

**DOCKETED**

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<b>Project Title:</b>	Morton Bay Geothermal Project (MBGP)
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Memorandum

**To:** Commissioner Noemi Gallardo, Presiding Member  
Commissioner Andrew McAllister, Associate Member

**Date:** August 17, 2023

**From:** California Energy Commission  
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**Subject: ISSUES IDENTIFICATION REPORT AND PROPOSED SCHEDULE FOR THE MORTON BAY GEOTHERMAL PROJECT (23-AFC-01)**

In their *Notice of Joint Public Site Visits, Joint Environmental Scoping Meeting and Informational Hearing, and Committee Orders* filed August 9, 2023 (TN 251545), the Committees for the Morton Bay Geothermal Project, the Elmore North Geothermal Project, and the Black Rock Geothermal Project ordered California Energy Commission (CEC) staff to file no later than August 17, 2023, "a proposed schedule for conducting the certification process and an Issues Identification Report [IIR] summarizing the major issues identified to date and what additional information is necessary to resolve them." Further, the Committees ordered applicant responses to staff's schedule and IIR by August 24, 2023.

**PROJECT DESCRIPTION**

The proposed Morton Bay Geothermal (MBGP) electricity generating facility would have a maximum continuous rating of roughly 157 megawatts (MW) gross output, with an expected net output of roughly 140 MW. The facility would deliver power via a proposed 3.2-mile transmission line (Preferred Route) to a proposed Imperial Irrigation District (IID) switching station to be constructed near the intersection of Garst Road and West Sinclair Road.

The project is composed of the steam turbine generator system, a geothermal fluid processing system, cooling towers, production and injection wells, well pads, pipelines, fluid and steam handling facilities, a solids handling system, a Class II surface impoundment, a service water pond, a stormwater retention basin, process fluid injection pumps, and power distribution centers. Dedicated construction laydown and parking areas would be located adjacent and serve the project site. Borrow pits and construction camps would be in the vicinity and designed to serve all three projects.

**CEC STAFF DISCOVERY EFFORTS**

Staff commenced discovery upon receiving confirmation of the Executive Director's recommendation that the application be considered complete at the July 26, 2023, Business Meeting. Data Request Set 1 is expected to be complete the week of August

28. Staff anticipates data requests covering the following technical areas: *Air Quality, Alternatives, Biological Resources, Cultural and Tribal Cultural Resources, Geology/Paleontology, Minerals, Land Use, Socioeconomics, Transmission System Engineering, Transportation, and Water Resources.*

### **POTENTIAL MAJOR ISSUES**

This portion of the report contains a discussion of the potential major issues that staff has identified to date. Other potentially interested parties have not yet identified their concerns to staff. In identifying potential major issues, staff reviewed the AFC and any additional documentation provided by the applicant or others, and assessed whether any of the following circumstances could occur:

- Potential significant impacts that may be difficult to mitigate;
- Potential areas of noncompliance with applicable laws, ordinances, regulations, or standards (LORS);
- Areas of conflict between the parties; or
- Areas where resolution may be difficult or may affect the schedule.

Based on staff's analysis of the project as presently described in the docket, staff would like to draw the Committee's attention to potential issues in the technical areas of Cultural Resources/Tribal Cultural Resources and Water Resources which could significantly affect staff's schedule for preparing its Preliminary Staff Assessment (PSA). Given the status of discovery, staff is unable to determine whether additional issues exist in the rest of the technical areas to be addressed in the PSA.

### **CULTURAL RESOURCES/TRIBAL CULTURAL RESOURCES**

Staff has identified two major issues to date concerning the proposed MBGP. These are the quality of the applicant's cultural resources survey coverage and identification of tribal cultural resources.

#### **Cultural Resources Survey Coverage**

In the cultural resources' surveys, sizable portions of the applicant's archaeological study area were inaccessible or had effectively no ground surface visibility. Staff's concern is that field studies (such as archaeological, historic architectural, and ethnographic surveys) verify or update the conditions reported in previous studies and identify previously unnoticed cultural resources.

For archaeological resources, a current and effective pedestrian survey is critical to assess cultural and tribal cultural resources in the study area. The inability of the applicant to survey significant portions of the project area calls into question the completeness of the archaeological survey and hampers impact assessments for cultural and tribal cultural resources. Previously inaccessible portions of the archaeological survey area should be surveyed as soon as possible to complete the archaeological survey.

