

Environmental Assessment
for
Trout Creek Rock Climbing Area
Access and Trail Plan
DOI-BLM-OR-P060-2012-0028-EA

U.S. Department of the Interior
Bureau of Land Management
Prineville District
3050 NE Third Street, Prineville OR 97754

2012

The Prineville District of the Bureau of Land Management (BLM) is requesting public input on how to solve issues related to human disturbances around nesting golden eagles in the Trout Creek Rock Climbing Area, located 10 miles north of Madras, Oregon. The BLM has prepared an Environmental Assessment (EA) that analyzes the effects of several alternatives that would address the issue, including establishing seasonal closures covering different lengths of time and “buffer” distances. While the BLM has identified a “proposed action” alternative, the final decision on this project may include parts of several of the alternatives. Comments will be most useful if they identify which parts of alternatives would be most effective in solving the issues, and why.

This EA considers the environmental consequences of a proposed action and alternatives to the proposed action to determine if there would be potentially significant impacts. Potentially significant effects would preclude issuance of a Finding of No Significant Impact (FONSI) and require preparation of an environmental impact statement. “Significance” is defined by the National Environmental Policy Act (NEPA) and is found in regulation 40 CFR 1508.27. If a FONSI can be issued after this EA, it may be followed by a decision record (with public appeal period) and implementation of the project.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to

withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

In keeping with Bureau of Land Management policy, the Prineville District posts Environmental Assessments, Findings of No Significant Impact, and Decision Records on the district web page under Plans & Projects at <http://www.blm.gov/or/districts/prineville/plans/index.php>. You may request a copy at the BLM office, 3050 NE Third Street, Prineville, Oregon, 541-416-6700.

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Chapter 1 Introduction

Project Location and Proposed Action

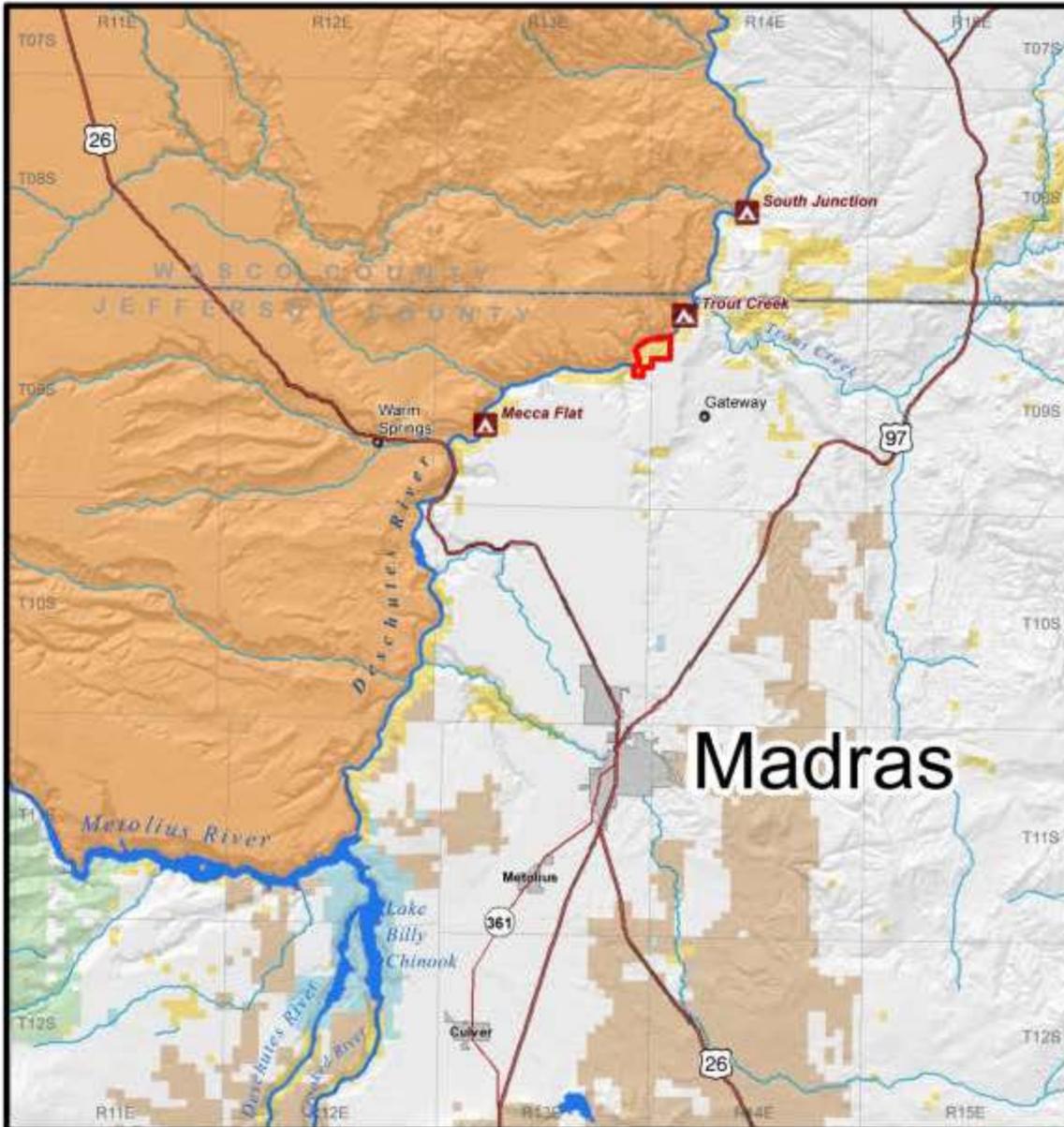
This environmental assessment (EA) looks at the potential effects of a proposal to seasonally restrict human access and activities within a 412-acre area from January 15 to August 31 each year near the Trout Creek Campground, about 10 miles north of Madras, Oregon (see Map 1). The closure size and timing would be managed annually based on golden eagle nest selection, breeding success and fledging of offspring. In the project area golden eagles often complete breeding activities connected to their nest by July 15 and the closure could be opened. However, if eagles nest late, the closure could be extended longer, hence the August 31st. For planning purposes this EA assesses effects out to the latest possible date the nesting closure could be extend even though this would be a rare occurrence. The closure would be on public lands administered by the Bureau of Land Management (BLM), Prineville District, Deschutes Resource Area. The proposed project area (see Map 2) includes BLM lands east and south of the Trout Creek to Mecca Flat administrative access road (aka, Trout Creek Trail (Trout Creek Trail Rehabilitation Plan and EA, 1992)) located on the east side of the Deschutes River (T. 9 S., R. 13 E., Sections 12 (187 acres) and 13 (39 acres) and T. 9 S., R. 14 E., Section 7, W ½ (186 acres)). The proposed action also would improve the conditions of existing user-created hiking trails located within the proposed closure area. The improvements would include relocating and decommissioning portions of trails to address resource concerns such as erosion. Signs would be installed notifying the public of the closure restrictions and private land boundaries would be posted with signs saying “Leaving Public Lands.”

Within the proposed closure area are formations of tall, columnar basalt cliffs that are popular for rock climbing. The cliffs and the trails leading to them are informally called the Trout Creek Climbing Area by BLM and the rock climbing community. The area is also within the Frog Springs Golden Eagle Breeding Territory (established by Oregon Department of Fish and Wildlife), because of frequent use of the cliffs for nesting by golden eagles. There are currently eight golden eagle nests in the territory; four on the cliffs in the climbing area and four on cliffs outside of it.

The proposed project area includes the Trout Creek Climbing Area, the golden eagle nest sites located on the cliffs of the Trout Creek Climbing Area, and the surrounding BLM-administered lands located within approximately ½ mile of these nests. Public access to all climbing routes within the Trout Creek Climbing Area is across BLM-administered land.

Need

The need for action is based on BLM’s obligation under law, regulation, and policy to protect golden eagles, and on the recent sharp decline in golden eagle productivity in the Frog Springs Golden Eagle Breeding Territory. The proposed closure focuses only on activity on or directly below the nests on the cliffs in the climbing area, and not on activity near the nests outside of the climbing area. The BLM’s legal obligation, data showing the decline in eagle productivity and the rationale for the limited scope of the closure are described below.



