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BUREAU OF LAND MANAGEMENT DECISION RECORD FOR THE SKYKOMISH GEOTHERMAL LEASING PROJECT

Introduction

This document describes my decision to: (1) adopt the U.S. Forest Service's (USFS) July 2013 Environmental Assessment (EA) consistent with Alternative B (Proposed Action) as supported by documents in the Project Record for the Skykomish Geothermal Leasing Project and (2) use this documentation as a basis for the Bureau of Land Management's (BLM) administrative decision to offer approximately 12,330 acres of lands for competitive geothermal lease sale pursuant to regulations at Part 43 Code of Federal Regulations (CFR) Group 3200 – Geothermal Resources Leasing.

This decision document also discusses and adopts leasing stipulations for protection of other resources on the lands to be offered as identified in the USFS's Decision Notice (DN) and Finding of No Significant Impact (FONSI) signed on November 15, 2013, by Jennifer Eberlien, Forest Supervisor for the Mt. Baker-Snoqualmie National Forest.

In reaching my decision, as described in this BLM Decision Record (DR) and FONSI, we completed an independent review of the USFS-prepared EA and DN/FONSI, as well as the supporting documentation.

We also worked closely with the USFS to ensure that the requisite geothermal lease sale will fully and accurately comport with applicable land use plans and stipulations specified by both agencies. Based on these actions, we have made the determination that offering the subject lands for lease, inclusive of stipulations derived from the following discussion, will be: (1) in the public interest and (2) consistent with the applicable regulations of both agencies and with the Mt. Baker-Snoqualmie Forest Land and Resource Management Plans (MBS Forest Plans).

Background

On May 18, 2011, the BLM notified the USFS of the independent expressions of interest in obtaining geothermal resource leases on more than 19,000 acres of lands in the Mt. Baker-Snoqualmie National Forest in western Washington State (Figures 1 and 2).

Subsequently, the USFS completed a National Environmental Policy Act (NEPA) analysis of the Proposed Action that concluded with issuance of a DN/FONSI on November 15, 2013, along with formal concurrence to the BLM for leasing of approximately 12,330 acres of the nominated lands subject to certain land use restrictions.

Project Location

The lands to be offered for geothermal leasing are situated in Snohomish County, Washington, on the USFS Skykomish Ranger District, approximately nine miles northeast of the community of Index. The parcels can be reached via the Index-Galena Road along the North Fork of the Skykomish River and

National Forest Road 65 in the Beckler and Rapid River watersheds (Figure 3). The general hydrologic and topographic settings are shown in Figures 4 and 5 and further discussed in Decision Factor 9 – Intensity, Item 3 – Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

BLM Decision

As the Responsible BLM Official, it is my decision to: (1) adopt the USFS July 2013 EA (now designated as DOI-BLM-OR-0936-2014-EA) and related DN/FONSI as well as all supporting documents included in the Skykomish Geothermal Leasing Project record and (2) use them as the basis for the BLM’s administrative action to offer the specified 12,330 acres of National Forest System (NFS) land, as described in the EA and the USFS Skykomish Geothermal Consent to Lease Project DN/FONSI, for competitive geothermal lease sale. The offered lands will be subject to certain stipulations for the protection of surface, hydrologic, biotic, and geophysical resources. The USFS DN/FONSI and concurrence were formally signed by Jennifer Eberlien, Forest Supervisor for the Mt. Baker-Snoqualmie National Forest, on November 15, 2013.

We made this decision based on the finding that DOI-BLM-OR-0936-2014-EA (the EA) and the USFS DN/FONSI adequately describe the environmental setting of the proposed leasing project, the Proposed Action (i.e., to offer the selected lands for geothermal leasing with stipulations), as well as the related and projected environmental effects and mitigation. My decision is also consistent with the goals, objectives, and Standards and Guidelines of the MBS Forest Plans, as amended; with regulations at 43 CFR Group 3200 – Geothermal Resource Leasing; and, more specifically, with regulations at 43 CFR § 3203 – Competitive Leasing.

Other documents supporting my decision include the: USFS Specialist Reports, applicable direction in the MBS Forest Plans, 2008 Programmatic Environmental Impact Statement (PEIS) for Geothermal Leasing in the Western United States¹, along with information available in the Project Record (see e-link in following section). Also included are the results of Tribal Government-to-Government (G-to-G) consultation and the public comments received during the EA scoping and development. All are incorporated herein by reference and made an integral part of my decision.

Relevant Documentation

The USFS-prepared EA, DN/FONSI, and supporting documents are part of the Project Record which is available on the Internet at the following link:

http://www.fs.usda.gov/wps/portal/fsinternet!/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gDfxM DT8MwRydLA1cj72BTUwMTAwgAykeaxRtBeY4WBv4eHmF-YT4GMHkidBvgAI6EdIeDXIvfdRAJuM3388jPTdUvyA2NMMgyUQQAyrgQmg!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfS000MjZOMDcxT1RVODBJN0o2MTJQRDMwODQ!/?project=39448

Proposed Action

The Proposed Action to offer approximately 12,330 acres of NFS lands for competitive geothermal lease sale, subject to certain stipulations, is well described and analyzed in the EA, in particular at Section 1.3 – Proposed Action, 1.4 – Purpose and Need for Action, and throughout Chapter 2 – Alternatives.

The physical location and geographic extent of the lands to be offered are illustrated in Figures 1, 2, and 3 appended to this document. The project area topography and hydrography are shown in Figures 4 and 5.

