintenance. Ormat updating models with new production and injection data.

5. Agreement on subsidence monitoring

- a. Dale Johnson: At our last meeting Jim Howl gave presentation on subsidence monitoring program in place and how expanded in 2014. BLM funded some additional benchmarks put out by Jim with help from BLM. He went over that, in the notes as item 9. After that Ormat has started looking at the monitoring/mitigation plans that need to be in place before they can start development the CD4 project and going to production. On the subject of subsidence it asked for the USGS and LVHAC to review the subsidence plan and how expanded. He gave the presentation and we did not agree we thought it was adequate. I wanted to capture in the notes that USGS and HAC feel the subsidence monitoring that we have in place is adequate for time being. Jim described how initial readings he took did not really show hardly any change – he described background noise due to volcanic stuff happening in the ground but felt that the next set of readings should come right before Ormat is ready to begin production and then going forward as production starts is what he advised as path forward on subsidence. Wanted to capture that we heard that presentation. After we heard the presentation we were all on board but the notes did not really capture that. Did anyone that took part in that – was there any issues on subsidence that we should discuss more?
- b. Bill Evans: I think better to wait for Jim to come back and talk about that. Aware of what he is doing but would have to run it off of Jim to see if he would like to comment at some later date.
- c. Dale Johnson: Talked to Jim several times and he is very happy with where we are at going forward with what he presented as his plan at the February meeting. It is part of the mitigation measures and monitoring plans required by CD4 record of decision that LVHAC and USGS review and expand the subsidence monitoring plan. We did that in 2014 and since we talked about it at last meeting wanted to make sure the notes capture that no felt the need to do anything beyond what we have right now. Not that we won't in the future but that where we sit right now, it is adequate.
- d. Nick Criss: Should we put this as an ongoing agenda item to report on?
- e. Dale Johnson: Yeah, it could be. Won't be much discussion until get closer to CD4 coming online but that is a good idea. Jim should present on a regular basis like he does on other data.

6. USGS monitoring data (Basalt Canyon temperature logs)
  - a. Bill Evans: We are skipping because he has been out one time in February to do new temperature logs and don't believe he has been out since that time. Temperature logs are shown in the quarterly report that he sends out, there was not much of note. He might have seen stuff I don't see, but small scale changes.
  
7. USGS water chemistry of MCWD wells and new Basalt Canyon monitoring wells
  - a. Nick Criss: And same with the chemistry, you guys have not been monitoring since COVID correct?
  - b. Bill Evans: Correct. He has had a couple of quick trips down to collect samples, so if he collected anything I did not see new analytical data from the samples so no new data to report. He is planning to get down the week after next so hopefully will get back started up but had to shutdown.
  - c. Nick Criss: Any comments or questions on this?
  
8. CD IV Groundwater Monitoring & Response Plan (GMRP)
  - a. Bill Evans: We did meet in May, meet quarterly, focus, because of COVID, did not discuss much in terms of data. Main focus on trying to get additional set of monitoring wells in place that have been talked about for a long time. Have the set 2825 just south of Shady Rest park and have additional shallow well in Mammoth RV park, been a desire for a second location for both the deep and shallow monitoring well. So Jim Howl did a lot of work over winter to determine good location for that and landed on a location on north side of Old Shady Rest campground. Went out and looked at that, with Gordon Martin. BLM submitted a special use permit for that location, feel a good spot based on some of the presentation that Jim gave us, good monitoring spot. So at the point of looking to get that location approved so we can hopefully install the monitoring wells. Preferably this fall. That is the main activity from the GMRP since February.
  - b. Tom Brown: Do you have the money, will this be a double completion, shallow and deep?
  - c. Bill Evans: Jim Howl prepared a budget we think will work for us so hopeful that we can make it happen.
  - d. Tom Brown: How deep plan to go?
  - e. Bill Evans: Need Jim Howl, he has been the primary person working on that.
  - f. Tom Brown: It's going to be closer to Shady Rest so it will be north of Hwy 203?
  - g. Bill Evans: Yes.
  - h. Tom Brown: How far from 14A?

