



Geothermal Non-Technical Barriers to Development

Stakeholder Engagement Overview

Interviews with Federal, State, and Local
Agencies in California

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Agencies Interviewed in California

Federal Agencies

- Department of the Interior, Bureau of Land Management (BLM) (El Centro Field Office)
- U.S. Army Corps of Engineers (UACE)
- U.S. Fish and Wildlife Service (USFWS)

State and Local Agencies

- California Dept. of Fish and Wildlife (CDFW)
- California Energy Commission (CEC)
- California Geologic Energy Management Division (CalGEM)
- Imperial County Planning and Development Services (ICPDS)
- Imperial Irrigation District (IID)

Key Themes Identified

- **Permitting Challenges**
- **Coordination Between Agencies**
- **Environmental Concerns**
 - Protected Species
 - Water Use/Rights
 - Restoration/Mitigation
- **Ancillary Activities**
 - Critical Minerals
 - Desalination

Permitting Challenges

- Reduced geothermal development over the past 20 years has resulted in a loss of institutional knowledge.
- Agencies are issuing permits for many types of projects, with geothermal being a very small percentage of the workload. Staff resources are limited.
- Permitting steps are not streamlined between agencies, with each agency having a different process.
- There is a lack of knowledge from developers on how to best apply for permits – information is often lacking, resulting in delays.
- Remote work during the pandemic has made communication across agencies more challenging - led to slower processing timeframes. Often staff don't have access to needed paper files that are located at the office.

Coordination Between Agencies

- Some agencies have more overlap in responsibilities (i.e., CDFW and FWS), making coordination more common.
- Staff at all agencies don't always understand the role that other agencies play in the permitting process.
- Staff retirements, temporary details, and transfers can result in a loss of contacts/relationships at each agency.
- We received contradictory statements from various county- and state-level agencies on the level of coordination that takes place.

Environmental Concerns

Protected Species

- Desert pupfish (both federally and state listed)
- Burrowing Owls
- Yuma & Ridgeway Rails
- Migratory birds
- Flat-Tailed Horned Lizard

Sensitive Habitats

- Stream or riparian habitats
- Desert pupfish habitat

- Areas closer to the Salton Sea have a higher number of biological resource concerns.
- Limited development has been done on the playa of the Salton Sea, so potential challenges for biological resources are not well known.

Environmental Concerns

Water Use/Rights

- Water is always a concern in this arid desert environment
- Limited development has been done on the playa of the Salton Sea, so potential challenges for biological resources are not well known.
- USFWS is working to manage the water coming out of the agricultural drains to put into the Salton Sea or to create an attractive habitat for birds.
- As water levels in the Salton Sea continue to decrease, the salinity is rising and will eventually fail to support fish resources, therefore eliminating the bird species food sources.

Environmental Concerns

Restoration/Mitigation

- Because of the overlap between state and federal lists of sensitive species, coordination between agencies often occurs for larger conservation plans (e.g. Coachella Valley)
- The Salton Sea Restoration Project is very large (15k acres) and involves numerous federal, state, and local agencies.
- USFWS is working with BLM and the State in developing groundwater managing wells and other habitat monitoring projects and looking to find ways to sustain the surface flows.

Ancillary Activities

Critical Minerals, Desalination, etc.

- If done correctly, lithium could be mined from the Salton Sea and have a secondary effect on the area in decreasing dust.
- There currently no large-scale efforts to develop a desalination plant in the Salton Sea.
- Local residents worry that if effort is put into desalinating water from the Salton Sea, the water will then be sent elsewhere rather than being used to maintain levels of the Salton Sea or contribute to the local habitat restoration levels.

Thank You!

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