¹ The PEIS is available at:

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

Shading used in Figure 6 distinguishes those portions of the offered lands that will be subject to either no surface occupancy (NSO) or to leasing stipulations as discussed below. These distinctions fall into two general categories:

- Those that will result in NSO affecting approximately 80 percent of the lands to be offered. These areas consist primarily of steep slopes with high erosion potential, water bodies, riparian reserves, wetlands, flood plains, lands with existing recreational use that would be incompatible with geothermal development, and river segments that are potentially eligible for Wild and Scenic River (WSR) status.
- Those that will govern permissible actions where occupancy is acceptable on approximately 20 percent of the lands to be offered. These areas will be subject to timing limitations within certain habitats and/or to controlled surface use to protect known geothermal features, endangered species, cultural resources, and inventoried roadless area.

Table 1 presents a roster of the NSO or permissible occupancy status of the tracts to be offered for competitive geothermal leasing as illustrated in Figure 6.

The subject lands will be offered for lease in parcels of no more than 5,120 acres each (43 CFR § 3203.10 – How are Lands Included in a Competitive Sale?). Pursuant to 43 CFR §3203.5 (b) – What is the General Process for Obtaining a Geothermal Lease?, the BLM will issue geothermal leases for a primary term of 10 years (43 CFR §3207.10 (a)) to the highest responsible² and qualified bidder as part of the competitive leasing process. Lands that do not receive a bid at the competitive lease sale will be available for noncompetitive leasing for a two-year period beginning the first business day following the sale.

Leases will only be issued to bidders that:

- Meet qualification requirements (43 CFR § 3203.10 – Who May Hold a Geothermal lease?);
- Make the required payments (43 CFR § 3203.17 – How Must I Make Payments...?);
- Agree to comply with lease issuance requirements (43 CFR § 3206.10 – What Must I do for BLM to Issue a Lease?);
- Neither directly nor indirectly hold more than 51,200 acres in other Federal leases in any one state of the United States (43 CFR § 3206.13 – What is the Maximum Acreage I May Hold?);
- Acknowledge their understanding and acceptance of lease terms (43 CFR § 3207 – Lease Terms and Extensions);
- Pay the required fee, rents, etc. (43 CFR § 3211 – Filing and processing Fees, Rent, Direct Use Fees, and Royalties); and
- Establish the requisite bonds (43 CFR § 3214 – Personal and Surety Bonds).

Geothermal leases will be issued on the BLM Standard Form 3200-24 – Offer to Lease and Lease for Geothermal Resources (Attachment 1), inclusive of the stipulations described in this DR/FONSI. Issued leases will require full compliance with all applicable regulations and with the stipulations discussed below which have been factored into the leasing provisions itemized in Attachment 2.

It is important to note that this decision does not authorize any specific, ground-disturbing actions. Activities associated with exploration for geothermal resources can only take place (other than casual

² A responsible party is defined as a contractor, supplier, vendor, or entity qualified on the basis that it: (1) has adequate financial resources to perform a contract, (2) is able to comply with the associated legal or regulatory requirements, (3) is able to deliver according to the contract schedule, (4) has a history of satisfactory performance, (5) has good reputation regarding integrity, (6) has or can obtain necessary data, equipment, and facilities, and (7) is otherwise eligible and qualified to receive award if its bid is chosen. Source: *Business Directory* (Copyright©2014 WebFinance, Inc.)

use³, which is already permitted) if the BLM, in consultation with the USFS, were to approve a Notice of Intent (NOI) to conduct geothermal resource exploration operations consistent with requirements at 43 CFR § 3251 – Exploration Operations: Getting BLM Approval. Similarly, development of the geothermal resources for energy production will require approval of a Sundry Notice in order to construct drill sites and conduct drilling operations as stipulated at 43 CFR § 3260 – Geothermal Drilling Operations: General. Approval by the BLM of either an NOI or Sundry Notice will also require further NEPA analysis. This process is specifically required by the Administrative Review Stipulations discussed below.

Authorities

The BLM has the delegated authority for leasing 245 million acres of public lands, including 104 million acres managed by the USFS, with geothermal potential in the 11 western states and Alaska. The BLM presently manages 818 geothermal leases, with 59 geothermal leases in producing status with a combined capacity of 1,500 megawatts of geothermal energy. Geothermal leases annually generate over \$12 million in Federal royalties, with 50 percent shared with the states and 25 percent shared with local counties.

A PEIS⁴ regarding the authorization of geothermal leasing was completed by the BLM and the USFS in October 2008, and the Record of Decision (ROD) was signed in December 2008. Both are incorporated into my decision by reference. The ROD amended 114 BLM resource management plans and allocated approximately 111 million acres of BLM-managed public lands as open for leasing. An additional 79 million acres of Forest Service lands are also made available for leasing, including those that will be offered as part of the Skykomish Geothermal Leasing Project.

The BLM derives its authority to competitively offer and issue geothermal leases pursuant to the Geothermal Steam Act of 1970, as amended by the Energy Policy Act of 2005 (30 U.S.C. 1001 *et seq.*), consistent with regulations at 43 CFR § 3200 – Geothermal Resource Leasing, and more specifically at 43 CFR § 3201 – Available Lands (Item 2), for lands administered by the Department of Agriculture with its concurrence.

Additionally, the Mining and Minerals Policy Act of 1970 (30 U.S.C. § 21 *et seq.*) encourages the development of mineral resources, including geothermal resources, on Federal lands. The act articulates national interest to foster and encourage private enterprise while mitigating adverse environmental impacts. This objective is further supported by the Federal Land Policy and Management Act of 1976 (Pub. L. 94-579). This act states that public lands are to be managed in a manner that recognizes the need for domestic sources of minerals, including renewable and non-renewable resources. In turn, the Energy Policy Act of 2005 (Pub. L. 109-58) amplifies a comprehensive, long-range domestic energy policy, including development of newer and more energy-efficient technologies, such as geothermal resources.

