

# Record of Decision

## Mt. Hood National Forest Geothermal Leases

USDA Forest Service

Mt. Hood National Forest

Hood River and Barlow Ranger Districts

Hood River County, Oregon

### Summary

It is my recommendation that the parcels included in geothermal lease applications OROR 017149, 017051, 017052, 017053, and 017327 be made available for leasing, with stipulations as described in this document. Figure 1 shows the parcels in the leasing applications.

### Background

The production, transmission, and conservation of energy are national priorities as reflected in the Energy Policy Act of 2005 and other government laws and policies. Section 225 of the Energy Policy Act of 2005 requires that the US Department of the Interior and the USDA Forest Service reduce the backlog of geothermal lease applications pending as of January 1, 2005, by 90 percent (by August 8, 2010). To respond to these directives, the BLM and the FS have prepared a joint Programmatic Environmental Impact Statement (PEIS) to analyze and expedite the leasing of BLM and National Forest System (NFS) lands with high potential for renewable geothermal resources in eleven Western states and Alaska.

### *Relationship of PEIS for Geothermal Leasing and this Decision*

The US Department of Interior Bureau of Land Management and the US Department of Agriculture Forest Service were joint Lead Agencies in preparing the Final PEIS for Geothermal Leasing in the Western United States. On December 12, 2008, the Under Secretary for the USDA issued a memo to the USDI documenting the status of the PEIS for future USDA Forest Service decisions. The memo established two points relevant to this decision document.

- The PEIS provides a framework to facilitate Forest Service efforts regarding pending geothermal lease applications and future determinations for projects on National Forest Service System lands;
- The Department of Agriculture supports and adopts the Programmatic Environmental Impact Statement for Geothermal Leasing in the Western United States.

I have reviewed the PEIS and find that the document is consistent with the National Environmental Policy Act (NEPA) procedures of the USDA Forest Service and meet the agency's NEPA requirements. I also find it contains sufficient, site-specific analysis of the human environment as a basis for my decision concerning consent to lease for geothermal activity for the pending lease applications on the Mt. Hood National Forest (PEIS 15.2). Based on the determinations in the Department of Agriculture December 2008 memo and my review

and evaluation of the PEIS, I am adopting the PEIS in its entirety including appendices and supporting documents as the analytical basis for this Record of Decision (40 CFR 1506.3).

It is important to note that both Lead Agencies for the PEIS, the BLM and FS, are making decisions and writing individual Records of Decisions based on the PEIS analysis. December 17, 2008 the BLM issued a Record of Decision from the PEIS that, among other decisions, amended the Resource Management Plans for BLM lands in the Western US to establish direction concerning suitability and availability of BLM lands for geothermal leasing. Amending the existing Land and Resource Management Plans (LRMPs) for National Forest Service System lands was not a purpose and need identified in the PEIS and this Record of Decision does not amend the Mt. Hood National Forest Land and Resource Management Plan.

### ***PEIS and Mt. Hood National Forest Pending Geothermal Lease Applications***

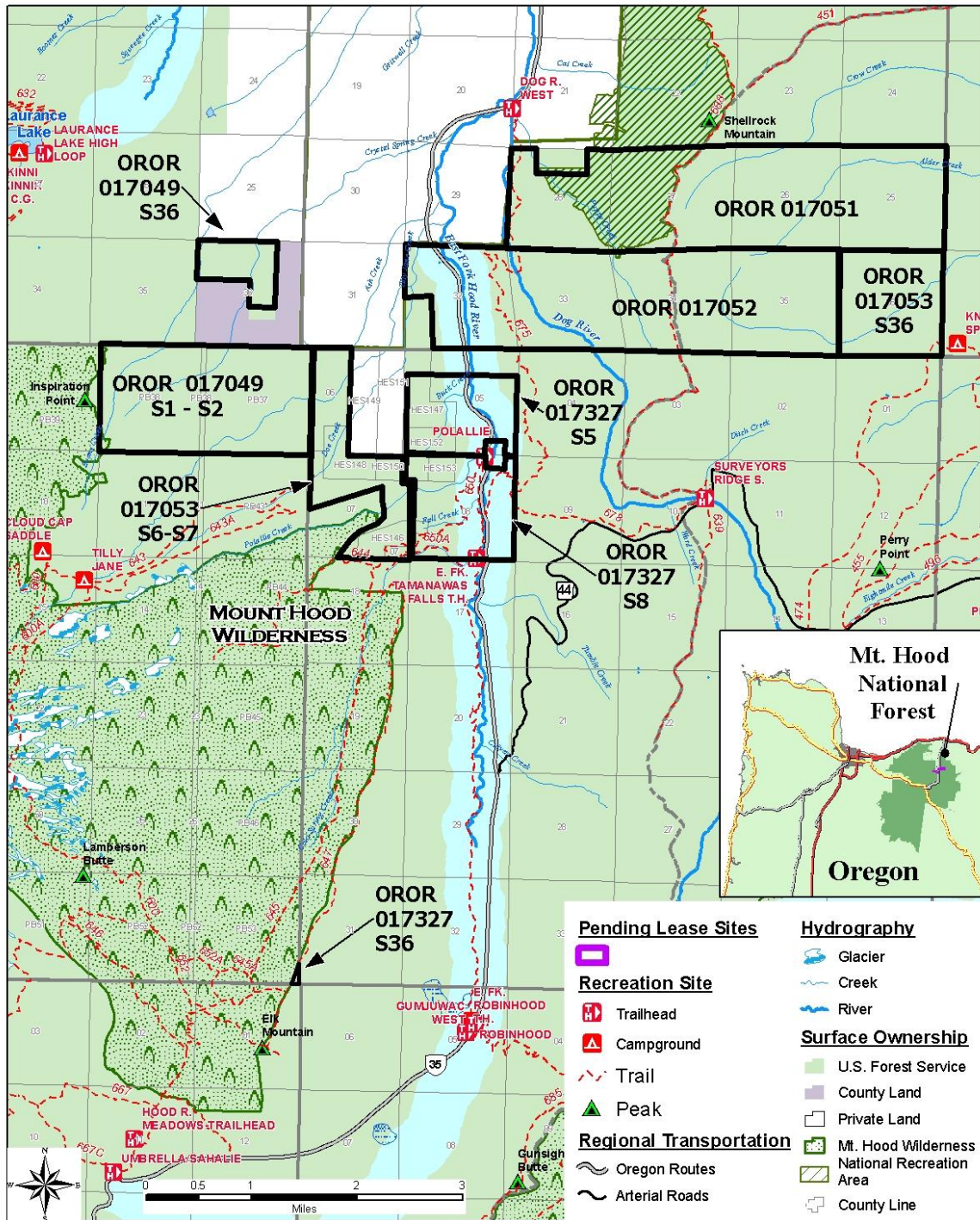
The PEIS incorporates two different scopes for analysis. The first scope covered the programmatic analysis to allocate lands as open or closed for leasing and development of geothermal resources and to apply stipulations (Volume I of the PEIS). The second scope covered the site-specific analysis of 19 backlogged lease applications that were pending as of January 1, 2005 (Volume II of the PEIS). Five of the backlogged lease applications (BLM serial numbers OROR 017149, 017051, 017052, 017053, and 017327) analyzed in the PEIS encompass 9,170 acres of public land within the Mt. Hood National Forest on the Hood River and Barlow Ranger Districts within Hood River County, Oregon. The PEIS analysis for the applications discloses the effects of reasonably foreseeable activity to explore for and develop geothermal resources if a lease is issued. Based on this analysis, the FS must decide if the involved Forest lands should be made available for leasing, and if so, what stipulations need to be applied to leases to minimize impacts to surface resources. The BLM is the federal government's minerals manager and is responsible for issuing geothermal leases on NFS lands, but can only do so if the FS determines its lands are available and consents to leasing.

