



United States  
Department of  
Agriculture

Forest  
Service

Southwest  
Region



# Scoping Document

## Santa Fe National Forest Geothermal Leasing Project

USDA Forest Service  
Santa Fe National Forest  
Santa Fe, New Mexico  
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## **1. Comments Welcome**

The Santa Fe National Forest (SFNF) welcomes your comments on the Santa Fe National Forest Geothermal Leasing Project, which will address geothermal leasing on certain National Forest System (NFS) lands in the Santa Fe National Forest. The Programmatic EIS (PEIS) for Geothermal Leasing in the Western United States (2008) analyzed the effect of allocating lands for geothermal leasing exploration and development in the Western United States. The United States Department of Agriculture, Forest Service (Forest Service) has determined that additional site-specific environmental analysis is needed to supplement the PEIS in order for the Forest Service to make a decision about providing concurrence/consent<sup>1</sup> to the Bureau of Land Management (BLM) to lease lands in the Santa Fe National Forest for the purpose of developing geothermal resources.

The SFNF will prepare an environmental impact statement to analyze the potential effects of geothermal development on 194,910 acres. The decision will be whether to proceed with geothermal leasing and, if so, under what stipulations.

The Forest Service is now seeking public comments specific to the scope of the analysis of the proposed Santa Fe National Forest Geothermal Leasing Project. Comments concerning the range of issues, impacts, and alternatives that should be evaluated in the environmental analysis must be received by June 12, 2015. The draft environmental impact statement is expected in January 2016, and the final environmental impact statement is expected in October 2016.

## **2. Location**

The project area is approximately 194,910 acres, of which approximately 26,212 acres are privately owned, approximately 48 acres are owned by state or other government entities, and approximately 168,650 acres are NFS lands. This includes lands on the Coyote, Cuba, Espanola, and Jemez Rangers Districts of the SFNF (Figure 1: Geothermal Leasing EIS Project Area).

## **3. Leasing Background Information**

The Energy Policy Act of 2005 (Public Law 109-58, August 8, 2005) establishes a goal for the Secretary of the Interior to approve 10,000 megawatts of electricity from non-hydropower renewable energy projects located on public lands. This includes solar, wind, and geothermal. Further, Secretarial Order 3285A1, amended February 22, 2010, establishes the development of environmentally responsible renewable energy as a Department of the Interior priority. The BLM is the Department of the Interior agency that issues geothermal leases. The Forest Service provides consent to the BLM for leases that have been nominated but does not issue geothermal leases. The Forest Service has obligations under Section 225 of the Energy Policy Act to facilitate the development and production of geothermal energy.

Geothermal phases that may occur on National Forest System lands are sequential and can include 1) the applicant acquiring a lease, 2) exploring through geophysical techniques and exploratory wells, 3) developing the field through additional wells if an economic discovery is made, and 4) establishing

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<sup>1</sup> For purpose of this document, the words consent and concurrence have the same meaning.

production through a plant, gathering pipelines, and a distribution network. Leasing regulations state that a National Environmental Policy Act (NEPA) analysis will be carried out at each phase. Issuing leases does not authorize ground-disturbing activities. Future proposals for exploration, development, or production operations would be subject to the appropriate NEPA review before activities are approved for each phase. Consistent with the rights conferred by the lease, future development proposals may be conditioned to minimize impacts on natural and cultural resources.

#### **4. Purpose Of and Need for Action**

The BLM has received expressions of interest in leasing approximately 46,000 acres of Santa Fe National Forest lands for exploration and development for geothermal energy production. The Forest Service must decide whether these lands are available for leasing by the BLM and, if so, under what stipulations for protection of surface resources. The US Geological Survey has identified approximately 194,000 acres of SFNF lands with significant geothermal potential. While the current expressed interest is for only a portion of this area, the entire area plus an additional approximately 900 acres for power transmission will be considered in the analysis in the event of future similar interest.

