

RECLAMATION

Managing Water in the West

Draft Environmental Assessment Prineville Reservoir Repeater Tower



**U.S. Bureau of Reclamation
Lower Columbia Area Office
Portland, Oregon**

April 2005

Proposed Repeater Tower Location Map

Prineville Reservoir, Crooked River Project, Oregon

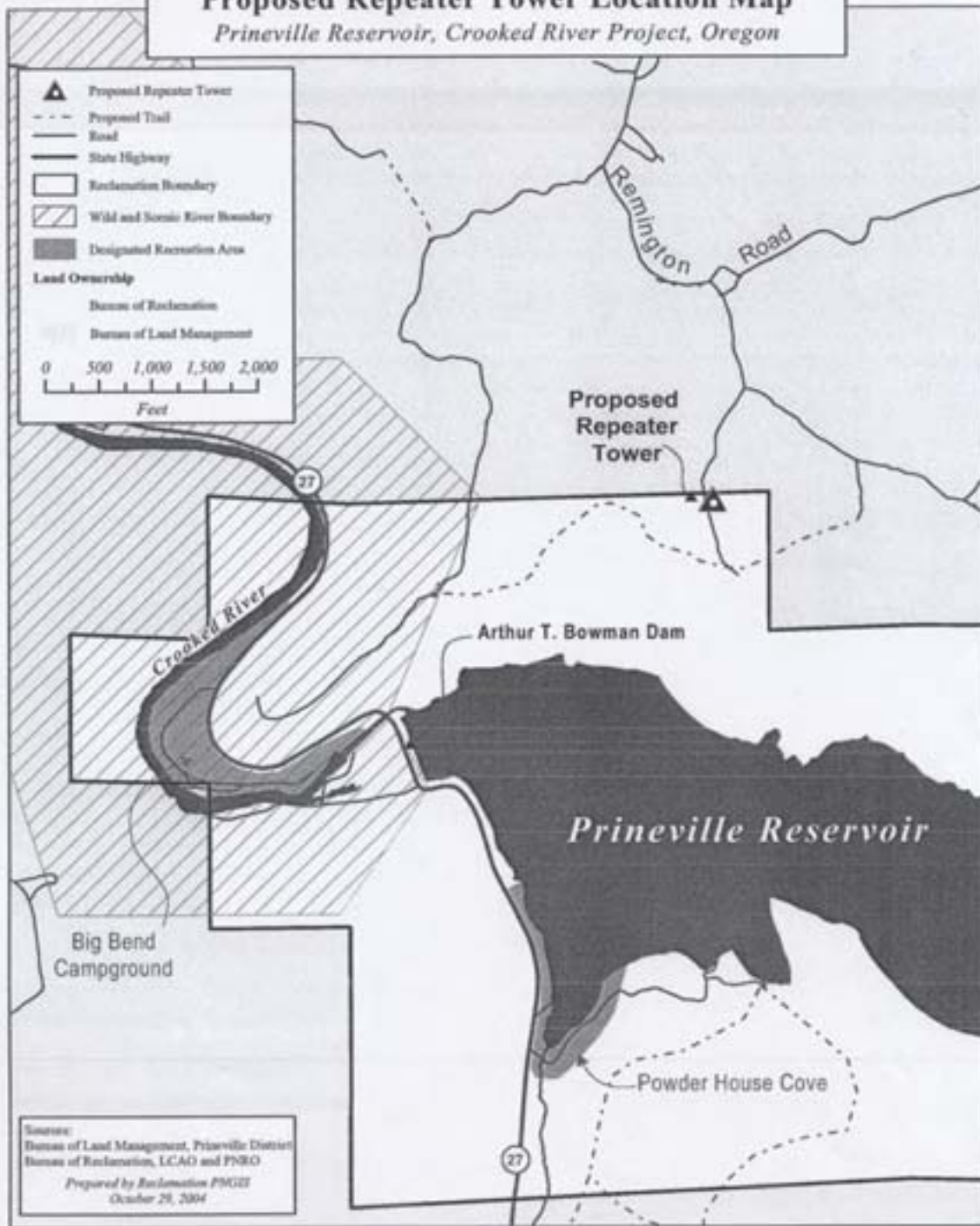


TABLE OF CONTENTS

Location map	Frontispiece
Acronyms and Abbreviations	ii
Chapter 1 Purpose and Need	1
Chapter 2 Alternatives	4
Chapter 3 Affected Environment and Environmental Consequences	8
Geology and Soils	8
Vegetation	9
Biological Soil Crusts	10
Visual Resources	12
Fish and Wildlife	14
Threatened and Endangered Species	16
Socioeconomics and Environmental Justice	17
Indian Trust Assets	19
Indian Sacred Sites	19
Historic Properties	20
Paleontological Resources	21
Cummulative Impacts	21
Chapter 4 List of Preparers	23
Chapter 5 References	25

ACRONYMS AND ABBREVIATIONS

AGL	Above Ground Level
BLM	U.S. Department of Interior, Bureau of Land Management
CEQ	Council on Environmental Quality
DBH	Tree diameter at breast height in inches
EA	Environmental Assessment
EO	Presidential Executive Order
ESA	Endangered Species Act
FAA	Federal Aviation Administration
Fire	Crook County Fire Department
ft.	Feet
FWS	U.S. Department of Interior, Fish and Wildlife Service
GIS	Geographic Information System
NEPA	National Environmental Policy Act
ODFW	Oregon Department of Fish and Wildlife
OID	Ochoco Irrigation District
OPRD	Oregon Parks and Recreation Department
Reclamation	U.S. Department of Interior, Bureau of Reclamation
Reservoir	Prineville Reservoir
RMP	Resource Management Plan
Sheriff	Crook County Sheriff's Office
SWA	State Wildlife Area
VRM	Visual Resource Management
WSR	National Wild and Scenic River

CHAPTER 1

PURPOSE AND NEED

1.0 Introduction

The Bureau of Reclamation (Reclamation) has identified inadequacies in the available radio communications coverage at Arthur R. Bowman Dam and Prineville Reservoir (Reservoir). The Reservoir is a popular destination for land and water recreational activities; the lack of comprehensive radio communication throughout the Reservoir area poses a risk to the visiting public from potentially delaying the response time to emergencies should they occur because of inadequate communication facilities. To remedy this problem, Reclamation and its managing partners are proposing to improve the emergency communication system at Prineville Reservoir. The managing partners, for the purposes of this EA, are Oregon Parks and Recreation Department (OPRD), Ochoco Irrigation District (OID), Crook County Sheriff's Office (Sheriff), Crook County Fire Department (Fire), and Crook County Road Department. Each of the agencies has responsibilities to provide public services including safety and emergency response assistance in the Reservoir area.

This Environmental Assessment (EA) has been prepared to evaluate the potential environmental and social impacts of the proposed project and to inform the public, regulatory agencies, and other interested parties. The EA findings and public comments will form the basis for a decision regarding the proposed action. Reclamation has analyzed the alternatives and mitigation measures to minimize environmental impacts. This document has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the regulations of the Council on Environmental Quality (40 CFR Part 1500).

1.1 Purpose and Need

Reclamation and the managing partners have had ongoing difficulties due to deficiencies in the radio communication coverage at Prineville Reservoir. The topography of the Crooked River canyon inhibits radio contact at some locations at the Reservoir causing the managing partners to have inadequate communication capabilities. Reclamation and the managing partners need to have reliable communication between staff persons working around the Reservoir and with emergency services in Prineville. They cannot rely on radio communication throughout the Reservoir area and local cell phone service is limited. The radio tower is necessary in order to increase public and worker safety at the Reservoir.

1.2 Background

Deficiencies in the communication capabilities at the Reservoir were identified as a concern in documents dating back to 1997 (Reclamation 1997). The lack of adequate

emergency communications at Bowman Dam and Prineville Reservoir was again identified in 1999 during an Emergency Action Planning exercise between Reclamation, the managing partners, BLM and other local emergency responders. In discussions with the managing partners it was determined that the most economical solution would be to expand the capacity of the existing Crook County Sheriff Emergency Communications System and allow each of the participants a separate radio frequency for their existing radio networks. The Sheriff Department operates and maintains the existing system and could easily accommodate the enhanced repeater network. The Sheriff's Office became the lead entity among the managing partners for locating potential sites, negotiating with landowners, and subcontracting services for the project's development and construction. Reclamation and the managing partners determined that a suitable tower site location would need to have 1) available road access, 2) a broad range of radio coverage from the site, 3) the lowest possible visual and natural resource impacts, and 4) proximity to electrical power. Positioning the tower close to power lines was eventually eliminated as a criterion when a solar powered tower option was evaluated and determined to be feasible.

The use of satellite phones was considered and eliminated because satellite phones are not adequate for the continuous communication requirements of the emergency response community. The managing partners have existing radio communication systems that provide the capacity for heavy continued use. This capacity and capability is necessary to service the daily demands of these agencies and to perform under intense emergency conditions. The enhanced repeater system of the Crook County Sheriff Department will meet this type of demand. Satellite phones will not provide this level of sustained service and are prone to operational dropouts during excessive traffic demands.