The five potential lease sites are made up of eight parcels that are located to the northeast of Mt. Hood, and one small parcel to the east-southeast of Mt. Hood. See Figure 1 (following page) for a location map of all the sites.

### ***Reasonably Foreseeable Development Scenario***

The PEIS describes the Reasonably Foreseeable Development Scenario for the proposed lease parcels on the Mt. Hood National Forest (PEIS, Section 15.2.4). The lease applicant, Portland General Electric (PGE), expects that all the lease sites will likely be developed for electricity generation. Should a commercially viable geothermal resource be located, the pending noncompetitive lease application describes the likely development of two power plants associated with the leases—one 30-megawatt plant to the west of Highway 35, and one 20-megawatt plant to the east of Highway 35 (PEIS, Section 15.2.4). Existing Forest Service roads would be used to access the power plant sites. Building the power plants would result in about 25 acres of disturbance, as well as additional disturbance associated with the clearing, construction, and operation of transmission lines needed to connect with the electric grid. Any such potential future actions associated with the exploration or development of geothermal resources would undergo site-specific analysis at that time in accordance with NEPA.

Figure 1: Potential Geothermal Leasing Sites



## ***Pending Geothermal Lease Applications and Mt. Hood National Forest Land and Resource Management Plan***

This decision is guided by the *Mt. Hood National Forest Land and Resource Management Plan (LRMP 1990)*, as amended. The goals and objectives, management area designations, and standards and guidelines in the Mt. Hood LRMP as amended provide the management direction framework for my decision. Consistency with the Mt. Hood LRMP was a key consideration in my decision concerning the pending geothermal lease applications as explained in more detail later in this document.

### **Purpose and Need for Action**

The purpose of the Federal action is to determine if approximately 9,170 acres of the Mt. Hood National Forest are available for geothermal leasing by the BLM to facilitate environmentally responsible exploration and development of public resources; and if so, under what reasonable and justifiable terms. This corresponds to the purpose identified in the PEIS to provide suitable information to the FS to facilitate its subsequent consent decision to the BLM for leasing on NFS lands (PEIS 1-3).

The need for this Federal action is stated in the PEIS (PEIS 1-3). In summary:

- To issue decisions on pending lease applications in accordance with the Energy Policy Act of 2005, specifically to reduce 90% of the backlog of geothermal lease applications pending as of January 1, 2005 by August 8, 2010;
- To address other provisions of the Energy Policy Act of 2005 including calling for clean and renewable energy;
- To facilitate geothermal resource leasing in an environmentally responsible manner to help meet the increasing interest in geothermal development on public and NFS lands in the western US.

### **Decision**

I have decided to select Alternative B as set forth in the PEIS, making 8,082 acres within the pending geothermal lease applications on the Mt. Hood National Forest administratively available for geothermal leasing, subject to the condition that any lease issued should contain the lease stipulations described in the section below. One-thousand eighty-eight acres of the geothermal lease applications are not available for leasing, as those lands are closed to leasing by law or regulation as specified below. The Regional Forester may subsequently notify the BLM of my recommendation in a letter of consent to offer these lands for lease.

My decision for consenting to lease those areas includes stipulations identified below and in the PEIS (2.2.2 Lease Stipulations, Best Management Practices, and Procedures). The stipulations and their effect on the resulting environmental impacts of leasing and the Reasonably Foreseeable Development Scenario that I considered in this decision are disclosed in Chapters 4, 5, and 15 of the PEIS.

