# United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
333 Bush Street, Suite 500
San Francisco, CA 94104

IN REPLY REFER TO:

L7617 (PWRO-EQ)

13 SEP 2011

Memorandum

To: Superintendent, Crater Lake National Park

From: Acting Regional Director, Pacific West Region

Subject: Environmental Compliance for Installing USGS Communications Tower

The finalized *Finding of No Significant Impact* for installing telemetry equipment - so as to facilitate USGS research and monitoring - is approved. To complete this particular compliance effort, the park should send its notice of the decision to all individuals and organizations who received or commented on the supporting environmental assessment.

Cynthia Ip

Attachment

# USGS Crater Lake Communications Tower
# Environmental Assessment

## Errata

This section itemizes clarifications, corrections, and changes made to the USGA Crater Lake Communications Tower Environmental Assessment following publication in December 2010 and public review. These errata should be maintained with all copies of the Environmental Assessment for a complete record of the completed environmental impact analysis. The changes and corrections incorporate responses to public, agency, and internal review comments received on the plan and additional National Park Service staff analysis. Revised or new language is underlined. Deleted text is marked by strikethrough.

### Consultation and Coordination

### Native American Consultation

First paragraph change to read:

> The Native American Klamath Tribe and the Cow Creek Band of the Umpqua Tribe ~~was~~ were contacted at the beginning of this project to determine if there were any ethnographic resources in the project area and if they wanted to be involved in the environmental compliance process. There was no response from the ~~Klamath~~ Tribes.

### Environmental Assessment Review and Lists of Recipients

Add to list of recipients:

> Cow Creek Band of Umpqua Tribe
> 2371 NE Stephens, Suite 100
> Roseburg, OR 97470

### List of Consultant(s) and Coordinator(s)

Add to list:

> Cow Creek Band of Umpqua Tribe
> Oregon State Historic Preservation Office

NATIONAL PARK SERVICE

FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT

USGS Communications Tower

Crater Lake National Park

September 2011

The Department of the Interior, National Park Service (NPS), has prepared this Finding of No Significant Impact (FONSI) on the Environmental Assessment (EA) for the installation of a communications tower in the Rim Village area of Crater Lake National Park. This FONSI is a statement of the decision made, other alternatives considered, public involvement in the decision making process, the basis for the decision, the environmental preferable alternative, and measures to minimize environmental harm.

The National Park Service prepared an Environmental Assessment (EA) describing the environmental effects of a proposal to install a communication tower within Crater Lake National Park. The U.S. Geological Survey Cascades Volcano Observatory (USGS/CVO) will install the tower next to the Concession Dormitory near Rim Village as described below. The tower will support wireless communications to transmit seismic monitoring data to the Cascades Volcano Observatory. This project does not establish a precedent for approval of future commercial wireless communication proposals. Future proposals for wireless telecommunications facilities will be evaluated independently on a case by case basis.

## PURPOSE AND NEED

Construction of a tower to support wireless communications will provide telemetry to transmit digital data in real time from existing USGS volcanic monitoring stations within Crater Lake National Park to an internet connection south of the volcano and south of the park's boundaries. Currently, the USGS operates and maintains 3 permanent seismic stations and 4 permanent Continuous Global Positioning Systems (CGPS) stations within Crater Lake National Park. Data from these stations is transmitted via both analog and digital radios to radios connected to a computer located on the top floor of the Rim Café building in the Crater Lake Rim Village. Currently, all data is stored on the computer and is manually downloaded by CVO staff twice a year as there is no reliable method to route this data through the Park's internet back to the USGS/CVO Vancouver office in real time. This inability to transmit monitoring data in real time prevents staff at CVO from performing its critical function to monitor and assess volcanic hazards at Crater Lake. Furthermore, the limited bandwidth on the current NPS CLNP Ethernet connection prohibits the transfer of seismic and deformation data in real time, thus hampering the ability to detect, analyze and interpret seismic events that occur within Crater Lake National Park. The USGS will install and maintain this tower in order to enhance monitoring capabilities at Crater Lake National Park to better detect the onset of any volcanic activity and to more accurately assess the likelihood of an eruption when seismic activity occurs within the park.

## SELECTED ACTION & OTHER ALTERNATIVES CONSIDERED

The National Park Service considered and evaluated the following alternatives, which included the No Action Alternative, and the Proposed Alternative.