In 2001, the Crook County Sheriff's Department funded a study to explore potential location and equipment requirements for a stand alone repeater system that would provide adequate radio coverage to the dam and the control house, campground sites downstream on the Crooked River, and other critical areas within the Reservoir boundary. Testing was conducted with a portable radio repeater and mobile hand held units to determine the radio coverage area of each site. The initial field tests identified a site on Taylor Butte to the North of Bowman Dam's left abutment on BLM lands. However, this site had several drawbacks. There is no direct access to the area, no electricity, and the site overlooks Powder House Cove where there would have been unacceptable visual resource impacts.

On September 19, 2003, Reclamation entered into a contract with the Sheriff's Office to assist the project with funding. Other partners also committed to assisting in the cost of the project through the execution of a Memorandum of Agreement (MOA) that was developed between August 03 and November 04. During the course of the MOA development, the BLM determined that their communication requirement for coverage below Arthur Bowman Dam would be met through reliance on temporary use of satellite phones or through temporary access to the enhanced communication system. Reclamation and the five remaining partners executed the MOA on January 19, 2005.

While work on the MOA was underway, the Crook County Sheriff had located a site on private land. The Pilot Butte location was at the upper East end of Prineville Reservoir and negotiations were conducted to secure a site during December of 2003. Ownership of this property changed hands during the course of negotiations and the new owner could not agree to terms with the County. The Pilot Butte site was then eliminated from consideration. The Sheriff identified another site on private land at Coyote Butte approximately 5 miles due east of Prineville Reservoir. On February 13, 2004, the landowner notified the County that he was not interested in concluding a lease for the site.

On February 18, 2004, a meeting was held with all partners. It was determined that no other suitable sites could be located on private property around Prineville Reservoir. Additional field tests were conducted on February 25, 2004 and a site was identified within the Prineville Reservoir boundary on the north side, just upstream of the Arthur Bowman Dam right abutment. This site was within the Prineville Reservoir boundary and had existing access and electrical power at the proposed location. The site set back from the vertical walls of the reservoir canyon and would not be visible from the Crooked River below the dam.

In May of 2004, the County applied to the BLM for right-of-way access to use Remington Road on the public land for access to the proposed repeater tower site. BLM has granted the access. The Sheriff's Office will also require a lease permit from Reclamation to construct, operate and maintain the enhanced repeater system the Prineville Reservoir site.

The repeater tower project has undergone changes since the tower was first proposed. The initial concept included a power line from the tower that would connect with an existing power line west of the proposed tower site. The power line component of the project was subsequently replaced with a solar power design to minimize impacts to the environment. Reclamation and the managing partners may consider alternative back up power source options in the future to supplement the solar powered operation.

1.3 Public Involvement

Reclamation contacted local residents, landowners, public agencies, the Prineville Resort operators, and local media by letter on November 10, 2004. The public was asked to identify issues of environmental or social significance to Reclamation by December 20, 2004. One response letter was received from Crook County supporting the project. The scoping letter and the County's response is in Appendix A of this EA.

The Confederated Tribes of the Warm Springs Reservation of Oregon was contacted by letter on October 15, 2004 and no comment has been received (Appendix A).

CHAPTER 2 ALTERNATIVES

2.0 Introduction

This chapter describes the alternatives being considered and evaluated in this EA. It includes the preferred alternative and the no action alternative. NEPA requires federal agencies to analyze the no action alternative (40 CFR Sec. 1502.14) to clearly contrast and define the consequences of proposed project and alternatives on the human environment. Due to the preliminary investigations of alternative sites and feasible communication options that can accomplish the need for this project (described in Section 1.2), only one action alternative is analyzed in detail. This EA will address Reclamation's preferred alternative of contributing funds, and granting use of federal property, to enhance the Prineville Reservoir radio communication system for public benefit.

2.2 No Action Alternative

If the No Action Alternative is selected the Preferred Alternative would not be implemented. The radio communication tower would not be situated and constructed as described in the preferred alternative. Reclamation and the managing partners would continue to work towards increasing public safety at Prineville Reservoir with the methods currently available. In the future, improvements in cell phone coverage or other communication improvements may expand the available communication options for comprehensive and reliable communication at the Reservoir.

2.3 Preferred Alternative

Reclamation is proposing to: 1) grant Crook County Sheriff's Office the right to use a site located on Federal land administered by the Bureau of Reclamation, 2) to contribute funding for the construction costs of one repeater tower, and 3) fund one-sixth of the tower's annual operation costs.

2.3.1 Location and Access

The site of the proposed tower is on Reclamation administered lands on a cliff above the north side of Prineville Reservoir (T 17S, R 16E, Sec. 11, NW1/4 NE1/4, WM). It is a 0.13-acre square; approximately 700 feet back from the rim of the cliff face, near Reclamation's boundary with BLM. The site is sparsely vegetated with several small junipers (less than 6 inches DBH), sagebrush, grasses, bare ground, and rocks (photographs 1 and 2).

Access to the proposed site is from Remington Road across BLM lands; no additional roads are required. The county submitted a right-of-way application to BLM to provide access to the proposed communications tower location. BLM approved the right-of-way application in November 2004. The BLM right-of-way permit issued to Crook County

sets out the limitations on road maintenance, which will be performed by the County or their contractor.

Portions of Remington Road are paved, improved gravel, and unimproved dirt road. Sections of Remington Road are in need of some minimal improvement in order for trucks and heavy equipment to reach the tower site during construction. Remington Road extends across BLM lands in T16S, R16E, Section 35 and T17S, R16E, Section 2 where the road is unsurfaced and passes through clay and scattered rock outcrops. The slope of the road ranges from gentle to steep grades. Many sections are about 12 to 14 feet wide. Some segments will require refilling the deep ruts to make the road accessible for vehicles to transport construction equipment and materials. There will be some minor grading and stabilization as necessary to permit safe travel where terrain or erosion has rendered the road impassable for vehicles larger than a standard size pickup. There is no intention to improve the road for other recreational vehicle or pedestrian trail usage.

2.3.2 Description of facilities

The specific design of the tower and size of the building will be determined by the system supplied by the successful bidder. However, certain design elements will be required. The proposed tower will not exceed 100 feet, will be an open lattice tower with a non-reflective coating, and will include a small equipment building. The perimeter of the site will be enclosed with a chain link security fence. The Federal Aviation Administration (FAA) does not require lights on antennas less than 199 feet above ground level (AGL); therefore, this tower will not have lights. The tower design will not include supporting guy wires. A building will be required to hold the electrical equipment and batteries for the solar electrical system. If a stand by generator is required in the future the generator and fuel source, such as a propane tank, would need to be located within the 75 by 75 foot compound. There is no expectation that a standby generator will be required at this time.

2.3.3 Construction

Construction of is tentatively planned for July 2005. All work is to be accomplished within the site footprint and adjacent road area. The subcontractor will not be permitted to stockpile supplies or operate equipment on nearby areas. Clearing of juniper trees and shrubs will be necessary to create a flat area for the tower base and a small building to house the electronic equipment. Heavy equipment sufficient to make the site level and to excavate for the tower's base will be required. This is expected to include a light industrial backhoe, small track excavator, dump truck and other small support equipment such as generators, air compressor and toolboxes. Placement of concrete for the tower will require concrete delivery from commercial concrete trucks. Delivery of the tower components and building unit would entail flat bed trucks. Construction of the security fence will also require trucks for light construction equipment and supplies.

2.3.4 Operation and Maintenance

In an agreement between the parties involved, the Sheriff's office will have the responsibility of operating and maintaining the repeater tower and all necessary components of the communication equipment at the site. Each agency involved will pay one sixth of the annual costs to keep the tower operable. The current number of partners determined that each party would contribute one sixth of the operation and maintenance costs as determined each year by the Sheriff Department. Such costs will include repair and replacement parts for radio and solar energy equipment, maintaining the site and road access. If other partners join the system in the future, the proportional cost to each partner would then change.



Photograph 1. View looking north toward the proposed communication tower site. Note the level ground surface and sparse vegetation. Prineville Reservoir Communication Tower – Crooked River Project – Oregon - May 3, 2004.



Photograph 2. Cliff forming bedrock outcrop about 700 feet south of the proposed tower site, note Prineville Reservoir in background. Prineville Reservoir Communication Tower – Crooked River Project – Oregon - May 3, 2004.

CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.0 Introduction

This chapter describes the natural and social resources that could be affected by a decision to implement each alternative. These resources are visual resources, geology and soils, vegetation, wildlife, Threatened and Endangered species, environmental justice, socioeconomics, historic properties, Indian sacred sites, and Indian trust assets. Reclamation also considered, but eliminated from detailed analysis, the following resources because there are no potential impacts: wetlands, floodplains, hydrology, air quality, noise, and hazardous waste. Where mitigation measures are included in the Preferred Alternative they are described with the associated resource. Cumulative impacts of the Preferred Alternative are addressed in Section 3.12.