## Lands Closed to Leasing

Some of the land within the parcels in the geothermal lease application is not available because it is closed to leasing by law or regulation (43 CFR 3201.11; PEIS Record of Decision [ROD] at 2-2). The following are closed to leasing:

- **Wilderness Areas:** Portions of parcels 017049 S1-S2, 017053 S6-S7, and 17327 S36 are in the Mt. Hood Wilderness and are closed to geothermal leasing. Portions of 017049 S1-S2 and 017053 S6-S7 will become Wilderness upon completion of a land exchange, and are closed to leasing (see Figures 3 & 5).
- **National Recreation Areas:** Portions of 017051 and 017052 are within the Shellrock Mountain National Recreation Area and are closed to geothermal leasing (see Figure 4).

## Lands Open to Leasing with Stipulations

Some of the land within the parcels in the geothermal lease application is available for leasing if stipulations are met. The lease stipulations are enforceable terms of the lease contract, and are attached to and made part of a lease (ROD at 2-4). The following are lease stipulations:

### *No Surface Occupancy Stipulation*

A no surface occupancy stipulation does not allow surface development of geothermal resources (ROD at 2-5). Geothermal exploration and development are constrained by this stipulation by the presence of the following resources:

- **Designated or proposed critical habitat for listed species under the Endangered Species Act:** Critical habitat is present within the lease areas. No surface occupancy will be permitted at those sites if a project-specific analysis determines that geothermal exploration or development would adversely affect habitat.
- **Areas with important cultural and archaeological resources:** Cultural resources have been recorded in parcels 017049, 017051, 017052, 017053, and 017327, and no surface occupancy is permitted at those sites (PEIS at 15-42 to 15-45). During the project-specific analysis that will occur prior to exploration or development, additional areas 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 BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects.
- **Water bodies, riparian areas, and wetlands:** Rivers, streams, and/or riparian areas are found in all the parcels, and no surface occupancy is permitted at those sites. This constraint includes Riparian Reserves under the Northwest Forest Plan (see Figures 3 through 5).
- **Developed recreational facilities, special use permit recreation sites, and areas with significant recreational use:** Recreation facilities and significant recreational use occur in portions of parcels 017053 and 017049, and no surface occupancy is allowed at those sites (PEIS at 15-15).

- **Scenic and Recreational Rivers under the Wild and Scenic Rivers Act:** The East Fork Hood River is a recreational river and passes through 017052 and 017327, and no surface occupancy will be allowed within the Wild and Scenic River corridor on those parcels (see Figures 3 & 4).
- **Designated important viewsheds:** Multiple sites in the area have a Scenery Management Integrity System level of Very High, which is akin to the Mt. Hood Land and Resource Management Plan (“Forest Plan”) Visual Quality Objectives of “Preservation” (Forest Plan at Four-221-223). Project-specific analysis is required to determine if geothermal exploration or development would have an impact on the characteristics of the viewshed. If it is determined that there would be a negative impact, then no surface occupancy is allowed at those sites.
- **Slopes in excess of 40%:** The presence or absence of slopes in excess of 40% was not available in the PEIS. The project-specific analysis that will occur prior to exploration or development may result in areas that may require a no surface occupancy stipulation due to steep slopes.

### **Roadless Stipulation**

The following stipulation may be applied once a site-specific proposal is made and its effects to the environment can be analyzed:

- Portions of parcels 017327 S6, S7, and S36, and 017327 S8 are within inventoried roadless areas (see Figures 2 & 3). No new road construction or road reconstruction may occur within the subject lands. Additional stipulations regarding the cutting, removal, or sale of timber associated with the exploration or development of a lease may be required on a site-specific basis, and may change based on the outcome of ongoing litigation related to roadless areas.

### **Other Terms & Conditions**

- **Endangered Species Act Notice:** The following notice would be attached to a geothermal lease if species or critical habitat is known or strongly suspected to occur at a lease site: “The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. The BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will 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 jeopardy 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.” (ROD at 2-8)
- **Forest Plan Consistency:** Terms and conditions required for Forest Plan consistency will be identified during the NEPA process, should the lessee submit a site-specific proposal for geothermal exploration or development. Such terms and conditions may

include design features and/or mitigation measures that minimize detrimental effects to resources.

## Decision Rationale

It is my decision that the portions of the parcels that are not within Wilderness, Potential Wilderness, or a National Recreation Area in the geothermal lease applications OROR 017149, 017051, 017052, 017053, and 017327 be made available for leasing, with the above stipulations.

In making this decision, I considered how both alternatives responded to the Purpose and Need for the federal action and how well they met Forest Service obligations under the Energy Policy Act of 2005, National Energy Policy, the Forest Service Minerals Policy, the USDA Forest Service Strategic Plan for Fiscal Years 2007-2012, and Forest Service direction on energy production and transmission (memo from Deputy Chief Holtrop, 3/17/2010). All of the above reflect a national need to facilitate domestic energy production. My decision responds to this need, while minimizing impacts to the natural resources and human values on National Forest lands.

I have determined that my decision does not need to specify monitoring provisions because making these lands available for subsequent leasing does not authorize any ground-disturbing activities that could affect environmental resources. Monitoring appropriate to geothermal exploration, development, operation, and closure activities will be addressed in the site-specific environmental reviews that will be conducted when those activities are proposed.

My decision conforms to the Mt. Hood National Forest Land and Resource Management Plan of 1990 (LRMP), as amended, which allows for the exploration and development of mineral resources while minimizing possible adverse impacts on surface resources.

## Alternatives Considered

Two alternatives were considered in this lease-specific analysis: Alternative A, the No Action alternative, and Alternative B, the Proposed Action. These are described further as follows:

### *Alternative A – No Action*

Under Alternative A, the Forest Service would not issue a consent determination for the lease and the BLM would not issue the lease on National Forest System (NFS) lands. This alternative is required by the National Environmental Policy Act and also serves as an environmental baseline for comparing the action alternative.