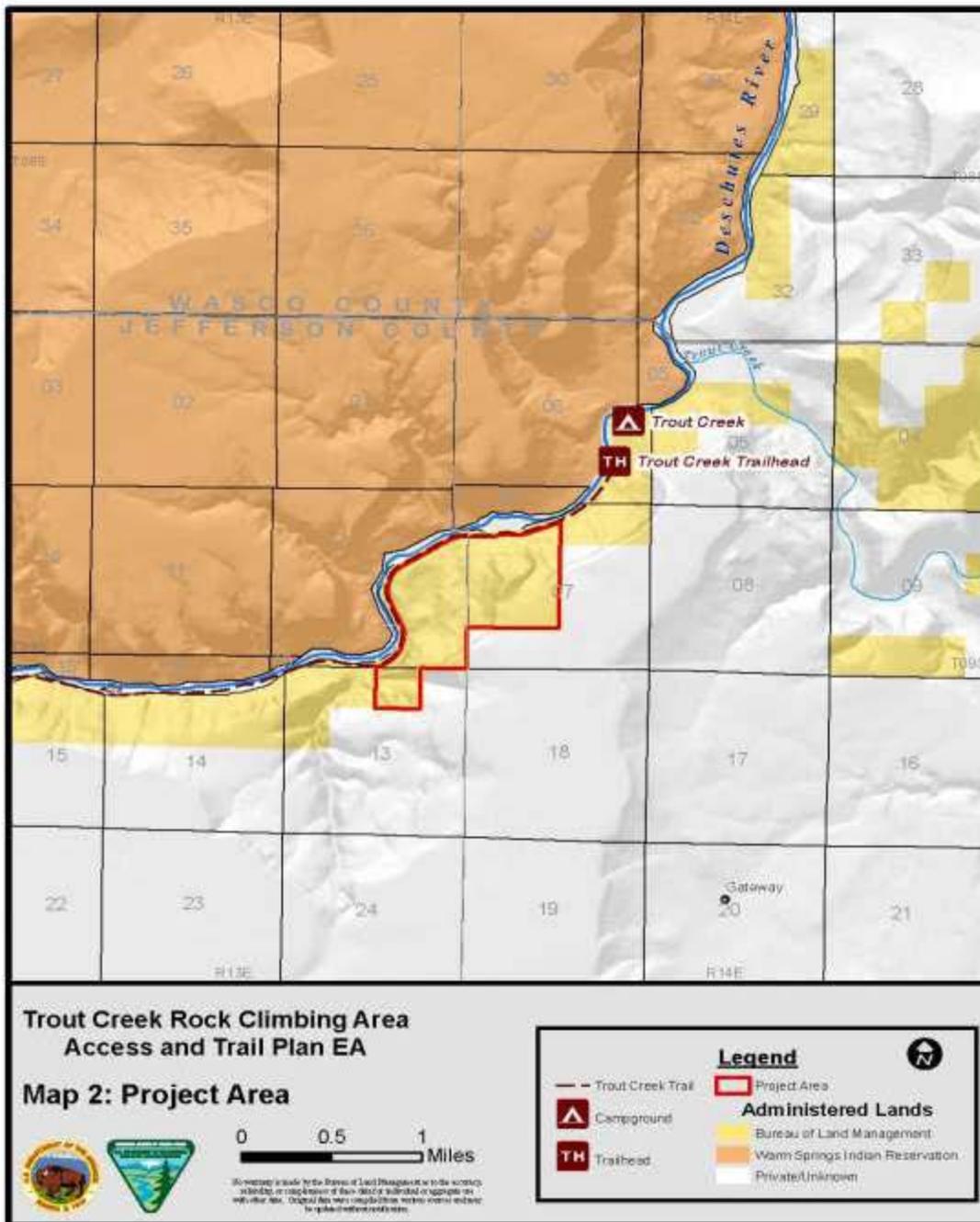
**Trout Creek Rock Climbing Area
Access and Trail Plan EA**

Map 1: Vicinity



Legend

- Project Area
- Campground
- Administered Lands**
 - Bureau of Land Management
 - U.S. Forest Service
 - Warm Springs Indian Reservation
 - Crooked River National Grassland
 - State
 - Private/Unknown
- North



Golden eagles and their habitats are protected under the Bald and Golden Eagle Protection Act (1963) (16 U.S.C. 668-668d) (Eagle Act) and the potential for human activities to violate Federal law by taking eagles exists under the prohibitions of the Eagle Act. The Eagle Act defines the “take” of an eagle to include a broad range of actions: “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

“Disturb” is defined in regulations at 50 CFR 22.3 as: “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” (Federal Register /Vol. 74, No. 175 / Friday, September 11, 2009 /Rules and Regulations). Taking action to reduce disturbance to breeding and nesting eagles would help reduce likelihood that BLM, via actions that it allows, would cause a “take” of golden eagles as protected under the Eagle Act. This would include avoiding actions that might “disturb” eagles, as defined at 50 CFR 22.3.

Protecting golden eagle nesting habitat is consistent with BLM policy (BLM Manual 6500). Goal 4 – Raptor Habitat Management of BLM Manual 6500 directs the agency to “provide suitable habitat conditions for birds of prey through the conservation and management of essential habitat components, including habitat for prey species, especially in areas where birds of prey concentrate during some period of the year, or in important habitats where populations are suppressed.” Specific objectives that apply to this project include (BLM Manual 6500, Rel. 6-114):

- a) Identify key nesting, migration, and concentration areas for birds of prey on public lands.
- b) Implement management programs on key habitats having highly significant raptor populations.
- c) Manage raptor habitats on public land by incorporating habitat and prey management considerations in land use and activity plans.

Monitoring data shows golden eagle nesting productivity in the Frog Springs Golden Eagle Breeding Territory declined from 1.3 young per year (1992 - 2001) to 0.09 young per year (2002 - 2012). Golden eagle reproductive monitoring data was provided by Portland General Electric (PGE) for the 1992 to 2012 period and supplemented by BLM in 2012.

During the breeding season golden eagles typically maintain several nests within their breeding territory, though they will nest in only one annually. Often golden eagles will alternate which nest they use between years. It is not unusual for eagles to build multiple nests within their territory and never use some of them for actual nesting. The golden eagles within the Frog Springs Golden Eagle Breeding Territory maintain eight nests. However, monitoring efforts since 1994 have documented the eagles have only selected four of the eight nest sites to actually nest in. All four of these nest sites are located on the cliffs within the “Trout Creek Climbing Area”. Two of these nests are located on BLM-administered lands and two nests are located on private lands within 100 feet of one of the aforementioned two nests located on BLM.

Of the other four nests within the Frog Springs Golden Eagle Breeding Territory that are not located in the project area, and for which the monitoring shows that golden eagles have never actually selected for nesting, two nests are located on BLM-administered lands, on tall cliffs east of and within 200 feet of the Trout Creek Trail and within 350 Feet of the Deschutes River, and two nests are located on lands belonging to the Confederated Tribes of the Warm Springs (CTWS). The two nests located on the CTWS are west of and within 350 and 1,900 feet of the Deschutes River and adjacent to a dirt road which is also located on lands owned by CTWS. The Trout Creek Trail is located on BLM-administered lands and is approximately 400 feet farther east and away from these nests on the other side of the river.

The BLM staff has observed an increase in groups coming to the area solely for rock climbing. Ten years ago it was rare to see a camp of rock climbers at the Trout Creek Campground, but today staff contacts a climbing group nearly every week during the late spring, summer and early fall seasons. Additionally, comments written on campground fee envelopes have increasingly stated their purpose of the trip was rock climbing. In 2002 a climbing guide became available on the web (search for “The Trout Creek Climbing Guide”) for the Trout Creek Climbing Area. The Trout Creek Climbing Guide identified 131 rock climbing routes and climbers established fixed anchors on several of the more popular routes along the cliffs where four eagle nests are located. All climbing routes are within ¼ mile of at least one nest and some climbing routes are within 25 feet of a nest. User-created trail development to access the climbing walls has also occurred on BLM-administered lands within ½ mile of these nests, contributing to erosion and increasing human visitation near nest sites by climbers and hikers.

The user-created trail developments begin approximately one mile south of the southern end of the Trout Creek Campground Trailhead. Because some climbing routes are located within 25 feet of a nest, portions of the trails used for hiking and access to rock climbing routes are located directly below and above nests. People rock climb and hike in the proposed project area all year long, which includes the breeding season when golden eagles are sensitive to human disturbance. Some upland bird (chukar and partridge) hunting also occurs in the project area. Hunters likely hike within a couple hundred feet of the golden eagle nests. This hunting season begins October 8 and runs through January 31.

Purpose

The purpose of the proposed action is to restore golden eagle nesting productivity within the Trout Creek Climbing Area portion of the Frog Springs Golden Eagle Breeding Territory to a target of the pre-2002 levels by reducing human disturbances during the breeding season. The proposed action is designed to reduce known and anticipated negative impacts resulting from human activities on eagle nesting productivity in the Trout Creek Climbing Area of the Frog Springs Golden Eagle Breeding Territory. Productivity is defined as golden eagle breeding activity that results in the successful fledging of young from the nest annually. Successful fledging is defined as young of the year becoming capable of flight, and developing to a point where they are no longer dependent on the nest site area for acquiring food from the adults. The negative impacts in this territory have been identified as human activities, such as rock climbing and hiking, within close proximity (defined in this document as within ½ mile) of the nest sites.