3.1 Geology and Soils

3.1.1 Affected Environment

On May 3, 2003 a Reclamation geologist conducted a site visit to evaluate the geologic conditions of the proposed tower site. The following information is excerpted from the geologist's report:

The site is underlain by bedrock composed of Tertiary Clarno and John Day formations (Waters and Vaughn 1968). The volcanic rocks were derived from a vent complex that is exposed about 2000 feet east of the tower site. The volcanic vent rocks are composed primarily of welded ash-flow tuffs that are of rhyolitic composition. The rhyolite is generally hard and resistant to erosion, forming the prominent cliffs above Prineville Reservoir about 700 feet south of the site. The ridge north of the site is composed of Late Tertiary basaltic flows of the Columbia River Basalt Group (Waters and Vaughn 1968). A volcanic cinder cone of probable Early Quaternary lies near the top of the ridge. The cone is composed of loose to slightly welded black to red cinders and agglutinate capped by a small relatively thin basaltic flow. A quarry (gravel pit) has been developed on the southeast side of the cinder cone.

Surface deposits consist of colluvium derived from erosion and weathering of the underlying bedrock rock and erosion and deposition of detritus from upland areas. Individual fragments within the colluvium are composed of various rock types ranging from cinders to welded ash-flow tuffs. A single hand dug test pit was excavated about 3 feet from the center of the proposed tower site. From the ground surface to about 1.5 feet, the material was loose, tan, dry silty sand, with angular gravel and cobble-sized clasts. From 1.5 to about 2.5 feet, the colluvium was coarser, consisting of angular cobbles in a silty sand with a gravel matrix. Scattered boulders up to 3 feet

in diameter were noted on the ground surface. Hand excavation became difficult beyond 2.5 feet. Soil development in the area is very limited and it is presumed the surface of the weathered rock is probably no greater than 2.5 to 5 feet from the ground surface. Based on the nearby exposures, the top of the bedrock will be rough and irregular and may vary in elevation up to a few feet across the site (Reclamation 2004).

3.1.2 Environmental Consequences

No Action Alternative

Without implementation of the preferred alternative, there will be no impacts to geological resources. No surface or subsurface soil or rocks will be disturbed.

Preferred Alternative

Reclamation's geologist concluded that the site is suitable for communication tower and appurtenant structures. The colluvium is at least 2.5 feet thick and can be excavated using common excavation methods. Beyond 2.5 feet bedrock may be encountered and, in order to create a flat or uniform surface for the concrete mat, some weathered bedrock, overhangs, or protrusions may have to be removed. The bedrock at the site should be adequate for drilling and setting the rockbolt anchors (Reclamation 2004). Soils at the site will be disturbed throughout the 0.13 acre site.

3.2 Vegetation

3.2.1 Affected Environment

The proposed repeater tower site is located in a shrub-steppe vegetation community. There are approximately 482 acres of shrub-steppe at Prineville Reservoir in the uplands surrounding the Reservoir (Reclamation 2003b). Vegetation occurs on approximately 50% of the ground surface and is dominated by western juniper, sagebrush, and Idaho fescue. The remaining 50% of the ground surface is bare ground and rock. The site has been disturbed by heavy cattle grazing and off road driving. Ecological indicators of site disturbance include the presence of cheatgrass and rabbitbrush and compacted soil (BLM 2004). Table 1 provides a list of plant species found at the proposed repeater tower site.

Vascular Plants on Proposed Project Site

Grasses

Cheatgrass	<i>Bromus tectorum</i>
Bottlebrush squirreltail	<i>Elymus elymoides</i>
Idaho fescue	<i>Festuca idahoensis</i>
June grass	<i>Koeleria cristata</i>
Thurber's needle grass	<i>Stipa thurberiana</i>

Forbs

Yarrow	<i>Achillea millefolium</i>
--------	-----------------------------

Pale alyssum	<i>Alyssum alyssoides</i>
Rockcress	<i>Arabis</i> sp.
Aster	<i>Aster</i> sp.
Freckled milkvetch	<i>Astragalus lentiginosus</i>
Eriastrum	<i>Eriastrum</i> sp.
Buckwheat	<i>Eriogonum</i> sp.
Bitterroot	<i>Lewisia rediviva</i>
Daisy	<i>Townsendia</i> sp.
Shrubs	
Big sagebrush	<i>Artemisia tridentata</i>
Gray rabbitbrush	<i>Chrysothamnus nauseosus</i>
Green rabbitbrush	<i>Chrysothamnus viscidiflorus</i>
Broom snakeweed	<i>Gutierrezia sarothrae</i>
Trees	
Western juniper	<i>Juniperus occidentalis</i>

Table 1. Plant species identified on the proposed tower site.
Field survey conducted by BLM on September 13, 2004 (BLM 2004).

3.2.2 Environmental Consequences

No Action Alternative

There will no impacts and no changes to the site if the no action alternative is implemented.

Preferred Alternative

The maximum area of disturbance to the site is 0.13 acres at the tower site during construction and the potential for some minor vegetation removal to make basic necessary road improvements to the access road. Several juniper trees and other plants will be removed. Gravel will be used to stabilize the disturbed areas around the tower and building and to provide for sufficient parking area within the compound.

3.3 Biological Soil Crusts

3.3.1 Affected Environment

Biological soil crusts are formed by living organisms and their byproducts creating a crust of soil particles bound together by organic materials. Crusts are predominately composed of cyanobacteria, green and brown algae, mosses, and lichens. These crusts affect processes that occur at the land surface or soil-air interface and include soil stability, nitrogen fixation, nutrient contribution to plants, moisture retention and infiltration, seedling germination, and plant growth (Belnap et al. 2001). Soil crusts were once widespread in eastern Oregon deserts but have been disturbed by human use, off-road vehicles, and livestock. Much of Reclamation's lands around Prineville Reservoir

have a long history of disturbance from a variety of factors and no longer include a high occurrence of biological soil crusts (Reclamation 2003a). On September 13, 2004, the BLM Prineville District assisted Reclamation with technical support to evaluate the proposed project site for the presence or absence of biological soil crusts.

In an undisturbed condition, biological soil crust would cover almost all of the interspaces between vascular plants and rocks. The BLM staff reported that at the proposed project site biological soil crusts are confined mainly to the ground around the bases of rocks, trees, and shrubs covering less than 15% of the ground surface. Cyanobacteria, an important component of biological soil crusts, are more widespread and are probably found at a low level throughout the site. Mosses are dominant in most of the patches of crust, and lichens, the most diverse component of the crusts, are found scattered on the site growing on soil, moss, or organic matter. No threatened, endangered, or sensitive species of lichens were present at the site (BLM 2004).

Several stages of biological crust development are present at the site. Following ground disturbance, the colonization of cyanobacteria is the initial step towards the formation biological crust and is present throughout the site. Mosses and certain lichens will grow where the cyanobacteria has stabilized the soil. The mosses were prevalent on the patches of biological soil crust at the proposed project site, but these indicator lichens were not well established. Later stages of biological crust formation are characterized the presence of slowly developing lichens which become layered on the mixture of soil particles and cyanobacteria, along with mosses and other lichens. Some of the biological crust at the site are inhabited by these lichens and are likely remnant patches of the crust that occurred throughout the unvegetated portions of the site prior to significant disturbance. They may be 100 years old or older (BLM 2004).

3.3.2 Environmental Consequences

No Action Alternative

The biological soil crusts at the proposed project site are in varying stages of recovery. If left undisturbed, the cyanobacteria already present will be expected to develop into the early stage of crust formation in 3 to 5 years. At the bases of trees and shrubs and dead grass clumps mosses (5 species) and lichens (2 species) are present and would continue to proliferate at the site over approximately the next 10 years. The recovery of plant and biological soil communities is simultaneous and dependant of the stability of the soils, precipitation, and disturbance factors. Based on BLM experience with disturbed rangeland, it will likely take decades for the ecology of this site to recover fully (BLM 2004). The No Action alternative will not interrupt the process of biological soil crust formation and recovery that is already occurring at the site.

Preferred Alternative

Constructing the proposed repeater tower and site facilities will result in the loss of biological soil crust that covers approximately 15% or 0.002 acres of biological soil crust.

The use of heavy construction equipment and removal of native soils will inhibit site recovery from disturbance and compaction of organisms currently in and on the soil. After construction, the site will remain relatively undisturbed except for occasional maintenance and repair activities. The permanent loss of ground cover by the tower and the appurtenant facilities will remove these areas from possible restoration. Eventually, if climate and soil conditions are favorable, areas of the site may recover some of the former vascular plant and biological soil crust communities. The natural restoration potential of this site is evident by the re-establishment of characteristic biological soil crust species after past cattle and off-road vehicle use have significantly damaged this resource. Mitigation measures will be used to encourage natural restoration of the site to the maximum extent possible.

3.3.3 Mitigation

Routine maintenance of the proposed tower site, conducted by the Sheriff's Office, will include monitoring for weeds and spot-treating weeds with herbicide if they are present. The BLM will continue to administer grazing allotments on Reclamation lands at Prineville Reservoir, consistent with BLM resource management planning and inter-agency agreements; but this site will be protected by any further livestock or vehicle impacts by the security fence included in the proposed project design.

