

California Energy Commission

DOCKETED

15-GRDA-1A

TN # 75336

MAR 06 2015

LONG VALLEY
HYDROLOGIC ADVISORY COMMITTEE

P.O. Box 2415
Mammoth Lakes, CA 93546
(760) 924-1705 Fax (760) 924-1701

Agenda

Wednesday June 4, 2014
10:30 am

Town/County Conference Room, Minaret Mall

- I. Discussion of Minutes from August 22, 2013 Regular Meeting
- II. Status Report from Subcommittee
- III. CD-IV Monitoring Plan Update
- IV. Review of Proposals
- V. Public Comment/Other Business

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June 4, 2014 Meeting Minutes

List of Attendees

| | |
|---------------------------------|------------------------|
| Pat Hayes – MCWD | |
| Mark Wildermuth – WEI | John Pedersen – MCWD |
| Gene Suemnicht – EGS Consulting | Mike Sorey – Ormat |
| Charlene Wardlow – Ormat | |
| Cheryl Eanes – Ormat | |
| Dan Dawson – UC-SNARL | Collin Reinhardt – BLM |
| Jim Howle – USGS | Bill Evans – USGS |
| Scott Burns – Mono County | |
| Nick Criss – Mono County | |

Commented [CW1]: I don't think he was at this meeting, maybe the one before.

Commented [CW2]: I don't think anyone was there from the APCD.

- I. Discussion of Minutes from March 26, 2014 Regular Meeting
No comment or revision to minutes

II. Status Reports from Subcommittees.

The thermal subcommittee met at 9:30 a.m. The presentation by Ben Holt was cancelled.

The monitoring plan has been agreed on to move forward. One well be drilled at the USFS Junkyard and the second well near Ormat's well 14-25. Ormat has agreed to drill a geothermal monitoring well if the data from the stress test (14-25 flowtest) is inconclusive and that the dynamic pressure data isn't proven over the next few years to be able to calculate a valid static pressure.

Collin Reinhardt (BLM) discussed introducing thermal imagery of Basalt Canyon and Casa Diablo field to see if there are any increases in heat along fractures. He said there is a possibility to get more money for this imaging from the BLM. It will take a collaboration of agencies (USGS and BLM) for the contract.

Both the USGS and MCWD were in agreement to have a private firm do the thermal imagery background and flight. The contractor would be Ariel Archives, the cost is based on the resolution. BLM/USGS have money in the budget for this fiscal year. The cost would be approximately \$5K to acquire and image the area on the map enclosed in blue with .5 degree Celsius temperature resolution - predawn, 10 square meter Pixel, digital format. The yellow triangles are the area MCWD would like to see monitored by infrared. The area covers Rhyolite, knolls, clear to fumeral valley. The goal is to have this as the background for future flights. It will be 30 – 45 days before a formal proposal can be made.

MCWD re-iterated the tree kill, and when pumping fluid can release of pressure, with the steam release comes CO₂, H₂S, etc. There are mapped faults where the proposed wells are. Fractures, faults make future pathways. Do an infrared fly by to identify soil temperature. Another monitoring Thermography should be done at least once a year over Casa Diablo, The Knolls, plus MCWD area to see if more hot spots how up as the proposed wells come online. MCWD would like to see a base line prior to pumping and injecting.

Ormat said looking at the triangle on the map, only goes out to Minaret, it should stay more to the west. The need to look at the Hotel that will be pumping and injecting in the area will have to be reviewed.

USGS had the imagery run more to the east to cover more geothermal ground. The thermal area by Shady Rest Park is a more sensitive area.

Original data taken in 1990 by JPL may be able to be recovered so a comparison can be made from 1990 - 2014 and a good baseline could be set.

III. CD-IV Monitoring Plan Update.

CD-IV Project is still in the appeal process at the IBLA

An "interested party" meeting was held on June 3 in Bishop at the BLM office to discuss the problem and objective statements for the groundwater monitoring plan. The MCWD, USGS, ,

USFS, Ormat and BLM were in attendance. June 24 will be the next meeting to finish objectives, set ground rules to provide a path moving forward with details. This is an open door meeting.

IV. M-1 Project Update.

M1 prevailed in the appeal by LIUNA. LIUNA sued Mono County over the adequacy of EIR., June /9 is the end of the period for LiUNA to elevate the suit to a higher court. M1 is on hold.

V. USGS – Update will be given at the next meeting

Cost of Sampling
Instrumentation
Aerial Thermo graphic

VI. Sherwin Creek Wells

An agreement has been reached on the joint funding amendment.

Ormat will fund the project. The equipment can be rented from the USGS Hydrologic Department. The QAQC on the instrument data will be collected in July on wells #1 and #2.

VII Monitoring Plan Well permitting Process

Collin has spoken to the CA BLM State Office that if the well on lease in the boneyard area can get permitted with a sundry notice or Geothermal permit. They will work with the USFS if cultural surveys that are needed. The down-hole permitting can be done quick, some analysis will be needed.

John Regelbrugge will get all Sundry Notices directly. The BLM will be doing the subsurface work, permitting. They will do the DNA and sundry notices and will coordinate with the USFS. The cost for the monitoring wells at 14-25 and the Bone yard for 600' wells is approximately \$300k . Charlene will get additional quotes as required by Ormat's purchasing policy. The USGS said all logging is included and logging would be done daily.. The USGS drilling unit will be available to drill in September.

VIII Mono County staffing LVHAC

Dan Lyster has retired. The Community Development will be handling the HAC. MC wants to review the history to see where the HAC has been and where it is going. The bigger project, CD IV, is on primarily on Federal land. Nick Criss will be in charge of Compliance. Brent Callaway will be in charge of permitting and natural resource compliance to make sure the by-laws are functioning. MC will continue to keep everything running, check with legal counsel to make sure all rules and laws are being followed. The proprietary aspects will be looked into and adjustments will be made.

The Board of Supervisors (BOS) supported the formation of the LVHAC and chairmanship. It is reviewing how the LVHAC is operating and how the HAC should operate. MC & BLM will coordinate efforts. MC would like to do an online subscription for the LVHAC agenda. The county will send out a draft agenda to all members prior to the August meeting to be reviewed and added to. The county will provide a secretary to review the minutes and taking of the minutes.

The meeting was adjourned at 11:40am. The next meeting will be held August 21 at 10:30am. The Town of Mammoth Lakes public workshop would coincide with the LVHAC meeting.

Agenda Items for next meeting:

- Promoting the use of heating sidewalks with spent geothermal fluids in town before re-injecting.
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