Issues for analysis

An issue is a point of disagreement, debate, or dispute with an action based on an anticipated effect. While many issues may be identified during scoping, only some are analyzed in the EA. The BLM analyzes issues in an EA when analysis is necessary to make a reasoned choice between alternatives, or where analysis is necessary to determine the significance of impacts. To warrant detailed analysis, the issue must also be within the scope of the analysis, be amenable to scientific analysis rather than conjecture, and not have already been decided by law, regulation, or previous decision. Significant effects are those that occur in several contexts (e.g., local and regional) and are intense (e.g., have impacts on public health or unique areas). For more information on issues and significance, see pages 40-42 and 70-74 in the BLM NEPA Handbook H-1790-1 (USDI BLM 2008).

Issues considered in detail

The following issues were raised by the public, by federal, state or local government agencies, by tribes, or by BLM staff, and are considered in detail in this EA.

How would the seasonal closures and buffer zones protect eagle breeding activities in the Frog Springs Golden Eagle Breeding Territory from human disturbances?

How would seasonal closures affect recreation activities such as rock climbing or hiking in the Trout Creek Climbing Area?

How would seasonal closures affect the number of climbers visiting the area, and subsequently the local economy?

Issues considered but eliminated from detailed analysis

While a number of other issues were raised during the scoping period, not all of them warranted detailed analysis to make a reasoned choice between alternatives or to determine the significance of impacts. Project design features (PDFs), also known as best management practices, have been incorporated as part of the proposed actions to further mitigate issues so that the issues no longer warrant detailed analysis. The PDFs are included in the description of the proposed action in Chapter 2. Included below are issues not analyzed or considered further in this EA.

How would golden eagle productivity be affected by other authorized or administrative activities? The seasonal closure would not apply to several ongoing or administrative actions including livestock grazing, noxious weed treatments, and monitoring of wildlife and other resources.

The presence of livestock within the project area would not be expected to disturb the eagles or reduce their productivity because grazing has occurred at the same levels and dates in the area for over 20 years, including from 1992 to 2001 when the eagles were more productive. Alternatives 2 and 3 include a design feature to limit fence maintenance to outside of the closure period, or limit human activity to one entry only, and use direct travel routes to and from work sites.

Other activities such as noxious weed treatments, and wildlife and resource monitoring would occur with some restrictions (see Design Features Common to Alternatives 2 and 3 in Chapter 2). These activities would not measurably affect breeding eagles because noxious weed treatments would be completed outside of the closure period for common weed species and during the closure would be limited to one entry with travel directly to and from treatment area only for weed species of high concern to allow for early detection and rapid response. Resource monitoring would occur outside of the closure period except for eagle monitoring which would occur at an established observation point 0.4 mile from the nest sites.

The effect of the above actions will not be discussed further in this document because they would be scheduled to occur outside of the closure period, restricted to a limited one-time visit, and limited in proximity (0.4 mile) to the active eagle nests and would therefore have no measurable effects on breeding golden eagles.

What would be the effect of seasonal closure on adjacent private lands and land uses? The seasonal closure would be only on BLM land. The BLM does not have authority to implement a closure on private lands or limit activities on private lands. There are no access rights of way or permits (e.g., for guided hunting) in the closure area, therefore there would be no effect on these uses of public land. Adjacent private lands would continue to be available for whatever uses the private landowners wish. Currently this includes grazing, agricultural crops, and two hunting preserves that provide fee based hunting opportunities on private land for upland game birds. The boundary of the seasonal closure on public lands would be posted. The BLM is contacting the private land owners concerning the closure, informing them of the purpose and need of the proposed project. Since there would be no effects on private lands, this issue will not be discussed further in this document.

What would be the effect of seasonal closure on river based recreation? The closure area does not include the Deschutes River or the access road/Trout Creek Trail adjacent to the river, therefore there would be no effect to river access and river based recreation. Also, the proposed closure would not increase recreation use on the river because the climbers are visiting this area to climb not to recreate on the river. Except for the climbers, hikers on the trails in the closure area are visiting this area because of the river and not for the sole purpose of hiking up to the climbing area and thus the proposed action would not decrease recreational use along the river corridor. Since no effects are expected, the issue will not be considered further in this EA.

What would be the effect of trail construction on soil erosion? Any new trails, re-routes, or trail improvements would follow Project Design Features to minimize soil erosion (see Design Features Common to Alternatives 2 and 3 in Chapter 2), thus the proposed action would not increase soil erosion in the project area and will not be analyzed further in this document.

Chapter 2 Alternatives

This chapter describes a no action alternative that would continue existing management, and two action alternatives. The action alternatives would meet the purpose and need described in Chapter 1. The alternatives are summarized in Table 1.

Alternative 1, No Action

No seasonal wildlife closure areas would be established for the eagle nest sites in the Trout Creek Climbing area of Frog Springs Golden Eagle Breeding Territory under the No Action Alternative. Currently allowed activities such as rock climbing, hiking, and other authorized activities would continue. The No Action Alternative provides a baseline for the comparison of alternatives.

Design features common to Alternatives 2 and 3

The seasonal closure area would include approximately 412 acres of BLM-administered lands (see Map 2), and is described below. The BLM-administered lands that would be closed are situated east and south of the Trout Creek Trail on the east side of the Deschutes River in T. 9 S., R. 13 E., Sections 12 and 13 and in T. 9 S., R. 14 E., Section 7, W ½.

The annual January 15 to August 31 closure period would be shortened if, through monitoring, it is determined that the young eagles have successfully fledged and have moved away and are no longer dependent on the nest site to acquire food and socialize with their parents; or the adult eagles are not breeding or have failed that year. The shortest closure period would include dates that would allow for late nesting birds (January 15 through May 15). According to Frank Isaacs, Bald and Golden Eagle Researcher with Oregon State University, eagles that have not laid an egg by May 15 will not successfully reproduce that year (personal communication, May 2012). Monitoring to determine occupancy, productivity and fledging will follow the Interim Golden Eagle Inventory and Monitoring Protocols developed by the USFWS (2010).

Signs notifying the public of the seasonal closures would be placed at the main access points such as Trout Creek campground and day use kiosk, and at trail intersections along the boundaries of the closure areas.

Up to two miles of user-created trails would be rerouted, repaired or decommissioned and approximately 0.5 miles of new trail would be constructed. Trails would be rerouted onto proper gradient and switchbacks would be added to unsustainable sections with too steep of a gradient. Existing trail repairs would include installing water bars, barriers and trail markers. Closing and rehabilitating trails would occur on trails leading to private land and on steep sections no longer needed due to rerouting. Trail standards to minimize erosion and soil loss include:

- Move trail gradient to less than 40 percent with a grade length of no more than 200 feet;
- Move trails out of natural drainage bottoms to either side of the drainage, slightly upslope, to reduce the concentration of water;

- Trails may have steps, switchbacks, and water-bars or drainage dips when slopes exceed 20 percent;
- New trails would be constructed so that they are out-sloped from two to five percent to allow water to drain off the surface perpendicular to the trail length.

The private property boundaries would be posted with signs saying “Leaving Public Lands” at two locations on the east end of the “Cool Wall,” and the approach trail rerouted around that private property (Map 4).

There would be no public or government employee entry into the project area during the closure period unless permitted by the BLM except for urgent circumstances. For example, routine livestock fence maintenance would only be allowed outside of the closure period. Emergency fence maintenance during the closure period would be coordinated with BLM, and human activity would be limited to direct travel to and from the work site and only one entry. Also, noxious weed treatments would only be allowed outside of the closure period for common weed species, and during the closure period would be limited to one entry with travel directly to and from the treatment area only for weed species of high concern to allow for early detection and rapid response.

Resource monitoring by BLM employees and permitted applicants would only be allowed outside of the closure period, except for golden eagle monitoring which would occur at an established observation point located approximately 0.4 miles from the nest sites. This monitoring would not occur more than once per week and would follow disturbance protocol described in the USFWS monitoring protocol.

Trail construction and decommissioning would be done following site specific surveys. If threatened, endangered or other special status plant or animals species are found, the project would be modified as needed to eliminate the negative effects or reduce effects to a point where they are negligible. Any human remains, cultural and/or paleontological resources (historic or prehistoric or vertebrate fossil site or object) that are discovered during project surveys or implementation will be immediately reported to the authorized officer. An evaluation of the discovery would be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

Archaeological surveys have been initiated to examine user-created trails and newly planned trail segments. Historic properties will be avoided by all proposed trail construction or rehabilitation. When proximity to archaeological sites is a factor, trails would be rerouted or designed to avoid those areas.

Alternative 2, Proposed Action

Alternative 2 would seasonally (January 15 to August 31, annually) restrict human access in a closure area, encompassing the Trout Creek Climbing Area, in order to reduce human disturbance impacts on nesting golden eagles within a portion of the Frog Springs Golden Eagle Breeding Territory.