3.4 Visual Resources

3.4.1 Affected Environment

Prineville Reservoir is located in the high rimrock dessert of central Oregon, a region dominated by open grasslands, juniper stands, basalt outcrops, and brown and reddish soils. The landscape surrounding the reservoir is dominated by steeply sloping hills with occasional peaks and buttes in the distance. The downstream portion of the Reservoir lies within the Crooked River Canyon and is bounded on either shore by steeply sloping canyon walls. Near the dam, the canyon walls tower 800 feet above the reservoir at full pool resulting in dramatic scenery. A 8-mile reach of the Crooked River between Bowman Dam and mile marker 12 of State Highway 27 (Chimney Rock segment) was designated by Congress in October 1988 as a National Wild and Scenic River (WSR) and was classified as a recreational river area. Outstandingly remarkable values included scenic, recreation, and fishery values. This 8-mile reach was also designated as a component of the National Back Country Byway System in 1989. The Lower Crooked River Backcountry Byway covers 43 miles of paved and gravel roads from the city of Prineville south to the convergence with State Highway 20.

The majority of the area surrounding the Reservoir has a natural character that appears to be minimally altered by human activities and development. The best opportunities to view the landscape features are from the Reservoir water surface and shoreline recreation sites. In general, development visible from the reservoir includes access points, recreation facilities, Bowman Dam, and some private homes (Reclamation 2003).



Photograph 3. View of the proposed tower site from Highway 27 southeast of Bowman Dam. The arrow indicates the approximate location. If constructed, the tower would be set back from the rim approximately 700 feet.

3.4.2 Environmental Impacts

No Action Alternative

If selected, the no action alternative would have no impacts on the visual resources in the area of Prineville Reservoir.

Preferred Alternative

Reclamation is committed to minimizing impacts to visual resources by ensuring that any new facilities will be compatible with the rural environment of the reservoir and surrounding area (Reclamation 2003b). In 2003, Reclamation completed the Prineville Reservoir Resource Management Plan (RMP), which addresses the potential for impacts to visual resources on Reclamation lands at Prineville Reservoir. The RMP provides detailed goals, objectives, and management actions specifically concerned with protecting the quality of the scenery at the Reservoir; including, designing developments to complement and be subservient to the surrounding landscape wherever possible, and using BLM's Visual Resource Management (VRM) contrast rating method to assess proposed projects for impacts to visual resources. The contrast rating method is a tool to analyze the degree of visual contrast created between a project and the existing

environment. The BLM has identified VRM objectives on the BLM lands adjacent to the Reservoir and WSR which are predominantly to manage for low levels of change to the characteristic landscape. Management activities and developments may be seen but should not attract the attention of the casual observer (i.e. VRM Class 2) (BLM 2003).

To determine the likelihood that the proposed repeater tower would result in impacts to the visual quality of the Reservoir and WSR two types of analyses were conducted. Reclamation performed a visibility assessment with a Geographic Information System (GIS) using 3-D analytical tools. This analysis uses surveyed observation points across the reservoir and the proposed tower site and locates them on a digital surface model. Lines of sight displaying visible and non-visible segments from observation points to the proposed tower location were calculated with respect to the digital surface model. The visibility analysis took into account the heights of the proposed tower (100 ft.) and an observer (6 ft.). Additionally, a viewshed map was generated based on the digital surface model. The GIS study found that throughout most of the Reservoir's water surface and in the WSR the tower would not be visible. The tower will likely be partially visible from portions of the southern shoreline including Powder House Cove. From points north of Reclamation's lands where the terrain is more level the tower is also likely to be visible in some locations.

To further characterize the degree of change and the predominance the proposed tower could have on visual resources at the Reservoir, BLM and Reclamation also conducted a visual contrast rating analysis from the southern shore of the Reservoir. The analysis considers the structure's form, line, color, texture, and distance in describing the visual impacts. From Powder House Cove the proposed tower site is approximately 1 mile away. Using juniper trees and utility poles located at and near the rim of the cliffs on the north side of the reservoir as references, and considering the distance of the set back from the rim is about 700 feet, it is unlikely that the entire tower will be seen from Powder House Cove. Some upper portion of the 100 foot tall tower may be visible above the rim from some locations. The scale of the landforms in the foreground will dwarf the tower overall, but its vertical shape will contrast with the especially strong horizontal line formed by the top of the cliffs. The contrast of the grey metal color of the structure will be partially mitigated by the open lattice tower design. No lights or reflectors will be used at the site.

3.5 Fish and Wildlife

3.5.1 Affected Environment

Prineville Reservoir supports a diverse community of wildlife. The water, wetlands, canyon walls, and upland sagebrush and juniper tree habitat supports over 70 species of birds, mammals, reptiles and amphibians (Clowers 2004). The ODFW, manager of the State Wildlife Area (SWA) since 1962, monitors wildlife and game species throughout the Reservoir. ODFW funds and implements fish and wildlife habitat improvement projects, such as installing and repairing fences, planting forage for deer and elk, blocking unauthorized off road vehicle trails, and planting shoreline vegetation for fish

species. Reclamation is funding an intensive, 2-year monitoring and survey effort of vegetation and wildlife at the Reservoir. This study, being conducted by Raven Research, is in its second year and has provided valuable information on the occurrence, behavior, and abundance of many wildlife species at the Reservoir. Appendix B contains a list of species observed at the Reservoir in 2003-2004. Most of these species are attracted to the water surface for all or some of their activity at the Reservoir.

The location of the proposed project is on a flat bluff (elevation 3850 ft.) above the reservoir in Western juniper woodland habitat with sage brush and grasses. A 2004 site survey of the proposed project site by Raven Research did not find any indication of significant use by wildlife species. There are no aquatic habitats in the area of the proposed communication tower. Two raptor nests occur near the site; a golden eagle nest to the west adjacent to the Crooked River downstream of the Reservoir and a prairie falcon nest to the south on an outcrop of the canyon wall. In 2004 the golden eagle pair fledged 1 chick by June 27, and the prairie falcons hatched 3 chicks which had fledged by July 12 (Clowers 2004). Reptiles and mammals such as bobcats, coyotes, rodents, lizards, and snakes may be present occasionally.

Bird strikes at communication towers can be lethal, especially for species of birds that migrate at night. The proliferation of communication towers has heightened awareness of this problem. Design features of communication towers which are especially associated with bird strikes are tower height, lighting, and use of guy wires (Manville 2000). Towers greater than 199 feet ABL are required by the FAA to have lights to warn pilots and prevent aircraft collisions. On September 14, 2000, the FWS issued voluntary "Service Interim Guidelines for Recommendations on Communications Tower Siting, Construction, Operation, and Decommissioning" (Guidelines). These Guidelines offer twelve measures to reduce impacts to avian species associated with communication towers. The Prineville radio repeater tower conforms with these guidelines where they are applicable to the proposed tower.

3.5.2 Environmental Consequences

No Action Alternative

There would be no changes at the site and no new disturbances if the Preferred alternative is not implemented.

Preferred Alternative

Implementing the Preferred alternative would cause disturbance to an area slightly less than 1/4 acre. The impact of the loss of this small area of potential cover and forage habitat is not significant to terrestrial or avian species that may travel through this location. The surrounding lands support an extensive area of similar sagebrush, juniper, and grassland habitat. However, the construction activity and the 100 foot tower structure could each have some potential to be temporarily disruptive because of equipment and vehicle noise.

The preferred alternative meets the FWS Guidelines for communication towers because the tower height would be less than 199 feet ABL, it would not be lighted, or be supported with guy wires. To minimize the loss of habitat, the size of the tower site is the minimum size required. The tower cannot be collocated with other communication towers or on an existing structure, as recommended in the Guidelines, because no suitable structures or other towers are located within the needed radio coverage area. Reclamation and the Sheriff's Office investigated other possible locations to site the tower which would have met the needs of the Reclamation and the managing partners, but no other locations were feasible.

3.5.3 Mitigation

Summer is the preferred construction season; from about October to April, in most years, access is nearly impossible due to slick mud or snow. The Sheriff's Office will contract the construction work with a private construction firm. No Reclamation staff or contractors will be involved in the construction work. Reclamation will restrict the Sheriff's Office from beginning construction of the proposed project until either Raven Research has verified that there are no nesting birds or other sensitive wildlife at or nearby the site during the 2005 season. Based on the 2004 monitoring season, it is likely that construction would commence during July or August of 2005.

3.6 Threatened and Endangered Species

3.6.1 Affected Environment

On July 21, 2004 Reclamation requested information from the U.S. Fish and Wildlife Service (FWS) regarding the presence of ESA listed species in the vicinity of the proposed tower site. Reclamation received the requested information on September 13, 2004. The FWS indicated that the bald eagle (threatened) is present in the local area of the proposed project. There were no other local ESA endangered, threatened or candidate species reported by FWS. Correspondence between FWS and Reclamation can be found in Appendix A of this EA.

