

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

San Luis Valley Resource Area Geothermal Leasing Resource Management Plan Amendment DOI-BLM-CO-140-2010-14-EA

U.S. Department of the Interior - Bureau of Land Management

Background

In 2008, the United States (US) Department of the Interior (DOI), Bureau of Land Management (BLM) recommended, and the Assistant Secretary—Land and Minerals Management approved, the Record of Decision (ROD) associated with the *Programmatic Environmental Impact Statement (PEIS) for Geothermal Leasing in the Western United States*. The 2008 Geothermal PEIS and ROD were prepared pursuant to the planning requirements of the Federal Land Policy and Management Act of 1976, as amended (FLPMA), and its implementing regulations at 43 Code of Federal Regulations (CFR) Part 1600, as well as the National Environmental Policy Act of 1969 (NEPA), and its implementing regulations at 40 CFR Parts 1500 through 1508.

Decisions in the 2008 Geothermal ROD allocated BLM-administered lands as available for geothermal leasing and development and provided stipulations, best management practices (BMPs), and procedures for geothermal leasing and development. While the 2008 Geothermal ROD amended 14 BLM Resource Management Plans (RMPs) in the State of Colorado, it did not amend the San Luis Valley Resource Area (SLRA) RMP. Therefore, the BLM is considering an amendment to the SLRA RMP that would incorporate the 2008 Geothermal ROD.

FINDING OF NO SIGNIFICANT IMPACT DETERMINATION

Based on review of the San Luis Valley Resource Area (SLRA) Geothermal Resource Management Plan Amendment and Environmental Assessment (EA), I have determined that the Proposed Action to allocate BLM administered lands for geothermal leasing as defined and analyzed in Alternative B is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects from any alternative assessed or evaluated meet the definition of significance in context or intensity, as defined by 43 CFR 1508.27. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project, proposed action, or action alternative.

Context:

The 1991 San Luis Resource Area RMP (SLRA RMP) allocated the majority of BLM administered lands as open with timing limitations with limited areas closed to geothermal leasing (EA Alternative A-No Action). The purpose of amending the SLRA RMP is to better facilitate environmentally responsible geothermal leasing and potential geothermal development

projects in BLM-administered portions of the San Luis Basin, a region along the upper Rio Grande Rift that is recognized for high resource potential by the USGS and Colorado Geological Survey. A BLM planning-level decision consistent with agency policy including best management practices as leasing procedures, defined in the December 17, 2008 Geothermal ROD provides that opportunity.

In addition, the SLRA RMP amendment proposal is needed to protect sensitive species, other resource values, and analyze additional information that was not available at the time the SLRA RMP was approved in 1991. This proposed amendment will inform BLM decision-making regarding appropriate means to reduce adverse impacts from possible geothermal leasing and development on resource values while advancing national and state renewable energy generation goals.

Decisions to be made include:

- Allocation of those BLM-administered surface lands and subsurface mineral estate with geothermal resource potential as closed, open with standard stipulations, or open with major or moderate constraints to geothermal leasing;
- Identification of appropriate stipulations and BMPs; and
- Possible exceptions, waivers, and modifications to lease stipulations; terms and conditions; and conditions of approval (COAs).

To support decision-making, the BLM consulted with the US Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973 (ESA) and the Colorado State Historic Preservation Office under Section 106 of the National Historic Preservation Act of 1966 (NHPA). Further, the BLM consulted with Indian Tribes throughout the plan amendment process and will continue to do so during plan implementation.

Intensity:

The following discussion is organized around significance criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this proposal:

Degree of effect on public health and safety:

The Proposed Action (Alternative B) and Alternative C, would allocate lands for geothermal leasing and define resource protective stipulations to guide leasing and potential future development of subsurface heat flow. Planning-level allocation of lands for geothermal leasing is not a surface disturbing activity. However, it is reasonable to expect resource exploration and potential development, which could affect public health or safety, to occur after a lease is issued and during the 10-year period of a standard lease term. There are several stages of decision making necessary following land use allocation to approve geothermal resource development, each with its own site-specific environmental analysis under NEPA. At each stage, the BLM can issue site specific conditions of approval to protect resource values and health and safety. Geothermal exploration and production on Federal land conducted through leases is subject to terms and stipulations to comply with all applicable Federal and state laws pertaining to various considerations for water quality and quantify, sanitation, tribal interests, sanitation, wildlife, safety, cultural resources, and reclamation.

Unique Characteristics of the Geographic Area:

The SLRA RMP planning-analysis area includes three wilderness study areas (San Luis Hills, Papa Keel, Black Canyon) where leasing is precluded 43CFR 3201.11(h)(1), eight BLM Areas of Critical Environmental Concern (Trickle Mountain, Elephant Rocks, Blanca Wetlands, Ra Jadero Canyon, Los Mogotes, Cumbres and Toltec Railroad, Rio Grande Natural Area), three National Wildlife Refuges (Baca, Monte Vista, Alamosa), three State Wildlife Areas (Russell Lakes, Hot Creek-Poso, Hot Creek), one National Park (Great Sand Dunes), one National Historic Trail (Old Spanish Trail), and one State Park (San Luis Lakes).

The planning area also includes known cultural resources which would be protected by a No Surface Occupancy (NSO) lease stipulation, as well as by site-specific conditions of approval applied to any subsequent permitted surface-disturbing activities. Wetlands in the area would be similarly protected by closure under Blanca Wetlands ACEC and McIntyre Springs and in other areas by NSO and Controlled Surface Use (CSU) lease stipulations and site-specific conditions of approval. There are no identified federal prime or unique farmlands, designated wild or scenic rivers or designated wilderness in the planning and analysis area.