#### **5. The Proposed Action**

The Forest Service has determined that certain lands within the project area are excluded from geothermal leasing on the basis of existing laws, regulations (see 43 CFR 3201.11), and Executive Orders. These nondiscretionary closures include the following lands:

- Wilderness Areas (none in the project area)
- Jemez National Recreation Area (approximately 28,850 acres)
- East Fork of the Jemez River Designated Wild River under the Wild and Scenic River Act, including a corridor 0.25 mile from the high water mark on either side of the river (approximately 1,162 acres within the Jemez National Recreation Area)

In addition to nondiscretionary closures, the Forest Service has the administrative authority to issue discretionary closures to protect special resource values. About 29,321 acres of NFS lands would be closed (by law, regulations, or other authority) to geothermal leasing within the project area. This represents about 17 percent of the NFS lands in the project area. Figure 1 shows the location of the project area, and Figure 2 shows the no-leasing areas.

Approximately 139,329 acres of the SFNF lands within the project area would be allocated as open to geothermal leasing subject to existing laws, regulations, formal orders, and stipulations attached to the lease form, and the terms and conditions of the standard lease form. Stipulations proposed include no surface occupancy, controlled surface use, and timing limitations.

Lease stipulations are major or moderate constraints applied to a new geothermal lease. A lease stipulation is a condition of lease issuance that provides a level of protection for other resource values or land uses by restricting lease operation during certain times or at certain locations or by mitigating unacceptable impacts, to an extent greater than the standard lease terms or conditions. A stipulation is an

enforceable term of the lease contract, supersedes any inconsistent provisions of the standard lease form, and is attached to and made a part of the lease. Lease stipulations further implement the Forest Service and BLM's regulatory authority to protect resources or resource values.

No Surface Occupancy (NSO) stipulations are considered a major constraint as they do not allow for surface development. For example, a lessee of a NSO area must develop any surface infrastructure outside the NSO area and would need to use advanced technology, such as directional drilling, to access the geothermal resource under the NSO area. An NSO is appropriate when the standard terms and conditions, conditional surface use stipulations and timing limitations, and best management practices for permit approval are determined to be insufficient to achieve the resource protection objectives.

In areas where an NSO stipulation is deemed overly restrictive, but where standard lease terms and permit-level decisions are deemed insufficient to protect the resources, the Forest Service would apply controlled surface use (CSU) stipulations or timing limitation (TL) stipulations to leases. A CSU allows the Forest Service to require any future activity or development be modified or relocated from the proposed location if necessary to achieve resource protection. The project applicant will be required to submit a plan to meet the resource management objectives through special design, construction, operation, mitigation, or reclamation measures, and/or relocation. Unless the plan is approved, no surface occupancy would be allowed on the lease.

In general, timing limitations are used to protect resources that are sensitive to disturbance during certain periods. Such stipulations are generally applicable to specific areas, seasons, and resources. They are commonly applied to wildlife activities and habitat, such as winter range for deer and elk, nesting habitat for raptors and migratory birds, and wildlife breeding areas. Timing limitations would be applied by the authorizing officer as appropriate for the specific lease areas.

The Forest Service's first priority is to mitigate impacts onsite during the exploration, drilling, utilization, or reclamation and abandonment of geothermal resources. The Forest Service will require project-specific mitigation measures, referred to as best management practices, to be used during any surface-disturbing activity. When the Forest Service determines that impacts cannot be mitigated to an acceptable level onsite, it may be necessary to deny the permit, ask the applicant to modify the proposal, or mitigate remaining impacts offsite. Best management practices may be incorporated into the permit application by the lessee or may be included in the approved use authorization by the BLM as conditions of approval. Conditions of approval are not lease stipulations, but they are site-specific and enforceable requirements to minimize, mitigate, or prevent impacts on resource values from an intended operation. Conditions of approval can limit or amend the specific actions proposed by the operator.

Mitigation measures, including lease stipulations and conditions of approval, as well as the general operation of geothermal developments, would be monitored by the lessee and the appropriate federal agency to ensure their continued effectiveness through all phases of development. Using adaptive management strategies, where mitigation measures are determined to be ineffective at meeting the desired resource conditions, the BLM and Forest Service would take steps to determine the cause and require the operator to take corrective action. This information would also be used to inform future geothermal leasing and development.

