

RECORD OF DECISION

Decision

After careful consideration of all perspectives and factors, balancing the need for renewable energy, the need to protect air quality and biological, cultural, and visual values, I have concluded that the interests of the public would be best served by selecting Alternative B. Therefore, it is my decision to lease all of the BLM-managed lands, totaling 3,322 acres, covered by federal lease applications CACA 043965 and CACA 046142.

The leasing of these lands for geothermal resources would be subject to standard lease stipulations (FPEIS Section 2.2.2), and Best Management Practices (FPEIS Appendix D).

Signature and Date

/s/ Daniel Steward
Daniel Steward
Acting Field Manager, El Centro Field Office

December 2, 2009
Date

ABBREVIATIONS AND ACRONYMS

BLM	Bureau of Land Management
BMPs	best management practices
CDCA	California Desert Conservation Area
CFR	Code of Federal Regulations
dBA	A-weighted decibels
FLPMA	Federal Land Policy and Management Act
FPEIS	Final Programmatic Environmental Impact Statement
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
ROD	Record of Decision
SWPPP	Stormwater Pollution Prevention Plan

1. INTRODUCTION

The Final Programmatic Environmental Impact Statement (FPEIS) for Geothermal Leasing in the Western US was prepared to analyze and disclose the potential environmental impacts on the natural and human environment that could result from the proposed leasing of Federal geothermal resources. The FPEIS, along with the Record of Decision, may be viewed at the following link:

http://www.blm.gov/wo/st/en/prog/energy/geothermal/geothermal_nationwide.html.

Chapter 12 of the FPEIS specifically considered approximately 3,322 acres of Bureau of Land Management (BLM)-managed public lands on the east side of the Salton Sea, located in Imperial County, California (Figure 1-1). The minerals on these lands, including the geothermal resources, are managed by the BLM El Centro Field Office.

The FPEIS was released to the public on October 24, 2008, with the publication of the Notice of Availability in the Federal Register (FR Vol.73, No. 207, Pg 63430). This Record of Decision (ROD) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality regulations (40 Code of Federal Regulations (CFR) 1500-1508) implementing NEPA.

The decision before the BLM in this ROD is whether to approve, disapprove, or approve with modifications the Proposed Action as described in Chapter 12 of the FPEIS; that is, to approve or reject non-competitive geothermal leases currently before the BLM and whether any special conditions of approval should be attached to activities related to the Federal development permits.

The decision described in this ROD has considered the environmental, economic and social impacts of the proposed leasing of Federal geothermal resources found in the leasing area. It has also considered comments received from the public and other Federal, State, local and Tribal entities and BLM's multiple use and sustained yield mandate as found in the Federal Land Policy and Management Act (FLPMA).

1.1 What the EIS Provides

The FPEIS analyzed the impacts of leasing geothermal resources managed by the BLM in two areas, comprising 3,322 acres, east of the Salton Sea in Southern California. Given that the purpose of the FPEIS is to address leasing and not development, it analyzes impacts of leasing and not specific impacts, which are more appropriately assessed prior to development. As stated in the FPEIS, the purpose of the proposed action is:

“To complete processing active pending geothermal lease applications and nominations by deciding whether, and under what stipulations, to issue geothermal leases on NFS and public lands.”

The FPEIS considered 19 pending lease applications, which were grouped into seven geographical locations. One of those seven geographical groupings is comprised of the two pending lease applications addressed in this ROD. These are the only pending lease

applications addressed in the FPEIS that occur solely on BLM-administered land (others occur on National Forest System land, or a combination of National Forest System land, BLM-administered land, and private land).

1.2 What the EIS Does Not Provide

The purpose of Chapter 12 of the FPEIS was to determine whether to approve leasing of Federal geothermal resources within the areas covered by Federal lease applications CACA 043965 and CACA 046142. As noted above, the FPEIS did not address or analyze site-specific development or impacts. This approach is consistent with NEPA and BLM procedures because there are no site-specific plans of development before the BLM and to analyze such impacts at this point in time would be speculative. Instead, the FPEIS generally addressed impacts that may occur based upon the reasonably foreseeable development scenario contained within the FPEIS to allow BLM to make an informed decision on the proposal to lease.