Prineville Reservoir supports one bald eagle nesting pair. A paucity of suitable nest trees, the tenaciously territorial pair that currently occupies the Reservoir, and heavy recreational use during the breeding season has prevented any increase in the number of breeding pairs (Clowers 2004). The current nest is located on BLM lands on the south side of the Reservoir approximately 2 miles southeast of the proposed project. The nest has produced 1 to 2 chicks per year in 5 out of nine years since the nest has been monitored (Issacs and Anthony 2004). In the Northwest, bald eagle breeding activities begin in January and fledging typically occurs in July. Young eagles generally remain near the nest for several weeks afterwards. In 2004, Raven Research, under contract with Reclamation, conducted intensive monitoring of the nest. The chicks had fledged by July 11 and within 4 weeks both adults and juveniles had moved upstream and were no longer observed in the vicinity of the nest. The adults foraged for fish from the Reservoir,

mainly upstream of the nest tree in the SWA, the adults and juveniles then dispersed in that direction quickly after fledging occurred. It is likely that heavy summer recreational use in the lower Reservoir, especially along the shoreline near the nest tree, has discouraged the eagles from using more of this area for foraging and prompted them to disperse rapidly from the nest tree (Clowers 2004).

The same bald eagle pair also remains at the Reservoir, roosting in the SWA, during the winter to forage and maintain their reservoir-wide territory. Other eagles have been observed communally roosting several miles upstream of the Reservoir during the winter months.

3.6.2 Environmental Consequences

No Action Alternative

If the No Action alternative is chosen there would be No Effect to bald eagles at Prineville Reservoir. A decision not to implement the Preferred Alternative will not improve or degrade habitat for bald eagles or their prey species or disturb their activities.

Preferred Alternative

The proposed project is located far enough away from the local bald eagles (>2 miles) that it will not negatively influence, or interfere with their habitat or behavior. Recent monitoring efforts by Reclamation have documented that the existing resident breeding pair concentrates most of their activity east of Bear Creek and largely on the south side of the Reservoir and in the SWA. Construction of the repeater tower site would occur no earlier than July 15 to reduce the possibility of disturbance to eagles from construction noise and activity. The bald eagles at Prineville will be monitored throughout the 2005 nesting season. If there is a change in the behavior or site use patterns of the eagles during the 2005 season Reclamation will require the Sheriff's Office to alter the construction schedule accordingly and Reclamation will consult with USFWS if there is a potential that the proposed action will affect bald eagles. Therefore, Reclamation has determined the proposed project will have No Effect on bald eagles.

3.7 Socioeconomics and Environmental Justice

The February 11, 1994 Presidential Executive Order 12898 (EO) defines environmental justice as "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations." The EO is intended to protect minority and low-income communities from discriminatory projects or practices which can result in a more hazardous or degraded human environment caused by a Federal action. Federal agencies are directed to analyze the effects of Federal actions on minority and low-income communities and to avoid those impacts to the extent that is practicable.

3.7.1 Affected Environment

Prineville Reservoir is located in Crook County, Oregon. According to the U.S. census the county’s population was 19,182 in 2000 and was estimated to be 20,600 in 2003 (Table 2). From 1990 to 2000 the county’s population grew 35.9% which was 15.5% more growth than was seen statewide in the same period. U.S. Census Bureau reports that white persons are 93.0% of the population. In each other race category, the census data reports that minority populations comprise a smaller percentage of the Crook County population than in the State overall. Economically, Crook County residents have lower median and per capita incomes than across Oregon. The unemployment rate is 10.4% and the percentage of people living in poverty is 11.3%, which is slightly lower than the statewide 11.6%.

U.S. Census Bureau Statistic	Crook County	Oregon
Total Population, 2000	19,182	3,421,399
Percent change, 1990 – 2000	35.9%	20.4%
Total Population, 2003 estimate	20,600	3,559,596
% White	93.0	86.6
% Black or African American	< 0.5	1.6
% American Indian and Alaska Native	1.3	1.3
% Asian	0.4	3.0
% Native Hawaiian and other Pacific Islander	<0.5	0.2
% Person of Hispanic or Latino origin*	5.6	8.0
Median household income, 1999	\$35,186	\$40,916
Per capita money income, 1999	\$16, 899	\$20,940
% Persons below poverty , 1999	11.3	11.6
Persons per square mile, 2000	6.4	35.6

Table 2. U.S. Census Bureau statistics for Crook County, Oregon.

*Hispanics may be of any race and are included in applicable race categories.

Source: <http://quickfacts.census.gov/qfd/states/41/41031.html>

3.7.2 Environmental Consequences

No Action Alternative

The purpose of the communication tower is to increase public safety at Prineville Reservoir by improving the effective communication system at the Reservoir. The No Action Alternative would indefinitely delay this improvement. The consequences of this alternative will affect the visiting public equally regardless of race or income.

Preferred Alternative

The Preferred alternative will not cause disproportionately adverse social, economic, or human health impacts to the local minority or low-income populations. Providing more

effective and reliable methods of communicating with emergency services in Prineville and between the workers at the Reservoir increases public safety equally among for all visitors. The site of the proposed project was chosen based on pre-established criteria and the unsuccessful attempt to find a private landowner willing to locate the tower on private property.

3.8 Indian Trust Assets

Indian trust assets are legal interests in property held in trust by the United States for Indian tribes or individuals. Examples of trust assets are lands, minerals, hunting and fishing rights, and water rights. The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or Indian individuals by treaties, statues, and Executive orders, which are sometimes further interpreted through court decisions and regulations. This trust responsibility requires Reclamation to take all actions reasonable and necessary to protect trust assets.

3.8.1 Affected Environment

No Indian owned lands, federally recognized Indian reservation, or ceded lands have been identified within the work area where traditional use rights are retained by a federally recognized Indian tribe.

3.8.2 Environmental Consequences

No Action Alternative

No Indian trust assets would be impacted by implementation of no action alternative because there would be no change to the site.

Preferred Alternative

No Indian trust assets would be impacted by the Preferred Alternative because none are located in or affected by the proposed repeater tower project.

3.9 Indian Sacred Sites

3.9.1 Affected Environment

Executive Order 13007 defines Indian sacred sites as “any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion.” If the locations of sacred sites are disclosed to an agency, the agency is responsible to seek to avoid damage to the sites, to consult about any actions that may potentially affect disclosed sites, and to accommodate access for traditional religious practitioners. Presence of a disclosed site does not preclude implementation of

damaging actions or denial of access, when necessary to meet broader agency responsibilities or public need. If sites are present but not disclosed to the agency, then the agency is not accountable for inadvertent damage.

In October 2004, Reclamation notified the Warm Springs Tribes of the proposed action and asked that they inform the agency if there were Indian sacred sites in or near the proposed project area. To date, no response has been received from the Tribes.

3.9.2 Environmental Consequences

No Action Alternative

No impacts to Indian sacred sites would occur, since no new actions with the potential to affect sites, if any are present, would be implemented.

Preferred Alternative

As indicated above, Reclamation has not been informed that Indian sacred sites are in or near the proposed project location. If no such sites are present, there will be no effect. If sacred sites are present within the construction zone, then it is likely that the characteristics necessary to their continued use would be destroyed. If they survived, they would no longer be accessible for use.

3.10 Historic Properties

3.10.1 Affected Environment

On July 11, 2004, a Reclamation archeologist completed an archeological survey of the repeater tower location and also the route for an electrical service line that was under consideration at that time. Vegetation was sparse and surface visibility excellent. No archeological sites or isolated artifacts were found. The BLM completed an archeological clearance of the access route across BLM lands to the repeater tower location, and have provided a use permit to the County. In October, 2004, Reclamation notified Ms. Sally Bird, Warm Springs Tribes tribal archeologist, of the proposed action and requested that she notify the agency if any archeological sites or locations of importance to the Tribes were present. At this time, no response has been received from the Tribes. Until otherwise informed, Reclamation will therefore assume that the Tribes do not have knowledge of resources at this location, or have made the decision to not inform Reclamation of known resources.

3.10.2 Environmental Consequences

No Action Alternative

There would be no potential to impact historic properties, since no new actions would be implemented.

Preferred Alternative

Since no resource sites have been identified in or near the potential impact area of the undertaking, then implementation of the preferred alternative would have no effect on historic properties.

3.11 Paleontological Resources

3.11.1 Affected Environment

Eastern Oregon is rich in paleontological materials, with the John Day basin recognized to have some of America's more important Oligocene, Miocene, and Pliocene epoch deposits. Fossil materials have been found in Clarno and John Day geological formations extending in John Day and Crook Counties. No general paleontological inventories have occurred to see if fossils are present elsewhere at the reservoir where the proper geological conditions exist. However, plant fossils materials have been reported in sedimentary members of the underlying Clarno Formation exposed further east in the reservoir basin area.

As indicated under Section 3.1 (Geology and Soils), a Reclamation geologist examined the radio tower location as part of the project investigation. He noted no paleontological materials during his investigation, and assessed the location as having very poor potential for undetected fossil materials. The bedrock at the site is probably part of the upper welded tuff (pyroclastic) member of the John Day Formation, which is essentially a volcanic rock of magmatic origin and would therefore not contain fossilized remains.