### *Alternative B – Proposed Action*

Under Alternative B, the Forest Service would provide a consent determination for NFS lands included in the lease application. This determination would involve a decision by the Forest Supervisor that the subject NFS lands are administratively available for leasing, subject to reasonable and necessary stipulations to protect other resource values and land uses. The Forest Service would then provide consent to BLM and the BLM would issue the lease with the stipulations identified in this decision. BLM may include additional stipulations on this lease to address concerns on the portion of the lease involving BLM-administered surface. Alternative B was developed to fulfill the purpose and need, address the public issues identified during scoping, and be consistent with the Forest Plan.



## Public Involvement

The BLM published the Notice of Intent to prepare a PEIS to evaluate geothermal leasing in 12 western states, including Alaska, on lands administered by the BLM and the Forest Service in the Federal Register on June 13, 2007 (72 FR 113). The Notice of Intent initiated the public scoping process and invited public comments on the content and issues that should be addressed in the PEIS.

The BLM and the Forest Service conducted scoping from June 13, 2007 through August 13, 2007. During that period, the BLM and Forest Service invited the public and interested groups to provide information and guidance, suggest issues that should be examined, and express their concerns and opinions on geothermal leasing in eleven western states and Alaska on public lands administered by the BLM and the Forest Service. Public meetings were held in ten western cities in July 2007, including Portland, Oregon on July 23, 2007. Verbal and written comments were received from interested parties during scoping and were considered by BLM and Forest Service in developing the alternatives and analytical issues contained in the PEIS.

The EPA published a Notice of Availability of the Draft PEIS in the Federal Register on June 13, 2008 (73 FR 115). The Notice of Availability initiated the 90-day public comment period provided for planning actions. Following release of the Draft PEIS, a second round of public meetings was held in 12 western states, including a meeting in Portland, Oregon on July 29, 2008. The comment period closed on September 19, 2008. A total of over 500 individual comments were made. All information received through these comments has been evaluated, verified, and incorporated into the Final PEIS, as appropriate. Appendix L in Volume III of the PEIS contains the comments and responses. Three commenters provided comments specific to the pending lease applications that are the subject of this ROD. The comments included concerns about seismic activity, impacts to Inventoried Roadless Areas and “citizen-proposed wilderness,” the effects of road construction, and impacts to water quality, late-successional reserves, and terrestrial and aquatic organisms. These letters and the agency responses are found on pages L-100 and 101, L-232 through L-243 and L-296 through L-343 of Volume III of the PEIS.

The EPA published the Notice of Availability of the Final PEIS in the Federal Register on October 24, 2008 (73 FR 207).

## Tribal Consultation

Tribal governments were consulted with throughout the development of the PEIS. On September 12, 2007 a letter inviting tribal participation in government-to-government consultation on the Programmatic Environmental Impact Statement (PEIS) was sent to over 400 tribes and pueblos in the western US and Alaska, including all tribal governments in Oregon. In July of 2008, the Draft PEIS was sent to over 400 tribes and pueblos in the western US and Alaska, including all tribal governments in Oregon. Final consultation with the Confederated Tribes of Warm Springs was conducted by telephone by the Tribal Natural Resource manager on August 13, 2010.



## Findings Required by Other Laws and Regulations

My decision is consistent with all applicable laws, Executive Orders, regulations, and policies including the following:

### *Forest Plan Consistency (NFMA)*

Pursuant to 40 CFR 1502.20, the National Forest Management Act requires a specific determination of consistency with the Mt. Hood National Forest Land and Resource Management Plan and its Standards and Guidelines. **Alternative B** has been developed to be in full compliance with the Forest Plan and National Forest Management Act, as discussed above in “Decision Rationale.” The basis for my decision is contained in federal law, Forest Service policy, and the Mt. Hood National Forest Land and Resource Management Plan, as amended. Since this action does not include any site-specific ground or habitat-disturbing proposals I have included stipulations (as listed above) to be included with any lease issued by the BLM for the 8,082 acres included in this decision.

### *National Environmental Policy Act*

My decision is consistent with the National Environmental Policy Act (1969). The PEIS for Geothermal Leasing in the Western US was completed under the guidelines outlined in 40 CFR Part 1500, and is consistent with the USDA Forest Service NEPA Policy and Procedures in Forest Service Manual 1950 and Forest Service Handbook 1909.15. I believe that the range of alternatives considered for the pending lease application is adequate and that sufficient information was included in the PEIS for me to make a reasoned and informed decision for the pending geothermal lease application on the Mt. Hood NF.

### *Energy Policy Act of 2005*

My decision is consistent with this law which emphasizes the production of energy resources in an expedited manner from lands within the United States.

### *Geothermal Steam Act of 1970*

My decision will result in the Forest Service providing consent to BLM for leasing in accordance with this act.

### *Executive Order 13212 - Actions to Expedite Energy-Related Projects*

My decision expedites projects that will increase environmentally sound energy production within the United States.

### *Endangered Species Act of 1973*

I have determined that there is no direct impact to federally listed threatened or endangered plant or wildlife species as a result of this action. My decision includes a lease stipulation to address threatened and endangered species as an added measure to address potential changes in listed species. Consultation pursuant to Section 7 of the ESA would be performed prior to any ground-disturbing activity that may result from my consent to lease for geothermal activities. This consultation may result in appropriate surveys, avoidance and mitigation measures that will be implemented prior to any geothermal activities to avoid adverse impacts to species. (PEIS 16-35). Lease issuance, by itself, does not afford lessees the right to engage in any ground-

disturbing activity. Under the regulations applicable to geothermal development, permits, with associated environmental reviews and coordination, are required at every stage of exploration, drilling, and utilization before the applicant may proceed. The BLM and FS have retained the authority post-lease issuance to condition, and even to deny, the use of the leased property if required by the Endangered Species Act.

