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Bald Mountain Bike Trails

Environmental Assessment DOI-BLM-ID-T030-2013-0025-EA

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1. PURPOSE AND NEED FOR ACTION

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Shoshone Field Office

Applicant: Sun Valley Company

NEPA Number: DOI-BLM-ID-T030-2013-0025-EA

1.1. BACKGROUND

The Shoshone Field Office (SFO), Twin Falls District of the Bureau of Land Management (BLM) has received an authorization request from the Sun Valley Company (SVC), holder of the joint U.S. Forest Service (USFS)/BLM Bald Mountain Ski Area Special Use Permit (SUP), to construct or reconstruct about 19 miles of summer nonmotorized trail to increase lift-assisted mountain biking recreational opportunities within the Bald Mountain Ski Permit Area, also referred to as the "project area". The USFS authorized 11 miles of the project on June 10, 2013 on USFS land within the permit area (USFS 2013). The remainder of the proposed trail are on public lands managed by the BLM (7.5 miles) and private land owned by SVC (1.1 miles). The proposed construction or reconstruction of the trails, identified as the Proposed Action described in detail in Section 2.1, is located within Blaine County, near the town of Ketchum, and occurs within the BLM-administered portion of the Bald Mountain Ski Permit Area (Figure 1). The ski area permit is administered through a jointly issued SUPs and totaling approximately 3,338 acres (2,045 of which are administered by the Sawtooth National Forest and 1,295 of which are administered by the BLM's SFO). The permit, issued to SVC, was renewed in 2007 and terminates in 2047.

The 3,338-acre Bald Mountain Ski Permit Area comprises a mosaic of wildlife habitats and vegetation communities. Elevations within the ski area range from approximately 5,500 feet to more than 9,000 feet. The vegetation is represented by mixed-age conifer forest stands of Douglas-fir and subalpine fir communities. Lodgepole pine, aspen, and whitebark pine also occur within portions of the ski area. Shrub and grass communities of sagebrush, bitterbrush, bluebunch wheatgrass, Idaho fescue, and various forbs are typically found on ski trails, though upper elevations contain natural herbaceous communities. Existing wildlife habitat conditions have been influenced by past natural and human-caused modifications including timber harvest, wildfires, road construction, ski area development, and other developed recreation. Eight designated hiking and mountain biking trails are currently on Bald Mountain and within the boundaries of the ski permit area, four of which are located in whole or in part on BLM-administered lands.

Under the Proposed Action, new and existing mountain bike trails would be constructed or reconstructed using a combination of hand tools and trail construction machinery. The trails would be constructed or reconstructed using sustainable "flow" design and construction techniques that link banked turns, sections of uphill gradients, and other natural and man-made features to manage downhill bike speeds. Construction would occur over four to six years. SVC would construct, maintain, and patrol the new trails.

The Bald Mountain Trail would continue to be the primary hiking route from the River Run base complex to the Roundhouse Restaurant and the top of Bald Mountain. No changes are proposed in the existing use or layout of the Bald Mountain Perimeter Trail.

1.2. PURPOSE AND NEED FOR ACTION

The BLM's purpose and need is to respond to SVC's request to construct about 7.5 miles of mountain bike trails on the BLM-administered portion of the Bald Mountain Ski Permit Area. The need for the action is established by BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to requests for the commercial use of public lands.

1.3. DECISION TO BE MADE

The BLM SFO Manager would decide whether to approve or deny SVC's request to construct and use the proposed trails.

1.4. CONFORMANCE WITH APPLICABLE LAND USE PLANS

1.4.1. Sun Valley Management Framework Plan

The Proposed Action is in conformance with the 1981 Sun Valley Management Framework Plan (MFP) (BLM 1981), although it is not specifically provided for. The general management philosophy for the Sun Valley Analysis Unit directs that "this area will be managed for recreation, local government needs, and open space" and includes "intensive recreation development." Further decisions identified in the MFP include the following:

> *Recreation, Decision Number 1:* Manage the Bald Mountain area for intensive ski development. Allow additional development that is in accordance with a master plan approved by BLM and U.S. Forest Service in accordance with the Memorandum of Understanding for the Management of the Bald Mountain Winter Sports Area.

1.4.2. Sun Valley Master Development Plan

The Bald Mountain Ski Area is the primary ski mountain of the Sun Valley Resort located in Sun Valley, Idaho. Recreational activities within the Bald Mountain Ski Permit Area are administered through a jointly issued SUP with the BLM and USFS. In 2005, a Master Development Plan (MDP) was completed to support the issuance of an updated SUP to guide the BLM and USFS in their administration of the Bald Mountain SUP. The 2005 MDP was completed with an Environmental Impact Statement (USFS/BLM 2007) and resulting Record of Decision (ROD) in 2007 (BLM 2007a).

The 2007 ROD established Project Design Criteria (PDC) and Best Management Practices (BMPs) for Bald Mountain activities, which are intended to protect scenic, cultural, soil, watershed, wildlife, vegetation, air, and recreation resources and reduce the spread of noxious weeds, and are required to be followed in conjunction with implementation of approved projects (BLM 2007a). The 2005 MDP, 2007 EIS, and 2007 ROD did not specifically address actions within the Proposed Action; however, the BMPs and PDC established in the ROD provide the framework for project-specific design criteria and BMPs tailored to address the specific construction and scale of trails within the Proposed Action. A list of the Proposed Action-specific design criteria and BMPs developed from this framework is provided in Appendix A.

1.5. SCOPING, PUBLIC INVOLVEMENT, AND ISSUES

1.5.1. External Scoping

This project has been listed on the Idaho NEPA Register since October 2013. Scoping letters were mailed October 31, 2013 to inform interested and potentially affected parties of the Proposed Action and solicit comments to assist with the National Environmental Policy Act (NEPA) review. The scoping information package stated that comments were to be received by December 6, 2013. The scoping package also noted that the BLM would not reject public feedback outside of the established public involvement period, but such comments may be considered secondary to comments received in a timely manner. Scoping letters were mailed to all 12 individuals and organizations on the SFO NEPA mailing list, including permittees and federal, state, and county governments. In addition, a press release was sent to all local newspapers and radio stations. The BLM received six comment letters or responses from the public.

The public scoping responses identified several comments, questions, and concerns about the Proposed Action, as well as specific issues to be analyzed in the EA. These are summarized below, organized by appropriate category.

1.5.1.1. *Trail Design, Use, and Experience*

- Concern that new trails would not be accessible without paying for a lift ticket.
- Concern that the trails do not accommodate uphill bike access, which is a desired experience for many trail users.
- Question about whether SVC would require a lift ticket to access the trail system.
- Comment that the proposal overemphasizes downhill mountain biking.
- Comment that there should be more opportunities for loop hikes and cross-country mountain biking.
- Comment that the proposed trails are oriented toward a single user group (downhill mountain biking) and should incorporate multiple user groups.
- Concern about the loss of walker and runner access to the existing River Run Trail.
- Comment that the proposed trails should be designed to minimize user conflict.
- Comment that trail signage should convey the difficulty of each segment and the damaging effects of off-trail use.

1.5.1.2. *Existing Trails and Access*

- Question about whether existing perimeter trails would be maintained for uphill bicycle access.
- Question about whether the existing Bald Mountain Trail would be maintained for uphill bicycle access.
- Question about whether access from River Run to Warm Springs should be maintained.
- Concern about the steeper grade of the trail intended to replace the River Run Trail (Trail #1).
- A suggestion to reduce the grades.

1.5.1.3. *Trail Construction and Impacts*

- Comment that wide trail construction in forested areas is appropriate on public lands.
- Concern about the width of the proposed trails, compared with typical single-track.
- Concern about the visual impacts of the proposed trails due to their width.
- Comment that the trails should be sited, designed, and managed to avoid, minimize, and mitigate adverse effects on forest processes, water quality, and wildlife habitat.
- Comment that the BLM should consider any potential negative effects from increased activity on listed and sensitive species of concern, including whitebark pine and raptors.
- Comment that the trails should be located outside of riparian areas and that the project must comply with the Clean Water Act.
- Comment that measures should be taken to minimize sedimentation, dust, noxious weeds, and wildlife displacement during construction.
- Comment that trail construction or maintenance should use existing access roads.
- Comment that proper trail maintenance is necessary to prevent long-term erosion.
- Comment that trails should be closed during the spring when they are wet, muddy, and easily damaged.

1.5.1.4. *BLM Evaluation Process*

- Comment that the proposal map is difficult to read and understand the location of the proposed trails and their proximity to existing trails.
- Comment that the BLM should assess existing trails on Bald Mountain and address issues related to resource damage and unauthorized trails.
- Concern that the BLM and USFS are analyzing the project in a segmented fashion.
- Comment that the agencies need to consider connected actions and cumulative effects, per NEPA requirements.
- Comment that there needs to be a summer use master plan that considers trail connections in a broader context.

1.5.2. Internal Scoping

Prior to public scoping, the BLM conducted internal scoping to identify preliminary issues and resources of concern. Internal scoping identified nine resources potentially affected by the Proposed Action (BLM 2013a). These resources were identified in the public Scoping Information Packet that was provided as part of the public scoping process (BLM 2013b). The issues identified for evaluation in the environmental analysis are shown in Table 1. Issues may warrant the development of an alternative, can be addressed through permit stipulations or mitigation, or are addressed through environmental analysis and disclosure.

Table 1. Issues Identified during Scoping.

Resource	Issue	Reference Section
Soils	Would the Proposed Action or alternative affect the area soils or increase erosion?	3.1
Visual	Would the Proposed Action or alternative affect visual resources?	3.2
Vegetation including Special Status Plant Species	Would the Proposed Action or alternative affect vegetation communities and BLM special status plants?	3.3
Invasive Plants and Noxious Weeds	Would the Proposed Action or alternative increase invasive plant and noxious weed populations?	3.4
Wildlife Including Threatened or Endangered and Special Status Species	Would the Proposed Action or alternative impact BLM special status species? Would the Proposed Action or alternative displace wildlife?	3.5 and 3.6
Migratory Birds	Would the Proposed Action or alternative impact migratory birds and habitat?	3.6
Recreation	Would the Proposed Action or alternative change or displace the recreational opportunities available to the public?	3.7
Socioeconomics	How would the Proposed Action or alternative affect the socioeconomics of Blaine County?	3.8

2. PROPOSED ACTION AND ALTERNATIVE

2.1. PROPOSED ACTION

The Proposed Action is the construction or reconstruction, operation, use and maintenance of about 7.5 miles of summer nonmotorized mountain bike trails on BLM-administered public lands within the Bald Mountain Ski Permit Area (see Table 2 and Figure 2). The trails would be contiguous with previously permitted trails on USFS portions of Bald Mountain. The BLM trails would consist of two completely new trails (Trail #1 and Trail #8), the majority segments of two new trails that cross both USFS and BLM lands (Trail #3 and Trail #5), reconstruction of a current bidirectional trail (Trail #2) into a downhill-only trail, and the redesignation of an existing trail (Trail #10) for uphill-only biking (retaining the current bidirectional hiking access).

The downhill-only mountain bike trails (Trails #2, #3, #5, and #8) would use sustainable "flow" design and construction techniques. Flow trail designs use banked turns, rolling terrain, uphill gradients, and other natural and man-made features to provide a downhill mountain biking experience while minimizing excessive pedaling and braking and managing downhill bike speeds. An example of a "flow" design and construction within the Wood River Valley includes the Punchline Trail in the Croy Creek Trail network. Uphill biking and hiking trails would be constructed in a similar manner, without the downhill-oriented "flow" features.