3.11.2 Environmental Consequences

No Action

No impacts to paleontological resources would occur, since no new actions with the potential to affect resources would occur, and no resources are likely to be present.

Preferred Alternative

Since geological and soil conditions at the location are not fossiliferous, there is essentially no potential for undetected paleontological resources. Therefore, there would be no effects to paleontological resources.

3.12 Cumulative Impacts of the Preferred Alternative

The Council on Environmental Quality (CEQ) defines a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative

impacts can result from individually minor but collectively significant actions taking place over a period of time” (CEQ Implementing Regulations 40 CFR part 1508.7). At Prineville Reservoir, there are no similar existing structures and no future projects to construct additional communication towers are planned by Reclamation or its managing partners. Communication towers may be sited and constructed on adjacent private lands by private communication companies in the future. To date, Reclamation is unaware of any such plans.

The cumulative impacts of additional development at Prineville Reservoir are addressed in the Prineville Reservoir Resource Management Plan and Master Plan: Finding of No Significant Impact and Final Environmental Assessment (RMP/EA) issued in June 2003 (Reclamation 2003a). The RMP/EA outlines planned development of Reclamation administered lands at Prineville Reservoir over a period of 10 or more years and analyzes the potential cumulative impacts on each resource addressed. This repeater tower was not specifically addressed in the RMP, but the cumulative impacts on natural resources resulting from development at Prineville Reservoir are described in the RMP/EA. The cumulative impacts to natural resources of the tower structure are not outside the scope of the analysis presented in the RMP/EA.

CHAPTER 4
LIST OF PREPARERS

Lanie Paquin Boler
GIS Specialist
Reclamation, Pacific Northwest Region
Boise, Idaho

Gary Clowers
Wildlife Biologist, Reclamation consultant
Raven Research
Madras, Oregon

Greg Gault
Regional GIS Data Administrator
Reclamation, Pacific Northwest Region
Boise, ID

Greg Currie
Recreation Planner
BLM, Prineville District
Prineville, Oregon

Rick Demmer
Natural Resource Specialist
BLM, Prineville District
Prineville, Oregon

Vicki Kellerman
Outdoor Recreation Planner
Reclamation, Pacific Northwest Region
Boise, Idaho

Lynne MacDonald
Regional Archeologist
Reclamation, Pacific Northwest Region
Boise, Idaho

Tanya Sommer
Natural Resource Specialist
Reclamation, Lower Columbia Area Office
Portland, Oregon

Don Stelma
Geologist
Reclamation, Pacific Northwest Region
Bend, Oregon

Larry Zakrajsek
Water and Lands Specialist
Reclamation, Lower Columbia Area Office
Bend, Oregon

CHAPTER 5

REFERENCES

Belnap, Jayne, Julie Hilty Kaltenecker, Roger Rosentreter, John Williams, Steve Leonard, and David Eldridge, 2001. *Biological Soil Crusts: Ecology and Management*. U.S. Department of Interior, Bureau of Land Management, National Science and Technology Center. BLM Technical Reference 1730-2. Denver, Co. 110 pps.

BLM (Bureau of Land Management). Lower Crooked River Wild and Scenic Plan. Prineville District Office, Prineville, OR.

BLM (Bureau of Land Management). 2004. *Assessment of the Biological Soil Crusts On the Proposed Repeater Tower Site North of Prineville Reservoir*. Report by Rick Demmer and JoAnne Armson, Prineville District, Prineville, Oregon. September 14, 2004.

Clowers, Gary. 2004. *Prineville Reservoir Final Report 2004*. Prepared by Raven Research West (Madras, Oregon) for Bureau of Reclamation, Lower Columbia Area Office, Portland, Oregon.

Issacs, F.B. and R.G. Anthony. 2004. *Bald eagle nest locations and history of use in Oregon and Washington portion of the Columbia River Recovery Zone, 19781 through 2004*. Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University, Corvallis, Oregon, USA.

Mannville, A.M. II. 2000. *The ABCs of avoiding bird collisions at communication twers: the next steps*. Proceedings of the Avian Interactions Workshop, December 2, 1999, Charleston, SC. Electric Power Research Institute. (<http://migratorybirds.fws.gov/issues/towers/abcs.html>, accessed on 1/3/2005).

Reclamation (Bureau of Reclamation). 1997. *Examination Report for Comprehensive Facility Review – Arthur R. Bowman Dam – Crooked River Project, Oregon*. Memorandum from Leon E. Faris to Manager, Operation and Structural Safety Group, Reclamation Service Center, Denver, CO. March 11, 1997.

Reclamation (Bureau of Reclamation). 2003a. *Prineville Reservoir Resource Management Plan and Master Plan: Finding of No Significant Impact and Final Environmental Assessment* Reclamation (Bureau of Reclamation). June 2003.

Reclamation (Bureau of Reclamation). 2003b. *Prineville Reservoir Resource Management Plan*. Pacific Northwest Region, Lower Columbia Area Office. August 2003.

Reclamation (Bureau of Reclamation). 2004. *Site Visit to Evaluate Foundation Geologic Conditions for the Proposed Communication Tower, Prineville Reservoir Area, Crooked*

River Project, Oregon. Memorandum from Don Stelma, Geologist, Exploration and Instrumentation Group, Bend Field Office. May 12, 2004.

Waters, A.C. and Vaughan, R.H., 1968. Reconnaissance Geologic Map of the Eagle Rock Quadrangle, Crook County, Oregon, U.S. Geological Survey Miscellaneous Geologic Investigations Map I-540.

APPENDIX A

PUBLIC INVOLVEMENT

November 19, 2004, Reclamation's public scoping letter and distribution list
December 2, 2004, Crook County comment letter

AGENCY CORRESPONDENCE

July 21, 2004, Reclamation's letter to FWS
September 13, 2004, FWS ESA species list
October 15, 2004, letter to Confederated Tribes of the
Warm Springs Indian Reservation of Oregon



IN REPLY
REFER TO:

LCA-1000
ENV-6:00

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

NOV 19 2001

Subject: Comments requested on the proposed Prineville Reservoir Emergency Radio Communication Tower

Ladies and Gentlemen:

The Bureau of Reclamation has identified inadequacies in the available radio communications coverage at Arthur R. Bowman Dam and Prineville Reservoir (Reservoir). To remedy this problem, Reclamation and its managing partners are proposing to improve the emergency communication system at Prineville Reservoir. The managing partners are Oregon Parks and Recreation Department, Ochoco Irrigation District, Crook County Sheriff's Office, Crook County Fire Department, and Crook County Road Department. Each of the agencies has responsibilities to provide public services including safety and emergency response in the Reservoir area. Prineville Reservoir is a popular destination for land and water recreational activities. The lack of comprehensive radio communication throughout the Reservoir area poses a potential risk to the visiting public.

Reclamation is proposing to: 1) grant Crook County the right to use a site located on Federal land, 2) to contribute funding for the construction costs of one repeater tower, and 3) fund one-sixth of the tower's annual operation costs. The location for the proposed repeater tower is on Remington Road on the north side of Prineville Reservoir (see enclosed location map). The Bureau of Land Management (BLM) has granted Crook County's request to access the site from Remington Road through BLM administered lands. A repeater tower located at this site will increase radio communication coverage between Arthur R. Bowman Dam, portions of Prineville Reservoir, and recreation sites downstream of the dam with Crook County emergency response services in Prineville. The tower will consist of a 100-foot tall open lattice structure, one small service building and a security fence. Solar power is planned as the primary energy source, but other sources may be considered to supplement solar power if necessary. The communications improvements will not provide for commercial cell phone service and the proposed site will not be available for other tower development.

Reclamation cannot make a final decision to implement this activity until a National Environmental Policy Act (NEPA) review of the proposed federal action is evaluated. In accordance with NEPA, Reclamation is required to identify environmental and social issues that may be of concern or potentially significant in the area within which the project may occur. We

are seeking your assistance to identify any possible social and environmental impacts or concerns that may result if the proposed repeater tower project is implemented.

Your written comments should be submitted by December 20, 2004 to the above address. If you have questions, please contact me at 503-872-2795, or Ms. Tanya Sommer, our Natural Resource Specialist, at 503-872-2846 or at tsommer@pn.usbr.gov.