1.3 Notice of Modifications

No comments have been received on the FPEIS that modifies the proposed action.

2. ALTERNATIVES CONSIDERED

Two alternatives were considered in the FPEIS, which are described below:

2.1 Alternative A: No Action

Under Alternative A, the BLM would deny the two pending lease applications.

2.1 Alternative B: Leasing with Stipulations

Under Alternative B, the BLM would offer the four sections of land with pending geothermal noncompetitive lease applications.

The geothermal leases would be subject to standard stipulations (Section 2.2.2 of the FPEIS) and Best Management Practices (FPEIS Appendix D).

Additional mitigation measures would be developed as a part of future, site-specific analyses and permitting considerations covering subsequent proposed exploration, development, or utilization activities.

3. MANAGEMENT CONSIDERATIONS IN SELECTING THE PROPOSED ACTION

BLM is required to manage public lands for multiple-use in accordance with FLPMA.

The reasonably foreseeable development scenario contained within Chapter 12 of the FPEIS (Section 12.2.4) described the amount of land that would be affected by geothermal energy development using assumptions for infrastructure from other similar projects. Under these assumptions, approximately 50 acres would be disturbed by development, including well pads, pipeline routes, access roads, and two power plant sites for the duration of the projects.

It is possible that the geothermal development within the leasing area could last 30 years or more depending on the quality and extent of the geothermal resources.

This decision is consistent with the 1980 California Desert Conservation Area (CDCA) Plan, as amended, which designated the lease area Multiple Use Class “Unclassified”. The Unclassified designation allows for management of such lands on a case-by-case basis. The decision is also consistent with the Western Colorado Route of Travel plan, which amended the CDCA plan in 2003 to designate and manage off-road trail use in the region.

The FPEIS assessed (Section 12.3.7) the impacts to air quality and found that the proposed action will not adversely affect air quality in the subject air basin; however, future site-specific actions do have the potential to result in air quality impacts and would be assessed at such time that a specific project proposal is available.

The decision will not affect designated wilderness areas or areas of critical environmental concern.

Lastly, I have determined that this decision will not cause undue or unnecessary impact to the public lands.

4. APPROVED MITIGATION MEASURES

Measures to avoid or minimize environmental impacts are included in the FPEIS where practicable. The following list of mitigation measures will be used as appropriate in subsequent environmental documents developed as a result of development proposals.

4.1 Mitigation Measures and Best Management Practices

Geothermal resource leases are subject to the standard stipulations and lease terms. The current terms, which are subject to change, are found on standard geothermal lease form 3200-24. The right to explore, develop, and utilize leased geothermal resources is inherent in the lease, subject to stipulations, legal requirements, and terms and conditions on permits. Specific conditions of approval and other mitigation measures would be required during subsequent authorizations. These include timing and location of activities during the development phases. In addition, BLM and other governmental agencies may require specific permits.

To minimize adverse impacts to resources and uses in the proposed action area, the following Best Management Practices (BMPs) and mitigation measures would be applied to future site-specific Plans of Operation, which are required for surface-disturbing activities. The BMPs provide guidance for lessees on how to meet Section 6 of the standard lease terms for this project area. Depending on site-specific conditions and individual development plans, the following BMPs and mitigation measures may be required. Others could be identified during site-specific analyses.

General

These BMPs would help reduce or eliminate impacts to multiple elements of the human environment. Many BMPs would also minimize operator costs.

- Centralize production facilities;
- Bury distribution power lines in or adjacent to access roads;
- Use common utility or rights-of-way corridors, where practicable;
- Conduct interim reclamation of disturbed areas not needed for operation;
- Recontour all disturbed areas in final reclamation to original contours or to contours which blend with the surrounding topography;
- Revegetate reclaimed areas to restore the area to the original vegetative species composition (including annual plant seed bank, which includes several sensitive species); and/or
- Use or improve existing roads to minimize new construction.