Trail designs would contour to hillsides at an average grade of less than 10%. Where the average grade exceeds 10%, continuous grade reversals will be constructed to reduce the chances of water flowing or otherwise channeling down the trail tread. Trails would be constructed using a full bench design and have constant rolling grade dips and knicks (see Figures 6 to 8). Soil removed to construct the full bench trail will be broadcast uniformly downhill of the trail tread (see Figure 6). These design features are enhanced to provide the "flow" experience described above, but also assists with shedding of water from the trail tread.

The proposed (new and reconstructed) mountain bike trails would be constructed using a combination of hand tools and trail construction machinery as appropriate for the location, accessibility, and current conditions. Staging areas for construction would occur within the trail alignment and construction corridor or on existing access roads. New trail construction would result in an initial disturbance of the ground surface, vegetation, and tree canopy, the extent of disturbance being highly dependent on a number of site-specific factors including the slope angle and aspect across which the trail would be constructed, vegetation types, and level of current disturbance. Initial disturbance will vary, but is anticipated to be between 9 feet wide and up to 25 feet wide (Figure 3). For example, shallower slopes would require less alteration of the existing slope to allow the trail to be constructed, whereas steeper existing slopes may require additional excavation on the uphill side of a trail with build-up of the downhill side of the trail to accommodate the tread width of the trail. Additionally, trails constructed across grassland-shrubland vegetation communities may require greater alteration to construct appropriate design features to address erosion potential, whereas trails constructed through forested areas may not require as great of a width of disturbance to achieve the same goals. Trail reconstruction (Trail #2) would include new trail grading and sculpting of the trail within the current corridor; however, as this would involve similar construction styles, the anticipated maximum potential

width of initial disturbance is conservatively assumed to be the same as new construction (up to 25 feet).

Revegetation of the construction disturbance width (backslope and outslope), not including the trail tread, will consist of reseeding the area with native seed mixes approved by the BLM SFO. Initial vegetative cover, post construction, is anticipated to consist of herbaceous grasses and take three to five years, depending on the extent of the disturbance. Tree and shrub revegetation will rely on natural regrowth, which will likely take 10 years or longer. Trail construction would occur over four to six years and would be subject to Proposed Action-specific PDC and BMPs (Appendix A). SVC would construct, maintain, and patrol the new and existing trails.

No other changes to existing trails would occur under the Proposed Action. The Bald Mountain Trail would not change and would continue to be the primary hiking route from River Run to the Roundhouse Restaurant and the top of Bald Mountain. Likewise, no changes are proposed in the existing use or layout of the Bald Mountain Perimeter Trail (which is comprised of the Warm Springs and Cold Springs Trails).

2.2. NO ACTION

Under the No Action Alternative, the BLM would not authorize construction of the new trails on BLM-administered public lands within the Bald Mountain Ski Permit Area. The existing trails would be retained. New trails on USFS-administered lands, which were authorized in June 2013 and have been partially completed, would still be constructed and used, although segments of trails on both BLM and USFS lands (Trail #3 and Trail #5) would not be constructed on the USFS lands per the 2013 authorization (USFS 2013). Based on the current trail configuration, downhill only trail users on the USFS lands would be required to down-load at the River Run Roundhouse lift or utilize the existing trail network throughout the remaining ski permit area.

Table 2. Proposed Mountain Bike Trails or Reconfigurations on Bald Mountain.

Trail No.	Designation	Trail Length (miles)	Average Grade (%)	Trail Tread Width (feet)	Maximum Disturbance Width (feet)	Total Impact Area* (acres)	Construction Type	Construction Priority
Proposed Action - BLM-Administered Lands								
1	Hike (up/down); Bike (up)	0.9	9	9	25	2.8	New	1
2	Bike, Flow, Intermediate Downhill	1.4	5	9	25	4.3	Redesigned downhill flow	1
3	Bike, Flow, Intermediate Downhill	3.3	7	9	25	10	New	1
5	Bike, Flow, Advanced Downhill	1.1	9	9	25	3.3	New	3
8	Bike, Flow, Intermediate Downhill	0.8	8	9	25	2.4	New	6
10	Hike (up/down) Bike (up)	No Change	No Change	No Change	No Change	No Change	No Change	Not Applicable
BLM Total Trail Length		***7.5***	***BLM Total Trail Impacts***			***22.8****		
Adjacent Land Trails Private Lands or USFS -Administered Lands								
Private SVC Land (River Run Base Area)								
1	Hike (up/down); Bike (up)	0.3	9				New	1
2	Bike, Flow, Intermediate Downhill	0.8	5				Redesigned downhill flow	1
3	Bike, Flow, Intermediate Downhill	0.2	5				New	1
Private Total Trail Length		*1.3*						
USFS-Administered Lands (permitted 2013)								
4	Bike, Flow, Novice Downhill	3.8	6				New	2
5	Bike, Flow, Advanced Downhill	0.3	18				New	3
6 (upper)	Bike, Flow, Intermediate Downhill	1.5	6				Redesigned downhill flow	4
6 (lower)	Bike, Flow, Intermediate Downhill	1.8	5				New	4
7	Bike, Flow, Novice Downhill	2.1	5				New	5
9	Hike (up/down); Bike (up)	1.2	8				New	7
USFS Total Trail Length		*10.7*						

*Rounding induces a +/- 0.1 acre discrepancy in total acreage calculations.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment and environmental impacts for the Proposed Action and the No Action Alternative. For each resource topic, the impact analysis follows the same general approach. Information on the affected environment and potential environmental consequences is derived from technical reports prepared by the BLM or USFS. The alternatives were evaluated using the best available information for each resource area. Effects were based on a review of relevant scientific literature, resource field studies, and the best professional judgment of the respective resource specialists.

Effects are described as direct or indirect. Direct effects or impacts are caused by an action and occur at the same time and place as the action. Indirect effects or impacts are caused by an action and occur later in time or farther removed from the area, but are reasonably foreseeable. Effects are also described as short-term or long-term. Short-term effects are caused by the immediate conversion of the existing condition to changes anticipated under an action. Long-term effects are caused by an action, but describe the effect to the resource after a time period has elapsed and a new equilibrium between the action and the resource has been established. Effects of the Proposed Action and the No Action Alternative are described as adverse or beneficial to the resource. Cumulative effects of the Proposed Action and the No Action Alternative are presented at the end of this section.

The project file contains the complete list of resources and supplemental authorities that were considered and the reasons why certain resources or authorities were not analyzed further. The resources and supplemental authorities analyzed within this EA are:

- Soils
- Visual Resources
- Vegetation, including BLM Special Status Plant Species
- Noxious Weeds and Invasive Plants
- Wildlife, including Special Status Wildlife Species
- Migratory Birds
- Recreation
- Socioeconomics

The No Action Alternative reflects current conditions within the BLM project area and serves as the baseline for comparing the environmental effects to the BLM project area of the analyzed Proposed Action.

3.1. SOILS

The scope of the soils analysis is limited to the BLM-administered lands within the Bald Mountain Ski Permit Area, the effects associated with trail construction or reconstruction, and the ongoing operation of the trails within the permit area. Three soil types, as defined by the USDA Natural Resource Conservation Service (NRCS), are located within the BLM-administered portion of the Bald Mountain Ski Permit Area. These soil types are the Ketchum-Povey and Vitale-Milligan complexes, which combined, constitute about 88% of the Bald

Mountain Ski Permit Area, with the Dollarhide-Rock outcrop complex making up the remaining 12% (NRCS 2014). NRCS mapping shows the Ketchum-Povey soils are primarily located within the north-facing forested areas of the Bald Mountain Ski Permit Area, with the Vitale-Milligan complex primarily located on the south-facing shrub/steppe slopes.

The Ketchum-Povey soil complex is described as a gravelly loam found on 30% to 60% slopes, is well-drained, has a moderate to moderately rapid permeability, is a severe erosion hazard with very rapid runoff, and is largely derived from quartzitic sandstone (NRCS 1991, 2014). The Ketchum-Povey soils constitute about 56% of the BLM-administered Bald Mountain Ski Permit Area. The current River Run Trail is located almost entirely (98%) within the mapped area of the Ketchum-Povey soil complex. Other existing improvements located within the Ketchum-Povey soil complex and close to the Proposed Action include the Olympic Ridge ski slopes (Olympic Ridge, Olympic Lane, Olympic, Sleeping Bear, and Exhibition) and several of the Roundhouse Gondola support towers.

The Vitale-Milligan soil complex is described as very gravelly to cobbly loam found on 30% to 60% slopes, is well-drained, has a moderate to moderately rapid permeability, is characterized as a severe erosion hazard with very rapid runoff, and is largely derived from quartzitic sandstone and related rock (NRCS 1991, 2014). The Vitale-Milligan soils constitute about 32% of the BLM-administered Bald Mountain Ski Permit Area. The summer maintenance access road from the River Run operations area and Lookout Express chairlift towers are located within disturbed areas for ski runs within this complex. Lift towers for the River Run chairlift are located on the ungraded undisturbed hillside above the maintenance access road.

The Dollarhide-Rock outcrop complex is characterized as a very gravelly fine sandy loam found on 60% to 75% slopes with rock outcroppings, is well-drained, has a moderately rapid permeability, is a very severe erosion hazard with very rapid runoff, and is largely derived from quartzitic sandstone (NRCS 1991, 2014). The Dollarhide-Rock outcrop complex constitutes about 12% of the BLM-administered Bald Mountain Ski Permit Area. A small portion (about 400 feet) of the current River Run Trail is constructed within this complex.

3.1.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain Ski Permit Area and the existing trails and trail-based recreational uses would remain. SVC would complete portions of the approved trail system on USFS land with the exception of Trails #3 and #5, and the Trail #1 portion on the SVC-owned lands would not be constructed. None of the permitted trails on USFS lands are contiguous with existing trails on the BLM-administered lands; therefore, there would be no impact on soil resources on the BLM lands. Existing conditions would not change as SVC would continue to maintain and monitor the existing trail network. Therefore, there would be no effects on soils or soil resources.

3.1.2. Proposed Action

The Proposed Action is to approve the construction or reconstruction, operation, use and maintenance of about 7.5 miles of new trails on the BLM-administered portions of the Bald Mountain Ski Permit Area. About 90% (7 miles) of proposed trail construction or reconstruction

under the Proposed Action would occur within the Ketchum-Povey soil complex. Less than 1 mile of the proposed trail construction or reconstruction would occur within the Vitale-Milligan soil complex (0.13 mile of Trail #1, 0.05 mile of Trail #2, and 0.67 mile of Trail #3). Of the proposed trails within the Vitale-Milligan soil complex, all but about 300 feet of the proposed trail construction or reconstruction would occur within the existing disturbance of the Lower River Run ski slope. A very small portion (less than 400 feet) of proposed Trail #2 reconstruction would occur within the Dollarhide-Rock outcrop complex.

The overall "flow" design for downhill trails includes uphill/downhill grades, gradual outsloping of the trail tread, and continuous grade reversals that would route water off or away from the trails to reduce and minimize erosion of soil resources. Trail designs would contour to hillsides at an average grade of less than 10% or, where the average grade exceeds 10%, continuous grade reversals would be constructed to reduce the chances of water flowing or otherwise channeling down the trail tread. Trails would be constructed using a full bench design (Figure 5) and would have constant rolling grade dips and knicks (see Figures 6 through 8). These design features are enhanced to provide the "flow" experience described above, minimize channelization from usage, and assist with shedding of water from the trail tread. The proposed construction design would allow water to sheet flow perpendicular across the trail tread, reducing the amount of water flowing down the trail, where it would gain velocity, create channels, and accelerate soil erosion. Surface water from the trails would be discharged to slow sheet flow, and further minimize off-trail hillslope erosion.