Alternative 2 would also allow rock climbing access to some climbing routes that are located over ¼ mile from the active nest site after May 15. The BLM would implement a partial opening after monitoring determines which nest site is occupied. If golden eagles select any of the three nests on the “Cool Wall,” then access to and rock climbing on the “Main Wall” would be allowed, with access from the north

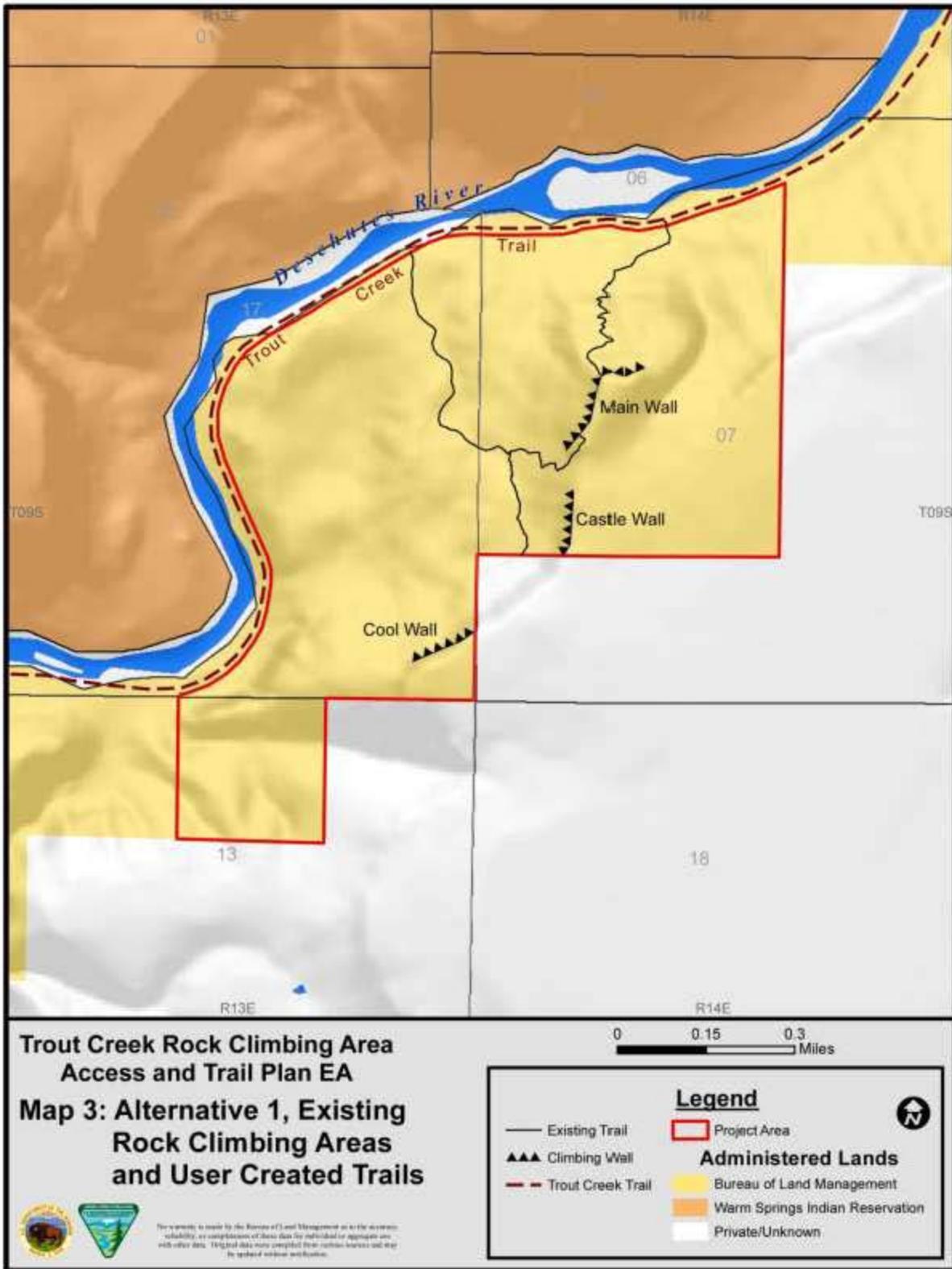
approach only (see Map 3). However, if the eagles select the northern-most nest on the “Cool Wall” only a portion of the “Main Wall” would be open. The area open would be approximately a ¼ mile away from this nest around the “Gold Rush” climbing route. If golden eagles select the nest on the “Main Wall,” then access to and rock climbing on the “Cool Wall”, south of the private property boundary, would be allowed, with access from the south along approximately 0.5 miles of a new proposed trail (see Map 4). Signs would be posted at the approach trail of the partial opening area. In both situations the open area would only include the approach trail and the climbing wall. The “Castle Wall” would not be open to climbing during the active breeding season regardless of which nest is selected due to its central location and proximity to all nests in the project area.

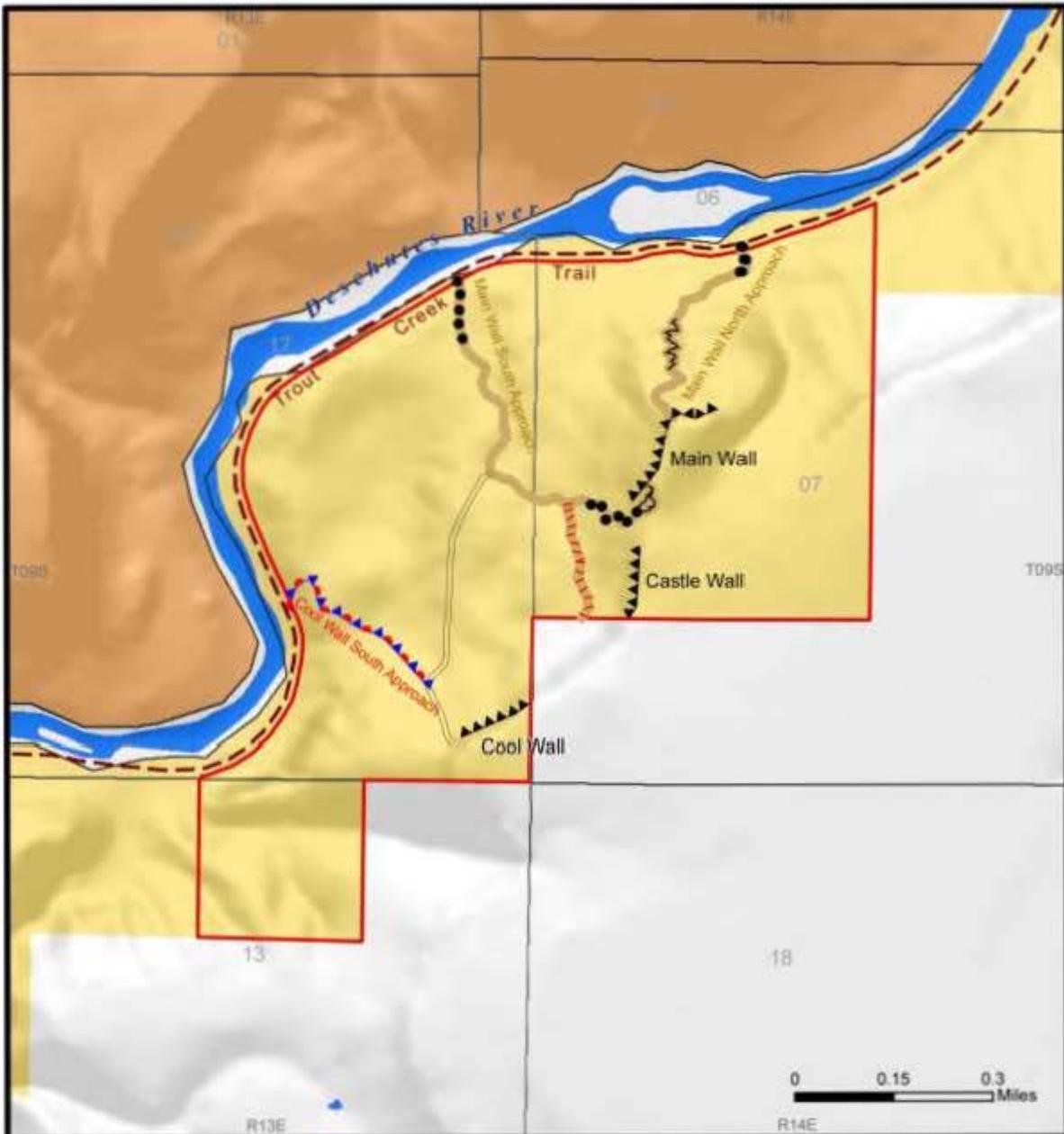
Alternative 3

This alternative is the same as Alternative 2 except with no partial opening for rock climbing and hiking along the climbing access trail when any of the nests on the Main Wall or Cool Wall are occupied. The entire project area would be closed annually from January 15 to August 31, depending on eagle breeding activity (see Design Features Common to Alternatives 2 and 3, page 10).

Table 1: Alternative Summary.