Air Quality

- Fugitive dust emissions from roads would be mitigated by periodic watering.

Noise

- The power plants would be sited using terrain to further shield noise impacts to the greatest extent possible.
- Whenever reasonably possible, geothermal well drilling or major facility construction operations proposed within 1,000 feet of residential areas would be restricted to non-sleeping hours (7:00 am to 10:00 pm), or appropriate, reasonable methods would be employed to limit the hourly average noise levels at the residences to 60 A-weighted decibels (dBA) or below.

Topography, Geology, Geological Hazards

- A detailed geotechnical analysis would be performed prior to the construction of any structures so they could be sited to avoid any hazards from subsidence or liquefaction (i.e., the changing of a saturated soil from a relatively stable solid state to a liquid during earthquakes or nearby blasting).

Fish and Wildlife

- Above ground pipelines would be insulated.
- All pipelines outside of a power plant site or other fenced areas would be elevated at least 12 inches (0.3 meters) above the ground surface to allow wildlife mobility and prevent interference with natural drainage.

Special Status Species

- Where feasible, vehicles would use existing roads. Before new drilling pads or other land disturbance is conducted, surveys of the affected areas would be conducted to identify any special status species populations to be avoided in the area.

Cultural Resources

- Before any specific permits are issued under leases, treatment of cultural resources would follow the procedures established by the Advisory Council on Historic Preservation for compliance with Section 106 of the National Historic Preservation Act.

- A pedestrian inventory would be undertaken of all portions that have not been previously surveyed or are identified by BLM as requiring inventory to identify properties that are eligible for the National Register of Historic Places.
- Those sites not already evaluated for National Register of Historic Places eligibility would be evaluated based on surface remains, subsurface testing, archival, and/or ethnographic sources. Subsurface testing would be kept to a minimum whenever possible if sufficient information is available to evaluate the site or if avoidance is an expected mitigation outcome.
- Recommendations regarding the eligibility of sites would be submitted to the BLM, and a treatment plan would be prepared to detail methods for avoidance of impacts or mitigation of effects. The BLM would make determinations of eligibility and effect and consult with the State Historic Preservation Office as necessary based on each proposed lease application and project plans.
- Avoidance of impacts through project design would be given priority over data recovery as the preferred mitigation measure. Avoidance measures include moving project elements away from site locations or to areas of previous impacts, restricting travel to existing roads, and maintaining barriers and signs in areas of cultural sensitivity. Any data recovery will be preceded by approval of a detailed research design, Native American consultation, and other requirements for BLM issuance of a permit under the Archaeological Resources Protection Act.

Visual Resources

- Power plants would be sited using terrain to obstruct visual impacts to the extent possible.
- All facilities, including geothermal production and injection pipelines, wellheads, powerplants, maintenance buildings, etc. would be painted a color that blends into the natural setting.

Human Health and Safety/Hazardous Materials

- Mitigation measures for hazardous materials generated by geothermal exploration and development would be specified in authorized use permits and would require the responsible party to take corrective actions(s) as required to comply with Federal, State, and local regulations.

4.2 Construction Design Measures

Air Quality

- Hydrogen sulfide emissions would be abated, for example, through the injection of hydrogen peroxide and sodium hydroxide into the test line.

Soils

- Prior to geothermal exploration and development, a complete subsurface geotechnical investigation would be conducted to analyze the soil and geologic conditions. The investigation would evaluate and identify

potential geologic hazards and would provide remedial grading recommendations, foundation and slab design criteria, and soil parameters for the design of geothermal power infrastructure. The following standard construction measures would be implemented as part of geothermal exploration and development:

- Standard soil and geotechnical engineering investigations would be conducted to ensure foundation stability.
- Before on-site grading, an erosion control plan would be prepared by an erosion control specialist certified by the International Erosion Control Society to adequately control erosion during construction.
- Proposed fill slopes would be no steeper than 2:1 (horizontal to vertical). Proposed cut slopes would be determined by soil characteristics.
- Safe allowable slope heights would generally be limited by the shear strength characteristics of the particular soil or rock conditions present.
- Grading would be performed so all identified compressible materials would be removed and recompacted, and fill soils would be placed and compacted to at least 90 percent relative compaction.
- All graded pads would have drainage swales to direct stormwater runoff or irrigation runoff away from structures or the tops of slopes to control drainage facilities. No stormwater would be allowed to discharge over the top of cut or fill slopes.
- If perched groundwater were identified as a potential concern during the subsurface investigation, canyon sub-drains would be installed after alluvial removal and before the fill placement.