Degree to which effects are likely to be highly controversial:

There are essentially no direct effects on the human or natural environment from planning-level allocation of BLM administered lands for geothermal leasing as defined in the Proposed Action (Alternative B) or Alternative C. Any subsequent proposals for surface-disturbing activities are presently speculative, and would be subject to site-specific environmental analysis. The BLM conducted public involvement in a manner that allowed agency staff to gauge public sentiment and concerns. Scoping identified issues included potential adverse effects to economically important direct geothermal users at Valley View Hot Springs, Joyful Journey Hot Springs, and the San Luis Valley Alligator Farm, water quality and quantity, wildlife habitat, sensitive species, wetlands, State Wildlife Areas, cultural resource protection, and maintenance of high quality views.

The lack of direct effects due to allocating lands for leasing geothermal resources under the Proposed Action (Alternative B) or Alternative C is certain. The degree to which direct, indirect, and cumulative effects are uncertain or involve unique or unknown risks depends on the location of any future geothermal lease, proposal for exploration, or energy development project. Generally, the effects of geothermal exploration and development of geothermal electricity generation through binary closed-loop technologies are not highly uncertain, nor are they characterized by unique or unknown risks. Geothermal development has been occurring in other areas of the western United States for decades. The potential effects of any subsequent proposals for surface-disturbing activities would be subject to site-specific environmental analysis, and based on such information and the BLM's knowledge of the local resource, would be reasonably predictable.

Consideration of whether the action may establish a precedent for future actions with significant impacts:

The allocation of lands for geothermal energy, as defined under the Proposed Action (Alternative B) represents a decision in principle about a future consideration of lands proposed for leasing.

However, the allocation of lands for geothermal leasing under Alternative B and action Alternative C both incorporate best management practices, leasing procedures, and environmental protection stipulations for resource protection. Neither the proposed action nor action alternative will create a precedent for future actions with significant impacts without further opportunity to identify issues and reduce or avoid impacts based on site-specific environmental review.

The BLM San Luis Resource Area Resource Management Plan (1991) allocated the vast majority of the San Luis Valley Field Office federal and split-estate as open for geothermal leasing, subject to existing laws, regulations, formal orders, stipulations attached to the lease form, and the terms and conditions of the standard lease form (see Alternative A-No Action in the EA-RMPA). The issuance of a lease, following the allocation of lands for geothermal leasing as defined in the Proposed Action (Alternative B) or Alternative C, does not authorize any ground disturbing activities to explore for or develop geothermal resources without further application, environmental review, and approval by the BLM.

Consideration of whether the action is related to other actions with cumulatively significant impacts:

There are essentially no cumulative effects of allocating lands as open or closed to geothermal leasing and this action is not connected or related to other actions with cumulatively significant impacts. Anticipated future actions related to geothermal leasing and development are not considered to have significant impacts given the application of protective stipulations and conditions of approval for subsequent ground-disturbing activities. Each stage of development requires additional site-specific environmental analysis prior to issuance of a permit from the BLM.

Scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places:

As described in section 3.7.2 of the EA, the proposed action will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. Per existing stipulations, all eligible and listed cultural resources would be avoided within the proposed lease area.

Threatened or endangered species and their critical habitat:

The allocation of lands for geothermal leasing does not directly affect threatened or endangered species or habitat. These resources would be affected only by development of specific geothermal projects. As described in the EA, the only threatened or endangered species or habitat that could potentially be impacted in the analysis area is Canada lynx. Lynx habitat on BLM administered lands would be protected under Alternatives B or C. Alternatives B and C include lease stipulations and a lease notice for the protection of Gunnison sage-grouse (currently a candidate species) and habitat. A no surface occupancy for Gunnison's Sage Grouse habitat in the northern portion of the planning area is defined in Alternative B. Additionally, threatened or endangered species and habitat would be evaluated on a project-specific basis, as environmental

analyses would be conducted for each of the potential phases of geothermal development activity.

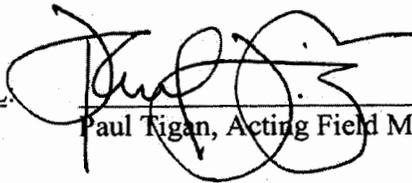
The Proposed Action (Alternative B), as well as Alternative C, includes a lease stipulation in accordance with the Endangered Species Act, Section 7 consultation. In addition, they include a Lease Notice specific to Canada lynx informing a potential lessee of the presence of Canada lynx habitat on the private surface portion of the analysis area. BMP's would be applied as Conditions of Approval to any exploration and/or development permits to avoid, minimize, or mitigate impacts to lynx habitat. It is expected that these measures would effectively minimize impacts on lynx by maintaining habitats and minimizing human caused habitat destruction, degradation, and fragmentation. The lease stipulations and lease notice, in addition to best management practices applied as Conditions of Approval to any subsequent permitting would help to avoid, minimize, or mitigate impacts to Gunnison sage-grouse.

Any effects that threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment:

As described in the EA, neither the Proposed Action (Alternative B) nor Alternative C, violate any known Federal, State, or local law or requirement imposed for protection of the environment. Specialists from BLM San Luis Valley Field Office, as well as representatives from various cooperating federal, state, and local agencies/governments, were involved in preparation of the EA. Officials from Saguache, Alamosa, Rio Grande, and Conejoes Counties were notified of the proposal.

The proposed action conforms with the provisions of NEPA (U.S.C. 4321-4346) and FLPMA (43 U.S.C. 1701 et seq.) and is compliant with the Clean Water Act and The Clean Air Act, the National Historic Preservation Act, Migratory Bird Treaty Act (MBTA) and the Endangered Species Act.

SIGNATURE OF AUTHORIZED OFFICIAL



Paul Tigan, Acting Field Manager

DATE SIGNED: 9/28/2012