## Alternative A - No-Action

Under this alternative, the telemetry tower would not be constructed. The USGS/CVO objective to establish and maintain reliable telemetry of real time volcanic monitoring data from Crater Lake would not be met. This would prevent staff at the USGS from quickly analyzing and interpreting seismic activity that occurs beneath Crater Lake. If the tower is not built, data from each remote monitoring station will continue to be transmitted to and stored on a computer located in the Rim Café and staff from the USGS will be required to visit the park and manually download the data off of the computer.

## Alternative B - Tower Installation

The alternative selected for implementation is Alternative B, which consists of constructing a telemetry tower behind the concession employee dormitory. There are no changes from what was presented in the EA due to public or other agency comments. The general area has been previously disturbed by the construction of the building and the installation of the electrical power transformer. The tower would consist of a single 4 foot diameter round flat panel digital antenna at the top of the pole pointing to the south towards the Klamath Basin. A run of 7/8" coax cable would be attached to the antenna and enclosed within the hollow tower. The digital radio equipment will consist of 1 outdoor metal electrical equipment cabinet to be located at the base of the antenna with enough space to accommodate up to 3 additional radios. One digital radio and a standard 4 or 8 port Ethernet router will be located in the cabinet. The tower would be primarily used by the USGS/CVO to telemeter volcanic monitoring data collected in the park at the 4 existing monitoring stations to a robust internet connection outside of the park. The tower would be served by existing electrical utilities near the site. All electrical cables to be installed and run from the existing utilities to the electrical cabinet at the base of the tower will be enclosed in conduit and buried in the ground according to standard local and federal electrical codes. Access to the tower would be over existing paved roads in front of the dormitory and other paved roads within the park. Machinery needed to complete all drilling and excavation will access the proposed site via the parking lot to the east of the dormitory and will be driven around the south side of the building. A temporary parking area will be necessary for the construction of the tower. This will include storage of work vehicles and trailers during construction. The parking area will be located adjacent to the east and south sides of the dormitory.

## OTHER ALTERNATIVES CONSDIERED BUT DISMISSED

The National Park Service considered and dismissed three additional alternatives.

- **Utilizing Other Existing Space** - No other wireless towers exist in the park. Therefore, utilizing an existing space was dismissed.
- **Alternative Locations for a Telemetry Tower in the Park** - The USGS/CVO considered one other location on the south rim of the crater. This site was not pursued because such a structure on the rim would be visible to the public and would consist of new construction in the Rim Village Historic Area.
- **Alternative Locations for a Telemetry Tower outside the Park** - The Crater Lake National Park encompasses a large area. No privately owned land is in the area that could be considered as a viable alternative location. Additionally, no one location outside of the park could be found that had line of site and was able to receive the signals transmitted by the radios at each of the remote monitoring sites within the park.

## ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental Quality (CEQ). The CEQ provides direction that the environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA's §101:

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- provide a range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B, Installation of the Communications Tower, would provide the USGS/CVO the infrastructure to perform real time monitoring of volcanic activity at Crater Lake and quickly provide park staff with interpretation and analysis of seismic events that occur at Crater Lake National Park. Additionally, the tower provides infrastructure that could potentially be utilized by the park for back up emergency radio and telecommunication systems. Furthermore, the USGS has worked very closely with staff from the park and Day wireless to identify and design a tower that will not impede visitor experiences in the park, limit its visibility from the crater rim and the Crater Rim Lodge, and disturb any previously undisturbed areas within the park.

## BASIS FOR DECISION

The National Park Service has selected Alternative 2 because it enhances the USGS ability to monitor seismic activity in the park to not only provide scientific information for resource stewardship and visitor interpretation but will also to help ensure visitor and employee safety by providing early warning of the potential for seismic activity. This helps fulfill the park's responsibility to current and future generations.

## MEASURES TO MINIMIZE ENVIRONMENTAL HARM

All practicable measures to avoid or minimize environmental impacts that could result from implementation of the selected action have been identified and incorporated into the selected action (Table 1).