Heavy-use sections, primarily on downhill portions, are likely to develop V-shaped ruts from mountain bike tire treads. This would increase the potential for localized channelization during heavy precipitation events and increase the detachment of soil particles resulting in erosional transport of soils down trail. In addition, downhill riders may "bank" around features, or puddles that may form within the depressions prior to a riser or interior of a bank turn. Trail usage and compaction over time would alter the natural infiltration rates of the native soils, altering erosion-control efficiencies of the original trail design and increasing the potential for puddles or unintended paths or treads that could contribute to soil erosion within or even outside of the tread width. Active trail monitoring and responsiveness by SVC during operations would identify these indirect effects, and appropriate trail improvement measures would be implemented to mitigate adverse impacts. Potential operational improvements may include enhancing or cleaning out grade reversals, recontouring trail sections, or altering flow design features.

Direct short-term adverse impacts from the trail construction and reconstruction would consist of the excavation, ripping, exposure, and tilling of existing soils to accommodate design construction of the trails. Soil removed to construct the full bench trail would be broadcast uniformly downhill of the trail tread (see Figure 5 and Figure 6). The width of initial construction disturbance would be highly variable depending on slope, rock outcropping, vegetation, and design features. The maximum disturbance width may be up to 25 feet, but could be only as wide as the final tread width of 9 feet, should conditions permit. The maximum width of direct long-term impacts on soil resources would be the final tread width of up to 9 feet. Soil disturbance (beyond the final tread width) required for construction would be rehabilitated according to approved plans to mitigate adverse impacts. The rate and ability for vegetation to recover would be directly related to the steepness of slope and the quality of the soils. Successful site rehabilitation is anticipated to take 3 to 5 years for herbaceous revegetation with

full development of recovered vegetative cover densities taking as long as 5 to 10 years after disturbance.

Long-term adverse soil impacts from the construction and use of the trails would be soil compaction and loss of soil tilth, or structure. Loss of topsoil and a decrease in soil organic matter would reduce soil productivity and increase the risk of soil particle detachment and transport due to surface water erosion. Trail design, monitoring, PDCs, and BMPs would be implemented to minimize erosion. In addition, construction would be phased over four to six years, thereby minimizing the overall extent of disturbance at any point in time.

According to the *Final Environmental Impact Statement – Sun Valley Resort (Bald Mountain) 2005 Master Plan Phase 1 Projects*, "No perennial stream channels reside within the Bald Mountain Special Use Permit (SUP) area. Tributary to the Big Wood River, there are four topographically defined drainages: Cold Springs Gulch, the River Run drainage, the Frenchman's drainage, and the Warm Springs drainage. Field review of these drainages reveals that these topographic drainage-ways do not contain any defined channel with bed and bank, nor is riparian or wetland vegetation present. Currently, no water courses, either perennial or intermittent, convey flows from the River Run drainage to the Big Wood River. Trails to be constructed under the Proposed Action would not cross existing surface water features that would facilitate the transport of soil particles downhill toward the Big Wood River. The proposed trails to be constructed under the Proposed Action would be within the River Run drainage and all but a small portion of the project area is topographically directed toward current ski area operations. Surface flow, and associated sediment transport, would flow through existing development and improvements including the SVC River Run Lodge and maintenance facility on the SVC property. Coupled with existing ski area permit BMPs, the potential for sediment movement or transport into the Big Wood River would be effectively discounted.

As noted above, a small portion of the project area is located topographically above the Big Wood River without SVC facilities in between. About 0.15 mile of Trail #1 to be constructed on private land and about 0.1 mile of Trail #2 to be reconstructed (on BLM-administered lands) are situated such that SVC facilities are not directly topographically downhill from the trails. As with the remainder of the Proposed Action, currently, no water courses, either perennial or intermittent, convey flows from these areas to the Big Wood River. The existing River Run Trail is situated topographically below the proposed location for Trail #1 and would be expected to trap sediment shed from the lower portion of Trail #1, preventing it from reaching the Big Wood River. About 0.1 mile of the existing lower switchback of Trail #2 is located about 125 feet topographically above the Big Wood River on a heavily vegetated, forested hillside. This trail would be reconstructed to accommodate downhill traffic, but would remain contoured across the hillslope. Accounting for these design factors, and coupled with the required PDCs and BMPs accompanying the Proposed Action, erosional transport of soils into the Big Wood River would be effectively discounted.

As part of expanded on-mountain services, SVC would be required to expend additional resources to manage and maintain the additional trails within the Bald Mountain Trail network. Although periodic monitoring and public feedback from trail users would supplement SVC personnel, responding to storm events or large erosion events may pull resources from other summer operation and maintenance activities. This, in turn may also have the indirect effect of

stretching SVC operational capacities within the Bald Mountain Ski Permit Area during these short-term events; however, impacts from such storm or large erosion events would be addressed by SVC under the required PDCs and BMPs for the Proposed Action.

Because development or generation of new soils is a process that occurs over the course of decades or centuries, the effects of soil compaction, loss of organic matter and tilth, and soil loss due to erosion may be considered an irreversible commitment of resources. Adherence to the PDCs and BMPs would reduce the overall magnitude of these anticipated losses.

3.2. VISUAL RESOURCES

The scope of the visual analysis is limited to the BLM-administered portion of the Bald Mountain Ski Permit Area. Visual resources are evaluated through BLM's Visual Resource Management (VRM) system in which the objective is to manage public lands in a manner that will protect the quality of the scenic values of the lands. The system is based on the premise that public lands have a variety of visual values, where these values mandate different levels of management. The BLM-administered lands are placed in one of four visual resource inventory classes, which represent the relative value of the visual resources and prescribe the amount of change allowed in the characteristic landscape. The entire Bald Mountain Ski Permit Area is managed under a Class III VRM classification. The definition of a Class III VRM classification is:

> *Class III Objective: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. (BLM Manual 8410).*

3.2.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain and the existing trails and trail-based recreational uses would remain. Existing conditions would not change; therefore, there would be no effects on visual resources.

3.2.2. Proposed Action

Under the Proposed Action, the proposed trails would be constructed over the course of four to six years. Direct impacts on visual resources would consist of construction scars during and following the initial trail construction. Longer-term adverse impacts would consist of differences in vegetation maturity for those areas of the Proposed Action visible from the Town of Ketchum as vegetation rehabilitation occurs. The visible areas are considered those within non-forested vegetation communities (grassland-shrubland and talus) on BLM-administered lands. Trail construction in these non-forested vegetation communities is anticipated to have a maximum impact of 5.7 acres (4.2 acres grassland/shrubland + 1.5 acres tallus/rock), or about 1 percent of the 511 acres of this community within the project area (Table 5). The remainder of the project impacts would occur within forested vegetation communities, which would likely obscure short and long-term impacts to visual resources. The visual impact to the visible areas

would lessen over time as revegetation of initial construction disturbance would obscure the initial direct impacts. Successful site rehabilitation could take 3 to 5 years for herbaceous revegetation with full development of recovered vegetative cover densities taking as long as 5 to 10 years after disturbance. As the project would occur within a VRM Class III management area, the Proposed Action complies with the Class III VRM objective and effects would not attract attention of a casual observer.

3.3. VEGETATION INCLUDING SPECIAL STATUS PLANT SPECIES

The scope of the vegetation analysis is limited to the BLM-administered portion of the Bald Mountain Ski Permit Area, the effects associated with trail construction or reconstruction, and the ongoing operation of the trails within the Bald Mountain Ski Permit Area. The vegetation within the ski permit area (both BLM and USFS) consists of two main plant communities: coniferous forest and grassland-shrubland communities. Coniferous forests consist of mixed-age stands of Douglas-fir (*Pseudotsuga menziesii*) and subalpine fir (*Abies lasiocarpa*), lodgepole pine (*Pinus contorta*), aspen (*Populus tremuloides*), Engelmann spruce (*Picea engelmannii*), whitebark pine (*Pinus albicaulis*), and an occasional ponderosa pine (*Pinus ponderosa*). Whitebark pine generally occurs in the higher elevation areas on USFS lands. Some lodgepole pines in the project area are dead or dying due to mountain pine beetle infestation. Understory species include Scouler's willow (*Salix scouleriana*), Rocky Mountain maple (*Acer glabrum*), and aspen. Grassland-shrubland communities of sagebrush (*Artemisia* spp.), bitterbrush (*Purshia tridentata*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), and various forbs and herbaceous vegetation are typically found on south-facing slopes and on areas that have been cleared of trees for ski trails.

The BLM-administered lands within the Bald Mountain Ski Permit Area contain about 760 acres of coniferous forests and 511 acres of grassland-shrubland, (USFS/BLM 2007, Taylor pers. comm. 2015[1]). The existing ski trails are included within the grassland-shrubland communities. Vegetation on the ski runs is actively managed to provide winter ski terrain and is crisscrossed by a network of almost 5 miles of unpaved roads used by SVC personnel for on-mountain maintenance and nonrecreational access during the summer months. The vegetation on the ski slopes includes a variety of both native and nonnative species that have been planted or invaded since the ski trails were cleared and developed out of the original native community. Common native plants found within ski trails include pinegrass (*Calamagrostis rubescens*), elk sedge (*Carex geyeri*), Indian paintbrush (*Castilleja* spp.), mountain balm (*Ceanothus velutinus*), ninebark (*Physocarpus malvaceus*), fireweed (*Epilobium angustifolium*), royal penstemon (*Penstemon speciosus*), western needlegrass (*Stipa occidentalis*), and common snowberry (*Symphoricarpos albus*). Common nonnative species within ski trails include crested wheatgrass (*Agropyron cristatum*), intermediate wheatgrass (*Agropyron intermedium*), smooth brome

[1] The 2007 USFS/BLM EIS erroneously identified at least 3.2 acres of habitat within the BLM-administered portion of the Bald Mountain Ski Permit Area as riparian habitat. In 2015 USFS confirmed that the mapped riparian area within the Holiday and South Canyon ski runs does not contain riparian vegetation (Taylor pers. comm. 2015). As such 2007 EIS acreage for grassland-shrublands (492 acres) are adjusted herein to a total of 495 acres to reflect this 3.2-acre discrepancy.

(*Bromus inermis*), yellow sweet-clover (*Melilotus officinalis*), berteroa (*Berteroa incana*), and saintfoin (*Onobrychis viciifolia*) (USFS/BLM 2007).

The USFS Ketchum Ranger District prepared a biological assessment and evaluation (BA/BE) for the project (inclusive of both BLM and USFS lands) that addressed effects on special status plants (USFS 2013; Appendix B). The BA/BE addressed effects on federally listed threatened, endangered, proposed, and candidate species; USFS Region 4 sensitive species; and BLM SFO sensitive species (Table 3).

Table 3. Special Status Plant Species, BLM SFO, and USFS Ketchum Ranger District.