Area closed to all use	0 acres	412 acres	412 acres
Period of total closure	0 months	4 – 7½ months	7½ months
Partial opening after May 15	NA	Yes	No
New trail construction	0	1.0 miles	0.5 miles
Reroute trail (decommission part and open new part)	0	0.75 miles	Same as Alt 2
Repair user-created trail	0	0.5 miles	Same as Alt 2
Close and rehabilitate user-created trail	0	0.25 miles	Same as Alt 2
Open to human activity on BLM-administered land within ¼ mile of active eagle nests from January 15 through August 31st	Yes	No	No
Open to human activity on BLM-administered land within 1/2 mile Line of Sight (LOS) of an active nest from May 16 through August 31st	Yes	Yes	No





**Trout Creek Rock Climbing Area
Access and Trail Plan EA**

**Map 4: Alternatives 2 and 3
Trail Plan**



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Changes that have occurred since the survey were not made by the Bureau of Land Management.

Legend

<p>Alternative 2</p> <ul style="list-style-type: none"> ▲▲▲ New Construction <p>Alternatives 2 and 3</p> <ul style="list-style-type: none"> --- Decommission --- New Construction ●●● Repair Existing Trail — Reroute Existing Trail 	<ul style="list-style-type: none"> ▲▲▲ Climbing Wall — Existing Trail --- Trout Creek Trail Project Area <p>Administered Lands</p> <ul style="list-style-type: none"> Bureau of Land Management Warm Springs Indian Reservation Private/Unknown
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Alternatives considered but eliminated from detailed study

Establish seasonal closures for hiking, camping, boating and fishing within ½ mile of the two golden eagle nests on BLM-administered land within the Frog Springs Golden Eagle Breeding Territory located on the edge of the project area adjacent to the Trout Creek Trail.

This proposal would not be expected to have an effect on nesting success for golden eagles nesting in the Frog Springs Golden Eagle Breeding Territory, and would not address the purpose and need for action. Therefore it is not analyzed in detail in this EA. Protecting the two golden eagle nests on BLM-administered land within the Frog Springs Golden Eagle Breeding Territory located on the edge of the project area would not likely increase productivity because the eagles have had the opportunity to select these nests every year, but have not selected them for nesting. According to BLM recreation staff, human use (e.g., hiking, camping, rock climbing) near these nests is very low during the nest selection period (January 15 – March 15). The recreation use during this winter period is low because temperatures are cold and not ideal for hiking and camping, fishing season is closed, the area is remote and far for people to drive, and very few people float this stretch of the river during this time of year. While some rock climbing occurs, it is mostly intermittent when favorable weather conditions occur. Therefore, if the golden eagles wanted to select these nests they would have, due to low human presence during the nest selection period.

Monitoring from 1994 to present has not documented golden eagles attempting to nest in either of these nests and all documented nesting use has been at the four nest sites located on the cliffs of the Trout Creek Climbing Area. According to Pagel (2010), during the breeding season, golden eagles maintain several nests within their breeding territory, though they will only nest in one annually. Also, golden eagles may alternate which nest they use between years. However, it is not unusual for eagles to build and maintain multiple nests within their breeding territory and never use some of them for actual nesting. Such behavior is thought to be a form of protecting breeding territory size from competing eagles, even though these nests are never actually used (Clowers, 2010, personal communication). Golden eagles build nests on cliffs or in the largest trees of forested stands that often afford an unobstructed view of the surrounding habitat (Pagel, 2010). The two golden eagle nests on BLM-administered land within the Frog Springs Golden Eagle Breeding Territory located on the edge of the project area adjacent to the Trout Creek Trail are located low topographically, while the nests in the Trout Creek Climbing Area afford an unobstructed view of the surrounding area. Because monitoring from 1994 to present has not documented golden eagles attempting to nest in either of these nests, it is unlikely that establishing seasonal closures for the area around these nests would result in the eagles nesting in either of them.

The purpose to restore golden eagle nesting productivity within the Trout Creek Climbing Area portion of the Frog Springs Golden Eagle Breeding Territory to a target of the pre-2002 levels by reducing human disturbances during the breeding season would not be achieved by establishing seasonal closures around these two nests. So, we have chosen to focus on actions in the Trout Creek Climbing Area where the eagles are known to attempt nesting, where they were successful at producing young for 9 of the past 19 years, and where those nesting efforts are now being adversely impacted by human activities such as rock climbing and hiking. This resulted in the defined project area.

Conformance

The action alternatives are in compliance with BLM policy (BLM Manual 6500, Rel. 6-114) and consistent with the Bald and Golden Eagle Protection Act.

The Two Rivers RMP, June 1986, directs on page 11: “Continued seasonal restrictions will be applied to mitigate impacts of human activities on important seasonal wildlife habitat, some important types of habitat include deer winter range, raptor nesting habitat, and curlew nesting habitat.”

Chapter 3 Affected Environment

Introduction

The affected environment describes the present condition and trend of issue-related elements of the human environment that may be affected by implementing the proposed action or an alternative. It describes past and ongoing actions that contribute to present conditions, and provides a baseline for analyzing cumulative effects.

The proposed project area (Trout Creek Climbing Area) is about 12 miles north of Madras, Oregon and is within the Frog Springs Golden Eagle Breeding Territory. The vegetation in this river canyon is sagebrush steppe and juniper woodlands. Columnar basalt columns and rim rock are characteristic of canyon walls encompassing the Lower Deschutes River. The project area is part of two grazing allotments that have a grazing season of November 1 to May 1. Cattle may be authorized to be in the allotment during a portion of that period in most years.

Above the top of the canyon rims to the south and east are agricultural fields. Various crops such as hay and small grains are grown. Some are irrigated and some are dry land crops.

Golden Eagle

The golden eagles within the Frog Springs Golden Eagle Breeding Territory maintain eight nests and four of them are located in the Trout Creek Climbing Area. Of the four eagle nests within the Trout Creek Climbing Area, one is located on the Main Wall and is on BLM-administered land, and three are located on the Cool Wall of which the southern-most nest is on BLM-administered land. The two eagle nests on private land are located just north of the BLM Cool Wall nest. These private land nests are within approximately 60 feet of BLM land and less than 300 feet of the BLM nest on the Cool Wall.

The action alternatives would affect the suitability (based on human disturbance) of the four nests located in the Trout Creek Climbing Area, though only two of these nests are located on BLM-administered lands.

Of the four nests within the Frog Springs Golden Eagle Breeding Territory that are not located in the Trout Creek Climbing Area, two are on BLM-administered land located on the edge of the southwest portion of the project area adjacent to the Trout Creek Trail and Lower Deschutes River, and two are located on CTWS lands northwest of the project area (see Background on page 4). The two golden eagle nests on land owned by the CTWS are located approximately 0.25 and 0.4 miles northwest of the project

area. The four nest sites within the project area are the only nests selected by the eagles since 1994. These nests are located on rim rock, approximately 800 feet above and ½ mile from the river near the top edge of the canyon and in the same view-shed of each other. Portland General Electric biologists have monitored all nests within the Frog Springs Golden Eagle Breeding Territory from 1992 to 2012 and BLM assisted monitoring of the territory in 2012. The PGE biologists use helicopters and follow a standard protocol similar to the one published by the USFWS (2010) in order to document territory occupancy, nesting status and productivity. The data shows the eagles selecting only nest sites on the cliffs in the Trout Creek Climbing Area in the last 19 years. Information provided by PGE biologists indicates golden eagle breeding activity in this area generally starts around January 15 and eagles fledge around mid-July (Marheine, personal communication 2012).

Monitoring data shows that nesting productivity in the Frog Springs Golden Eagle Breeding Territory declined from 1.3 young per year (1992 - 2001) to 0.09 young per year (2002 - 2012). The steep decline in nesting success for this golden eagle pair began in 2002, which coincides with the publication of a rock climbing guide for the cliffs in the Trout Creek Climbing Area. In 2012, BLM established a voluntary seasonal area closure for the proposed project area in an effort to reduce negative effects caused by humans travelling in close proximity to nesting eagles. The eagles initiated nesting and the BLM monitored the eagles and human activity at this site from March 1– May 16, 2012. The monitoring behavior observed by BLM staff indicated a pair of golden eagles attempted nesting and failed to successfully produce young. This was based on multiple observations of an adult sitting on the nest during the incubation period, the adults taking turns sitting on the nest, and one adult working in the nest in typical fashion indicating it was turning over an egg for incubation and then sitting in that location of the nest. BLM observations of human visitation during this voluntary closure period noted hikers disregarding closure signs and suggestions by BLM staff, and hikers entering the area and travelling directly above and below the nests. Rock climbing, however was never observed within the closure area during the closure period. Monitoring efforts concluded on May 16 when BLM staff noted after several visits that the adult birds were no longer occupying the nest (on the Main Wall) they had been using during the incubation period and they were not observed at one of the alternate nests.

Human activities are described in this section because they can alter golden eagle behavior and contribute to reproductive failure. The analysis focuses on human activities occurring in the project area within a ¼ mile and ½ mile line of sight of a nest site. Line of sight means the activity can be seen from the nest. These distances are used because they are commonly used for evaluating disturbance impacts (described further in Chapter 4). A variety of human activities occur within the project area within line of sight of the four nests including hiking, rock climbing, and hunting.