Administrative procedures for leasing are outlined in the Memorandum of Understanding (MOU) between the United States Department of the Interior and United States Department of Agriculture for Implementation of Section 225 of The Energy Policy Act of 2005 regarding geothermal leasing and permitting⁵ (National-level MOU). Under the terms of the National-level MOU, the USFS and the BLM are committed to jointly prepare NEPA documents that will meet the requirements of both agencies in reaching their independent leasing decisions. The Energy Policy Act of 2005 further requires Federal agencies to respond in a timely fashion to applications for energy resources.

³ Casual uses are defined as activities that ordinarily lead to no significant disturbance of Federal lands, resources, or improvements. Source: 43 CFR § 3200.1 – Definitions

⁴ On December 17, 2008, the BLM and the USFS issued a joint PEIS that analyzed and expedited the leasing of BLM- and FS-administered lands with high potential for renewable geothermal resources in 11 western states and Alaska.

⁵ BLM MOU WO300-2006-08 and USFS Agreement No. 06-SU-11132428-051, signed April 14, 2006.

According to the procedures for geothermal leasing at 43 CFR 3200, the BLM grants access to geothermal resources through a formalized leasing process based on end use. Uses such as electrical generation are known as “indirect uses” and are leased under a competitive process. Other uses, known as direct uses (such as heating pools, spas, greenhouses, and buildings), also require leases; however, they are issued non-competitively. In general, areas are nominated for lease by the public. The geothermal lease nominations subject to this decision are for indirect uses and will be offered for competitive leasing.

With respect to geothermal leasing, when the BLM receives a nomination involving NFS lands, it is forwarded to the USFS. The USFS is responsible for the NEPA analysis necessary to support its decision for concurring to the leasing of NFS lands, for developing appropriate terms and conditions under which the lease(s) may be offered and developed, and for ensuring that doing so is consistent with the applicable land and resource management plans developed under the National Forest Management Act.

If the USFS issues concurrence, the BLM is responsible for conducting any geothermal lease sales and for issuing any leases. The BLM can supplement leasing with additional terms, conditions, or stipulations deemed appropriate and necessary and must make an independent decision whether to offer a lease for sale after reviewing the decision and documentation presented by the USFS, as well as other relevant factors.

Administrative Review and Analysis

Leasing vests with the lessee a non-exclusive right to future exploration and an exclusive right to develop, produce, and use the geothermal resources within the leased area subject to existing laws, regulations, and formal orders as well as the terms, conditions, and stipulations in or attached to the lease form. Lease issuance, however, does not authorize any specific, ground-disturbing activities associated with exploration or development of geothermal resources without further, site-specific approval of the planned operations.

For those lands to be offered where surface occupancy will be allowed, any such proposals to explore, develop, or in any other manner use the lands or resources described will be subject to the BLM’s approval following environmental review, analysis, and public disclosure required by NEPA, or any other review, analysis, or consultation undertaken by the United States Department of the Interior or the United States Department of Agriculture under applicable law and regulations. The BLM has absolute discretion to condition or deny, as appropriate, any proposed exploration or development operations beyond casual use. No ground-disturbing activity may commence until the BLM approves and issues a specific permit (i.e., NOI or Sundry Notice).

Leasing Stipulations

Geothermal leases issued consistent with this DR/FONSI will include the stipulations listed in Attachment 3. They were derived from the following discussion and will impose moderate to major constraints on activities that will be allowed on the offered lands. The stipulations will be included in the notice of lease offer (Attachment 1) as enforceable terms that supersede any inconsistent requirements of the standard BLM Lease Form 3200-24. They were developed by the USFS and are adopted herein and supplemented by the BLM. These conditions will provide protection for resource values or land uses by excluding occupancy or by restricting lease operations or by establishing timing limitations within specified areas or by requiring review and/or mitigation to an extent greater than would be the case under standard lease terms or conditions.

The stipulations will also be applied and/or amended through the determination of the USFS and the BLM at the time geothermal exploration and/or development are proposed by the lessee(s) through either a NOI to conduct geothermal exploration operations or a Sundry Notice to construct related on-site infrastructure for roads and drill sites and to conduct drilling operations.

Stipulation for Lands of the National Forest System (NFS)

For all NFS lands under the jurisdiction of the United State Department of Agriculture, the following stipulation will apply:

“The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license/prospecting permit/lease. The Secretary of Agriculture’s rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of the Interior, (2) uses of all existing improvements, such as Forest development roads, within and outside the area licensed, permitted or leased by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.”

No Surface Occupancy (NSO) Stipulation

Exclusion of surface development will be applied to:

- Designated or proposed critical habitat for listed species under the Endangered Species Act of 1973 (as amended) if it would adversely modify the habitat. For listed or proposed species without designated habitat, NSO would be implemented to the extent necessary to minimize or avoid adverse impacts.
- Properties designated or eligible for the National Register of Historic Places, including National Landmarks and National Register Districts and Sites, and additional lands outside the designated boundaries to the extent necessary to protect values where the setting and integrity is critical to their designation or eligibility.
- Areas with important cultural and archaeological resources, such as traditional cultural properties and Native American sacred sites, as identified through consultation.
- Segments of rivers determined to be potentially eligible for WSR status by virtue of a WSR inventory, including a corridor of 0.25 miles from the high water mark on either side of the bank⁶ (see further description at Decision Factor 9 – Intensity, Item 3).
- Designated important viewsheds, including (1) public lands designated as VRM Class I and (2) NFS lands with a Scenery Management System integrity level of Very High.
- Slopes in excess of 40 percent and/or soils with high erosion potential.
- Water bodies, Riparian Reserves, wetlands, playas, and 100-year floodplains. Developed recreational facilities, special-use permit recreation sites (e.g., ski resorts and camps), and areas with recreational use with which geothermal development is deemed incompatible, excluding direct use applications.