## 6. Decision to be Made

The decision will be whether to implement the action as proposed, implement an alternative which allows leasing under different stipulations or conditions, or not to implement the action. If the decision is to authorize leasing, that decision with associated stipulations and conditions will become an amendment to the Santa Fe National Forest Plan or will become a part of the Revised Forest Plan.

## 7. Preliminary Issues

The following preliminary issues for analysis have been identified for the Santa Fe National Forest Geothermal Leasing Project based on Forest Service experience with similar projects. The project has the potential to impact the following resources if development of leases occurs. The potential impacts would come from ground disturbance associated with the future exploration and development of geothermal resources.

- Land use, recreation, and special designations (including inventoried roadless areas)
- Geologic Resources
- Energy and mineral resources
- Paleontological resources
- Soil resources
- Water resources and quality (both surface and ground)
- Air quality and air quality related values
- Vegetation
- Fish and wildlife
- Threatened and endangered species and special status species
- Livestock grazing
- Cultural resources
- Tribal interest and traditional cultural resources
- National scenic and historic trails
- Visual resources
- Social interest, economics, and environmental justice
- Health and safety
- Noise
- Access
- Climate change

Other issues may be identified during the scoping process.

## 8. Scoping Process

Two public meetings will be held to discuss the proposed action and solicit public input. One meeting will be held in Santa Fe, New Mexico and one in the Cuba, New Mexico area. Interested individuals are invited to learn more about the leasing project proposal by attending any of the two upcoming Public Scoping Meetings. The meetings are scheduled to begin at 5:00 PM and will include a brief presentation and an opportunity to view maps and discuss the proposed action with Forest Service personnel. The dates and locations are as follows:

**Monday, June 1, 2015**  
**Cuba Ranger Station**  
**Santa Fe National Forest**  
**04b County Road 11**  
**Cuba, NM 87013**  
**(575) 289-3264**

**Tuesday, June 2, 2015**  
**Santa Fe National Forest**  
**Headquarters**  
**11 Forest Lane**  
**Santa Fe, NM 87508**  
**(505) 438-5300**

Geothermal leasing EIS documents and other information will be posted at:  
<http://www.fs.usda.gov/projects/santafe/landmanagement/projects>.

It is important that interested parties provide their comments at such times and in such manner that they are useful to the agency's preparation of the environmental impact statement. Therefore, comments should be provided prior to the close of the scoping period and should clearly articulate the reviewer's input on the range of issues, impacts, and alternatives that should be evaluated in the environmental analysis process. Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will also be accepted and considered.

Send written comments to:

Geothermal EIS Project, Santa Fe National Forest  
11 Forest Lane  
Santa Fe, NM 87508

Comments may also be sent via email to [comments-southwestern-santafe@fs.fed.us](mailto:comments-southwestern-santafe@fs.fed.us), or via facsimile to 505-438-5390.

Comments concerning the scope of the analysis must be received by June 12, 2015.

## 9. Analysis Process

A tentative timeline has been developed for completion of this EIS. Key steps are outlined below:

### EIS Timeline and Key Steps

<b>Activity</b>	<b>Approximate Dates</b>
Begin Scoping	May 13, 2015
Notice of Intent published in Federal Register	May 13, 2015
30-day public scoping period	May 13, 2015 to June 12, 2015
Draft EIS prepared	January 2016
45-day public comment period	January 2016 to February 2016
Final EIS and Draft ROD	October 2016
45-day objection period starts	October 2016
Final ROD signed	November 2016

## 10. Contact

For further information, contact Larry Gore, Forest Geologist, at:

Email address: [ldgore@fs.fed.us](mailto:ldgore@fs.fed.us)