Common Name	Scientific Name	Status[1]	Potential to Occur in Project Area
Ute ladies'-tresses orchid	*Spiranthes diluvialis*	Threatened	No
Whitebark pine	*Pinus albicaulis*	Candidate, FS	Yes
Tall swamp onion	*Allium validum*	FS	No
Northern sagewort	*Artemisia campestris* ssp. *borealis* v. *purshii*	FS	No
Challis milkvetch	*Astragalus amblytropis*	FS	No
Lemhi milkvetch	*Astragalus aquilonius*	FS	No
Mourning milkvetch	*Astragalus atratus* var. *inseptus*	BLM	No
Park milkvetch	*Astragalus leptaleus*	FS	No
Picabo milkvetch	*Astragalus oniciformis*	BLM	No
White cloud milkvetch	*Astragalus vexilliflexus* var. *nubilus*	FS	No
Slender moonwort	*Botrychium lineare*	FS	Yes
Least moonwort	*Botrychium simplex*	FS	Yes
Bryum moss	*Bryum calobryoides*	FS	No
Buxbaum's sedge	*Carex buxbaumii*	FS	No
Engelmann's sedge	*Carex engelmannii*	FS	No
Sand sedge	*Carex incurviformis* var. *incurviformis*	FS	No
Pale sedge	*Carex livida*	FS	No
Mt. Shasta sedge	*Carex straminiformis*	FS	No
Earth lichen	*Catapyrenium congestum*	BLM	No
Idaho douglasia	*Douglasia idahoensis*	FS	No
Bacigalupi's downingia	*Downingia bacigalupii*	BLM	No
Pointed draba	*Draba globosa*	FS	No
Yellowstone draba	*Draba incerta*	FS	No
Stanley's whitlow-grass	*Draba trichocarpa*	FS	No
Spoon-leaved sundew	*Drosera intermedia*	FS	No
White eatonella	*Eatonella nivea*	BLM	No
Chatterbox orchid	*Epipactis gigantean*	BLM, FS	No
Guardian buckwheat	*Eriogonum meledonum*	FS	No
Blandow's helodium	*Helodium blandowii*	FS	No
Sacajawea's bitterroot	*Lewisia sacajaweana*	FS	No
Idaho Stanley thlaspi mustard	*Nocceae idahoensis* var. *aileeniae*	FS	Yes
Obscure phacelia	*Phacelia inconspicua*	BLM	Yes
Least phacelia	*Phacelia minutissima*	BLM, FS	Yes
Marsh's bluegrass	*Poa abbreviata* ssp. *marshii*	FS	Yes
Kruckeberg's hollyfern	*Polystichum kruckebergii*	FS	No
Jones' primrose	*Primula incana*	FS	No
Bugleg goldenweed	*Pyrrocoma insecticruris*	BLM, FS	Yes
Farr's willow	*Salix farriae*	FS	No
Wedge-leaf saxifrage	*Saxifraga adscendens* ssp. *oregonensis*	FS	No
Nodding saxifrage	*Saxifraga cernua*	FS	No
Petalless campion	*Silene uralensis* ssp. *montana*	FS	No
Tall dropseed	*Sporobolus asper*	BLM	No
Malheur princesplume	*Stanleya confertiflora*	BLM	No

[1]Threatened: Federally listed as threatened; Candidate: Candidate for listing as threatened or endangered; FS: USFS sensitive species list; BLM: BLM sensitive species list.
Source: USFS 2013.

Of the 43 species listed in Table 3, 35 are not addressed further in this EA, either because the project area is outside the known range of the species, because suitable habitat is not present in

the project area, or because past surveys at Bald Mountain have not located any populations of the species (USFS 2013). Habitat requirements for these species are found in the BA/BE (Appendix B).

Eight species (whitebark pine, slender moonwort, least moonwort, Idaho Stanley thlaspi mustard, obscure phacelia, least phacelia, Marsh's bluegrass, and bugleg goldenweed) are addressed below. These species are either known to occur in the project area or could potentially occur based on the presence of suitable habitat.

Whitebark pine occurs in scattered areas of the warm and dry Great Basin, typically occurring on cold and windy high-elevation or high-latitude sites in western North America. Whitebark pine is a slow-growing long-lived tree that tolerates poor soils, steep slopes, and windy exposures, often in areas with fragile nutrient-poor soils. It is typically found at alpine tree line and subalpine elevations throughout its range (USFS 2013, citing Tomback et al. 2001). Whitebark pine is a component of the subalpine plant community, a community that occurs in the project area.

Slender moonwort is found in a variety of montane forest or meadow habitats and is described as "deep grass and forbs meadows, under trees in woods, and on shelves on limestone cliffs, mainly at higher elevations" (USFS 2013, citing Wagner and Wagner 1994); however, typical habitat for this species is difficult to identify because known sites are so different. Other slender moonwort sites occur in grass- to forb-dominated openings in forests characterized by cone-bearing trees such as pine, spruce, and fir species or on roadsides in early seral habitat. Slender moonwort could occur in the project area, especially in previously disturbed areas such as edges of existing trails.

Least moonwort grows in moist to dry soils in a variety of habitats ranging from conifer woods and meadows to rocky places between 4,000 and 6,000 feet in elevation. Least moonwort is typically found in deep shade and duff, making it inconspicuous and difficult to find (USFS 2013, citing Lorain 1990). Potential habitat for this species is present in the project area.

Idaho Stanley thlaspi mustard is endemic to the intermountain valleys of central Idaho, known from 18 occurrences in the Stanley Basin, Sawtooth Valley, and upper Wood River Valley near Easley Creek (USFS 2013). Eight occurrences are known within the Sawtooth National Forest. This species is found on loose bare sandy soil on steep slopes among small rocks on sagebrush/fescue flats and alluvial terraces in the Big Wood River drainage. The elevation of known populations ranges from 6,000 to 11,000 feet (USFS 2013, citing Moseley 1988). Potential habitat for this species is present in sagebrush-dominated areas in the project area.

Obscure phacelia is an annual forb found in sagebrush, mountain shrub, and aspen stands at elevations from 5,000 to 8,000 feet. It often grows in rocky or bare sites that are lacking in other vegetation, in disturbed areas, or in areas that hold snow drifts late into the season. Associated species include snowberry (*Amelanchier alnifolia*), quaking aspen (*Populus tremuloides*), chokecherry (*Prunus virginiana*), big sagebrush (*Artemisia tridentata vaseyana*), western waterleaf (*Hydrophyllum occidentale*), annual pink phlox (*Microsteris gracilis*), and bedstraw (*Galium* spp.) (USFS 2013). Obscure phacelia could potentially occur in sagebrush and aspen stands in the project area.

Least phacelia is an annual forb found in mesic sagebrush steppe and aspen stands at elevations from 5,000 to 8,200 feet. This species is endemic to the Owyhee Mountains and a few surrounding areas. Two occurrences are known north of the Snake River in Idaho – one on a ridge extending east-southeast from Smoky Dome in the Soldier Mountains and the other near Hash Spring (USFS 2013). Both of these populations are considered historic occurrences and recent surveys have failed to relocate the sites. Idaho populations occur mostly in stands of false hellebore (*Veratrum viride*) and adjacent forbs/grasses or near mixed aspen, willow (*Salix* spp.), and subalpine fir communities. Least phacelia could potentially occur in sagebrush-dominated areas in the project area.

Marsh's bluegrass is a perennial grass found in alpine meadows and granite talus slopes from 9,000 to 10,000 feet in elevation. Potential habitat for this species is present in the upper bowls at Bald Mountain Ski Area, although surveys in suitable habitat in 2012 did not locate this species (USFS 2013). Although Marsh's bluegrass was listed as potentially occurring in the project area in the BA/BE, this species is unlikely to occur in the BLM portion of the project area, which is below 9,000 feet in elevation.

Bugleg goldenweed is a perennial sunflower found in wet sagebrush steppe habitats between 4,500 and 7,500 feet in elevation. This species is found in both undisturbed and disturbed communities with various levels of competition. Associated species include northern mule's ear (*Wyethia amplexicaulis*), checker-mallow (*Sidalcea oregano*), sego lily (*Calochortus nuttallii*), mountain big sagebrush (*Artemisia tridentata vaseyana*), rabbitbrush (*Chrysothamnus* spp.), and various forbs and grasses. Bugleg goldenweed may be present in sagebrush habitats in the project area.

3.3.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain Ski Permit Area and the existing trails and trail-based recreational uses would remain. SVC would complete portions of the approved trail system on USFS land with the exception of Trails #3 and #5, and the Trail #1 portion on the SVC-owned lands would not be constructed. This would result in a loss of vegetation from trail construction on USFS-administered portions of the Bald Mountain Ski Permit Area. The types of impacts are described in the USFS BA/BE with accompanying mitigation measures (USFS 2013). As no trails would be constructed on BLM-administered lands, existing conditions on BLM-administered land, including vegetation and special status plants, would not change and there would be no impacts on vegetation resources.

3.3.2. Proposed Action

Construction would include the removal, trampling, disturbance, and cutting of vegetation within the trail construction corridor and could potentially impact special status plant species on BLM-administered lands.

Potential impacts on specific vegetation communities were quantified by overlaying the Proposed Action trails on vegetation communities presented in the 2007 MDP EIS (USFS/BLM 2007) with updated field-proofed clearances (see Footnote 1). The trail length across each vegetation community type was then calculated from the overlay (Table 4). Trail length by

vegetation type was then used to calculate total disturbance areas based on a 25-foot width of disturbance during construction and 9-foot width for the permanent trail tread (Table 5). Of the 7.5 miles of new trail within BLM-administered lands, 5.7 miles would be within coniferous forest, 1.3 miles would be within mapped grassland/shrubland habitat, 0.5 mile would be within the sparsely vegetated Lower River Run ski run mapped by BLM/USFS as rock and talus. About 3 miles (40%) of the 7.5 miles of new trails would be within existing ski runs that have been developed through the mapped vegetation communities.

Table 4. Length of Proposed Trails in Each Vegetation Community.

Proposed Action Trails	Linear Trail Distance[1] within Vegetation Communities[2] (miles)				
	Coniferous Forest	Grassland/ Shrubland	Rock/Talus	Total Length	Percentage Existing Ski Run[3]
Trail #1	0.8	0	0.1	0.9	21%
Trail #2	1.4	0	<0.1	1.4	12%
Trail #3	2.0	1.0	0.3	3.3	52%
Trail #5	0.7	0.3	0	1.1	78%
Trail #8	0.8	0	0	0.8	7%
Trail #10[4]	N/A	N/A	N/A	N/A	N/A
Total Distance	5.7	1.3	0.5	7.5	40%

Notes:

[1]All Proposed Action distances are calculated for BLM-administered lands only. USFS and private lands at River Run base (owned by SVC) are excluded.

[2]Vegetation types are based on USFS/BLM mapping in the MDP EIS (USFS/BLM 2007), field confirmation, and Google Earth base map.

[3]Ski run calculations are independent of mapped vegetation types mapped in the MDP EIS.

[4]No impacts on vegetation would occur.

Direct impacts on vegetation would include permanent vegetation removal to construct the trail tread and vegetation clearing within the construction corridor adjacent to the trail tread. The final trail tread width would be highly variable and would be determined during actual trail construction; however, for the purposes of analysis, the maximum final tread width of 9 feet was used to evaluate maximum permanent impacts on vegetation resources. All vegetation within the trail tread would be permanently removed, including some mature conifers, shrubs, grasses, and forbs. The permanent loss of vegetation within the trail tread corridor could total up to 6.2 acres within the coniferous forest community type and 1.4 acres of grassland/shrubland (Table 5). Much of the vegetation that will be removed within the coniferous forest community type will be the understory i.e. grasses and shrubs. Some trees may be removed however, the intent of constructing and riding trails through the forest community type is to remove as few trees as possible in order to retain the natural characteristics of the environment. It should be noted that vegetation community impacts are denoted in acres; the actual configuration of the measurement is a linear corridor of a specified width resulting in the total acreage measurement.