## Table 1. Mitigation Measures

| Mitigation | Critical Milestones | Responsible Party |
|---|---|---|
| Ensure visitor experience and safety | The tower will be located out of view of the general public. The tower will be painted a non reflective paint in a neutral color chosen to blend in with surroundings. The area of construction will be closed to the public and non construction personnel during the construction period | Chief Ranger, Crater Lake National Park |
| Maintain site topography and minimize impacts to soils | Site access and equipment staging will be confined to areas of existing disturbance. Grading will be limited to the minimum extent necessary for tower construction. All trenches will be backfilled and returned to original grade. | Chief, RP&R, Crater Lake National Park |
| Minimize impacts to air quality | If windy conditions warrant, construction surfaces will be wetted to reduce fugitive dust emissions. Equipment will not be permitted to idle unnecessarily. | Chief, RP&R, Crater Lake National Park |
| Minimize impacts to vegetation | Surveys will be conducted prior to trail/parking construction for rare plant species. Work is designed to prevent damage to large diameter trees. No trees will be removed. There is little understory in project area however, if rare plants are found project will be modified to avoid populations. The limits of construction will be identified by temporary fencing. | Chief, RP&R, Crater Lake National Park |
| Minimize impacts to cultural resources and scared Indian sites | Previous surveys found no sites. Any finds located during fieldwork, will require all work to be stopped and the Park's Historian will be contacted. Contractors will be informed of penalties for illegally collecting artifacts. | Chief, I&CRM, Crater Lake National Park |

## WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE QUALITY OF THE HUMAN ENVIRONMENT

The NPS used the following NEPA criteria and factors defined in 40 CFR §1508.27 to evaluate whether the Selected Alternative would have a significant impact on the environment.

**Degree of effect on public health or safety.**

There is no anticipated effect on public health or safety from the selected alternative.

**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.**

The project is located in a development zone and in an area that that has been previously disturbed. The proposed location of the wireless tower is outside of the Rim Village Historic District and does not affect any historic building. The tower may be visible from a small portion of the Historic District, however the visual intrusion is considered negligible. Past cultural resources surveys indicate that no cultural resources were located in the vicinity of the proposed location. As a result, the project would not result in any direct impacts and only negligible impacts to the viewshed. There are no prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas affected by the project.

**Degree to which effects on the quality of the human environment are likely to be highly controversial.**

We received comments from 16 total sources during our scoping and public comment periods. The majority of the comments supported the project. Three comments were neutral. One comment did not support the project due to cost considerations related to government spending in general. One comment supported the concept of seismic monitoring but did not support the installation of a tower to accomplish that goal. One comment questioned whether adequate consultation had been completed with local tribal governments. We received four comments expressing concern that this project might promote additional towers for public phone service. Two comments expressed a desire for public cell service. . Given the number and pattern of comments received, Constructing a tower in this area of the park is not considered to be highly controversial.

**Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.**

Installation of similar towers have been done routinely elsewhere. Some preconstruction surveys will be conducted to confirm that there are no species of management concern in the area. The potential impacts of the project are predictable and are minor.

**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.**

This project will provide telecommunications for the transfer of data to a government agency. Some commercial firms have expressed interest in establishing wireless telecommunications towers to support wireless communications for the general public. This project does not establish a precedent for approval of future commercial wireless communication proposals. Future proposals for wireless telecommunications facilities will be evaluated on a case by case basis.

**Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

The project is not related to other actions in the park. The cumulative effects of installing this telecommunication tower was evaluated for each impact category in the context of past, current and reasonably foreseeable projects in the park. The potential cumulative impacts attributed to this project are negligible and limited in scope to the localized area of the tower.

**Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

The project will not adversely affect districts, sites, highways, structures or objects listed on the National register of Historic Places and will not cause the loss or destruction of significant scientific, cultural, or historic resources.

**Degree to which the action may adversely affect an endangered or threatened species or its critical habitat.**

The project will have no affect on listed endangered or threatened species or their habitats.

**Whether the action threatens a violation of Federal, state or local environmental protection law**

The project will not violate any Federal, state or local laws.

## PUBLIC INVOLVEMENT AND AGENCY PARTICIPATION

### Scoping

Internal scoping was completed by the interdisciplinary team on January 25, 2011. Internal scoping was completed for the project using the project's environmental screening form. External scoping for additional issues and concerns was conducted from April 13 through May 13, 2011. Scoping comments were solicited through a mailing on April 13, 2011 to 15 different interested and affected groups and a general press release to media and agency contacts. One comment was received during scoping.

The National Park Service sent notification to consult with the following groups and agencies before developing the EA proposing this project.