- i. Someone else 1: Bill, isn't that out by where used to be a groundwater well where turn off on the road to the north of the road that goes into Shady Rest Park?
- j. Bill Evans: It is old Shady Rest campground.
- k. Someone else 1: There was a well there. It wasn't logged well. Kind of behind...
- l. Nick Criss: It's between Shady Rest Park Rd and Forest Trail, where the old Shady Rest campground is.
- m. Bill Evans: Yes
- n. Someone else 2: Comment - that is moving away from the area of concern. Would have liked that well on the southside of 203. But sure you guys have your reasons, permits, private property. But looking at map that was obtained from a previous meeting, has proposed location south of 203 between P17 and M26.
- o. Bill Evans: Yeah that was always the area, the idea was that was a good area for a shallow monitoring well and I think MCWD is looking into getting a monitoring well over there.
- p. Mark Busby: I will comment on that, we are pursuing a location which would be south of 203 in the Center Street area, on a transect between our well site and over near P17 between that and where the production is going to happen and between where the BLM monitoring wells are going.
- q. Tom Brown: Who owns the property?
- r. Mark Busby: Still working on securing a location.
- s. Nick Criss: Once the wells are drilled will that satisfy the ground water response plan and can Ormat go forward with CD4 at that point?
- t. Bill Evans: The ground water monitoring well network is already satisfied, these are not required but we are interested in having them added and think we found a location and way to get them put in there.
- u. Steve Nelson (?): Clean this up just a hair – like Dale described, the requirements in the ground water monitoring response plan were met and have been for some time. But BLM has commitment to move forward on additional wells if we believe – in coordination with Ormat – and the water district – that we can find good spots and find a collective process to move forward. Think we have done that. We are not ready to roll out full plan because work in progress but can tell you that the location as proposed have nothing to do with the ease or difficulty relating to permitting. All based on recommendations and conversations through the ground water group on where we thought the best locations were for the type of information we need. So the plan is to have paired wells and the fire station is the best land mark for people who aren't familiar with the area. The well is in the Old Shady Rest campground and also looking to find a spot more tied into the shallow ground water and we have come up with a strategy to fund that. Dale found the funding for BLM to foot the bill for all of the monitoring wells north of 203 even though were not required. Kudos to Dale. When we have that figured out, and Mark Busby can chime in, then we will roll that out. But

because there are moving pieces we don't want to get ahead of ourselves and get disappointed but that is where it is at.

- v. Mark Busby: I agree and it has been great to work with BLM on this, very collaborative process. The wells and information will be beneficial.
- w. Sandra Moberly: Will this well affect operations of Old Shady Rest Campground?
- x. Dale Johnson: We put the special use permit in to the Forest Service and they will need to do some sort of environmental analysis, probably a categorical exclusion document, but would say no. Would be a problem if adversely affecting the campground.
- y. Sandra Moberly: So it does not takeaway campsites? Or will sites be removed?
- z. Dale Johnson: No, the design is on the edge of the campground but would not eliminate sites. These are not production wells, it's a monitoring well.
- aa. Tom Brown: Mark – are you still monitoring M26 for bromide, chloride, arsenic and boron?
- bb. Mark: Yes. There has been a sampling hiatus because of COVID but chloride, bromide and boron are still being analyzed in M26.
- cc. Tom Brown: Have you been presenting that data in these meetings?
- dd. Mark: Yes, usually show data in graph form and I don't always show all of the data from all the wells but I think I have always shown chloride in M26 and bromide and boron are plotted and if anything strange I would present at meeting. M26 has a consistent chemistry overall from years of monitoring.
- ee. Tom Brown: The Water Board was hoping for a well between P17 and 1425/1225 to let us know if any connectivity, and see if there was to explain that 100 microgram per liter of arsenic that was discovered earlier. Two years ago. But from what I am hearing from BLM it does not matter who owns the property, they are picking best location in interest of science. Just want to say that it does not make sense to me if you are looking for connection between shallow and deep that could explain what happened to P17, to locate it over by Shady Rest. And that is my comment.

9. Adjourn to next meeting February 3, 2021