Direct impacts on vegetation also would include vegetation clearing on either side of the trail tread, resulting in a construction corridor up to 25 feet wide. Adverse impacts within the construction corridor would include vegetation removal and disturbance due to trampling, crushing, and general construction traffic. The project would result in removal of some large late successional trees during initial construction as well as a potential decrease in the number of snags for safety during ongoing operations. Long-term impacts on vegetation within the

construction corridor would include conversion of 11 acres of coniferous forest within the construction corridor to grassland/shrubland until the native forest community regenerates (Table 5). About 2.5 acres of grassland/shrubland within the construction corridor would be temporarily impacted by construction. Potential indirect impacts on vegetation would include a change in the native plant communities due to introduction of nonnative plant species. Areas temporarily disturbed during construction would be reseeded with an appropriate seed mix approved by the BLM SFO to mitigate direct impacts on vegetation communities. Replanting and reseeding of disturbed areas outside the trail tread would be conducted in early spring or late fall.

As shown in Table 5, the Proposed Action would result in the loss, conversion, or disturbance of a corridor along the trails with a total area of 17.2 acres of coniferous forest, 3.9 acres of grassland-shrubland, and 1.5 acres of tallus/rock area, for a collective impact of 1.8% of the total BLM-administered lands within the ski area. Because not all construction would occur at once, these impacts would be staggered over the course of the four to six years of construction, with restoration efforts implemented concurrently. Permanent vegetation loss within the trail tread is estimated up to 6.2 acres of coniferous forest, 1.4 acres of grassland-shrubland, and 0.5 acre of talus, for a total permanent loss of 8.1 acres (0.7% of vegetation communities within the entire BLM/USFS permit area).

Site rehabilitation and reseeding would be conducted to mitigate adverse impacts on vegetation communities. The proposed action would require SVC to revegetate areas, as designated by BLM, where the soil has been exposed to ground-disturbing activities. Disturbed areas would be reseeded with an appropriate seed mix approved by the BLM SFO. Replanting/reseeding of disturbed areas outside the trail tread would be conducted in early spring or late fall. Revegetation of herbaceous cover is anticipated to take at least 3 to 5 years with the full development of recovered vegetative densities taking as long as 5 to 10 years after the disturbance. Forested areas and shrubland rehabilitation may take 10 years or longer, depending on the species, location, and rehabilitation efforts. After final trail network completion and successful implementation of rehabilitation efforts, additional impacts on vegetation from trail use would be negligible and would be mitigated during operational patrolling and maintenance. Appropriate conservation measures, including revegetation with BLM SFO-approved seed mixes and weed-control measures, would be implemented as described in Section 3.4 *Noxious Weeds and Invasive Plants* to reduce the potential for spread of noxious weeds.

Table 5. Proposed Action Impacts on Vegetation.

Vegetation Community	BLM Lands (acres)	Ski Permit Area (USFS+ BLM) (acres)	Impacts[1]			Percent of Total Impacts	
			Construction Corridor[2] (acres)	Trail Tread[3] (acres)	Total Impacts[4] (acres)	BLM Lands	Ski Permit Area
Coniferous forest	759	1,845	11	6.2	17.2	2.3%	0.9%
Grassland/shrubland	495	1,430	2.5	1.4	3.9	0.8%	0.3%
Talus/rock	16	24	1.0	0.5	1.5	9.4%	6.0%
Total	1,295	3,338	14.6	8.1	22.7	1.8%	0.7%

Notes:

[1]All Proposed Action areas are calculated for BLM lands only. USFS and private lands at River Run base owned by SVC are excluded. Areas measured in acres represent the total area for linear trail corridor based on noted dimensions.

[2]Construction corridor disturbance width = 25 feet

[3]Trail tread width = 9 feet.

[4]Rounding errors induce a +/- 0.1 acre discrepancy, maximum value shown.

Vegetation types are based on mapping from the SVC MDP EIS.

There is a risk that the proposed activities could negatively affect whitebark pine individuals, regeneration, and habitat. To minimize these effects, PDC and BMPs identified in the USFS BA/BE require avoiding whitebark pine, limiting disturbances in occupied whitebark pine habitat, and taking preventive measures regarding introduction and spread of nonnative invasive plant species. Most whitebark pine habitat is at higher elevations on USFS lands and, therefore, the Proposed Action would result in a low potential for impacts. During implementation of the Proposed Action, SVC would implement similar control and mitigation measures outlined in the USFS BA/BE across BLM and USFS jurisdictional boundaries, as permitted and applicable (Appendix B). Mature cone-bearing whitebark pine trees, if found in the project area on BLM-administered land, would be flagged and avoided during construction or mitigated and managed in accordance with the measures outlined in the USFS BA/BE (USFS 2013). The USFS BA/BE found that the Proposed Action may affect, but would not likely adversely affect, the whitebark pine. The BA/BE also found that the Proposed Action would have no effect on Ute ladies'-tresses orchid, a federally threatened species. The U.S. Fish and Wildlife Service (USFWS) concurred with these findings.

The Proposed Action, with associated impacts on vegetation, could adversely affect slender moonwort, least moonwort, Idaho Stanley thlaspi mustard, obscure phacelia, least phacelia, Marsh's bluegrass, and bugleg goldenweed. Compliance with Proposed Action-specific PDCs (Appendix A), and those outlined in the USFS BA/BE (Appendix B), and implementation of BMPs to prevent the spread of noxious weeds and invasive species would reduce impacts on these species. The BA/BE found that the Proposed Action would impact these species, but would not likely contribute to a trend toward federal listing or cause a loss of viability of the population of any of these species. The BA/BE also found that the Proposed Action would have no effect on the other special status plant species listed in Table 3.

3.4. NOXIOUS WEEDS AND INVASIVE PLANTS

The scope of the noxious weeds and invasive plants analysis is limited to the BLM-administered portion of the Bald Mountain Ski Permit Area, the effects associated with trail construction, or reconstruction and the ongoing operation and maintenance of the trails within the Bald Mountain Ski Permit Area. Noxious weeds are identified by the Idaho State Department of Agriculture

(ISDA) as "any plant having the potential to cause injury to public health, crops, livestock, land, or other property; and which is designated as Noxious by the director of the ISDA" (Section 22-2402, Idaho Code). Idaho currently has 64 weed species designated as noxious by the ISDA. Although no noxious weed surveys were performed as part of this assessment, previous studies have identified Idaho state listed noxious weed species could be present in the project area, including spotted knapweed (*Centaurea maculosa*), Dalmatian toadflax (*Linaria dalmatica*), hoary alyssum (*Berteroa incana*), and Canada thistle (*Cirsium arvense*) (USFS 2013). Noxious weeds are most likely to occur in disturbed habitats such as along the edges of trails and in areas of disturbed soils. SVC has a trained and licensed herbicide applicator on their staff and has an active noxious weed management program on the Bald Mountain Ski Permit Area (USFS/BLM 2007). The known occurrences of noxious weeds have been inventoried and treated, particularly in high-risk spread areas, including along roads and in recently burned areas.

Nonnative invasive plant species are also found in the project area. Although these species are not listed as noxious weeds, they still can impact hydrologic cycles, native plant vigor, and establishment of desirable vegetation following a disturbance. Cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*) are exotic invasive annual grasses likely to be found across much of the project area, especially as a component of sagebrush communities. Other nonnative invasive species, such as tumble mustard (*Sysimbrium altissimum*) and Russian thistle (*Salsola ibericum*), could occur at disturbed sites in the project area.

3.4.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain Ski Permit Area and the existing trails and trail-based recreational uses would remain. Existing conditions on BLM-administered land would not change. SVC would continue their current program to control noxious weeds at the ski area. Therefore, additional impacts to noxious weeds and invasive plants would not occur beyond those resulting from currently authorized operations within the ski permit area.

3.4.2. Proposed Action

Construction would result in removal, trampling, and cutting of current vegetation and disturbance of soils within the trail construction corridor and could potentially impact noxious weeds and invasive plants on BLM-administered lands.

Construction activities could facilitate the establishment or spread of noxious weed and nonnative vegetation because many of these species are able to out compete native vegetation on disturbed sites. In addition, vehicles and equipment used during construction could transport seeds of nonnative species from off-site onto the project area. Noxious weeds have the highest potential for establishment in and along the areas of proposed soil disturbance. Additional avenues for weed introduction include machinery, work crews, access vehicles and equipment, and mountain bikes. Non-local mountain bikers visiting the trails may also unknowingly transport weed or non-native plant seeds from other locations to the project area from areas that may be infested with noxious weeds or non-native plants. Direct adverse impacts include the potential for new infestations to become established and for existing infestations to expand on to adjacent lands, thereby threatening resource values and uses. Adverse impacts due to the spread

of noxious weeds include the reduction of vegetative species diversity and the potential endangerment of native flora and fauna by encroachment.

Noxious weeds would be controlled to meet BLM, state, and Blaine County requirements pertaining to noxious weed management. The following PDCs will be implemented to minimize the impacts to noxious weeds within the project area:

- Trail construction and earth-disturbing equipment used within the project area – such as trail dozers and mini-excavators – shall be cleaned to remove all visible plant parts, dirt, and material that may contain noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestation.
- Integrated Weed Management shall be used to maintain or restore habitats for sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.
- Only those herbicides authorized for use on public lands are allowed.
- Monitoring and implementation of the current noxious weed management program for the ski permit area will continue.

3.5. WILDLIFE INCLUDING SPECIAL STATUS WILDLIFE SPECIES

The scope of the wildlife analysis is limited to the BLM-administered portions of the Bald Mountain Ski Permit Area and within the larger context of the full (BLM and USFS) permit area for all species but Canada lynx, gray wolf, wolverine, and elk. Because these species occur in a larger area, the study area for these species includes the ski area and surrounding adjacent habitat. Lynx Analysis Units (LAUs) are used to evaluate the Canada lynx. Because the diverse vegetation communities in the project area support a variety of wildlife species, the vegetation communities serve as the basis for evaluating planned or anticipated changes in wildlife habitat analyzed in this section. It is important to note, however, that some wildlife species use different habitat for different purposes. Habitat types present in the BLM-administered lands include mixed coniferous forest, and grassland-shrubland communities. Hunting and trapping are not prohibited within the ski area boundary; however, the high level of other recreational activities, extensive infrastructure, and road closures to public use do not make it a desirable area for most hunters and trappers.

Special status species include species listed or proposed for listing under the Endangered Species Act (ESA) and species designated as sensitive by the BLM State Director. Because the proposed project would also occur on USFS land, USFS sensitive species are included. The BA/BE prepared by the USFS for the project (Appendix B; USFS 2013) addressed effects on federally listed threatened, endangered, proposed, and candidate species (Table 6) and USFS Region 4 and Idaho BLM Sensitive wildlife species that may occur in or adjacent to the proposed project area (Table 7).

Table 6. Federally Listed Threatened, Endangered, Proposed, and Candidate Wildlife Species, SFO and Ketchum Ranger District.

Common Name	Scientific Name	Status	Potential to Occur in Project Area
Canada lynx	*Lynx canadensis*	Threatened	Yes
Yellow-billed cuckoo	*Coccyzus americanus*	Threatened	No
Greater sage-grouse	*Centrocercus urophasianus*	Candidate	Yes
Bliss Rapids snail	*Taylorconcha serpenticola*	Threatened	No
Banbury Springs limpet	*Lanx* sp.	Endangered	No
Snake River physa snail	*Physa natricina*	Endangered	No

Source: USFS 2013.

Of the species listed in Table 6, two species (Canada lynx and greater sage-grouse) are either known to occur in the project area or could potentially occur based on the presence of suitable habitat. Four species (yellow-billed cuckoo, Bliss Rapids snail, Banbury Springs limpet, and Snake River physa snail) are unlikely to occur in the project area, either because the project area is outside the known range of the species or because suitable habitat is not present in the project area (USFS 2013).