Furthermore, the effectiveness of the pedestrian survey in a study area depends on the visibility of archaeological resources. Vegetative ground cover, whether natural or agricultural, can render archaeological materials invisible to the surveyors, unless the surveyors use additional methods to improve the chance of discovery. Additional methods might include clearing ground cover at regular intervals, excavation of test pits, remote-sensing survey, or simply returning to the study area when ground cover would be less of an impediment (such as after a crop is harvested).

The poor-visibility portions of the proposed MBGP project were covered in agricultural crops to such an extent that only 10 percent or less of the surface was visible to the applicant's archaeologists (Jacobs 2023d, Appendix 5.3A, page 47). These areas include the borrow pit at Hatfield and West Sinclair roads, the well pad along the coast of the Salton Sea, approximately half of the borrow pit east of the Alamo River, and part of the construction camp southwest of the Cal Energy generation facility (Jacobs 2023d, Appendix 5.3A, Figure 6-5).

The lack of surface visibility in these areas of the proposed project calls into question whether the archaeological survey missed archaeological resources on the ground surface. The proposed MBGP is near three recorded cultural resources, including a tribal cultural resource and archaeological sites. Staff has prepared data requests (Set 1, in preparation) for the applicant to close this gap in the field assessment of cultural and tribal cultural resources.

### **Identification of Tribal Cultural Resources**

Staff's review of the AFC indicates that identification of tribal cultural resources and the proposed MBGP's potential impacts on them are incomplete. A letter mailed to the applicant's consultants on behalf of Carmen Lucas (Kwaaymii Laguna Band of Mission Indians), disclosed, "Please also know that the Project areas are in or near the Southeast Lake Cahuilla Active Volcanic Cultural District. This district encompasses several features with tribal cultural value including the Obsidian Butte area, the two sets of mud pots, and other features." (Jacobs 2023d, Appendix 5.3A-C.) The AFC does not otherwise discuss the Southeast Lake Cahuilla Active Volcanic Cultural District.

Staff proposes to work with affiliated California Native American tribes, including the Kwaaymii Laguna Band of Mission Indians, to identify and assess tribal cultural resources (such as the Southeast Lake Cahuilla Active Volcanic Cultural District) that the MBGP could affect. The CEC has the responsibility to consult with tribes pursuant to the California Environmental Quality Act and the CEC's Tribal Consultation Policy. Since the identification of tribal cultural resources relies on tribal input, staff concludes that it would be most efficient if staff completed the analysis of tribal cultural resources, rather than requesting the applicant to do so.

Staff has already initiated the consultation process with affiliated tribes, having mailed letters offering consultation in early August. Staff is well prepared to conduct this work.

## **REFERENCES CITED**

Jacobs 2023d – Jacobs (TN 249724). Morton Bay Geothermal Project AFC, Volume 2, Appendix 5-3 Cultural Resources, dated April 18, 2023. Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=23-AFC-01>

## **WATER RESOURCES**

Staff is concerned about the combined water demand of 13,165 acre-feet per year (AFY) for the three projects, as identified in the Morton Bay AFC (5,560 AFY), Elmore North AFC (6,480 AFY), and Black Rock AFC (1,125 AFY), with respect to Imperial Irrigation District's (IID's) ability to provide this water demand and the impact on regional water supply.

Staff's initial analysis of the issue reveals that IID's Interim Water Supply Policy (IWSP) for Non-Agricultural Projects (IID 2009) designates 25,000 AFY for non-agricultural use. This designation is not an actual reserved amount of water that currently exists, but may be available upon request by implementing conservation and efficiency programs. As of July 2023, 5,380 acre-feet (AF) has already been committed by water agreement, leaving a remainder of 19,620 AF for all other potential non-agricultural projects (IID 2023), including the proposed Morton Bay, Elmore North, and Black Rock geothermal projects. The combined water demand for the proposed projects constitutes about two-thirds of the remaining non-agricultural designation.

IID allocations from the Colorado River, its sole water source, are likely to decrease in the future based on historical trends of Colorado River flow. Based on water agreements and treaties, the allocation of lower basin Colorado River water (9.0 million AFY) is split among California, Arizona, Nevada and Mexico. California's allotment is 4.4 million AFY, while IID's portion is capped at 3.1 million AFY (USDOI 2003) or 70 percent. In 2022, releases from Hoover Dam totaled 8,742,390 AF, which would be a deficit of 257,610 AF when compared to total lower basin water user allotments. Among the three lower basin states, California was the only water user to exceed its allotment in 2022 by over 24,000 AF, while water deliveries to Arizona and Nevada were 72 and 74 percent of their respective allotments (USBR 2023).

