

AGENDA

SEISMIC MONITORING ADVISORY COMMITTEE

May 10, 2021 at 9:30 A.M.

Join Zoom Meeting

<https://lakecounty.zoom.us/j/91926032724?pwd=UHBKUlhoUktyZiFsRnJyRjhaSFZlQT09>

Meeting ID: 919 2603 2724

Passcode: 097747

- I. Introductions
- II. Approval of SMAC minutes from **November 9, 2020 meeting**
- III. Southeast Geysers Effluent Pipeline (SEGEP) Operations & Northern California Power Agency Update – Ed Voге, NCPA
- IV. Santa Rosa Geysers Recharge Project (SRGRP) Update & Calpine Update - Craig Hartline, Calpine Corporation
- V. Report from CALGEM – California Geologic Energy Management Division – Amar Rao
- VI. Report on US Geothermal - Western Geo Power– Scott Nichols
- VII. Anderson Springs Community Service District – Rose Knudsen
- VIII. Anderson Springs Public Input – Jacquelyn Bartlett
- IX. Cobb Area Water – Ben Murphy
- X. Cobb Area Public Input – Robert Stark
- XI. Middletown Community Input – Linda Diehl Darms
- XII. General Public Input
- XIII. Schedule Next Meeting for _____
- XIV. Adjournment

SEISMIC MONITORING ADVISORY COMMITTEE (SMAC) Monday, November 9, 2020

Virtual Meeting Due to COVID-19 Concerns

<https://lakecounty.zoom.us/j/96384840150?pwd=Qk5KdWFhZFUrNVpidllUVDVrOEo0Zz09>

Meeting ID: 963 8484 0150

Passcode: 656001

MINUTES

Meeting Called to order by Jan Coppinger, Committee Chair (Lake County Special Districts) at 9:30 A.M.
Minutes recorded by Lori Baca and transcribed to Draft Minutes.

I. Introductions

Introductions conducted by Jan Coppinger:

Present: Jan Coppinger, Committee Chair (Lake County Special Districts), Craig Hartline (Geysers Power Company, LLC), Bill King (Calpine), Ed Voge (Northern California Power Agency), Scott Nichols (Western Geo Power) Lori Baca (Lake County Special Districts)

II. Approval of SMAC minutes from December 12, 2019 meeting

Motion made by Craig Hartline to approve the minutes, second by Scott Nichols, all in favor. Motion carried.

III. Update of SE Geyser Pipeline Operations, Ed Voge (*Figures 1-7*)

- Historical SE Geysers Effluent Pipeline Deliveries To The Geysers
 - Total Daily Delivery = 62.06 billion gallons at an average rate of 5,145 gpm
- **Reporting period, April 1 2020 – September 20, 2020**
 - Average Daily Injection = 5.65 MGD or 3,924 gpm
 - SEGEP Availability = 95.6%
- Observed Seismicity
 - The USGS Recorded 50 Seismic Events of Magnitude 1.5 and Greater, this is up from the previous six month reporting period.
 - Steam Production for the area in the reporting period was 18.29 billion pounds mass for this reporting period. This value is up by 36.7% from the previous reporting period.
- Seismic Activity in The Geysers (KCGRA)
 - 309 events of magnitude 1.50 were recorded for this reporting period. There were 3 events of magnitude 3.0 or greater. The

largest event was magnitude 3.97 which occurred on July 5, 2020. Figure 6 shows the trends of seismic events for the Geysers since 2010 while Figure 7 shows the locations of the events for the last six months.

There was more discussion on each figure noted above. Please see presentation on Calpine website for additional data details

IV. Geysers Power Company, LLC Report, Craig Hartline (Figures 1-62)
Reporting period, April 1, 2020 – September 30, 2020

- Calpine is now called Geysers Power Company, LLC
- Geysers Geothermal Field and Nearby Communities
- Geothermal Baseload Renewable Power
- Seismic Monitoring Networks
 - USGS/ Northern California Seismic Network
 - LBNL/ Geysers Power Company, LLC Seismic Monitoring Networks
 - Field-wide Seismic Analysis
 - Field-wide Water Injection and Seismicity
 - Water Injection and Induced Seismic Animations
 - LBNL/ Calpine Strong Motion Network
 - Strong Motion Data Access and Analysis
 - Community Hotline
- 3D Structure Model Building
 - Fault/Fracture Analysis
- Additional Seismic Monitoring and Research
- New Water Injection Wells and Induced Seismicity Response
- Introduced Dr. Roland Gritto from Array Information Technology.

There was much discussion on each figure noted above. Please see presentation on Calpine website for additional data details.

V. Report on CALGEM, Amar Rao

Present. Amar mentioned that during the pandemic they transitioned to remotely witnessing most of the tests and procedures. Amar also clarified that DOGGR is now called California Geologic Energy Management Division (CALGEM). In the last six months they have had three permits issued. One re-work permit (take existing well and improve condition) two new drills McKinley 17 and LF 51 and four wells completed.

VI. Report on US Geothermal – Western Geo Power, Scott Nichols

Scott Nichols was not present for the second half of the virtual meeting.

VII. Anderson Springs Community Service District, Rose K

Rose Knudsen was not present

VIII. Cob Area Water, Ben Murphy

Not Present

IX. Middletown Community Input - Linda Diehl Darms

Not Present

- X. **Anderson Springs Public Input - Jacquelyn Bartlett**
Jacquelyn Bartlett was not present for the second half of the virtual meeting
- XI. **Cobb Area Public Input, Robert Stark**
Not present
- XII. **Schedule Next Meeting for Monday, May 10, 2020** Motion made to schedule future meetings on the second Thursday in May and December, all in favor for next meeting date.
- XIII. **General Public Input – None to report**
- XIV. **Jan Coppinger – Jan announced her retirement**
- XV. **Adjournment**
Zoom meetings are 45 minutes each. Meeting ended at approx. 11:00 A.M.

Next Meeting for Monday, May 10, 2021

Meeting Agenda and Full Presentations are available online at:
<http://www.geysers.com/smac.aspx>