⁶ As part of the Forest Planning process in the 1980s, WSR inventories of potentially eligible rivers were conducted forest-wide. Where a river or river segment was found to be “eligible” for inclusion in the WSR system as part of this inventory, the Forest Service has the obligation to protect the lands along the eligible segment until a “suitability” determination is made as part of the land use planning process. If the river or river segment is found to be “non-suitable,” the lands along the river then would be available for other uses. The 1990 Forest Plan made those eligibility and suitability determinations.

Seasonal or Time Limited (TL) Stipulations

Time limited stipulations will be used to protect resources that are sensitive to disturbance during certain time periods for specific areas, seasons, and resources such as wildlife activities and habitat including:

- **Northern Spotted Owl** – No activities between March 1 and July 15 (early nesting season) within occupied sites or unsurveyed habitats that include nesting, foraging, and roost habitat. Seasonal restriction determined by the agencies during the late breeding season may occur from July 15 through September 30 if adverse effects are anticipated in occupied or unsurveyed habitats.
- **Marbled Murrelet** – No activities between April and September 23 within occupied sites or unsurveyed potential nest tree habitats.
- **Bald Eagle** – Mid-winter bald eagle habitat (foraging and night-roost habitat) occurs within the Beckler and Rapid River reaches within the area. Project construction, operations, and motorized vehicle use may be restricted by the agencies depending on the level of bald eagle activity during the mid-winter period. A seasonal restriction occurs between October 31 through March 15 when bald eagles are known to winter in the Beckler and Rapid River basin.
- **Designated Ungulate Winter Range Habitat (MA-14)** – No project construction or motorized vehicle use between December 1 and April 15 within designated winter range.

Controlled Surface Use (CSU) Stipulations

Controlled surface use stipulations will require that future activity or development be modified or relocated from the proposed location, if necessary, to achieve resource protection. The lessee(s) will be required to submit plans to meet the resource management objectives through design, construction, operation, mitigation, or reclamation measures and/or relocation. Unless the plans are approved, no surface occupancy will be allowed. Consideration of the following CSUs would be applied to this leasing action:

- **Protection of riparian and wetland habitat** within 500 feet of riparian or wetland vegetation to protect the values and functions of these areas. Measures required will be based on the nature, extent, and value of the area potentially affected.
- **Late Successional Reserves (LSR)** for important habitat conditions within the LSR land allocation of the MBS Forest Plans, as amended. Because there is no specific habitat-disturbing proposal associated with this lease application, there are no specific LSR stipulations or restrictions. In the event of geothermal exploration and development, “the guiding principle will be to design mitigation measures that minimize detrimental effects to late-successional habitat” (Northwest Forest Plan, Record of Decision, p. C-17). The project applicant will be required to submit a plan to meet the resource management objectives of the LSR for late successional habitats and to ensure that any subsequent geothermal exploration and/or development will be conducted in a manner that is either neutral or beneficial to the creation and maintenance of late successional habitat.
- **Protection of visual resources** on lands with a Scenery Management System integrity level of High and other sensitive viewsheds, such as within the visual setting of National Scenic and Historic Trails or near residential areas.
- **Protection of recreational areas** to minimize the potential for adverse impacts to recreational values, both motorized and non-motorized, and the natural settings associated with the recreational activity.
- **Compatibility with urban interface** to minimize the potential for adverse impacts to residential areas, schools, or other, adjacent urban land uses.

- **Protection of erodible soils** and soils on slopes greater than 30 percent to minimize the potential for adverse impacts to erodible soils as defined as severe or very severe erosion classes based on Natural Resources Conservation Service (NRCS) mapping.
- **Protection of important habitat** and migration corridors to protect the continuity of migration corridors and important habitat.

Management Stipulations

Additional management restrictions would be applied to:

- **Protection of geothermal features** such as natural springs and geysers by either declining to issue a lease that would result in a significant adverse effect to such a feature or requiring monitoring of the thermal features during any exploration, development, and production of the lease to ensure that there are no impacts to water quality or quantity.
- **Protection of endangered species** in a manner similar to that described in BLM Instruction Memorandum No. 2002-174 regarding oil and gas leasing where threatened, endangered, or other special status species or critical habitat is known or strongly suspected to exist. The BLM, in consultation with the USFS, would provide a separate notification identifying the particular special status species that are known to be present on the offered lease parcel. The notice would stipulate that:

“The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in adverse impacts to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 USC 1531 et seq., including completion of any required procedure for conference or consultation.”
- **Protection of cultural resources** in accordance with BLM Instruction Memorandum No. 2005-003, the following stipulation would apply to protect cultural resources:

“This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The Agencies may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.”
- **Protection of roadless areas** which encompass approximately 755 acres within the project area subject to a non-discretionary restriction that applies to designated inventoried roadless areas that states:

“No new road construction or reconstruction would be allowed in inventoried roadless areas without the approval of the Secretary of Agriculture. If future legislation or regulations change the roadless area designation, the restriction would be revised along with any appropriate environmental review.”

Decision Rationale

It is important to understand the distinction between the Proposed Action to offer lands for geothermal leasing and any subsequent discussion of reasonably foreseeable developments (RFD) included in this decision. Although the EA and USFS DN/FONSI summarized likely RFDs based on the PEIS, my decision only pertains to actions that the BLM will take to offer and issue competitive geothermal leases to the highest responsible, qualified bidder(s). Any RFD associated with future exploration or development will be subject to further administrative action, including NEPA analysis, the concurrence of the USFS, and authorization by the BLM.