On May 22, 2023, the lower Colorado River basin states submitted a letter to the U.S. Bureau of Reclamation proposing a plan (Lower Basin Plan) to conserve at least 3 million AF of water deliveries between 2023 and 2026, with 1.5 million AF in 2024 (Lower Division States 2023). The proposed reduction is to prevent the Colorado River System's reservoirs from falling to critically low elevations that would threaten water deliveries and power production (Arizona Mirror 2023). According to a Holtville Tribune article (Holtville Tribune 2023), IID announced increasing water conservation to 250,000 AFY as part of the Lower Basin Plan, voluntarily reducing its water use to 2.85 million AFY.

Given that historical trends suggest that water demand can be expected to grow as a result of future development and exceed the Colorado River basin's capacity to supply

water, CEC staff has these current concerns for the applicant to address regarding water supply for the proposed projects:

1. How does IID use water efficiency conservation programs to provide water for non-agricultural projects, such as the proposed projects?
2. How will IID conserve water to honor the Lower Basin Plan and how will this affect the proposed projects?
3. If the availability of lower Colorado River basin water continues to decrease, how will IID adapt and how will this affect the proposed projects?

### **REFERENCES CITED**

Arizona Mirror 2023 – Arizona Mirror. Arizona, California and Nevada Announce a Plan to Cut Colorado River Usage for 3 Years. Article dated May 22, 2023. Available online at: <https://www.azmirror.com/2023/05/22/arizona-california-and-nevada-announce-a-plan-to-cut-colorado-river-usage-for-3-years/>

Holtville Tribune 2023 – Holtville Tribune. Plan for Colorado River & Lake Mead water conservation. Article dated May 22, 2023. Available online at: <https://holtvilletribune.com/2023/05/22/iid-gm-comments-lower-basin-plan-for-colorado-river-lake-mead-water-conservation/>

IID 2023 – Imperial Irrigation District (IID). E-mail communication between Justina Gamboa-Arce (IID) and Abdel-Karim Abulaban (California Energy Commission). 5:38 p.m. July 25, 2023

IID 2009 – Imperial Irrigation District (IID). IID Interim Water Supply Policy for Non-Agricultural Projects. Adopted September 9, 2009. Available online at: <https://www.iid.com/home/showpublisheddocument/9599/638108689553970000>

Lower Division States 2023 – Colorado River Basin States Representatives of Arizona, California, and Nevada (Lower Division States). Letter to the U.S. Bureau of Reclamation proposing the Lower Basin Plan. dated May 22, 2023. Available online at: <https://doi.gov/sites/doi.gov/files/lower-basin-plan-letter-5-22-2023.pdf>

USBR 2023 – U.S. Bureau of Reclamation (USBR). Colorado River Accounting and Water Use Report: Arizona, California, and Nevada, Interior Region 8: Lower Colorado Basin. May 15, 2023. Available online at: <https://www.usbr.gov/lc/region/g4000/4200Rpts/DecreeRpt/2022/2022.pdf>

USDOJ 2003 – U.S. Department of Interior (USDOJ). Colorado River Water Delivery Agreement, Federal Quantification Settlement Agreement, approved October 10, 2003. Available online at: <https://www.iid.com/home/showpublisheddocument/825/635648001335730000>

## PROJECT SCHEDULE

As CEC staff is currently gathering information, staff has produced an estimated schedule for publication of the PSA. Staff will communicate updates regarding the progress of its analysis in future status reports.

Staff recommends that the Scheduling Order for this proceeding include language reflecting the significant amount of discovery anticipated in this proceeding. The recommended language would state that publication of the PSA will occur no later than 60 days after staff notifies the Committee in a status report that staff has received complete and satisfactory answers to its data requests and thus has no further data requests.

Staff proposes the following schedule:

Application deemed complete	7/26/2023
Data Request Set 1 filed	TBD, (Anticipating 8/29/2023)
Tribal Consultation Letters mailed	8/1/2023
Staff Memo re: Issue ID and Schedule filed	8/17/2023
Data Requests Set 2 filed	TBD
Committee Info Hearing and Site Visit	8/31/2023
Staff's PSA published (60 days after staff acknowledgement that it has no further data requests)	TBD
Deadline for comments on staff's PSA (45 days per CEQA) and last day to intervene	TBD
Staff files FSA including responses to comments on PSA (60 days after comment deadline)	TBD
Evidentiary hearing related testimony and activities	TBD
Committee proposed decision	TBD
Commission Decision at Business Meeting	TBD