In the project area there are 412 acres open to cross country travel. There are 0.75 miles of user-created hiking trails within ¼ mile of the four nest sites in the Trout Creek Climbing Area and an additional one mile of hiking trail within ½ mile of the nest sites. A small portion (30%) of these trails are used as dirt roads for motorized vehicles and originate from private property, above and to the east of the Main Wall. These trails likely receive little use as they dead end at private or require permission from private land owners to enter from the east. The remaining 70% of trails originate at the Trout Creek Trail, 800 feet below and nearly ½ mile away from the nest sites, and travel upland providing

access to the rock climbing areas. These routes are primarily used as approach trails to the base of the wall for rock climbing, however general hiking does occur. Some of these trails are located directly above and below the nests. Of the 0.75 miles occurring within ¼ mile of the nest sites, 0.4 miles are in line of sight of the nests. An additional 0.3 miles occur within a ½ mile line of sight. The north Main Wall approach trail and the trails on top of the Main Wall, adjacent to private are not in line of sight of the nests. Access to the top of the Main Wall, which is directly above one nest, can be achieved by hiking an existing user-created trail from the bottom or a route originating from the private land on top. The BLM has observed people standing on top of the Main Wall and throwing rocks off over the edge of the cliff wall (BLM observation, 2012). The routes on top (located on BLM-administered land) originating from private land are closed to motorized use and the 2010 Trout Creek Climbing Guide encourages climbers to avoid accessing the climbing area using these routes.

For purposes of discussing the climbing environment relevant to eagles, all climbing activities will be described as occurring on the Main Wall, the Cool Wall and the Castle Wall. The Main Wall, including the northern end and southwest corner, is approximately 800 feet long and has over 100 identified climbing routes. There is one nest on the southern end of this formation situated vertically below the top of adjacent climbing routes, and within view of the climbing routes on the Main Wall. Climbing routes have been identified within 100 feet of the nest however the more popular routes begin approximately 300 feet to the north (Sorensen, personal communication, 2011). There are three nests on the Cool Wall intermixed amongst approximately 18 routes, and climbing anchors are established within 25 feet of both sides of at least one nest.

Recreation

Recreational use of the Lower Deschutes River and the adjacent access road has been ongoing for many years. High use periods are driven by recreational floating seasons which generally begin May 15 and end around September 15. There is also a noticeable increase in use beginning on the fourth Saturday in April coinciding with the opening of trout fishing in this portion of the river. Use levels vary year to year, depending on weather and water flows. In 2012, Segment 1 (Warm Springs – Harpham Flat) had 22 boater passes sold the Saturday prior to opening day of trout season. On opening day (April 28) of trout season boater pass sales increased to 129. This use is on the Lower Deschutes River located outside of, but adjacent to the project area.

Two of the cliff areas in the Trout Creek Climbing Area have become popular rock climbing areas. A rock climbing guide was published for the area in 2002 by a private individual. The Main Wall has 105 identified climbing routes and the Cool Wall has 26 identified climbing routes (this includes the Castle Wall) in the guidebook. Anecdotal information suggests that rock climbing began as early as the 1970s or 1980s in this area. In the 2000s more information about climbing opportunities and technical climbing routes became available to the growing rock climbing community. Rock climbing at this site has been occurring year round. The recreational rock climbing use of the Trout Creek Climbing area has been increasing over the last 10 to 15 years. While data about the amount of use and timing of rock climbing in this location is not available, BLM staff has observed an annual increase in groups coming to Trout Creek Campground area solely for rock climbing. Ten years ago it was rare to see a camp of rock climbers at the Trout Creek Campground, but today staff contacts a climbing group nearly every week

during the late spring, summer and early fall seasons. Additionally, comments written on campground fee envelopes have increasingly stated their purpose of the trip was rock climbing.

Rock climbers have described Trout Creek as incredible, unique, world class crack climbing, and some of the best crack climbing in the country. Crack climbing is a type of rock climbing that is not available at all rock climbing locations. Smith Rock State Park, about 35 miles from Trout Creek, also offers some crack climbing opportunities. A nearby area (about seven air miles from Trout Creek) known as “Bill’s Wall” also provides crack climbing opportunities on BLM land.

Access to the climbing area begins at the Trout Creek Trailhead located in the BLM Trout Creek Campground. The Trout Creek trail is located along the river and was developed from an old road, and is located on the east side of the Deschutes River. There are several user-created foot trails that leave the Trout Creek Trail that have become well used by rock climbers to access the climbing area. There is no public access to the climbing area through the private agricultural lands on the top of the canyon rim. One of the access trails in the center area of the Cool Wall crosses private property, though this access is illegal for the general public. There are two-track dirt roads on the private property that lead to the canyon rim above the climbing area and nest sites. One of the two-track roads is on BLM land in T. 9 S., R. 14 E., Section 7, N ½ of the SW 1/4 and ends in a turnaround near the Main Wall and the golden eagle nest located there. This portion of the two-track road is not a designated route in the Lower Deschutes River Management Plan Record of Decision, 1993, and is not open to motorized vehicles.

Observations made by BLM staff indicate that hiking uphill for pleasure in this area is not common. Generally, only climbers and hunters leave the Trout Creek Trail and hike upslope. There are no designated trails and hikers are using trails developed by the rock climbers and probably some livestock and wildlife trails. Although cross country travel and general hiking can occur year round in the project area, the project area and trails within it are primarily used for accessing the climbing walls and rock climbing. Therefore the season and amount of use is strongly correlated to rock climbing activities.

Rock climbing occurs year round depending on weather and temperature. The Trout Creek climbing guide says, “spring and fall offer consistently good temps but warm winter days create best conditions.” Extreme temperatures can be avoided on the Main Wall by climbing before the sun hits the rock between 12:30 and 2:00 p.m. on hot days and after 1:00 p.m. on cold days.

Rock climbing use has been increasing over the last 20 years and is described in the Trout Creek climbing guide book (2002). According to the guide book the area received rock climbing attention “a handful of times” in the mid-1980s, in 2002 the guide book was created, in 2007 articles were published in magazines and “huge crowds followed...” although “things remained fairly quiet except for spring / fall weekends...”.

Large groups are more common on the weekends. Twenty individuals at the base of the Main Wall were observed on a Saturday in late May 2012 (BLM monitoring) and the associated noise could be heard from the Cool Wall and down the South approach trail, nearly ½ mile away.

Local Economy

Climbing activity contributes to the local economy. The Trout Creek Climbing Area receives 480 climber days per year (personal communication with Access Fund, Central Oregon Rocks representative Eric Sorenson November 2012). Each climber day involves approximately \$45.00 in purchases of gas, food and supplies, and stays at hotels and campgrounds in central Oregon. This estimate is based on rough assumptions by BLM staff about a typical user's spending habits. This equates to an estimated contribution from climbing to the local economy of \$21,000 annually. In 2007, retail sales in Madras totaled \$50,370,919 (US Census, 2012). Therefore rock climbing activities contribute to .04 percent of local retail sales.

Chapter 4 Environmental Effects

Introduction

The effects are the known and predicted effects from implementation of the actions, limited to the identified issues. Direct effects are those caused by the action and occurring at the same time and place. Indirect effects are those caused by the action but occurring later or in a different location. Cumulative effects result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The cumulative effects analysis includes other BLM actions, other federal actions, and non-federal (including private) actions. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable, based on known opportunities or trends.

The current conditions on the lands affected by the proposed action have resulted from a multitude of natural and human actions that have taken place over many decades. The description of the current state of the environment provided here inherently includes the effects of past actions and serves as an accurate and useful starting point for a cumulative effects analysis. The importance of "past actions" is to set the context for understanding the incremental effects of the proposed action. This context is determined by combining the current conditions with available information on the expected effects of other present and reasonably foreseeable future actions.

The size and shape of the closure area is based on existing literature, research, and guidance from the Upper Deschutes Resource Management Plan, 2005 (UDRMP) page 47, site specific features such as land ownership pattern, location of trail, and topography. The ability for the public to easily recognize the boundary on the ground and the effectiveness of enforcement were also considered in proposed closure boundaries. The guidance from the UDRMP was used since it provides guidance for similar habitats and site features and it is the most recent and best available guidance developed for the Prineville District.

Golden Eagle

Golden eagles are sensitive to human activities during the breeding season. Human intrusions near golden eagle nest sites have resulted in the abandonment of the nest; high nestling mortality due to overheating, chilling or desiccation when young are left unattended; predation on eggs or young, missed

feedings, and premature fledging; and ejection of eggs or young from the nest (Boeker et al. 1971; Suter et al. 1981, USFWS 2010).