My decision to both adopt the EA and USFS DN/FONSI and to offer the subject lands for competitive geothermal lease sale is also based on consideration of the following factors:

Decision Factor 1: Compliance with Requirements at 43 CFR 3203 – Competitive Leasing

Implementation of my decision will require the BLM to:

- Provide public notice of this decision subject to a 30-day appeal process (see Administrative Remedies).
- Provide public notice of the parcels to be offered as well as the time, location, and process for participating in the lease sale.
- Hold an announced, competitive geothermal lease sale.
- Issue geothermal leases to the highest responsible, qualified bidder(s) after a competitive leasing process (see previous discussion of the Proposed Action).

Decision Factor 2: Compliance with Applicable Environmental Requirements

As previously noted, my independent review of the EA, USFS DN/FONSI, and supporting documentation affirms the conclusion that the EA was prepared in accordance with regulations for implementing NEPA (40 CFR 1500-1508). In turn, the EA was tiered to the PEIS and to the Final Environmental Impact Statement (FEIS) for the Mt. Baker-Snoqualmie Land and Resource Management Plan (USDA, 1990), as amended. Major plan amendments since 1990 include:

- The Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl, as adopted and modified by the April 1994 Record of Decision, which provides additional standards and guidelines (United States Department of Agriculture (USDA) Forest Service and United States Department of the Interior (USDI) BLM, 1994), and commonly known as the ROD, or the Northwest Forest Plan (NWFP)).
- Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage Protection Buffer, and Other Mitigation Measure Standards and Guidelines (USDA, USDI 2001).
- Record of Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy Amending Resource Management Plans (USDA Forest Service and USDI BLM, 2004).
- Record of Decision for the Pacific Northwest Region Invasive Plant Program: Preventing and Managing Invasive Plants (USDA, 2005).

The EA incorporated by reference the Project Record (40 CFR 1502.21) that documented the NEPA process. In addition, the Project Record contains Specialist Reports and other technical documentation used to support the analysis and conclusions in the EA. These Specialist Reports addressed fish, forest vegetation, plants, watershed resources, wildlife, heritage and treaty resources, lands and minerals, and

recreation. The reports also documented the detailed analytical framework, methods, and conclusions employed to assess impacts on these resources. They also described the affected environment, or baseline conditions, which provide a background for the discussion of environmental consequences (see summary in EA in Chapter 3).

In addition to the leasing stipulations previously discussed, during consideration of any subsequent applications for exploration, drilling, development, utilization, or reclamation and abandonment of geothermal resources, the BLM and USFS will require project-specific mitigation measures, including utilization of Best Management Practices (BMP). The BMPs are state-of-the-art mitigation measures incorporated into a site-specific permit application by the lessee/operator or included in the authorization of NOIs or Sundry Notices by the BLM as conditions of approval. Furthermore, project-related operations must not unreasonably interfere with or endanger those of other existing operations or authorized uses or cause unnecessary or undue degradation of the lands (43 CFR § 3250.11 – May I Conduct Exploration Operations on My Lease, Someone else's Lease, or Unreleased Lands?).

Operations that could affect a listed species or critical habitat at a particular location will be subject to a full policy and legal review, including review and coordination under the Endangered Species Act, as amended (7 U.S.C. § 136, 16 U.S.C. § 1531 *et seq.*), and the USFS Sensitive Species and Management Indicator Species (i.e., any species of plant or animal that has been identified as a representative for a group of species with special habitat requirements), as well as taking into consideration effects on Essential Fish Habitat (i.e., “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” pursuant to the Magnuson-Stevens Act).

The following items represent some of the considerations regarding any RFD that would also be taken into account consistent with the Record of Decision for the PEIS:

- Geotechnical investigations
- Stormwater management and groundwater discharge and recharge
- Additional plant and animal surveys such as raptors, sensitive plants, etc., with subsequent avoidance
- Air quality monitoring plan and emissions control
- Noise limitations, traffic plans, and road design
- Visual resource mitigation or design (colors, lighting, siting features, etc.)
- Vegetation removal or incidental timber harvest
- Construction techniques for roads, pads, pipelines, utility lines
- Noxious weed inventory, prevention, control, and management plans
- Hazardous materials and waste management
- Protection of workers and the public
- Interim and final reclamation techniques including recontouring, vegetation management, topsoil management, seeding, erosion control, and mulching
- Proposed ground-disturbing activities within ¼ mile of a National Forest property boundary, including Wilderness boundaries, shall be surveyed, marked, and posted to ensure Wilderness is not occupied or intruded upon.

The Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 508.20 – Mitigation) further define mitigation to include:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

Decision Factor 3 – Concurrence of the USFS (the Surface Managing Agency)

In July 2013, the USFS completed an EA with supporting documents for the Skykomish Geothermal Leasing Project. The EA was prepared in response to the BLM’s letter to the USFS of May 18, 2011, describing lands that had been nominated for competitive geothermal leasing in the MBS National Forest. The EA fully comported with the NEPA process⁷, including:

- Announcement on July 6, 2012, of the pending project and request for scoping comments.
- Opening on June 28, 2013, of a 30-day public comment period on the EA.
- Notification on September 18, 2013, of the start of the 45-day public objection period to the EA and proposed final decision.

On November 15, 2013, the USFS issued a formal DN/FONSI and letter of concurrence to the BLM for the Proposed Action. As previously noted, these documents are hereby adopted by the BLM and made a part of this decision as well as further administrative action, subject to certain stipulations agreed upon by the agencies, in order to formally offer the specified 12,330 acres of nominated lands for competitive geothermal lease sale pursuant to 43 CFR § 3203 – Competitive Leasing.