Water Resources

- Proposed geothermal exploration and development would comply with the Clean Water Act as implemented by the State Water Resources Control Board’s National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, a general permit for construction activities, and the associated Order No. 92-08-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity. Projects of 1 acre or more are subject to this general construction permit process.
- Developers would be required to eliminate or reduce non-stormwater discharges to stormwater systems, develop a Stormwater Pollution Prevention Plan (SWPPP) prior to beginning construction, inspect all stormwater control structures, and implement other pollution prevention measures, such as applicable BMPs and conservation measures during construction.

- The SWPPP would include the specific measures and techniques for implementation to protect the project sites and adjacent areas from erosion and deposition during site grading, construction, and post-construction stabilization of sediment on the site.
- The contractor would provide a copy of the SWPPP for the various crews performing work on the construction site, and a copy would be kept on-site during the project to satisfy the requirements of the NPDES permit. A draft of this SWPPP would be forwarded to the BLM for review prior to its finalization.

Recreation

- Any necessary temporary route closures for construction would be coordinated with BLM before beginning construction.
- Signs directing vehicles to alternative park access and parking would be posted in the event construction temporarily obstructs parking areas near trailheads.
- Signs and/or flagging that advise recreational users of construction activities would be posted in coordination with BLM. Whenever active work is being performed, the area should be posted with “construction ahead” signs on any adjacent access roads or trails that might be affected.
- Construction-related traffic would be restricted to routes approved by the authorized agency(ies). Construction of new access roads or cross-country vehicle travel would not be permitted unless prior written approval is given by the authorized officer. Authorized roads used by the proposed action will be rehabilitated when construction activities are complete. The agency(ies) would work with the proponent to develop site-specific standards for route reconstruction.
- Whenever possible, construction activities would be avoided during high recreational use periods.

Transportation and Traffic

- The following measures would be considered during implementation to minimize traffic safety issues. With the incorporation of these measures, no significant impacts to the local roadway systems would occur.
- The lessee would be required to file a traffic control plan indicating how and where construction traffic would be routed and traffic control measures would be emplaced to ensure accidents do not occur.
- Construction-related traffic would be restricted to routes approved by the BLM.

5. MONITORING

The BLM will monitor construction and operations to ensure that impacts are within those disclosed in the FPEIS and future site-specific environmental documents.

6. PUBLIC INVOLVEMENT

6.1 Scoping

During June through September 2007, the BLM and the Forest Service conducted a formal scoping process for the FPEIS, which included site specific leasing at the two lease areas described in Chapter 12. BLM invited the participation of affected Federal, state, and local agencies; Indian tribes; and other interested persons to learn more about the proposals and to make comments. Based on comments during scoping, the BLM identified the environmental issues that were analyzed in the Draft and Final PEISs. The scoping comments also assisted the BLM in determining the appropriate depth of analysis for each issue, and which issues were outside the scope of the proposed action.

6.2 Draft PEIS

The BLM released the Draft PEIS for public comment with the publication of a Notice of Availability in the Federal Register: June 13, 2008 (Vol. 73, No. 115: Page 33802). Thirteen informational public meetings were held across the 12-state project region. The closest meetings to El Centro were held in Sacramento, CA and Tucson, AZ during July 2008. Major points for the Draft PEIS were presented at these meetings and questions regarding the planning process and Planning Area were answered by BLM representatives.