In general, eagles tend to be most sensitive early in the breeding season, during courtship and nest-building, egg-laying, and incubation. As eggs hatch and juveniles mature, disturbance response is less likely to result in nest abandonment; however, young require more feedings at this stage and human activity can result in adults spending less time near their nests and feeding their young and themselves less frequently (Steidl, et al. 1993). Sensitivity increases again late in the season, as nestlings fledge (USFWS 2007, Fraser 1985, Fraser 1991, Johnson 2001, Knight 1995, Richardson 1997, Steidl 1997).

Distance is used to determine at what point a golden eagle alters its behavior (if disturbed) in response to human activity. The distance at which an eagle is observed altering its behavior and becomes alert or flushes from the nest in response to human activity is described as a disturbance distance. There is little empirical evidence on disturbance distances related to golden eagles during the breeding season. However, what is available in studies and professional opinions show a wide range of disturbance distances during different stages of the breeding cycle. This wide range is likely because golden eagles' response to human activities can vary depending on the individual bird's tolerance and experience, and site specific factors, such as visibility of the activity from the nest, elevation of activity relative to the nest, the frequency and duration of the activity, and the levels of noise that are produced by the activity in comparison to ambient noise (Suter et al. 1981). Disturbance distances are often used to create spatial and temporal buffer zones of restricted human activity around nests sites to avoid disturbance and minimize impacts on nesting eagles and reproductive success. Table 2 summarizes results of a literature review on disturbance distances and recommendations for spatial buffer zones for golden eagles. Distances of ¼ and ½ mile are used in this document to analyze the effects of the proposed actions.

Table 2: Literature summary of disturbance distances and recommendations for spatial buffer zones for nesting golden eagles.

Protecting raptors from human disturbance, a review (Richardson, C. T. et al. 1997)	Flushing distance for pedestrian disturbance was 344 feet – 0.25 mile.	Visually shield golden eagles from line of sight of human activity. Median recommended buffer distance for golden eagle was 0.5 mile.
Criteria for GE, ferruginous hawk, and Prairie falcon nest site protection. (Suter, G. W. et.al, 1981)	Importance of buffers protecting habitat and prey base, along with nest-site protection.	Intermittent disturbance such as: resource surveys – 1,640 feet (0.3 mile); noise disturbance (construction, energy development, etc.) – 3,280 feet (0.6 mile). Temporal (seasonal) protection should include all nesting activities but must at least include time from arrival of adults through first few weeks of nestling development.

	Survey of raptor researchers shows range of recommended buffer zones for golden eagles.	0.25 mile (M.R. Fuller) 0.12- 0.3 mile (N. Woffinden) 1 mile line of sight (R.P. Howard)
	Raptor researchers response to a survey resulted in median values of distances from which an individual or small group of people approaching a nest would cause 20% of sitting birds to flush from the nest during: laying – 524 feet (0.1 mile); incubation – 328 feet; rearing young – 1,100 feet (0.2 mile).	None cited
Effects of human activity on breeding behavior of Golden Eagle in Wrangall-St. Elias NP: a preliminary assessment (Steidl, R. J. et al. 1993).	Feeding of young and adults decreased between disturbances at 0.25 mile versus 0.5 mile.	No human activity within at least a 0.5 mile radius of nest.
A Review of Disturbance Distances in Selected Bird Species (Ruddock and Whitfield 2007)	Survey of expert opinion of disturbance distances showed upper limits for active disturbance for incubation was 3,280 – 4,921 feet (0.6 -0.9 mile) and chick rearing was 2,460 – 3280 feet (0.47 -0.6 mile). Median values were 738 feet (0.1 mile) for incubation and 1,312 feet (0.25 mile).	None cited

Alternative 1

The No Action Alternative would allow human activities (e.g., rock climbing, hunting and hiking) within close proximity ($\frac{1}{4}$ to $\frac{1}{2}$ mile) of the eagle nests in the project area during all stages of the breeding cycle including: courtship, nest selection and building, incubation, hatching and chick rearing, and fledging. Some activities that could occur under this alternative include: hunting (firearm discharge) across the project area during two weeks of the breeding season (January 15 to January 31); climbing throughout

the breeding season including climbing routes within 25 – 100 feet of a nest; and hiking on trails below and directly above nests throughout the breeding season. These activities would likely have a negative impact on nesting eagles and result in a continued low reproductive rate (i.e., 0.09 annual productivity rate for 10 years).

Alternative 2

This alternative would close all BLM lands (412 acres) within approximately ½ mile of the four eagle nests within the Trout Creek Climbing Area to human activities from January 15 through May 15. This would prevent human activity from occurring in the project area and allow golden eagles to successfully court, select and maintain their nest, and incubate eggs.

From May 16 – August 31, this alternative would close all BLM lands to all activity within ¼ mile of the active nest. During this period, activity outside of ¼ mile would be limited to travel on a designated trail and rock climbing in a designated area without access to the top of the rim. This alternative would allow rock climbing and hiking activities to occur within a ½ mile line of sight of an active nest and within 25 – 100 feet of an inactive nest during chick rearing and fledging.

Intermittent hiking and rock climbing may occur during the week, however, concentrated human activity would be expected on weekends. Access to the top of a wall would not be allowed by hiking or rock climbing and therefore should limit negative effects from people positioning themselves at a higher elevation than the nesting eagles. Hiking would occur on a designated trail from the Trout Creek Trail, adjacent to the river's edge, to the base of a climbing wall. The two trails that would be used for access are located either close to ½ mile from an active nest or mostly outside the line of sight of the "active" nest until reaching the climbing wall. The primary human activity occurring during this period would be hiking directly to the climbing wall and rock climbing. Groups of 20 and more people would be expected on weekends on the Main Wall and higher temperatures during this period may encourage a limited window of climbing opportunity from daylight to 2:00 p.m. However, climbing on the north end of the Main Wall and the Cool Wall do not receive direct exposure to the sun, therefore the duration for daily climbing can be longer. Noise associated with both hiking and rock climbing, especially with larger groups would be audible to nesting eagles.

This alternative would expose nesting eagles to this type of human activity more than ¼ mile but less than ½ miles in line of sight during the chick rearing and fledging stage. This activity is not expected to result in nest abandonment or premature fledging. However, it is likely to alter behavior resulting in increased alertness, decreased feedings and would reduce the opportunities for the eagles to use the open climbing area for alternate activities such as perching, foraging, and resting. These effects would mostly occur during weekend days. Although monitoring suggests sensitivity to the current levels of activity in the area, the eagles would be expected to successfully reproduce with the amount of limited human activity this alternative proposes because they have been successful with activity occurring in the past. Prior to the reproductive decline in 2002, the pair was successful during a period when human activity, including climbing was occurring, even though the use was lighter than current levels and year round. Successful breeding also occurred in 2008 on the "Cool Wall", despite the increase in, and year

round activity. The limitations of human activities in Alternative 2 are expected to result in a reproductive rate similar to pre-2002 levels.

Alternative 3

This alternative would close all BLM lands (412 acres) within approximately ½ mile of the four eagle nests within the Trout Creek Climbing Area to human activities for the entire nesting season (January 15 through August 31). This action would not allow human activity to negatively affect golden eagles during any stage of breeding. This action would likely result in successful reproduction annually and increase reproduction rates to levels comparable to years of 1992 to 2001.

Table 3: Summary of effects to golden eagle by alternative

	Yes	No	No
	NA	Yes	No
	No	No	Yes

Cumulative effects

Past actions in the area include livestock grazing which has been consistent for many years. The river based recreation (fishing and boating) has been occurring for many years. The 1993 Lower Deschutes River Management Plan, Supplement to the Lower Deschutes River Management Plan of 1997, and the Settlement Agreement of 2004 set limits for maximum use levels for float boating therefore increases in use are not expected. These activities, and the actions associated with them, were ongoing for many years prior to the 2002 through 2011 decline in eagle productivity of this territory. The two eagle nests within the Frog Springs Golden Eagle Breeding Territory located on BLM-administered lands but not located in the Trout Creek Climbing Area proposed project area are located within approximately 250 and 450 feet of the Deschutes River and the river based recreation (e.g., hiking along the Trout Creek Trail, fishing and floating on the river). The two eagle nests located on the CTWS lands are approximately 960 (0.18 mile) and 1,890 feet (0.36 mile) from the river and river based recreation. The four eagle nests located within the Frog Springs Golden Eagle Breeding Territory are located about 1.2 miles apart. River based recreation activities along this corridor are located in close proximity to these four eagle nests and have the potential to limit their use by nesting golden eagles. The river and people using the river would be in the direct line of sight of all four of these nests.