Canada lynx are typically associated with spruce, subalpine fir, and lodgepole pine forests, occurring in areas with cold winters and deep snows above 4,000 feet in elevation (Koehler et al. 1979). Lynx prey almost exclusively on snowshoe hares (*Lepus americanus*) and benefit from forest conditions that favor snowshoe hare abundance (USFS 2013, citing Koehler 1989). Lynx require a mosaic of forest conditions, including early successional habitat for hunting and mature forests for dens. Den sites are typically within lodgepole pine, spruce, and subalpine fir forests older than 200 years with northerly aspects and a high density of downfall logs (USFS 2013, citing Koehler 1989). Mature stands containing dens are as small as 1 to 5 acres with connected travel corridors that provide security cover for adults and kittens.

No records exist of any lynx observations on Bald Mountain. Although several historical records of lynx are known from within 10 miles of the ski area, no recent observations of lynx have been made on the Ketchum Ranger District or across the north end of the Sawtooth National Forest (USFS 2013). Bald Mountain occurs within the Lower Warm Springs-Greenhorn-Deer LAU. Predicted lynx habitat has been mapped within the ski area, including 600 acres of foraging habitat and 363 acres of denning habitat (USFS 2013). A portion of the predicted habitat burned in 2007 and is no longer considered lynx foraging habitat until sufficient regeneration occurs to provide habitat for prey species; thus, 550 acres of foraging habitat and 329 acres of denning habitat currently is present in the ski area. The majority of mapped predicted habitat is within the Sawtooth National Forest portion of the Bald Mountain Ski Permit Area; very little mapped lynx habitat is present on the BLM portion of the ski area (USFS 2013). Lynx foraging and denning habitat near the project area is shown on pages 71-74 of the BA/BE (Appendix B).

Yellow-billed cuckoos are found within riparian woodlands along streams and rivers. No records exist of yellow-billed cuckoos within the Bald Mountain Ski Permit Area or in the northern portion of the Sawtooth National Forest, although suitable habitat occurs along the Big

Wood River riparian zone (USFWS 2013). No potential habitat for the species occurs upon federal lands in the Bald Mountain Ski Area where activities are proposed. . The BA/BE (Appendix B) determined that the Proposed Action would have no effect on the yellow-billed cuckoo, and this species is not addressed further in this EA.

Greater sage-grouse are dependent on sagebrush habitats for nesting, early brood-rearing, and wintering. During late brood-rearing (July to October), sage-grouse can be found in grasslands, agricultural fields, and even alpine peaks, but are generally within 1 mile of sagebrush habitat (USFS 2013). Sage-grouse have been observed in several lower elevation areas on the Ketchum Ranger District in late summer/early fall in nonforested sagebrush habitat. Sage-grouse are known to nest and winter in suitable sagebrush habitats to the south of the Ketchum Ranger District on BLM and private land.

Mapped key habitat for sage-grouse does not occur on Bald Mountain, but exists within 6 air miles to the south (USFS 2013). Preliminary Priority Habitat and Preliminary General Habitat, as defined by BLM Instruction Memorandum No. 2012-043, do not occur in the project area. Active leks are known to occur 18 miles to the south, and currently unoccupied leks occur within 12 air miles to the south of Bald Mountain (USFS 2013). One anecdotal report of a sage-grouse is known from Bald Mountain and several sage-grouse have been recorded within about 5 miles of the ski area. While the ski area has marginally suitable potential late brood-rearing habitat for sage-grouse on the unforested ridges at the south end of the ski area, the area is very unlikely to support sage-grouse during critical stages such as breeding, brood-rearing, or wintering due to a lack of suitable habitat and the distance from known populations. In addition, year-round recreational and maintenance activities likely preclude use of this habitat by sage-grouse.

The **Bliss Rapids snail**, **Banbury Springs limpet**, and **Snake River physa snail** are aquatic invertebrates found within the Snake River Basin in Idaho. The Bliss Rapids snail is believed to occur in the sections of the Middle Snake River and a few tributaries as well as the Thousand Springs reach of the Snake River. The Banbury Springs limpet exists only in four isolated cold spring complexes along the Snake River in south-central Idaho. Three populations of the Snake River physa snail are known to exist in the Snake River from near Bliss, Idaho to Hammet. There are no current or historic records of these three species within the Wood River subbasin (USFS 2013), and there is no suitable habitat within the project area. For these reasons, the BA/BE determined the project would have no effect on these species, and they are not addressed further in this EA.

Table 7. BLM and USFS Sensitive Wildlife Species, SFO and Ketchum Ranger District.

Common Name	Scientific Name	Status[1]	Potential to Occur in Project Area
Spotted bat	*Euderma maculatum*	FS	Yes
Townsend's big-eared bat	*Corynorhinus townsendii*	BLM, FS	Yes
Hoary bat[2]	*Lasiurus cinereus*	BLM	Yes
Little brown bat[2]	*Myotis lucifugus*	BLM	Yes
Long-eared bat[2]	*Myotis evotis*	BLM	Yes
Long-legged bat[2]	*Myotis volans*	BLM	Yes
Silver-haired bat[2]	*Lasioncycteris noctivagans*	BLM	Yes
Western small-footed bat[2]	*Myotis cillolabrum*	BLM	Yes
Wolverine	*Gulo gulo*	BLM, FS	Yes
Fisher	*Martes pennanti*	BLM, FS	Yes
Northern goshawk	*Accipter gentilis*	BLM, FS	Yes
Boreal owl	*Aegolius funereus*	BLM, FS	Yes
Flammulated owl	*Otus flammeolus*	BLM, FS	Yes
Northern three-toed woodpecker	*Picoides tridactylus*	FS	Yes
White-headed woodpecker	*Picoides albolarvatus*	BLM, FS	No
Spotted frog	*Rana luteiventris*	BLM, FS	No
Wood River sculpin	*Cottus leiopomus*	BLM, FS	No
Northern leatherside chub	*Lepidomeda copei*	FS	No
Mountain quail	*Oreortyx pictus*	BLM, FS	No
Pygmy rabbit	*Brachylagus idahoensis*	BLM, FS	No
Peregrine falcon	*Falco peregrinus*	BLM, FS	Yes
Bald eagle	*Haliaeetus leucocephalus*	BLM, FS	Yes
Rocky Mountain bighorn sheep	*Ovis canadensis*	BLM, FS	Yes
Gray wolf	*Canis lupus*	BLM, FS	Yes
Black-backed woodpecker	*Picoides arcticus*	BLM	Yes
Lewis' woodpecker	*Melanerpes lewis*	BLM	Yes
Fringed myotis	*Myotis thysanodes*	BLM	Yes
Calliope hummingbird	*Stellula calliope*	BLM	Yes
Willow flycatcher	*Empidonax traillii*	BLM	Yes
Olive-sided flycatcher	*Contopus borealis*	BLM	Yes
Golden eagle[2]	*Aquila chrysaetos*	BLM	Yes
Green-tailed towhee[2]	*Pipilo chlorurus*	BLM	Yes

[1]FS: On USFS sensitive species list; BLM: On BLM sensitive species list
[2]Species not originally included in 2013 USFS BA/BE but added to 2015 BLM Special Status Species List.
Source: USFS 2013, BLM 2015.

Of the species listed in Table 7, 26 sensitive wildlife species (spotted bat, Townsend's big-eared bat, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-

footed bat, wolverine, fisher, northern goshawk, boreal owl, flammulated owl, northern three-toed woodpecker, peregrine falcon, bald eagle, Rocky Mountain bighorn sheep, gray wolf, black-backed woodpecker, Lewis' woodpecker, fringed myotis, Calliope hummingbird, willow flycatcher, olive-sided flycatcher, golden eagle, and green-tailed towhee) are either known to occur in the project area or could potentially occur based on the presence of suitable habitat. Six species (white-headed woodpecker, spotted frog, Wood River sculpin, northern leatherside chub, mountain quail, and pygmy rabbit) are not likely to occur in the project area, either because the project area is outside the known range of the species or because suitable habitat is not present in the project area (USFS 2013). Habitat requirements for these species and the rationale for exclusion from further analysis, if appropriate, are discussed below.

Spotted bats forage in open ponderosa pine stands, marshy areas, and open pastures. Roosting occurs in rock crevices on steep cliff faces (USFS 2013, citing Watkins 1977 and Wai-Ping and Fenton 1989). It is unknown if spotted bats occur within the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for spotted bats is present in the ski area, although surveys for the species have not been conducted (USFS 2013).

Townsend's big-eared bats generally forage along the forest edge and roost in crevices of rocky outcrops, caves, old mines, or buildings. It is unknown if Townsend's big-eared bats occur at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys for this species have not been conducted (USFS 2013).

Hoary bats occur in deciduous and coniferous forests and woodlands, including areas altered by humans. Roost sites are usually in tree foliage several feet above the ground, with dense foliage above and open flying room below, often at the edge of a clearing and commonly in hedgerow trees. Sometimes these bats roost in rock crevices but rarely in caves. Hibernating individuals have been found on tree trunks, tree cavities, and in squirrel's nests. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Little brown bats occur in mountainous and riparian areas in a wide variety of forest habitats; from tree-lined xeric-scrub to aspen meadows and Pacific Northwest coniferous rain forests. This species roosts in tree cavities and crevices. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Long-eared bats are found in forested areas with broken rock outcrops, in shrublands, in meadows near tall timber, along wooded streams, and near reservoirs. This species roosts in buildings, hollow trees, mines, caves, and fissures. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Long-legged bats are found in wooded habitats from pinion- juniper to coniferous forests, usually at elevations of 4,000 to 9,000 feet. Roosts and maternity colonies are found in tree cavities or under loose bark, in rock crevices, cliffs, and buildings. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Silver-haired bats primarily occur in coniferous forested areas adjacent to lakes, ponds, or streams, including areas that have been altered by humans. Summer roosts and nursery sites are in tree foliage, cavities, under loose bark, or in buildings. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Western small-footed bats typically occur in desert, badland, and semiarid habitats. Western small-footed bat summer roosts are found in rock crevices, caves, tunnels, under boulders, beneath loose bark, or in buildings. Hibernation occurs in caves and mines. Maternity colonies often are found in abandoned houses, barns, or similar structures. It is unknown if this species occurs at the Bald Mountain Ski Permit Area. Potential foraging and roosting habitat for the species occurs at the ski area, but surveys have not been conducted.

Wolverines occur within a variety of habitats, primarily boreal forests, tundra, and western mountains throughout Alaska and Canada; however, the southern portion of the range extends into the contiguous United States, including Idaho. Wolverines are primarily scavengers, but may also hunt for snowshoe hares, marmots, mice, voles, ground squirrels, and grouse or eat fruits, berries, and insects when other prey is unavailable (USFS 2013, citing Hash 1987). Wolverines have large home ranges and use a variety of habitats from low-elevation forested drainage bottoms to high-elevation sparsely timbered cirques (USFS 2013).

No observations of wolverines have been recorded directly at the ski area, but incidental wolverine observations have occurred since the 1990s by members of the public in the general vicinity (USFS 2013). Persistent snow through May 1 has been positively correlated with wolverine den sites, which has been used by the USFS as a way to delineate potential wolverine denning habitat. Using this process, the USFS showed that no potential denning habitat occurs on the Bald Mountain Ski Permit Area or immediate vicinity (USFS 2013).