Decision Factor 4 – Use of Other Agency EA and FONSI

In order to carry out the NEPA process, the USFS brought together an interdisciplinary (ID) team of resource specialists to conduct an assessment of the proposed Skykomish Geothermal Leasing Project, to complete the environmental analysis, and to develop the concurrence for leasing with appropriate stipulations. The EA and USFS DN/FONSI were built on work that has already been done and/or tiered to the PEIS and the MBS Forest Plans NEPA analysis to avoid redundancy and to provide a coherent record of the analytical and decision-making process (see Decision Factor 3). More specifically, the EA:

- Tiered to the PEIS.
- Tiered to the FEIS for the Mt. Baker-Snoqualmie Land and Resource Management Plan (USDA, 1990), as amended.
- Conformed to the applicable USFS and MBS Forest Plans.
- Determined that no new circumstances or information has arisen since the original analysis was conducted.
- Achieved consistency with the BLM NEPA Handbook (H-1790-1-2008) and CEQ Guidance Regarding NEPA Regulations (48 Fed. Reg. 34263, July 28, 1983).
- Addressed logical alternatives including the Proposed Action and No Action (see EA Section 2.3 and Table 1 – Comparison of Alternatives).
- Analyzed environmental consequences for each alternative (see EA Chapter 3).

Decision Factor 5 – Government-to-Government Consultation

The Tulalip Tribes were contacted as part of G-to-G consultation regarding the Proposed Action. One written comment was received from the Tulalip Tribes dated June 21, 2012, and made a part of the Project Record. The Tribes articulated the importance of the nominated lands for providing the opportunity to

⁷ NEPA requires agencies to follow a three-step review process: (1) conduct a preliminary screening for NEPA’s applicability, (2) prepare an Environmental Assessment (EA) to determine whether an EIS is required, and (3) prepare an EIS if required (an EIS is required if a proposed action may “significantly affect the quality of the human environment”).

exercise their reserved treaty hunting, fishing, and gathering rights within the MBS National Forest. Ray Fryberg, Executive Director of the Tulalip Natural Resources Department, emphasized that conducting these cultural activities requires access, resource availability, and, oftentimes, privacy.

The Tulalip Tribes further specified that they would not support post-lease geothermal exploration or development without assurance that such development would not lead to disruption of the animal populations, tribal hunts, or the general exercise of Tulalips' treaty rights. The Tribes also requested that, if there were subsequent proposals to do further exploration and potential development of geothermal energy in this area, they would like to meet on a G-to-G basis early in the planning and prior to any scoping under NEPA (letter to Tasha Lo Porto, Forest Service Project Leader, 6/21/2012).

Decision Factor 6 – Consultation with Other Agencies

Because the Proposed Action will result in no ground-disturbing activities without subsequent submission and specific approval of either NOIs or Sundry Notices which would require further NEPA analysis, consultation with the National Marine Fisheries Service or with the U.S. Fish and Wildlife Service is not required at this time because: (1) the effects determination for federally listed species and designated critical habitats would be “No Effect,” and (2) the determination for essential fish habitats is “Would Not Adversely Affect.” Likewise, no formal consultation regarding federally listed threatened, endangered, or proposed plant species is required as none are known to occur on the MBS National Forest.

This decision to offer land for leasing also assumes that all future activities will occur outside areas that are encompassed by the NSO stipulation. Elsewhere, actions would be subject to other lease terms, including controlled surface use stipulations and timing restrictions as well as application of BMPs and other mitigations for any subsequent exploration for geothermal resources and their development which may limit placement and operation of related facilities. At that time, additional stipulations may be implemented regarding ESA compliance and as the result of USFS consultation with the U.S. Fish and Wildlife Service if any listed species would be affected by the nature of proposed ground disturbing activities.

Decision Factor 7 – Public Involvement

On May 9, 2012, the USFS sent consultation notices to local Tribes for this proposal and received one written comment from the Tulalip Tribes. On June 6, 2012, EA scoping notices were sent to interested citizens, groups, industry, and agencies. Eleven written comments were received from interested citizens, organizations, and one governmental agency. The notices, scoping letters, and comments are available in the Project Record (see link in the “BLM Decision”).

Private individuals, groups, and governmental agencies were also contacted regarding the Proposed Action (see Decision Factor 5). During preparation of the EA, several private individuals and Tribal representatives were in contact with USFS personnel regarding this action (see EA Chapter 1, Section 1.5 – Public Involvement, and Chapter 4 – Consultation and Coordination, Section 4.2 – Tribes). This process indicated that there were no known conflicts between the EA alternatives considered and the plans and policies of other jurisdictions.

Decision Factor 8 – Environmental Consequences

Leasing itself will have no direct impact on any tangible resources aside from establishing a legal encumbrance on the leased lands. The environmental impacts of subsequent, post-leasing exploration and development, however, were analyzed in the EA based on a logical RFD scenario derived from the PEIS. Use of this scenario was appropriate because it is the best professional estimate of possible environmental impacts resulting from exploration for and/or development of Federal geothermal resources that may be accessible from or within the offered lands.

The BLM does not interpret the RFD scenario in the EA as a “maximum-development” situation, although it does trend toward the higher end of expected possible development. Any actual, post-leasing, ground-disturbing actions, however, will be subject to further environmental analysis by both agencies when specific proposals are made. Leasing stipulations specified by the USFS and adopted by the BLM will avoid, minimize, or negate the potential impacts of post-leasing actions.

In addition to leasing stipulations previously discussed, during any subsequent exploration, drilling, utilization, abandonment, and reclamation of geothermal activities, the agencies will require project-specific mitigation measures and BMPs as part of use authorization. The BMPs are state-of-the-art mitigation measures incorporated into a site-specific permit application by the lessee/operator or included in the approved use authorization issued by the responsible land and resource managing agencies.

Because there are no surface-disturbing activities involved at the leasing stage, site-specific BMPs to further protect surface resources are not included in this decision. The non-inclusive items listed in Decision Factor 2, however, will be considered in more detail if and when surface disturbing activities are proposed, including those required by the CEQ regulations.