6.3 Public Comments on Draft EIS

A total of 75 comment letters were received by the BLM by the close of the public comment period. Only one substantive comment was received in relation to the El Centro lease areas. The Wilderness Society recommended approval of the El Centro leases with the condition that the screens (closed areas, stipulations, etc.) listed in Chapter 2 of the FPEIS be implemented. The Wilderness Society stated *“This will protect the other resources of this area while still allowing development of the geothermal resource and the benefits to climate change from renewable energy development.”*

6.4 Tribal Consultation

In September 2007 the Bureau of Land Management (BLM) invited over 400 Tribes into consultation regarding the PEIS. One response, from the Quechan Indian Tribe, was received as of the publication of the Final PEIS in October 2008. The letter from the Quechan Historic Preservation Officer, dated September 10, 2008, expressed concern over geothermal development, and requested that the Quechan be consulted prior to finalizing any decisions regarding geothermal development. The letter and the response are included in Appendix L of the PEIS.

To follow up on the PEIS Tribal consultation, the BLM El Centro Field Office sent out letters informing local Native American Tribes about the PEIS and the need for this office to make a decision about the two pending lease applications that were analyzed in the PEIS. Letters were sent August 6, 2009 to the following Tribes:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Indians
- Cabazon Band of Mission Indians
- Campo Kumeyaay Nation
- Cocopah Indian Tribe
- Ewiiapaayp Band of Kumeyaay Indians
- Fort Yuma Quechan Tribe
- Kwaaymii Laguna Band of Indians
- La Posta Band of Kumeyaay Indians
- Los Coyotes Band of Cahuilla and Cupeno Indians
- Manzanita Band of Kumeyaay Indians
- Santa Rosa Band of Cahuilla Indians
- Santa Ysabel Band of Diegueno Indians
- Torres-Martinez Desert Cahuilla Indians
- Twenty-nine Palms Band of Mission Indians

Follow up calls were made to all Tribes by the BLM El Centro Field Office on November 4, 2009. Comments were received from four Tribes. The Fort Yuma Quechan Tribe sent a letter objecting to the project because of general cultural resource sensitivity in the area. The Kwaaymii Laguna Band of Indians expressed concern that the potential leases be subjected to thorough cultural resource surveys, with the assistance of Native American consultants, prior to any geothermal development. The Agua Caliente Band of Cahuilla Indians requested additional information on the area before the Tribe would comment further, and that information was sent in November 2009. The Campo Kumeyaay Nation expressed concern about programmatic EISs in general, about this PEIS in particular, and about the difference in the breadth and depth of environmental review between leases and rights-of-way. The Campo also requested that Native American consultants be present during cultural resource surveys prior to geothermal development in the proposed lease areas.

7. AVAILABILITY OF THE EIS

Copies of this ROD and the FPEIS are available for download at the “Documents” page of the project website (http://www.blm.gov/geothermal_eis). A paper copy may be requested by contacting the Bureau of Land Management, California Desert District, 22835 Calle San Juan De Los Lagos, Moreno Valley, CA 92553, Attention: John Dalton.

8. APPEAL PROCEDURES

Within 30 days after the date of signature of this decision, an adversely affected party has the right of appeal to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations at Title 43 Code of Federal Regulations, Part 4.411. Follow the procedures as outlined in the Form 1842-1, Information on Taking Appeals to the Board of Land Appeals. Within 30 days after filing an appeal, a Statement of Reasons must be provided to the Board of Land Appeals, list in Item 3 on the form. In addition, please provide

the El Centro Field Office with a copy of the Statement of Reasons. The appellant has the burden of showing that the appealed decision is in error.

9. IMPLEMENTATION DATE

As provided under 43 CFR 3200.5(b), this decision is immediately in full force and effect upon approval by the Authorized BLM officer. The authorized BLM officer for this action is the BLM El Centro Field Manager.

10. CONTACT PERSON

For additional information concerning this decision, please contact:

John Dalton, Project Manager BLM-California Desert District 22835 Calle San Juan De Los Lagos Moreno Valley, CA 92553 Telephone: (951) 697-5311