Fishers occur in mature to old-growth forests with high canopy closure and generally avoid large openings. Fishers are associated with mesic forest conditions and forested riparian areas. Fishers have not been documented in the Bald Mountain Ski Permit Area or within the Ketchum Ranger District. Although potential habitat for fishers is present, the ski area likely occurs outside the range of fishers in central Idaho, thus the probability of fishers occurring there is extremely low (USFS 2013). In addition, fishers are unlikely to occur in the project area due to high levels of year-round recreation.

Northern goshawks forage in mixed coniferous forests and nest in areas with tree canopy cover of at least 50% to 60% and a high density of large trees. Potential goshawk nesting habitat occurs within the project area, but no goshawk nests have been discovered there during several surveys conducted in the area (USFS 2013). The closest nest to the proposed project area is 1 mile to the north. Although the project area is within the foraging area of this nest territory, it is unlikely goshawks would nest within the project area due to high levels of year-round recreation.

Boreal owls occur in spruce-fir, Douglas-fir, and mixed conifer forests above 5,000 feet in elevation. Boreal owls nest in tree cavities and generally use cavities excavated in dead trees by woodpeckers for their nest sites. Potential habitat for this species occurs at the ski area. No boreal owls were heard at the Bald Mountain Ski Permit Area during surveys conducted for the

species in 2004 and 2006; however, surveys detected boreal owls within 1 mile west of the project area in Basset Gulch (USFS 2013).

Flammulated owls occur in mature ponderosa pine and mature Douglas-fir forests with an abundance of snags or live trees with cavities for nesting. This species is truly migratory and does not arrive on its breeding territories until May in central Idaho. Although potential habitat for flammulated owls exists at the project area, flammulated owls have not been found during surveys, including a survey in the Warm Springs portion of the project area in 2004 (USFS 2013). The nearest known observation of a flammulated owl occurred in 1994 about 2.5 miles west in Moonlight Gulch.

Northern three-toed woodpeckers are found in northern coniferous forests and are primarily associated with mature forests with outbreaks of bark beetles. They forage mainly in dead trees and a large percentage of their diet is wood-boring insect larvae. Woodpeckers excavate cavities in snags or occasionally live trees (USFS 2013, citing Short 1982). Some lodgepole pines exist on the Bald Mountain Ski Permit Area, occurring as a subdominant species with Douglas-fir. Minimal habitat for three-toed woodpeckers occurs in the project area. The nearest known observations were about 7 miles to the north in 1998 and 8 miles to the west in 2003 (USFS 2013).

White-headed woodpeckers are found in open mature mixed conifer forests, mainly ponderosa pine and mixed ponderosa pine/Douglas-fir forests in Idaho (USFS 2013, citing Frederick and Moore 1991). The woodpeckers feed on pine seeds and insects under bark and on branches (USFS 2013, citing Ligon 1973). Nests are usually excavated in large-diameter dead trees in moderate to advance decay (USFS 2013, citing Bull et al. 1986). No habitat for white-headed woodpeckers is present at the Bald Mountain Ski Permit Area due to a lack of open ponderosa pine habitat. The nearest observation of a white-headed woodpecker is approximately 42 air miles to the west on the Fairfield Ranger District.

Spotted frogs are found in areas where permanent water is present, such as marshes, ponds, or riparian areas. No potential habitat for spotted frogs, such as springs or wetlands, is present in the project area. No spotted frogs have been documented in the project area. The closest confirmed observation was in 2003 during an amphibian survey at a pond adjacent to Highway 75, approximately 4 miles north (USFS 2013).

The **Wood River sculpin** is endemic to the Big Wood, Little Wood, and Camas subbasins of central Idaho. Little is known about the specific habitat requirements of Wood River sculpin, but freshwater sculpin are typically found in clear streams with cobble or gravel bottoms and require cool water with high oxygen content (USFS 2013, citing Meyer et al. 2008). Wood River sculpin have been documented in the Big Wood River near the Bald Mountain Ski Permit Area, just downstream near the confluence with Trail Creek. Although there are no records of Wood River sculpin sampled in Warm Springs Creek north of the project area, nor in the 2-mile-long stream segment from the project area downstream to the confluence with the Big Wood River, there are records of Wood River sculpin being sampled at multiple sites in lower Warm Springs Creek above the project area (USFS 2013, citing Griffith 1996 and Abbruzzese and Henderson 1999). Wood River sculpin have also been documented at high densities in the Big Wood River 1 mile upstream from the Warm Springs Creek confluence (USFS 2013, citing Merkley and

Griffith 1993). It is likely that individuals reside in Warm Springs Creek near the project area; however, no streams run off from Bald Mountain into the Big Wood River or Warm Springs Creek. There are no watercourses, perennial or intermittent, within the project area that convey flow to the Big Wood River; therefore, there is no potential for Wood River sculpin to occur in the project area.

The **northern leatherside chub** is a rare desert fish in the minnow family that occurs in northern Utah and Nevada, southern and eastern Idaho, and western Wyoming. Despite one historic unconfirmed observation of this species in the Big Wood River, there are no verified records of this species being observed or vouchered during extensive sampling efforts in the Big Wood River Subbasin (USFS 2013). In its finding on a 12-month petition to list the species, the USFWS determined that the Big Wood River and its tributaries are no longer considered current or historical range for the northern leatherside chub (76 Federal Register 63443, October 12, 2011).

Mountain quail are found in dense brush, coniferous forests, and around the edges of mountain meadows from 1,500 to 10,000 feet in elevation. Important year-round habitat consists of tall dense shrubs and water. Mountain quail have been documented more than 38 air miles to the east of the Bald Mountain Ski Permit Area on the west side of the Fairfield Ranger District and the east side of the Mountain Home Ranger District (USFS 2013). No observations of mountain quail have been made at the ski area and the ski area is not potential habitat for the species.

Pygmy rabbits are a sagebrush obligate species. They use areas with tall dense sagebrush where soil textures allow easy excavation of burrows. Pygmy rabbits have been documented on BLM and state lands within 26 air miles to the south of the Bald Mountain Ski Permit Area (USFS 2013). Potential habitat for pygmy rabbits does not occur in the project area.

Peregrine falcons nest on tall cliffs, approximately 150 feet high, with adequate ledges for nesting and perching. The project area is more than 32 air miles southeast of the closest known nesting site. No potential peregrine falcon nesting habitat occurs within or near the project area and peregrine falcons are not known to forage in the project area (USFS 2013).

Bald eagles require large trees with access to water for nesting. Bald eagle winter habitat typically includes open water for foraging or sources of carrion with suitable trees for perching nearby. No suitable bald eagle nesting or foraging habitat occurs in the project area (USFS 2013).

Rocky Mountain bighorn sheep are typically found in areas with rugged topography, generally in mountain or canyon habitats. No known population of bighorn sheep occurs near the project area. The nearest (unconfirmed) observation of a bighorn sheep at the project area was near the Hailey Airport in 2005 (approximately 11 air miles south of Bald Mountain). Observations of individual or small groups of bighorn sheep have occurred on National Forest System lands in the Ketchum Ranger District over the past few decades, but none within the Bald Mountain Ski Permit Area (USFS 2013).

Gray wolves have been reported in many locations throughout the Ketchum Ranger District on USFS lands from 2002 through 2013, but no wolf activity has been reported in the project area

(USFS 2013). Suitable habitat for wolves is present in the project area. Year-round range for mule deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*), both of which provide a food source for wolves, occurs near the project area. Wolves are unlikely to establish a den in the project area due to the existing human activity, but the project area could provide foraging habitat.

Black-backed woodpeckers occur in a variety of habitat types ranging from early successional mixed conifer and lodgepole pine forests to late successional subalpine forests and riparian woodlands. Black-backed woodpeckers typically concentrate in recently burned forests for foraging and require standing snags and downed wood for foraging (USFS 2013 citing Harris 1982). Potential habitat for black-backed woodpeckers occurs in the burned areas on the west side of the Bald Mountain Ski Permit Area.

Lewis' woodpecker habitat includes open woodland dominated by aspen and logged or burned pine forests (USFS 2013, citing Wisdom et al. 2000). Lewis' woodpeckers are known to occur near the ski area, but have not been recorded within the project area (USFS 2013). This species could occur in the riparian woodlands along the Big Wood River adjacent to the ski area and within the burned areas on the west side of the ski area.

Fringed myotis occurs in a variety of habitat types including forests, woodlands, grasslands, and deserts (USFS 2013, citing Marshall et al. 1996 and Keinath 2004). Roosting typically occurs under loose bark and inside hollows within tree snags. It is unknown if fringed myotis occurs within the project area because surveys have not been conducted. No caves, mines, structures, or natural features potentially suitable for maternity roost sites or hibernacula are known to occur in the project area. Forests that could provide potential foraging habitat and snags that provide roosting habitat occur in the project area.

Calliope hummingbirds occur in mountainous regions throughout Idaho during the breeding season, except for nonforested and extreme arid portions in the southern part of the state. The Calliope hummingbird is associated with open coniferous forests, montane meadow, shrublands, riparian thickets of willows, and brushy areas. It nests in riparian areas and open forests at the edges of meadows (Groves et al. 1997).

Willow flycatchers occur in thickets, scrubby and brushy areas, open second-growth forests, swamps, and open woodlands. Flycatchers catch prey in the air or take food from foliage. Willow flycatchers build cup-shaped nests in shrubs or deciduous trees. Although willow flycatchers are declining in the Pacific Northwest, their numbers in Idaho appear stable (NatureServe 2014).

Olive-sided flycatchers occur in forests and woodlands (especially in burned areas with standing dead trees) such as taiga, subalpine coniferous forests, mixed forests, boreal bogs, muskeg, and borders of lakes and streams (Groves et al. 1997).

Golden eagles typically nest on steep cliffs near open and semiopen grassland-sagebrush habitat near canyons and rim rock. Sagebrush and open grasslands that could provide foraging habitat are present in the project area, although no known nests or cliffs that provide nesting habitat are present.

Green-tailed towhees forages and nest in dense shrubby vegetation, including sagebrush. Sagebrush and other shrublands that could provide nesting and foraging habitat are present in the project area.

Mule deer and elk are not listed under the ESA and are not USFS or BLM sensitive species. They are locally and regionally abundant and are included in this EA due to their prevalence and wide usage of habitats in the area. Year-round range for mule deer and elk occurs near the project area. Portions of the ski area are used extensively by mule deer in the summer and fall and are used occasionally by elk. The Warm Springs and Cold Springs Perimeter Trails are closed in the spring until the last weekend in June to protect calving and fawning big game. The proposed mountain bike trails would be mostly located in areas surrounded by existing disturbances such as ski runs, trails, the gondola, and associated high levels of human activity and are not likely to be used for calving or fawning.

3.5.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain and the existing trails and trail-based recreational uses would remain. The No Action Alternative would occur within the existing BLM-administered Ski Permit Area Boundary and quantifying wildlife impacts independent of existing ski area operations and land disturbances is not feasible. For this reason, impacts to wildlife are discussed qualitatively.

Under this alternative, SVC would complete portions of the approved trail system on USFS land with the exception of Trails #3 and #5, and the Trail #1 portion on the SVC-owned lands would not be constructed. This would result in a direct loss of habitat on USFS-administered lands for some wildlife species during trail construction and impacts of species displacement, avoidance, and decrease in foraging or nesting habitat as analyzed and described in the USFS BA (USFS 2013). Ongoing displacement of some sensitive wildlife species would occur on BLM-administered lands as a result of trail construction on adjacent USFS land in a manner similar to the impacts described below in Section 3.5.2 of this EA. Existing habitat conditions for special status species on BLM-administered land are not anticipated to change aside from slight changes in usage from species displacement due to trails development on adjacent USFS lands. Because the magnitude of the change on BLM-administered lands is anticipated to be imperceptible, this alternative would have negligible impacts on wildlife and wildlife habitat on BLM-administered lands. Impacts on non-BLM and non-USFS administered lands immediately adjacent to the project area would be negligible because of the distance between these areas and the activities on the USFS-administered lands.