Decision Factor 9 – Intensity

The following discussion is organized around the environmental protection criteria described at 40 CFR 1508.27 – Significantly. Each consideration relies, without restatement, on the description and analysis of environmental effects contained in the EA, the associated USFS DN/FONSI, and that agency’s concurrence to offer lands for leasing of geothermal resources through a public lease sale with specified stipulations, all of which conform to the laws, regulations, and policies of the USFS and the applicable MBS Forest Plans.

- Impacts that may be both beneficial and adverse.
 - Leasing itself will result in no tangible effects on the biological, cultural, or geophysical resources within the offered lands because this action conveys no authorization of surface-disturbing activities. The RFDs, such as geophysical exploration and development of geothermal resources, would affect local employment, energy production, and related use and need for improvements to public services and infrastructure. Possible impacts from exploration and development would be described and considered during NEPA analysis of any NOIs and Sundry Notices and mitigated by application of appropriate BMPs and other, site-specific stipulations in order to comport with applicable regulations and the MBS Forest Plans.
- Degree of effect on public health and safety.
 - Leasing itself will result in no tangible effects on existing public health and safety because this action conveys no authorization for surface-disturbing activities. Post-lease actions, however, could potentially foster geophysical exploration and/or development of geothermal resources that would result in increased use of local roads, need for employee housing, and demand for local goods and services, including health care. Any such RFDs would have to conform to local zoning restrictions, sanitation standards, law enforcement, etc.
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
 - The nominated lands lie along the westward flowing North Fork of the Skykomish River and along the southward flowing headwaters of the Beckler River. Most of the project area ranges in elevations between 1,600 and 3,400 feet above sea level in late youth topography that has been shaped by both glacial and fluvial erosion. Bedrock geology is predominated by contact and fault bounded Tertiary intrusives to the west and Mesozoic metamorphics to the east. The variable superficial material is largely covered by stands of second growth forest of various age classes.

- Of the 12,330 acres of lands that will be offered for geothermal leasing, approximately 1,420 acres drain to the North Fork Skykomish River between about river mile (RM) 12.5 and RM 18. Some 10,880 acres drain to the Beckler River between RM 7 and its headwaters at RM 13, which includes most of the tributary sub-watersheds draining to the Beckler within this reach as well as the Rapid River up to the Wild Sky Wilderness boundary. The Beckler River watershed drains to the South Fork Skykomish River, a major tributary of the Skykomish River sub-basin.
- The entire Skykomish River sub-basin (including the North Fork and the Beckler River watersheds) is a Tier 1 Key Watershed (USDA Forest Service and USDI BLM, 1994), designated as such for its direct contribution to conservation of at-risk anadromous salmonids, bull trout, and resident fish species. Lands proposed for potential lease in the North Fork Skykomish River are also within a reach proposed as a WSR under the Wild and Scenic Rivers Act as a “scenic” segment (USDA, 1990). The segment includes 8.4 miles from the end of FS (Forest Service) Road 6300 downstream to the confluence with Troublesome Creek.
- Throughout the MBS National Forest, there are eight fish species of interest that display both anadromous and resident life. These fish generally depend on cold, clean water; appropriately sized spawning gravels; and a variety of slow- and fast-water habitat types to meet their needs at various life stages. The Skykomish River Forks Watershed Analysis (USDA, 1997) identified portions of the proposed lands to be offered as having unstable soils stream channels in important spawning areas for bull trout and steelhead. These areas will require special management and application of appropriate BMPs.
- The area encompassed by the nominated lands includes:
 - Riparian and wetland habitats
 - LSR
 - Areas of high Scenery Management System integrity
 - Recreational values
 - Erodible slopes of greater than 30 percent
 - Important habitat and migration corridors
 - Possible sensitive species
 - Cultural resources (See Decision Factor 5.)
- Regarding cultural resources, the BLM, in accordance with Instruction Memorandum No. 2005-003, will apply the stipulations previously discussed.
- The Proposed Action, however, will not result in any direct effects to listed fish or their habitat. Indirect effects to fish or their habitats occurring away from the project area or at a later time would be those from potential, future, site-specific exploration and development. For critical habitat, leasing would also have no effect on designated Chinook and bull trout critical habitats or on proposed steelhead critical habitat. For essential fish habitats (EFH), leasing would not adversely affect chinook, Coho, or pink salmon EFH.
- Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.
 - Leasing itself will result in no tangible effects on the quality of the human environment because it conveys no authorization for surface-disturbing activities. There are no effects associated with either the USFS decision or from BLM actions to offer parcels for competitive geothermal lease sale. Any potential future effects from authorization of geothermal exploration and development would have to undergo additional, site-specific, environmental and regulatory analysis. Therefore, even though there may be lingering effects to fishery resources from past projects and/or effects from existing or RFDs within the vicinity of the nominated lands, the Proposed Action would have no direct effect and would not contribute cumulatively to other existing projects that are likely to be highly controversial.