### ***Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations***

This order requires the consideration of adverse effects to minority and low income populations. My decision will not have a disproportionately high or adverse human health or environmental effects on minority or low income populations. The PEIS projects that low income and minority populations are not likely to be impacted by geothermal development due to the lack of a residential population in and around the pending lease area (PEIS at 15-51).

### ***Sensitive Species Policy – Forest Service Manual 2670.32***

My decision is consistent with FS policies for the conservation and protection of sensitive species. Prior to any ground-disturbing activities, appropriate surveys, avoidance, and mitigation would be identified and implemented to avoid adversely affecting any sensitive species or the habitats on which they rely (PEIS 15-41).

## **Implementation**

If we receive no appeals within the 45-day time period, we can implement the decision on, but not before, five business days from the close of the appeal filing period. If appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

## **Administrative Review or Appeal Opportunities**

This decision is subject to appeal pursuant to Forest Service regulations at 36 CFR 215. Appeals must meet the content requirements of 36 CFR 215.14. Only individuals or organizations who submitted comments or otherwise expressed interest in the project during the comment period may appeal. Appeals must be postmarked or received by the Appeal Deciding Officer within 45 days of the publication of the Notice of Decision for this project in *The Oregonian*. This date is the exclusive means for calculating the time to file an appeal. Timeframe information from other sources should not be relied on. Incorporation of documents by reference is not allowed. The Appeal Deciding Officer is the Regional Forester.

Appeals must be sent to: Appeal Deciding Officer, ATTN: Geothermal Appeals, P.O. Box 3623; Portland, OR 97208-3623; faxed to Regional Forester, ATTN: Appeals at (503) 808-2339 or e-mailed to: [appeals-pacificnorthwest-regional-office@fs.fed.us](mailto:appeals-pacificnorthwest-regional-office@fs.fed.us). Please put “Appeal” and name of project in the subject line. Electronic appeals must be submitted as part of an actual e-mail message, or as an attachment in Microsoft Word (.doc), rich text format (.rtf), or portable document format (.pdf) only. E-mails submitted to addresses other than the ones listed above or in formats other than those listed or containing viruses, will be rejected. It is the responsibility of the appellant to confirm receipt of appeals submitted by electronic mail. Appeals may also be delivered to: Pacific Northwest Regional Office, 333 SW First Avenue, Robert Duncan Plaza Building, Portland, Oregon between 8 am and 4:30 pm.

## Availability of Records

This Record of Decision and the Final PEIS will be available for review at the following Forest Service Office:

Mt. Hood National Forest Headquarters  
16400 Champion Way  
Sandy, OR 97055  
(503) 668-1700

This ROD is also available online at: <http://www.fs.fed.us/r6/mthood/projects>. Interested persons may also review the Final PEIS on the Internet at [www.blm.gov/geothermal\\_eis](http://www.blm.gov/geothermal_eis).

## Contact Person

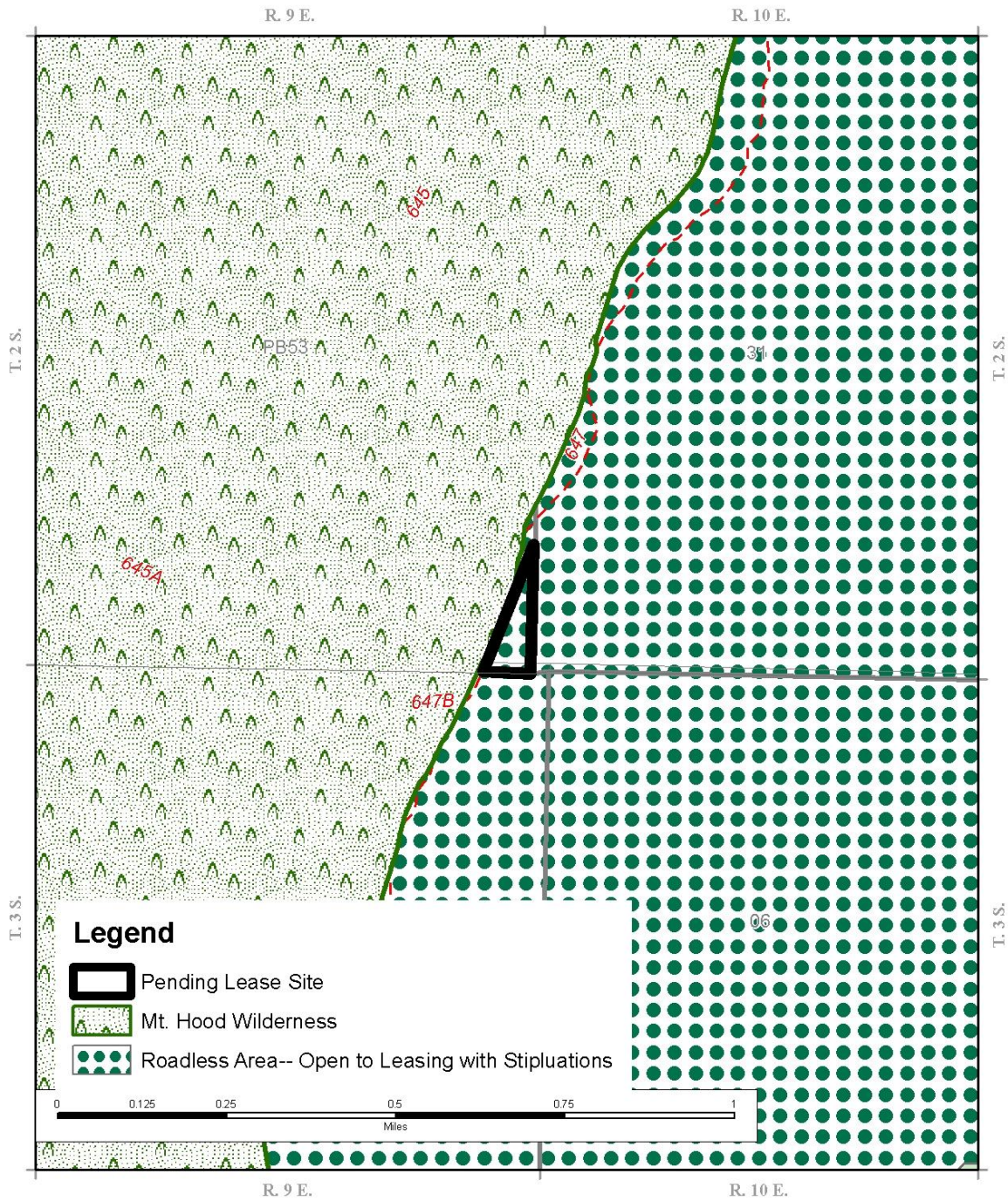
For additional information concerning this decision or the Forest Service appeal process, you may contact:

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/s/ Gary L. Larsen  
Gary L. Larsen  
Forest Supervisor  
Mt. Hood National Forest

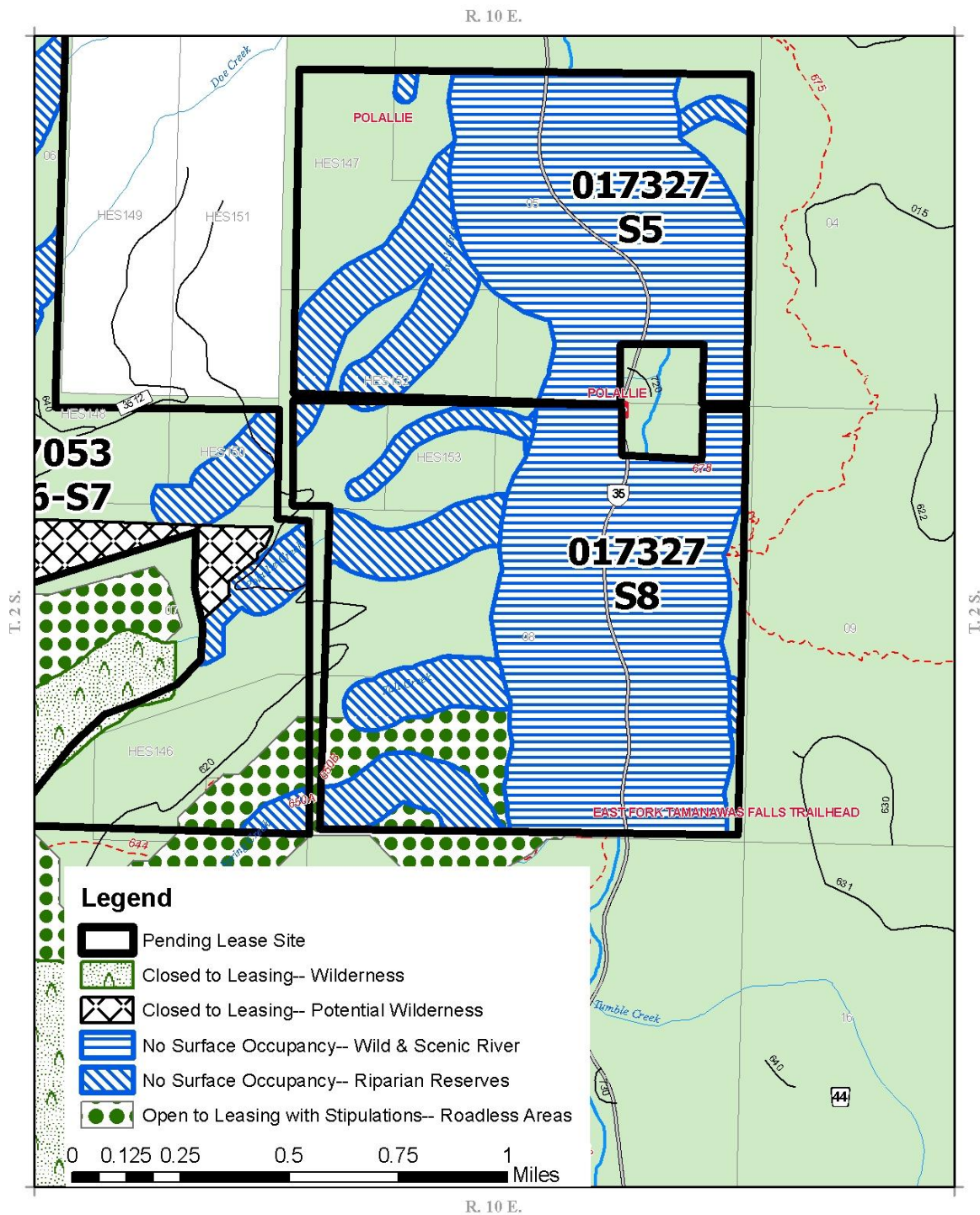
August 8, 2010  
Date

**Figure 2: Area Open to Leasing with a Stipulation in Parcel OROR 017327 S36**





**Figure 3: Areas Open to Leasing and Open to Leasing with Stipulations in Parcels 017327 S5 & S.8**



**Figure 4: Areas Closed to Leasing, Open to Leasing, and Open to Leasing with Stipulations in Parcel 017053 S6 & S7**

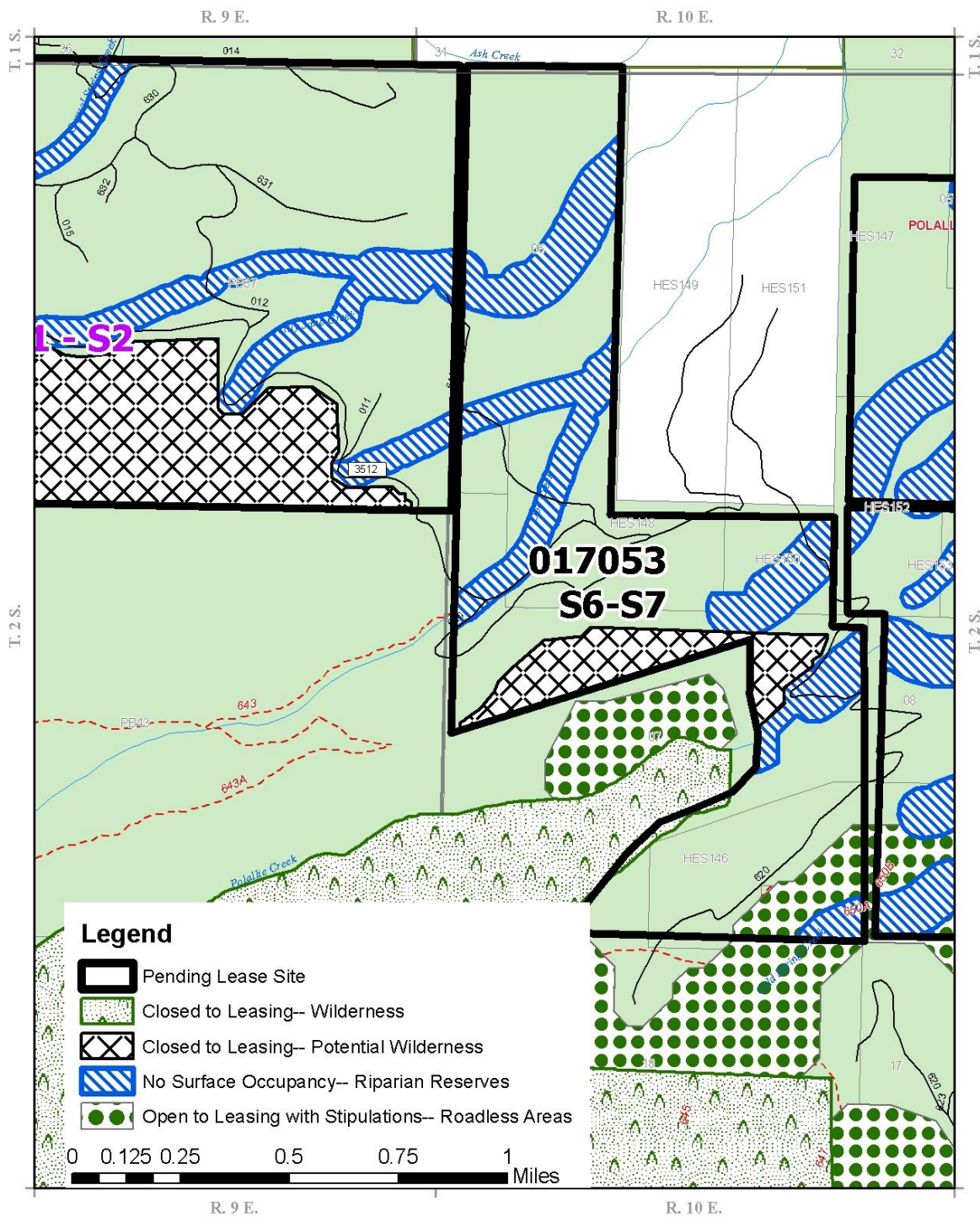
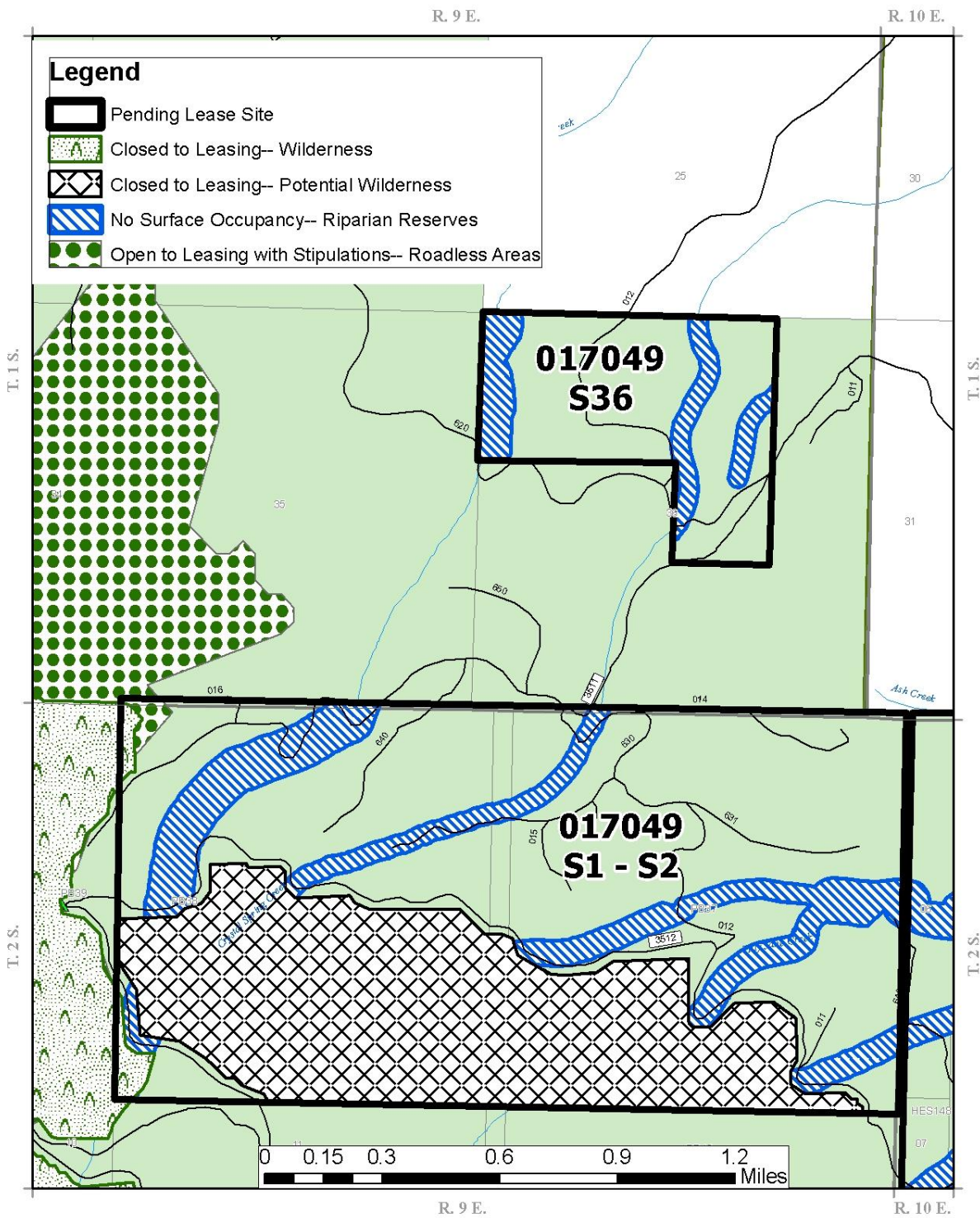