In addition to the rock climbing, hiking and hunting on BLM lands within the project area, there are an additional 1.2 miles of Trout Creek Trail and Deschutes River located outside the project area on BLM lands, but within ½ mile of the eagle nests in the Trout Creek Climbing Area. A small portion (less than 25 percent) of the trail and river are within view of the Trout Creek Climbing Area nest sites. During the early sensitive period of the breeding season (January through March) this area receives low visitation while April begins the increase in recreation activity which increases to a high use during the summer months. The Trout Creek Trail parallels the Deschutes River and they are approximately 800 feet lower in elevation and receive year-round use from climbers, hikers, and people fishing, hunting, and boating. The river is over ¼ mile from these nest sites and usually close to ½ mile away, except for one nest (approximately 0.34 miles). Private lands also play a role in managing for secure nesting opportunities for golden eagles. The BLM manages 71 percent (497 acres) of the lands within ½ miles of the raptor nest sites within the climbing area. There are approximately 175 acres of private lands within ½ miles of the four nest sites. Approximately 10 percent of native habitat on private land has been converted for human uses (agriculture). The majority (150 acres) of these private lands are in native shrub-steppe habitat while the remaining portion has been converted to agriculture. Agriculture lands sometimes provide foraging opportunities for golden eagles. However, the birds could be flushed from these areas during farming activities. These private lands are owned by two different landowners and each conduct guided bird-hunting on their lands. The landowner to the east does not conduct hunts within ½ mile of the nest sites (Vibbert, personal communication). There are approximately 1.5 miles of two-track dirt roads on private lands within ½ mile of the eagle nests.

The possibility of wildfire could change the plant composition in the project area. Wildfire would likely have a short-term negative effect, but a long-term positive effect. The shrub-steppe plant communities in this area typically grow from an early seral state of grass dominated plant communities after a disturbance such as fire. Over time the grass dominated community transitions into more of a shrub dominated community and if fire is removed from the system will continue to transition to juniper woodlands. While grasslands provide suitable foraging opportunities for eagles, having a low to moderate amount of shrubs mixed in increases prey diversity and abundance. The quality of golden eagle foraging habitat decreases as the shrub-steppe plant community transitions to juniper woodlands. The shrub community will die off as junipers increase in cover.

Alternative 1 would have the greatest potential for adverse cumulative effects on golden eagle nesting success when considered with actions on other lands. Cumulative effects of combined activities of Alternative 1 on BLM-administered lands and actions on other lands in the project area and immediately adjacent areas are expected to result in continued displacement of golden eagles during nesting season and contributing to nesting failure for this territory. This expected result would be due to allowing human activity in close proximity, including climbing within 25 feet of some nests and at heights located above the eagles nest; hunting which includes the discharge of loud firearms; and hiking below and above nests which facilitates photography and nature observation of the nesting eagles.

Cumulative effects of combined activities of Alternative 2 on BLM-administered lands and actions on other lands in the project area and immediately adjacent areas are expected to result in improving security around the four nest sites during nest selection and a portion of the breeding season. This

closure would allow eagles within the project area to select a nest, and lay and hatch eggs, unless they nest late. This would also allow the eagles to use other nests within the closure area for perching, foraging, and resting during this period. This improvement would be due to a reduction in human activities within the project area during the four-month closure period. This alternative would continue to improve security from the current situation during the nestling and fledging periods by maintaining an area closure around the active eagle nest and limiting human travel to no closer than ¼ mile of the active nest. This alternative, however would allow disruption of perching, foraging and resting opportunities at the adjacent cliff areas.

Alternative 3 would have the greatest potential for decreasing cumulative effects on golden eagle nesting success when considered with actions on other lands. Cumulative effects of combined activities of Alternative 3 on BLM-administered lands and actions on other lands in the project area and immediately adjacent areas are expected to result in improved security around the four nest sites and perching, resting, and foraging areas in the project area throughout the nest selection and nesting season (January 15 – August 31). This improvement would be due to a reduction in human activities within the entire project area throughout the nesting season.

Recreation

Alternative 1

Recreation opportunities such as rock climbing, hiking and hunting would not be affected and would continue to be available year-round. The entire 412 acres would continue to be available for hiking and cross country pedestrian use.

Alternative 2

Annually, Alternative 2 would provide at least four and one-half months of recreational use (rock climbing and hiking) within the entire project area and an additional three and one-half months within a portion of the project area. All 131 climbing routes and three miles of trails would be open for four and one-half months of the year. A portion of the area would become available after it is determined which nest site within the area is being used in the current year. If the Main Wall is opened on May 15, 105 climbing routes and 0.75 miles of hiking trails would be available for another three and one-half months of the year. If the Cool Wall is opened on May 15, 18 climbing routes and 0.5 miles of hiking trails would be available for another three and one-half months of the year.

Alternative 3

Annually, Alternative 3 would provide at least four and one-half months (September 1 through January 15) of recreational opportunities (rock climbing and hiking) within the entire project area. Recreation opportunities would not be available during the eight-month closure period on the 412 acre closure area. It would be allowed during the other four and one-half months of the year. Early opening of the closure could provide up to another three and one-half months of recreation opportunities if the golden eagles do not attempt nesting, fail nesting or fledge young early that year.

Cumulative effects

There are no likely foreseeable actions that may affect the recreation use of the area. There are no known plans to change the existing nearby land uses. The Lower Deschutes River Management Plan has set use limits that trigger limited entry when use rises above the trigger. Land use of nearby private property is likely to remain unchanged in the foreseeable future. There are no known reasonably foreseeable future actions that would affect recreation opportunities for this eagle territory.

Local Economy

Alternative 1

Contributions to the local economy from people visiting the Trout Creek Climbing Area for rock climbing would not be affected. Climbing activity would remain at 480 user days annually and would continue to contribute approximately \$21,295 or .04 percent annually to retail sales in Madras.

Alternative 2

In Alternative 2, climber days would drop to 290 per year, contributing around \$12,943 annually to the local economy. This would equate to .03 percent of retail sales in Madras.

Alternative 3

Alternative 3 would further reduce climber days to an estimated 185 per year, contributing around \$8,869 annually to the local economy. This would equate to .02 percent of retail sales in Madras.

Cumulative effects

Currently the economy is in a recession, but is slowly showing signs of improvement. High gas prices reduce the number of visitors travelling to the area for reasons other than rock climbing, consequently reducing local retail spending. Rock climbers visit the area during times (late fall, winter, early spring) when other visitors are going elsewhere. River rafting, fishing and camping all occur more frequently during late spring, summer and early fall and much less in the late fall, winter and early spring periods.

Summary of Effects

Table 4: Summary of effects for issues considered in detail in this EA

Human activities affecting eagle breeding and nesting activities	Allows human activities during entire eagle breeding and nesting periods.	Seasonal closure on 412 acres during 4 months of eagle breeding and nesting period. Limits human activities for additional 3½	Seasonal closure on 412 acres without human activities during 7½ months of eagle breeding and nesting period.

		months.	
Recreation, especially rock climbing affected by seasonal closures	No change; no seasonal closure. Allows recreation year round to 412 acres of BLM-administered lands.	Recreation including rock climbing not allowed on 414 acres of BLM lands for 7½ months of the year, but with the ability to adjust closure both spatially and time dependent on eagle breeding activity.	Recreation including rock climbing not allowed on 412 acres of BLM lands for 7½ months of the year.
Climbing routes (number) available from January 15 to August 31	131 (no closure)	0 from Jan 15 to May 15 105 or 18 (approximately) after May 15	0
Climbing days available	365	122-261 (# of days may be greater depending on if and when breeding activity ends)	122
Local Economy Contributions	\$21,295	\$12,943	\$8,869

Chapter 5 Public and other involvement

Tribes, individuals, organizations, or agencies consulted

BLM requested input when it published the EA to its public website, advertised the availability of the EA in the Central Oregonian newspaper, and sent notification letters to those who expressed interest in this type of project or action. The recipients of notification letters included a number of individuals and organizations, as well as the following:

- US Fish & Wildlife Service
- Oregon Department of Fish and Wildlife
- Jefferson County
- Confederated Tribes of the Warm Springs Reservation
- Portland General Electric
- Oregon Eagle Foundation, Inc.
- Oregon Parks and Recreation Department: Smith Rock State Park

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Frog Springs Golden Eagle Territory Status – Territory ID # JE0630

Year	Nest Number	Territory Status	Nesting Status	Number of Young Observed	Monitored By
1992	NA	Occupied	Occupied Failure		PGE
1993	Not reported	Occupied	Successful	1	PGE
1994	002	Occupied	Successful	1	PGE
1995	004	Occupied	Successful	1	PGE
1996	001	Occupied	Successful	2	PGE
1997	002	Occupied	Successful	1	PGE
1998	004	Occupied	Successful	2	PGE
1999	002	Occupied	Successful	2	PGE
2000	004	Occupied	Successful	2	PGE
2001	003	Occupied	Successful	1	PGE
2002	NA	Unoccupied	NA		PGE
2003	NA	Occupied	Occupied Failure		PGE
2004	NA	Occupied	Occupied Failure		PGE
2005	NA	Occupied	Occupied Failure		PGE
2006	NA	Unoccupied	NA		PGE
2007	NA	Occupied	Occupied Failure		PGE
2008	003	Occupied	Successful	1	PGE
2009	NA	Occupied	Occupied Failure		PGE
2010	NA	Occupied	Occupied Failure		PGE
2011	NA	Unoccupied	NA		PGE
2012	001	Occupied	Occupied Failure		PGE & BLM