Figure 1: Geothermal Leasing EIS Project Area

### Geothermal Leasing EIS Project Area

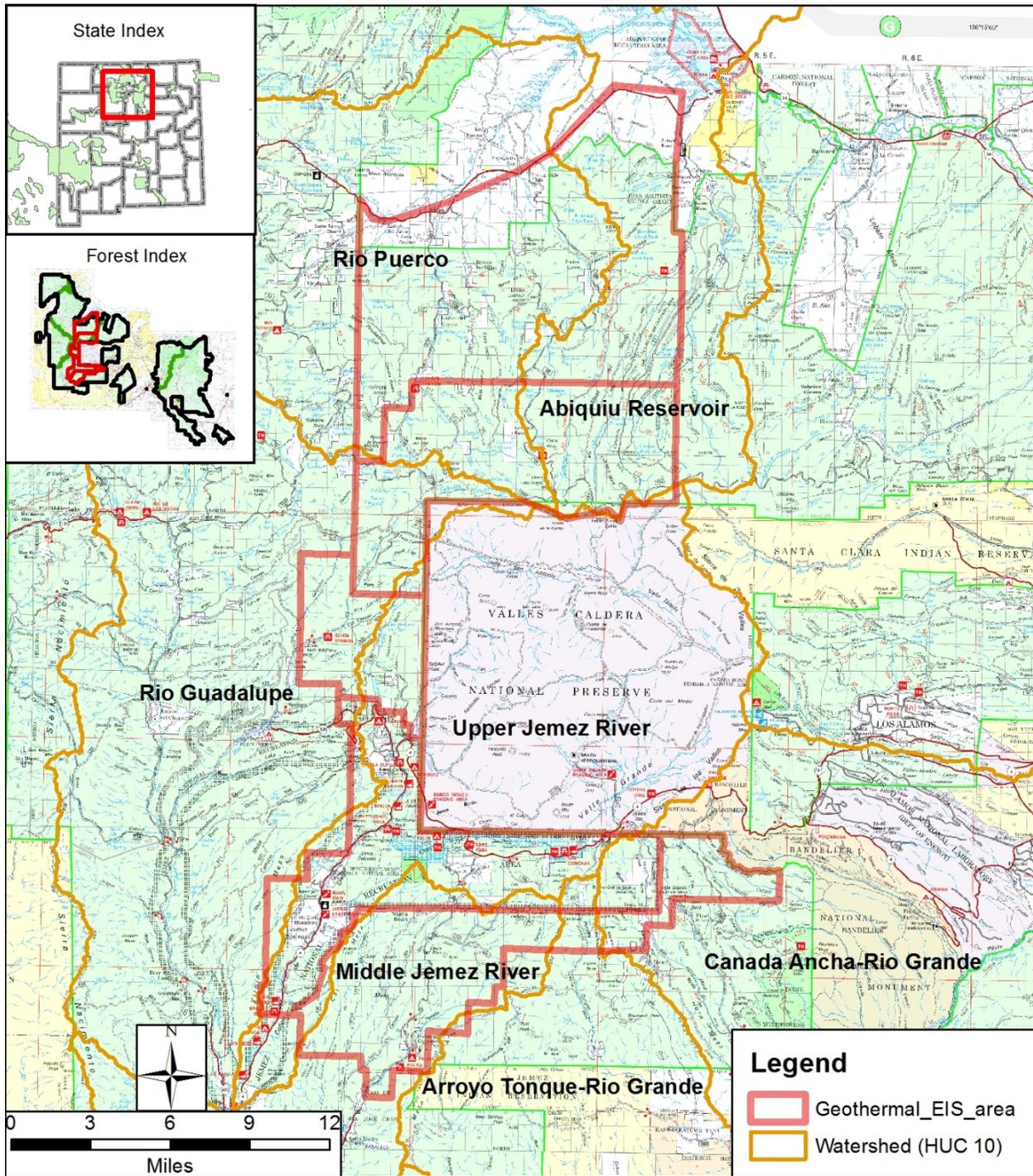


Figure 2: Non-Discretionary and Discretionary Closures

Geothermal Leasing EIS  
No Leasing