- With the concurrence of the USFS to offer leasing subject to NSO, TL, CSU, and other management stipulations, future analysis would revolve primarily around cumulative and indirect effects to terrestrial and aquatic habitats from sedimentation, in-water vibrations, changes to quantity or timing of flows, or discharges of water quality contaminants associated with possible geothermal exploration and development.
- Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.
 - Leasing itself will have no tangible or highly uncertain or unique or unknown risks affecting the quality of the human environment because it would convey no authorization for surface-disturbing activities. Leasing would only establish a legal encumbrance on the leased lands. The physical, environmental, and socioeconomic effects of possible, subsequent, geothermal exploration and development are well described in the EA Chapter 2 – Alternatives, Table B-1 – Past, Present, and Foreseeable Action for Cumulative Effects Analysis, and Appendix D – Reasonable Foreseeable Development Scenario.
- Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
 - Leasing itself will only establish a legal encumbrance on the land and an exclusive entitlement for the lessee(s) to propose and, if authorized, carry out geothermal exploration and possible, future development pursuant to separate approval of NOIs/Sundry Notices and associated operating plans. Any such action would require NEPA analysis and determinations of consistency with the MBS Forest Plans subject to appropriate stipulations for protection of other biotic, geophysical, and land use resources that would lead to concurrence from the USFS.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
 - Leasing itself will not contribute to cumulatively significant impacts because no on-the-ground actions are authorized. Leasing would only establish a legal encumbrance on the land and an exclusive entitlement to propose and carryout geothermal exploration and possible development if related NOIs/Sundry Notices and associated operating plans are approved (see EA Section Alternative B – Proposed Action, Table B-1 – Past, Present, and Foreseeable Action for Cumulative Effects Analysis, and Appendix D – Reasonable Foreseeable Development Scenario).
- Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
 - Leasing itself will not adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or cause loss or destruction of significant scientific, cultural, or historical resources because on on-the-ground actions are authorized. The RFD scenario in Appendix D of the EA, as derived from the PEIS, provides a best professional approximation of possible environmental impacts resulting from post-leasing development of the offered Federal lands. Leasing stipulations, as previously discussed, would assure that possible impacts on scientific, cultural, or historic resources from leasing or post-lease exploration and/or development of any geothermal resources are fully considered, mitigated, or precluded as part of the NOI/Sundry Notice review process.
- Degree to which the action may adversely affect an endangered or threatened species or its critical habitat.
 - Leasing itself will not adversely affect endangered or threatened species or their critical habitat because no on-the-ground actions are authorized. The EA extensively addresses the important and critical habitats within the lands to be offered for geothermal leasing and establishes administrative stipulations to control effects on biological, geophysical, and land use resources (see previous discussion of Seasonal or Time Limited (TL) Stipulations).

- Whether the action threatens a violation of Federal, state, or local environmental protection law.
 - Leasing in itself will not violate Federal, state, or local environmental protection laws because no on-the-ground actions are authorized. Subsequent exploration and development would be subject to the identified lease stipulations and BMPs designed to ensure protection of environmental resources and compliance with Federal, state, and local environmental protection laws, as well as applicable regulations and MBS Forest Plans.

Decision Factor 10 – Environmental Justice

- Over the past decade, the concept of Environmental Justice has emerged as an important component of Federal regulatory programs as initiated by Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This Executive Order directs each Federal agency to “make achieving environmental justice by avoiding disproportionately high or adverse human health or environmental effects on minority and low-income populations” part of its mission. The order further emphasizes that federally recognized Native Tribes or bands are to be included in all efforts to achieve environmental justice (Sec. 6.606).
- The demographics of the nominated lands were examined to determine the presence of minority, low-income, or Tribal populations in the area of potential affect. Neither of the EA alternatives would have disproportionately high or adverse effect on low-income women or minority populations because no on-the-ground actions are authorized.

Decision Factor 11 – Independent Evaluation and Determination

Based on my review of the EA and associated USFS DN/FONSI, I have determined that: (1) the EA satisfies the BLM’s NEPA process and procedures as well as adequately analyzes the Proposed Action, and (2) the information and analysis contained in the EA, as further substantiated by the USFS DN/FONSI, adequately:

- Addresses and evaluates the environmental impacts that would arise from implementation of the USFS concurrence for the BLM to offer the subject lands for geothermal leasing, as well as those that might stem from RFD.
- Indicates that all potentially significant effects have been analyzed and that these effects do not reach significance.
- Ensures that actions taken comply with the terms, conditions, and mitigation measures identified in this decision.
- Shows that programmatic and project-specific documents included in the Project Record provide an adequate basis for the conclusion that the selected Alternative B (Proposed Action) will have no significant effect.
- Supports the determination that the Proposed Action (offering specified lands for geothermal leasing), subject to the stipulations described herein, will not have a significant effect on the human environment. Therefore, an environmental impact statement (EIS) specific to this decision will not be prepared.

No Need for an EIS

The Proposed Action to offer the subject lands for competitive geothermal leasing itself will not significantly affect the human environment. It is an administrative action that may result in issuance of leases exclusively entitling the lessees to seek further authorization to conduct exploration for geothermal resources and/or development thereof for energy production.

This conclusion is based on the foregoing discussion and analysis which substantiates the conclusion that the Proposed Action will have no significant effects beyond those analyzed in the EA specific to the lands to be offered as tiered to the 2008 PEIS for Geothermal Leasing in the Western United States, including possible Reasonably Foreseeable Development for non-NSO areas. Thus, a FONSI is appropriate for the Proposed Action.

Furthermore, my decision is based on a thorough review of the EA (DOI-BLM-OR-0936-2014-EA) and supporting documents which substantiate the determination that the Proposed Action 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. Thus, there are no environmental effects arising from implementation of the Proposed Action that meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27, and do not exceed those effects as described in the MBS Forest Plans, as amended. Therefore, an EIS is not required.

Further Action

This BLM DR/FONSI will be made available for a 30-day public review because the affected lands contain wetlands and riparian habitat. Other relevant, environmental documents related to this decision are included in the Project Record and can be examined at the link provided in the preceding section on the "BLM Decision."

Authorization

As the Responsible Official, it is my decision to offer the subject lands for competitive geothermal leasing. The lands are located in Snohomish County on the USFS Skykomish Ranger District of the MBS National Forest and are situated approximately 9 miles northeast of Index, Washington, within the North Fork of the Skykomish, Beckler, and Rapid River watershed, as shown in Figures 1, 2, and 3, subject to the leasing stipulations listed in Attachment 2.



Jerome E. Perez
State Director, Oregon/Washington



Date