Decision Memo

USGS Seismic Monitoring Stations

USDA Forest Service
Bend-Ft. Rock Ranger District, Deschutes National Forest

Deschutes County, Oregon
T20S R11E Sec 23, T22S R13E Sec 24 & 26, T21S R12E Sec 17, 23 & 25,
T22S R12E Sec 26, T22S R11E Sec 13, T23S R13E Sec 10.

Background

The United States Geological Survey (USGS) Seismic Monitoring Station project area is located approximately 18 miles south of Bend, Oregon and approximately 12 miles east of LaPine, Oregon (Figure 1). The legal description of proposed project area includes sites located in: T20S R11E Sec 23, T22S R13E Sec 24 & 26, T21S R12E Sec 17, 23 & 25, T22S R12E Sec 26, T22S R11E Sec 13, and T23S R13E Sec 10.

The purpose of this project is for the USGS’s Cascade Volcanic Observatory (CVO) to install eight volcanic monitoring stations in the Newberry Crater area and maintain them on a long term basis. Nine sites have been identified and evaluated; however, only eight of those sites will be utilized. USGS will make the determination which sites will be used. The general location of each site was chosen by USGS based on monitoring needs, ability to transmit information to an off-site communication facility, having minimal disturbance to vegetation, and having remoteness from human activities and possible disturbance.

The USGS’s Cascade Volcanic Observatory has identified the need for these monitoring stations to provide timely warning to public officials and the public regarding volcanic activity in the Newberry Crater area. This need is documented in USGS’s Scientific Investigation Report 2004-5211 titled Seismic Monitoring at Cascade Volcanic Centers, 2004 Status and Recommendations and can be found at this link: http://pubs.usgs.gov/sir/2004/5211/.

The project area is located in the following land allocations designated in the Deschutes National Forest’s Land and Resource Management Plan (1990) (LRMP):

- General Forest 4 sites
- Scenic Views 3 sites
- Intensive Recreation 1 site
- Dispersed Recreation 1 site

In addition, three sites also overlay within the boundaries of the Newberry National Volcanic Monument and are in the following management zones:

- Caldera Zone 2 sites (Intensive Recreation and Dispersed Recreation)
- Flanks Zone 1 site (General Forest)
Description of Decision
I have decided to issue a special use permit to the USGS to authorize installation of eight permanent seismic monitoring stations.

My decision includes the following project elements:

- Install eight hut style stations (huts are 5’ x 5’ x 5”) and GPS antennas. Each site will be approximately 30 square feet and also includes a cement pad for the hut, a buried sensor, and wiring.
- Use of a helicopter to transport materials for installation and the monitoring equipment to each site and removing building materials after installation.
- Possible removal of trees within the immediate area of the site to allow unobstructed communication signals to off-site receivers.
- Annual maintenance as needed.

My decision also includes the following project design and mitigation measures to meet project objectives and/or to reduce or minimize unwanted effects:

- Selection of the specific installation location by USGS to minimize disturbance to existing vegetation and limit tree removal.
- Any trees to be cut would have a diameter at breast height (dbh) of less than 14 inches. It is estimated that as few as 5 to 10 trees would need to be cut. Trees that are cut will be left in place for wildlife habitat. No Whitebark Pine will be cut as part of this project and no trees will be cut at the two sites within the caldera.
- Raptor surveys will occur prior to implementation within ¼ mile of the project area if installation activities will occur during nesting season. If installation occurs outside nesting seasons defined below, no surveys are necessary.
- Apply seasonal restrictions on disturbing activities around active raptor, heron or crane nest sites if discovered, as follows: redtail hawk (March 1 – August 31); northern goshawk (March 1 – August 31); Cooper’s and sharp-shinned hawks (April 1 – August 31); Osprey (April 1 – August 31); great blue heron (March 1 – August 31); greater sandhill crane (March 15 – July 31). Modifications or exceptions can be made by the District Biologist depending upon site variables or waived by a line officer.
- For the prevention of invasive plant introduction and spread vehicles will not be parked in areas of known noxious weed infestation and no mechanized or foot paths will be established to the project area through known weed infestations. No infestations at the sites or the helicopter loading area were found.

Reasons for Categorically Excluding the Decision
Decisions may be categorically excluded from documentation in an environmental impact statement or environmental assessment when they are within one of the categories listed in 36 CFR 220.6(d) and (e), and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative effect on the quality of the human environment.
Category of Exclusion

The appropriate category of exclusion is found in the Forest Service National Environmental Policy Act (NEPA) regulations at 36 CFR 220.6(e)(3) — “Approval, modification, or continuation of minor special uses of NFS lands that require less than five contiguous acres of land. Examples include but are not limited to: (i) Approving the construction of a meteorological sampling site;” This category is appropriate because the project involves a Special Use permit that requires less than 5 contiguous acres of land and is similar to other meteorological sampling sites on this Forest and others.

Relationship to Extraordinary Circumstances

In determining the appropriateness of using the categorical exclusion, a determination of the potential impact to the resource conditions identified in FS 1909.15 Section 30.3(2) must be made. The following is the list of the potential effects to the resource conditions from the project activities.

1. Federally listed threatened or endangered species or designated habitat or species proposed for federal listing or proposed critical habitat and Forest Service Sensitive Species.
   
   Fish – There will be No Impact to the R6 Sensitive Columbia Basin Redband Trout and No Effect to any threatened or endangered fish species. No live streams exist at or near the sites.
   