Sincerely,

ACTING FOR



Ronald J. Eggers
Area Manager

Enclosure

Mr. Steve Memminger
Prineville Reservoir State Park
19300 S. Juniper Canyon Road
Prineville, OR 97754

Mr. Boyd Goodpaster
402 E. Yakima Avenue, Suite 600
Yakima, WA 98901

Mr. Brian Ferry
Oregon Department of Fish & Wildlife
2042 S.E. Paulina Highway
Prineville, OR 97754-9701

Mr. Jim Hensley
Crook County Sheriff's Office
308 N.E. Second Street
Prineville, OR 97754

Mr. Larry Rasmussen
U.S. Fish & Wildlife Service
2600 S.E. 98th Avenue, Suite 100
Portland, OR 97266

Ms. Sherri Miyazaki
2804 226th Avenue, S.E.
Sammamish, WA 98075

Mr. Robert Towne
Bureau of Land Management
3050 N.E. 3rd Street
Prineville, OR 97754

The Bulletin
1526 N.W. Hill Street
Bend, OR 97701-1999

Mr. Bill Zelenka
Crook County Planning Department
300 East Third Street
Prineville, OR 97754-1999

Central Oregonian
558 North Main
Prineville, OR 97754-1199

Mr. Wayne Shuyler
Oregon State Marine Board
435 Commercial Street, NE, Suite 400
Salem, OR 97309-5065

Mr. Scott Cooper
Crook County Commissioner
County Courthouse
300 East Third Street
Prineville, OR 97754-1999

Mr. Mathew & Ms. Laura Hawes
Prineville Reservoir Resort
19600 S.E. Juniper Canyon Road
Prineville, OR 97754

Mr. Chuck and Ms. Dorothy Abernathy
62969 Florence Drive
Bend, OR 97701

Mr. Ken and Ms. Marjorie Goodpaster
30054 Elisha Road
Molalla, OR 97038

Mr. Barron Bail
District Manager
Bureau of Land Management
3050 N.E. Third Street
Prineville, OR 97754

Mr. Larry & Ms. Joy Rose
1610 Bonnie Street, S.W.
Albany, OR 97321-1852

Ms. Janet Hutchison
Bureau of Land Management
3050 N.E. Third Street
Prineville, OR 97754

Mr. Gary Ervin
6381 N.E. Wainwright Road
Prineville, OR 97754

Mr. Gordon & Ms. Sandra Bergquam
Lakeview Cove
P.O. Box 1215
Prineville, OR 97754

Ms. Julie Schiedler
Bottero Park Improvement District
12276 S.E. Vista Loop
Prineville, OR 97754



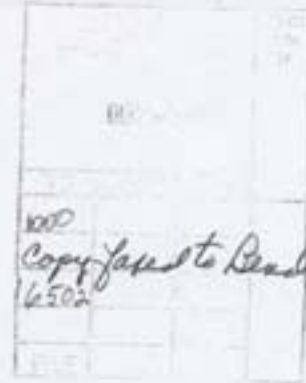
Crook County

300 N.E. 3rd Street • Prineville, Oregon 97754

Phone (541) 447-6555 • FAX (541) 416-3891

December 2, 2004

U.S. Dept. of Interior
Bureau of Reclamation
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon, 97232-2135



RE: Comments on proposed Prineville Reservoir Emergency Radio Communication Tower

Dear Sir or Madam:

The Crook County Court, the governing body for Crook County, a political subdivision of the State of Oregon, submits the following comments in support of the proposed placement of a radio communication tower on the north side of Prineville Reservoir.

Crook County strongly supports this project.

At present, the lack of a tower and the topography of the reservoir render Crook County law enforcement agents unable to maintain radio communication with each other and with emergency responders from other areas. The inability to communicate places officers at risk and the public using the reservoir at risk. The installation of a communications tower is expected to resolve this problem. In doing so, it may well in time save lives of both public safety officers and the recreating public and enhance the ability of law enforcement to respond maintain the peace.

As you know, the interoperability of communications is also a priority of the federal government in the wake of Sept. 11, 2001. It goes without saying that before communication can be interoperable, it must first exist! The installation of this tower is a first step toward resolution of the greater national objective.

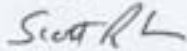
Bowman Dam on Prineville Reservoir is recognized by the federal government as vital infrastructure which is entitled to extraordinary protection. Such protection cannot be provided

Scott R. Cooper, Judge • Mike McCabe, County Commissioner • Mike J. Mohan, County Commissioner

without an adequate communication system. The construction of this tower is not only desired to serve local needs but is essential to achieving federal Homeland Security objectives.

Thank you for the opportunity to comment.

Sincerely,



Scott R. Cooper
Crook County Judge

Cc: Commissioner Mike McCabe
Commissioner Michael J. Mohan
Sheriff Rodd Clark
Jeff Wilson, County Counsel



United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
1201 NE Lloyd Boulevard, Suite 750
Portland, Oregon 97232

LCA-6500
ENV-7.00

JUL 21 2004

MEMORANDUM

To: State Supervisor, U.S. Fish and wildlife Service, Oregon State Office, 2600
Avenue, Suite 100, Portland, OR 97266
Attn: Kemper M. McMaster

From: Ronald J. Eggers
Area Manager /s/ RONALD J. EGGERS

Subject: Request for List of Threatened and Endangered Species Under the Endangered
Species Act for the Proposed Prineville Reservoir Repeater Tower, Crook County,
Oregon

The Bureau of Reclamation, in partnership with Crook County, the Bureau of Land
Management, Ochoco Irrigation District, and Oregon Parks and Recreation Department, is
proposing to install a repeater tower at Prineville Reservoir. The proposed repeater tower would
be primarily for radio communication for emergency service (fire, ambulance, sheriff) personnel
and Bowman dam operators. The proposed tower site and the power line alignment are on
Reclamation lands located in Crook County, Oregon: T17S, R16E, Section 11 N1/2.

As part of Reclamation's National Environmental Policy Act compliance procedure and as
required by the Federal Endangered Species Act (ESA) of 1973, we are formally requesting
information on any listed or proposed endangered and threatened species that may be present in
the project area. We request that your species list cover the location listed above.

We would appreciate receiving the ESA species list at your earliest convenience. Please send
your response and any other correspondence related to this project to me at the above address. If
you have any questions regarding this project, please contact Ms. Tanya Sommer at 503-872-
2846.

bc: LCA-6500, LCA-6501, LCA-6502
BFO-3220, BFO-3000

WBK:TSommer:KBlakney:rvaghn:7/19/04:503-872-2846
k:\users\rvaghn\USF&WS\Species List Request-Crook Co.-7-19-04

OFFICIAL FILE COPY		
DATE	SURNAME	CODE
7/19/04	Blakney	1001
7/19/04	Eggers	1002
7/19/04	McMaster	1003
7/19/04	Reynolds	1004
Classification		
Project <i>Crossed Lines</i>		
Control No. <i>4000727</i>		
Folder I.D. <i>511</i>		

ENV-7.00 054
4 11



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
 2600 SE 98th Avenue, Suite 100
 Portland, Oregon 97266
Phone: (503) 231-6179 FAX: (503) 231-6195

Reply To: 8330.05061 (04)
 File Name: Sp0506.wpd
 TS Number: 04-3522

Ronald Eggers
 U.S. Bureau of Reclamation
 825 NE Multnomah Street, Suite 1110
 Portland, OR 97232-2135

Subject: Prineville Reservoir Radio Repeater Tower Project
 USFWS Reference # 1-7-04-SP-0506

BUREAU OF RECLAMATION OFFICIAL FILE COPY		ACTION MADE BY
SEP 13 04		
SEP 10 2004	DATE	
1000		
6500		
Copy to Karen FILE Tamara, Rick		

Dear Mr. Eggers:

This is in response to your memorandum, dated July 21, 2004, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Prineville Reservoir Radio Repeater Tower Project in Crook County. The Fish and Wildlife Service (Service) received your correspondence on July 26, 2004.

We have attached a list (Enclosure A) of threatened and endangered species that may occur within the area of the Prineville Reservoir Radio Repeater Tower Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). U. S. Bureau of Land Management (BLM) requirements under the Act are outlined in Enclosure B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, BLM is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Enclosure B, as well as 50 CFR 402.12.

If BLM determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, BLM is required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

Enclosure A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published May 4, 2004, in the Federal Register (Vol. 69, No. 86, 24876) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect only candidate species or species of concern, BLM is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends addressing potential impacts to these species in order to prevent future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, BLM may wish to request technical assistance from this office.

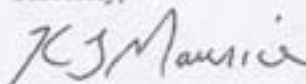
You should be aware that another of our Trust Resources, migratory birds, can suffer significant mortality from collisions with communications towers. Further information of this issue can be obtained from the following web sites:

<http://migratorybirds.fws.gov> (Click on "issues")
<http://www.towerkill.com>

Please refer to the recently approved Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers. We recommend its application to your proposed project. We also recommend the Service tower site evaluation form, which you may find useful in helping to determine the effects of your proposed project to endangered species and migratory birds.

Your interest in endangered species is appreciated. The Service encourages BLM to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Kevin Maurice at (503) 231-6179. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact NOAA Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

Sincerely,



Kemper M. McMaster
State Supervisor

Enclosures
1-7-04-SP-0506

cc:
Nongame, Oregon Department of Fish and Wildlife, Salem, Oregon.