- Fremont-Winema National Forest
- Rogue-Siskiyou National Forest
- Umpqua National Forest
- US Fish and Wildlife Service (USFWS)
- Oregon Department of Fish and Wildlife District Office
- Oregon State Historic Preservation Officer
- Klamath County Commissioners
- Jackson County Commissioners
- Klamath Tribes

- Cow Creek Band of the Umpqua Tribe
- Pacific Crest Trail Association
- Crater Lake Natural History Association
- Friends of Crater Lake
- Crater Lake National Park Trust

The Oregon State Historic Preservation Officer (SHPO) responded on August 17, 2011 that they concurred with the finding of no adverse effect for the proposed project on above ground historic resources. In a letter dated August 18, 2011, the SHPO stated that their statewide cultural resource database did not indicate that a cultural survey had been completed in 1989 for the project area. We contacted the SHPO with the results of the survey and on September 9, 2011 they agreed that the survey met their standards and concurred with the findings of no effect.

Internal and public scoping comments focused on potential impacts to topography, geology and soils, air quality, natural sounds, and visitor experience. These areas of concern formed the impact categories that were evaluated in the EA.

**EA Review**

The EA for the Installation of the USGS Telecommunications Tower was also distributed and available for public review between July 28 and August 28, 2011. Approximately 600 letters inviting the public to comment and informing them where the EA was available were sent out on July 28, 2011. These letters were sent to those individuals on the park's mailing list and to other interested groups. Public notification was placed on Crater Lake National Park's web site with links to access the EA. Three printed copies of the EA were made available, one each at the Crater Lake National Park Headquarters, at the public libraries in Klamath Falls and Medford located in Oregon. Our notices indicated that a printed copy would be made available to anyone upon request. A press release was sent to approximately sixty different newspapers, television news stations, and radio stations located in Oregon, Washington and California. At least two newspapers ran a story on the project and our request for public comment.

Fifteen public comments were received during the open public comment period including one from the National Parks and Conservation Association and 14 from interested individuals. Nine of the comments were generally supportive of the tower installation. Three of the comments were neutral. One comment was generally opposed citing concerns with increased government spending for the project. One comment supported the concept of seismic monitoring but did not support the installation of a tower to accomplish that goal.. One comment suggested that the NPS camouflage the tower by simulating a tree. It is the opinion of the park that painting the tower a non reflective color that will blend with the surroundings is adequate mitigation to minimize its appearance on the landscape. Several comments questioned the relationship of this tower to future facilities for public cell phone communications. This Environmental Assessment does not establish a precedent for future proposals for telecommunication facilities. Any proposals for future facilities will be evaluated independently. One comment suggested the development of additional visitor use facilities (winter warming hut) in conjunction with this installation. Additional visitor use facilities are outside of the scope of this proposed installation and are not considered under this assessment.

One comment suggested that we did not adequately address other alternatives to site the telecommunications tower on existing radio antennas in the park. The commenter also suggested that more frequent manual downloading of seismic data might be adequate and would preclude the need for constructing a tower in the park. Potential locations on existing towers or buildings inside the park were screened by the USGS but there were not existing

locations with the necessary attributes to support wireless communications for seismic data. Increased manual downloading will not be adequate for real time monitoring required by the USGS.

One commenter expressed concerns that adequate consultation had been completed with local tribal governments. The EA did not indicate that The Cow Creek Band of the Umpqua Tribe was consulted in addition to the Klamath Tribes. The EA was changed to correct this omission. There were no other changes to the EA in response to the public comments received.

## IMPAIRMENT

The National Park Service has determined that implementation of the selected alternative and mitigation measures will not constitute impairment to Crater Lake National Park resources and values. There would be no major adverse impacts to a resource or value whose conservation is 1) necessary to fulfill specific purposes identified in the park's establishing legislation; 2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or 3) identified as a goal in the park's General Management Plan or other relevant NPS planning documents. This conclusion is based on a thorough analysis of the environmental impacts described in the USGS Crater Lake Communications Tower Environmental Assessment, the mitigation measures, agency consultations, considerations of the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies.

## CONCLUSION

Implementation of the Selected Alternative for the USGS Telecommunications Tower will not have significant impacts on the human environment. The determination is sustained by the analysis in the EA, agency consultations, the inclusion and consideration of public review, and the capability of mitigations to reduce or avoid impacts. Adverse environmental impacts that could occur are negligible to minor in intensity, duration, and context and less-than-significant. As described in the EA, there are no highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence. There are no previous, planned, or implemented actions, which in combination with the selected alternative would have significant effects on the human environment. Requirements of the National Environmental Policy Act have been satisfied and preparation of an Environmental Impact Statement is not required. The park will implement the Selected Alternative as soon as practical.

Recommended: _____ Date: 9/8/2011
Superintendent
Crater Lake National Park

Approved: for _____ Date: 9/13/2011
Regional Director
Pacific West Region
National Park Service