   Wildlife – There will be No Effect to any threatened, endangered, or R6 Sensitive wildlife species. (Biological Evaluation for Wildlife).
   
   Plants – The project will have No Effect to any threatened, endangered, or R6 Sensitive plant species. (Biological Evaluation for Threatened, Endangered, and Sensitive Plants).

2. Flood plains, wetlands, or municipal watersheds

   Executive Order 11988 provides direction to avoid adverse impacts associated with the occupancy and modification of floodplains. Executive Order 11990 provides direction to avoid adverse impacts associated with destruction or modification of wetlands. The project is consistent with both executive orders.

   Municipal watersheds – The site is not located within or adjacent to a municipal watershed.

3. Congressionally designated areas such as wilderness, wild and scenic rivers, and national recreation areas –

   Three of the eight sites are within the Newberry Crater National Volcanic Monument.

   Public Law 101-522 states the purpose of its designation as:
   
   “There is hereby established the Newberry National Volcanic Monument in the State of Oregon as a component of the National Forest system in order to preserve and protect for present and future generations Newberry’s remarkable geologic landforms – and to provide for conservation, protection and interpretation, and enhancement of its ecological, botanical, scientific, scenic, recreational, cultural, and fish and wildlife resources.”

   This project is consistent with the Newberry National Volcanic Monument Comprehensive Management Plan, 1994. Two of the management goals of the monument are:
• “Provide for scientific research consistent with the purposes for which the Monument was established.”
• “Protect the health and safety of visitors to the Monument.”

In addition the Newberry National volcanic Monument Comprehensive Management Plan also requires evaluation of proposed research projects (page 169). While this project is primarily a monitoring project, the data will also be used for research.

Two sites are located in the Caldera Zone. The objective for this zone stresses the management of recreational and interpretive opportunities for the public. One site is located in a sub-management area called the “Flow Recreation Unit” and the second site is located in the “Undeveloped Recreation Unit”. While recreation is the primary focus of this zone, the size and remote placement of these two units should have no effect on recreational use. Visitors may notice the helicopter flights during the time when materials are delivered to each site and the follow up removal of equipment, but actual flight time will be of short duration. The size and scale of sites within the surrounding landscape will not have negative impacts on the area’s scenic resources or recreational values. The visual quality objective for this area is retention. No trees will be removed at either of these two sites to meet that objective.

A third site is located in the Flanks Zone at the very southern end of the monument. The objective for this zone stresses the retention of its undeveloped and remote character to provide opportunities for solitude and dispersed recreation. Except for the duration of the helicopter flights, this site should have limited impacts on this objective due to its remoteness and size.

4. The project area is not located within or adjacent to any wilderness or national recreation areas.

5. *Inventoried roadless areas* – Two of the sites are located within the North Paulina Inventoried Roadless Area. The monitoring stations will impact approximately 60 square feet within the 19,667 acre IRA. Installation of the two stations does not require construction of roads or removal of trees. The two stations will not impact the roadless character and are likely to go unnoticed by the public because they are not near any trails, roads, or recreation sites.

6. *Research Natural Areas* – There are no existing or proposed Research Natural Areas in or adjacent to the project area.

7. *American Indian and Alaska Native religious or cultural sites, archaeological sites, or historic properties of areas* - Surveys were conducted for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by this decision. A ‘no properties affected’ determination was made based on the implementation of design criteria and mitigation measures to avoid or prevent damage to known and unknown sites and post-treatment monitoring. Consultation has occurred under the Programmatic Agreement with the State Historic Preservation Office (SHPO). The project has been determined to be exempt under Appendix B, Item 17 of the 2003 Programmatic Agreement for the State of Oregon and has been determined to comply with Section 106 of the National Historic Preservation Act.
My conclusion is based on a review of the record that shows a thorough review of the relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. Based on the conclusions regarding the effect to the resource conditions listed above, I have found that no extraordinary circumstances exist with the proposed project activities that may result in a significant direct, indirect, or cumulative effect on the quality of the human environment.

**Findings Required by Other Laws**

This decision is consistent with the Deschutes National Forest Land and Resource Management Plan (LRMP) (1990) as amended. The project was designed in conformance with both LRMP standards and guidelines for Intensive Recreation, Dispersed Recreation, and Scenic View management areas. Proposed actions have been determined to have no adverse effects on riparian management objectives and resources.

The proposed action, with mitigation measures, complies with current forest and regional direction regarding the introduction, control, and spread of invasive species, including noxious weeds. The project has been determined to have a low risk of introducing invasive plants into the project area.

There would be no effects to any Oregon Department of Environmental Quality list of water quality impaired water bodies (303(d) list).

**Public Involvement**

On March 23, 2011 an initial scoping letter was mailed to 105 individuals, groups, and agencies with the proposed action described. Three letters and two email responses were received during the scoping period. One email was in support of the project and two letters raised no issues or dealt primarily with geothermal projects. The second email was in support but asked that tree removal be limited and questioned if any sites were in inventoried roadless areas. The third letter raised issues that were addressed in the evaluation.

**Administrative Appeal and Implementation**

This decision is not subject to appeal pursuant to 36 CFR 215.12(1). This decision may be implemented immediately. Implementation will take place in August of 2011.

**Contact**

For additional information concerning this decision, contact Rick Wesseler (Project Leader) by telephone at 541-383-4722 or by e-mail at rwesseler@fs.fed.us.

A. SHANE JEFFRIES
District Ranger

DATE
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