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES,
 CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR WITHIN THE
 AREA OF THE PRINEVILLE RESERVOIR RADIO REPEATER TOWER PROJECT
 1-7-04-SP-0506

LISTED SPECIES^{1/}BirdsBald eagle^{2/}*Haliaeetus leucocephalus*

T

PROPOSED SPECIES

None

CANDIDATE SPECIES^{3/}Amphibians and Reptiles

Columbia spotted frog

*Rana luteiventris*BirdsYellow-billed cuckoo^{4/}*Coccyzus americanus*SPECIES OF CONCERNMammals

Pygmy rabbit

Pale western big-eared bat

Silver-haired bat

Small-footed myotis (bat)

Long-eared myotis (bat)

Fringed myotis (bat)

Long-legged myotis (bat)

Yuma myotis (bat)

Preble's shrew

*Brachylagus idahoensis**Corynorhinus townsendii pallescens**Lasiorycteris noctivagans**Myotis ciliolabrum**Myotis evotis**Myotis thysanodes**Myotis volans**Myotis yumanensis**Sorex preblei*Birds

Northern goshawk

Western burrowing owl

Ferruginous hawk

Greater sage-grouse

Black tern

Olive-sided flycatcher

Willow flycatcher

Yellow-breasted chat

Lewis's woodpecker

Mountain quail

White-headed woodpecker

*Accipiter gentilis**Athene cunicularia hypugea**Buteo regalis**Centrocercus urophasianus**Chlidonais niger**Contopus cooperi borealis**Empidonax trailli adastus**Icteria virens**Melanerpes lewis**Oreortyx pictus**Picoides albolarvatus*Amphibians and Reptiles

Northern sagebrush lizard

Sceloporus graciosus graciosus

Fish

Interior redband trout

Oncorhynchus mykiss gibbsi

Invertebrates

Cascades aptanian caddisfly

Apatania tavalala

Plants

Henderson ricegrass

Achnatherum hendersonii

Wallowa ricegrass

Achnatherum wallowaensis

Bastard kentrophyta

Astragalus tegetarioides

Ochoco lomatium

Lomatium ochocense

Disappearing monkeyflower

Mimulus evanescens

Little mousetail

Myosurus minimus ssp. *apus*

Howell's thelypody

Thelypodium howellii ssp. *howellii*

(E) - Listed Endangered

(T) - Listed Threatened

(CH) - Critical Habitat has been designated for this species

(PE) - Proposed Endangered

(PT) - Proposed Threatened

(PCH) - Critical Habitat has been proposed for this species

(S) - Suspected

(D) - Documented

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

¹ U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, *Endangered and Threatened Wildlife and Plants*, 50 CFR 17.11 and 17.12

² Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle

³ Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants

⁴ Federal Register Vol. 66, No. 143, July 25, 2001, 12-Month Finding for a Petition To List the Yellow-billed Cuckoo

ENCLOSURE B

FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c)
OF THE ENDANGERED SPECIES ACT

SECTION 7(a)-Consultation/Conference

Requires:

- 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;
- 2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and
- 3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c)-Biological Assessment for Major Construction Projects¹

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or for potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not a listed species will be affected. Upon completion, the report should be forwarded to our Portland Office.

¹A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c). On projects other than construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.



IN REPLY
REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2155

LCA-6502
LND-1.10

OCT 15 2004

Ms. Sally Bird, Tribal Archeologist
Confederated Tribes of the Warm Springs Reservation of Oregon
PO Box C
Warm Springs, Oregon 97761-3001

Subject: Proposed Radio Communication Tower at Prineville Reservoir

Dear Ms. Bird:

The Bureau of Reclamation (Reclamation) is proposing to execute a Right of Use Agreement with Crook County to construct, operate, and maintain a 100-foot tall radio communication tower at Prineville Reservoir. Construction of the tower would increase public safety at Prineville Reservoir by providing Crook County emergency services, Ochoco Irrigation District, and Prineville State Park staff with communications that are more reliable than presently available. At present, radio signals are blocked or interrupted when made from many areas on the reservoir or surrounding lands, which can dangerously delay reporting of emergencies and obtaining assistance.

The site of the proposed tower is on Reclamation lands on the top of the cliffs overlooking the valley on the north side of Prineville Reservoir in T 17S, R 16E, Sec. 11, NW1/4 NE1/4, WM, as shown on the enclosed map. This location is preferred because there is existing road access, it provides maximum range of radio coverage, and seems to offer a minimum of environmental and visual impact. An archeological survey was completed of the location in July, and no archeological materials or sites were observed. A copy of the report memo is enclosed. The proposed radio tower facility would have a 75-foot square footprint enclosed by a security fence, and consist of one 100-foot open lattice tower with non-reflective coating and one small service building. The tower and building would be constructed over a concrete slab. The facilities would be accessible from Remington Road across Bureau of Land Management administered lands. It would be solar powered, so no power line would be installed.

Before we make a final selection of the repeater station's location, we request your assistance to determine if there are resources of interest to the Confederated Tribes of the Warm Springs that could be affected by construction of the tower. In particular, we would like to determine if you have knowledge of Indian sacred sites (per Executive Order 13007), archeological sites, or traditional cultural properties important to the Warm

Springs Tribes in or near the tower location. If you have knowledge of such sites or reason to believe that they could be present, please inform us so we can begin more detailed discussion and further involve you and your staff. You can direct questions or information to Ms. Lynne MacDonald, Regional Archeologist, Bureau of Reclamation, 1150 North Curtis Road, Suite 100, Boise, ID, 83706-1234 or call her at 208-378-5316.

Sincerely,


Ronald J. Eggers
Area Manager

bc: Lynne MacDonald (PN-6511)
w/o encl

APPENDIX B

LIST OF PRINEVILLE RESERVOIR WILDLIFE SPECIES

PRINEVILLE RESERVOIR FINAL REPORT 2004

Species List

Raptors

Bald eagle (*Haliaeetus leucocephalus*)
Golden eagle (*Aquila chrysaetos*)
Osprey (*Pandion haliaetus*)
Western red-tailed hawk (*Buteo jamaicensis*)
Cooper's hawk (*Accipiter cooperii*)
Sharp-shinned hawk (*Accipiter striatus*)
Prairie falcon (*Falco mexicanus*)
American kestrel (*Falco sparverius*)

Other Birds

White pelican (*Pelecanus erythrorhynchos*)
Great-blue heron (*Ardea herodias*)
Western Canada goose (*Branta canadensis moffitti*)
Mallard (*Anas platyrhynchos*)
American wigeon (*Anas americana*)
Northern shoveler (*Anas clypeata*)
Green-winged teal (*Anas crecca*)
Ring-necked duck (*Aythya collaris*)
Common goldeneye (*Bucephala clangula*)
Common merganser (*Mergus merganser*)
Ring-billed gull (*Larus delawarensis*)
California gull (*Larus californicus*)
Belted kingfisher (*Ceryle alcyon*)
Western grebe (*Aechmophorus occidentalis*)
Clark's grebe (*Aechmophorus clarkii*)
Horned grebe (*Podiceps auritas*)
Pied-billed grebe (*Podilymbus podiceps*)
Common loon (*Gavia immer*)
Spotted sandpiper (*Actitis macularia*)
Killdeer (*Charadrius vociferus*)
Greater yellowlegs (*Tringa melanoleuca*)
Long-billed dowitcher (*Limnodromus scowpaceus*)
Least sandpiper (*Calidris minutilla*)
Baird's sandpiper (*Calidris bairdii*)
Turkey vulture (*Cathartes aura*)
Western raven (*Corvus corax sinuatus*)
Black-billed magpie (*Pica hudsonia*)
Pinyon jay (*Gymnorhinus cyanocephalus*)
Northern flicker (*Colaptes auratus*)
Common nighthawk (*Chordeiles minor*)
Spotted towhee (*Pipilo maculatus*)

Species List

Other Birds (cont.)

American robin (*Turdus migratorius*)
Townsend's solitaire (*Myadestes townsendi*)
Mountain bluebird (*Sialia currucoides*)
Brewer's blackbird (*Euphagus cyanocephalus*)
Red-winged blackbird (*Agelaius phoeniceus nevadensis*)
Rock dove (*Columba livia*)
Mourning dove (*Zenaida macroura*)
Ashthroat flycatcher (*Myiarchus cinerascens*)
Western kingbird (*Tyrannus verticalis*)
Say's phoebe (*Sayornis saya*)
Gray flycatcher (*Empidonax wrightii*)
Loggerhead shrike (*Lanius ludovicianus*)
Rock wren (*Salpinctes obsoletus*)
Canyon wren (*Catherpes mexicanus*)
Sparrow spp.
Warbler spp.
Swallow spp.
Swift spp.

Mammals

Bobcat (*Lynx rufus*)
Coyote (*Canis latrans*)
American beaver (*Castor Canadensis*)
Northern river otter (*Lontra Canadensis*)
Muskrat (*Ondatra zibethicus*)
Black-tailed jackrabbit (*Lepus californicus*)
Mountain cottontail (*Silvilagus nuttallii*)
California ground squirrel (*Spermophilus beecheyi*)
Belding's ground squirrel (*Spermophilus beldingi*)
Golden-mantled ground squirrel (*Spermophilus lateralis*)
Least chipmunk (*Tomais minimus*)

Herps

Western toad (*Bufo boreas*)
Great-basin gophersnake (*Pituophis catenifer deserticola*)
Western yellow-bellied racer (*Colubar constrictor mormon*)
Great-basin fence lizard (*Sceloporus occidentalis longipes*)

The above list reflects all species recognized and noted between 9/30/03 and 11/9/04 at Prineville Reservoir by Raven Research in the course of this study.