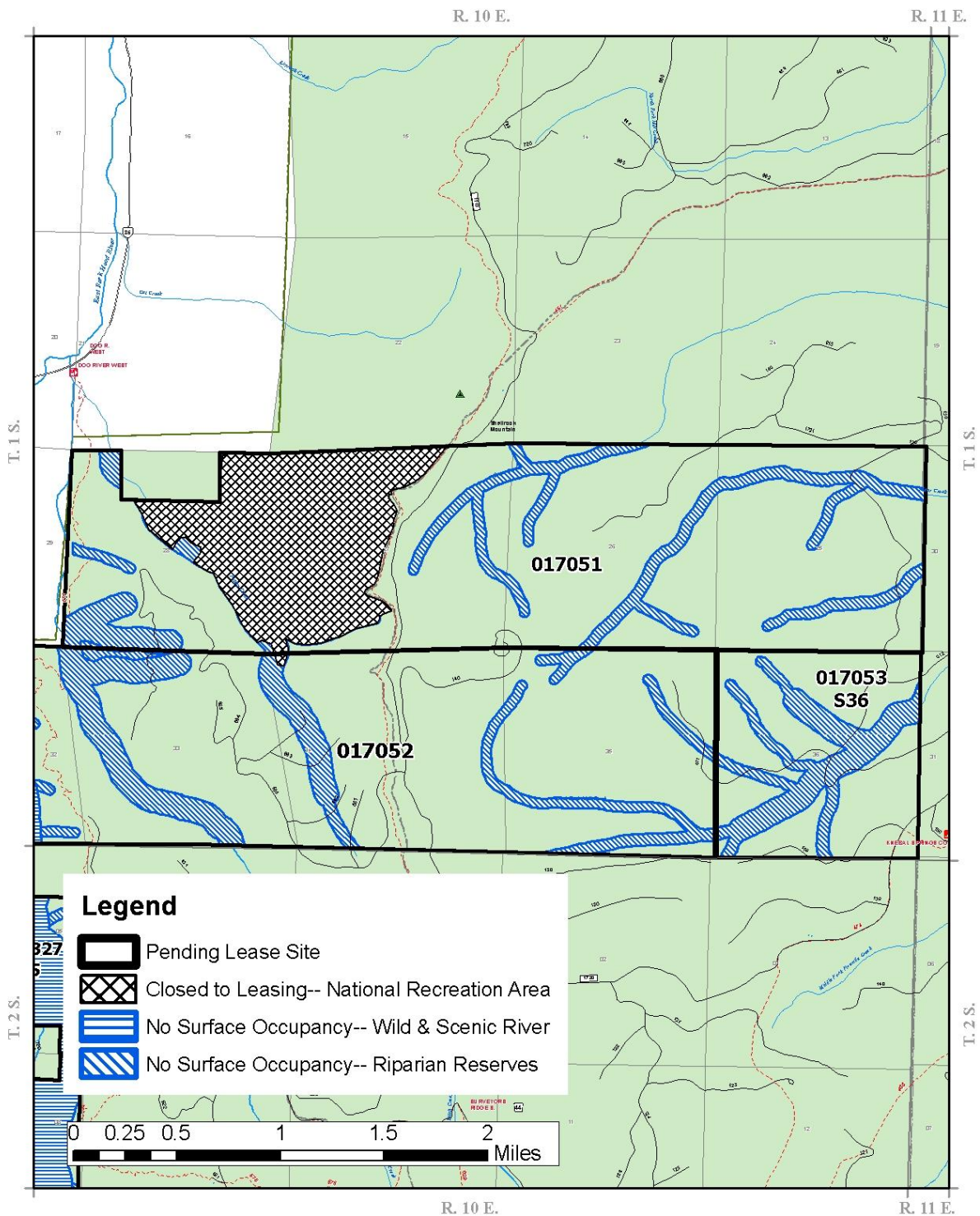


Figure 5: Areas Closed to Leasing, Open to Leasing, and Open to Leasing with Stipulations in Parcels 017049 S1, S2, & S36





**Figure 6: Areas Closed to Leasing, Open to Leasing, and Open to Leasing with Stipulations in Parcels 017051 & 017053 S36**



**Figure 7: Areas Closed to Leasing, Open to Leasing, and Open to Leasing with Stipulations in Parcel 017052**