3.5.2. Proposed Action

Construction would result in removal, trampling, conversion, or cutting of existing vegetation communities (and thereby wildlife habitat) within the trail corridor. Operation, use and maintenance of the trails would increase human presence and activity in areas both with and without current levels of human activity that could potentially impact wildlife species on BLM-administered lands.

Under the Proposed Action, SVC would construct the proposed trails within the BLM-administered lands, subject to approved project plans and PDCs/BMPs outlined in Appendix A. Direct adverse impacts on wildlife habitat would occur during the initial construction phase and include species displacement or avoidance of the area due to removal of habitat, increased human presence during construction, trampling or crushing of habitat, disturbance from increased vehicle traffic, and noise from machinery. Direct impacts are anticipated to be contained within a trail construction corridor of a maximum width of 25 feet. Indirect impacts would extend beyond the maximum 25-foot corridor width, both during initial construction as well as ongoing operations, but would be location-specific along the trail route, influenced primarily by topography and final extent of direct impacts. Longer-term adverse impacts would include habitat loss or conversion of forested habitat to grassland-shrubland communities until reestablishment of forest canopy and ongoing disturbance and displacement from increased mountain bike traffic on the new trails. As rehabilitation restores vegetation communities and habitat over the course of years to decades, the amount/width of initial habitat loss would decrease. An increase in forest edge habitat along the trail corridors may also impact species that avoid or seek the transitional zones between forested and grassland habitats. Indirect short-term impacts of species displacement, avoidance, and decrease in foraging or nesting habitat and activity would occur beyond the footprint of direct impacts due to the increase in proximity of construction activity and subsequent trail usage and maintenance.

The Proposed Action is located within the existing BLM-administered Ski Permit Area Boundary and quantifying wildlife impacts independent of existing ski area operations and land disturbances is not feasible. For this reason, impacts to wildlife are discussed qualitatively below with vegetation community habitat used as a quantitative proxy for wildlife impacts.

3.5.2.1. *Wildlife Habitat*

Long-term impacts on foraging, denning, and nesting habitat would occur under the Proposed Action and would consist of the permanent removal of vegetation communities within the trail tread width, loss or reduction (in height or density) of forest canopy, increase in edge habitat, reduction in snags and windthrow from safety and maintenance activities, habitat fragmentation, and habitat conversion from coniferous forest to grassland/shrubland. Coniferous forest rehabilitation may take decades to reach densities and canopy cover approaching preconstruction levels, if possible; therefore, conversion of coniferous forest to grassland/shrubland is characterized as a long-term impact. In addition, increased human activity along the trail corridor may alter the potential use and habits of the area by species unaccustomed to human presence, resulting in a change in nesting and denning behavior that may impact species productivity. The changes in habitat type, conversion of habitat, fragmentation, and increase in human presence from long-term trail usage would alter wildlife use of the area, potentially resulting in the permanent displacement of certain species. Indirect long-term impacts from construction activities and ultimate trail usage includes the potential for reduction in species diversity and decrease in habitat sustainability for current species densities.

As shown in Table 5, the Proposed Action would result in the potential for long-term or permanent disturbance of linear corridors, which totals 17.2 acres of coniferous forest habitat, 3.9 acres of grassland-shrubland habitat, and 1.5 acres of sparsely vegetated rock/talus within the Lower River Run ski slope. The Proposed Action would result in a potential maximum

disturbance of 22.7 acres of wildlife habitat, 42% of which occurs on existing ski slope terrain. The 22.7 acres of potential habitat impacts represent 1.8% of the available habitat within the BLM-administered lands in the Bald Mountain Ski Permit Area. Permanent habitat losses would include up to 6.2 acres of coniferous forest habitat, 1.4 acres of grassland-shrubland habitat, 0.5 acre of rock/talus (8.1 acres total), representing about 0.7% of the BLM-administered lands (Table 5).

3.5.2.2. *Special Status Species*

Very little Canada lynx habitat is present on BLM-administered land of the Bald Mountain Ski Permit Area and none is present near the existing and proposed trails. As described in the BA/BE (Appendix B), the Proposed Action would likely result in some minor habitat alterations to mapped predicted lynx foraging and denning habitat, but overall conditions for lynx at the ski area would be maintained. Levels of year-round recreation and ski area maintenance activities would likely preclude lynx from using the ski area. While habitat quality may be somewhat reduced for snowshoe hares as a result of trail construction and increased summertime mountain bike use, the Proposed Action would not affect the possibility of lynx using the ski area. Changes in lynx habitat and recreational use from current conditions would be negligible. The BA/BE found the Proposed Action may affect, but is not likely to adversely affect, Canada lynx. The USFWS concurred with these findings.

The Proposed Action would not affect the yellow-billed cuckoo, Bliss Rapids snail, Banbury Springs limpet, or Snake River physa snail because suitable habitat is not present for these species in the project area. The greater sage-grouse would not be affected because they are extremely unlikely to occur in the project area. The wolverine would not be affected because the Proposed Action would not affect denning habitat and would not increase disturbance during the critical stage of denning. The BA/BE concluded the Proposed Action would have no effect on these species, and the USFWS concurred with these findings.

The increased summertime mountain bike use and trail maintenance as well as the removal of up to 6.2 acres of coniferous forest; potential conversion of an additional 11 acres of conifer forest to grassland-shrubland habitat; and removal of up to 1.4 acres of grassland-shrubland habitat, and 0.5 acre of rock/talus habitat would remove or alter some foraging and security habitat and could adversely affect spotted bat, Townsend's big-eared bat, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-footed bat, fisher, northern goshawk, boreal owl, flammulated owl, gray wolf, black-backed woodpecker, Lewis' woodpecker, fringed myotis, Calliope hummingbird, willow flycatcher, olive-sided flycatcher, mule deer, and elk. Spotted bats and Townsend's big-eared bats could be affected by removal of roosting habitat such as rock outcrops or loss of foraging habitat. The loss of up to 6.2 acres of coniferous forest could reduce potential foraging habitat for northern goshawks and fishers; however, existing levels of recreational use likely preclude these species from occurring in the project area, so the effects would be unlikely. The increase in forest edge habitat along trail corridors may affect species that seek (e.g., hummingbirds) or avoid (e.g., fishers) the transition zone between habitats. Although large snags greater than 24 inches diameter at breast height (DBH) (especially those with cavities) would not be removed unless they posed an unacceptable safety risk, the boreal owl, flammulated owl, black-backed woodpecker, Lewis' woodpecker, and fringed myotis could be affected by removal of snags that provide nesting sites and minor loss of

foraging habitat. Increased recreation from future use of the proposed mountain bike trails may reduce the quality of wolf habitat at the ski area; however, the probability of wolves occurring would remain low due to year-round human presence.

The long-term recreational use of the proposed trails could result in some displacement or increased disturbance to spotted bat, Townsend's big-eared bat, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-footed bat, boreal owl, flammulated owl, gray wolf, black-backed woodpecker, Lewis' woodpecker, fringed myotis, Calliope hummingbird, willow flycatcher, olive-sided flycatcher, golden eagle, green-tailed towhee, mule deer, and elk if they occur near the proposed trails. The portion of the project area that would be affected by new displacement would occur within the area between the Roundhouse Restaurant and River Run Plaza, is surrounded by existing ski runs, and is underneath the existing Roundhouse Gondola. This area is already impacted by human activity and is bisected by existing trails and ski runs. Increased human presence on the trails, especially in the summer months, could cause sensitive species to avoid the area.

No streams are located within the project area and no surface water features within the project area drain to the Big Wood River. As described in Section 3.1, almost all drainage from the River Run drainage basin is directed through the existing developed lodge and operations area at the River Run Plaza at the eastern base of the ski area operations. Any sediment dislodged during precipitation events would be transported across existing ski area infrastructure (ski runs and access roads) or through the existing structures, pavement, and landscaping at the River Run base area before discharging to the Big Wood River. The lack of a surface water connection to perennial streams and the existing ski area permit BMPs would reduce the potential for discharge into the Big Wood River, thereby reducing or eliminating the potential for impacts on the Wood River sculpin.

Recreational use of the proposed trails would result in some displacement or increased disturbance to wildlife. Increased human presence on the trails, especially in the summer months, could cause some wildlife to avoid the area. The area affected by new displacement effects from the proposed trails is surrounded by existing ski runs and is underneath the existing gondola. This area is already impacted by human activity. Wildlife occurring in this already-impacted area are likely to be acclimated to human activity in the area, and therefore, when coupled with wildlife PDC, adverse impacts are likely to be minor.

Wildlife-specific PDCs consist of the following to mitigate potential impacts:

- No tree cutting would occur between May 1 and July 31 to prevent disturbance to nesting birds during the breeding season, unless a site-specific survey is conducted to confirm the tree is not occupied by nesting birds.
- Large snags greater than 24 inches DBH (especially those with cavities) would not be removed unless they posed an unacceptable safety risk.

The BA/BE (Appendix B) found that the Proposed Action would impact spotted bat, Townsend's big-eared bat, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-footed bat, boreal owl, flammulated owl, Lewis' woodpecker, fringed myotis, golden eagle, and green-tailed towhee (Calliope hummingbird, willow flycatcher, and olive-

sided flycatcher were not addressed in the BA/BE), but would not likely contribute to a trend toward federal listing or cause a loss of viability of the population of any of these species. The BA/BE also found that the Proposed Action would have no effect on the other special status wildlife species listed in Table 7. Although not addressed directly in the BA/BE, there is no reason to suspect that effects on the Calliope hummingbird, willow flycatcher, olive-sided flycatcher, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-footed bat, golden eagle, and green-tailed towhee would be different than those listed in the BA/BE. The effects for each special status species are summarized in Table 8.

Table 8. Summary of Effects on Special Status Species by Alternative.

Special Status Species[1]	Direct Habitat Impacts (acres)[2]	Total BLM/ USFS Habitat (acres)[3]	No Action Alternative	Proposed Action
Canada lynx	22.7	3,256	No effect	May affect, but not likely to adversely affect (no loss of foraging or denning habitat)
Greater sage-grouse	0	1,448	No effect	No effect (does not occur in project area)
Spotted bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat (rock outcrops) and displacement due to increased human activity on mountain bike trails
Townsend's big-eared bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat (rock outcrops) and displacement due to increased human activity on mountain bike trails
Hoary bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Little brown bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Long-eared bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Long-legged bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Silver-haired bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Western small-footed bat	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Wolverine	22.7	3,411	No impact	No impact (unlikely to occur in project area)
Fisher	17.2	494	No impact	No impact (unlikely to occur in project area)
Northern goshawk	17.2	1,903	No impact	No impact (unlikely to occur in project area)
Boreal owl	17.2	473	No impact	Could be adversely affected by loss of foraging and nesting habitat (snags[4]) and displacement due to increased human activity on mountain bike trails
Flammulated owl	17.2	473	No impact	Could be adversely affected by loss of foraging and nesting habitat (snags[4]) and displacement due to increased human activity on mountain bike trails
Northern three-toed woodpecker	17.2	473	No impact	Could be adversely affected by loss of foraging and nesting habitat (snags[4]) and displacement due to increased human activity on mountain bike trails
White-headed woodpecker	0	0	No impact	No impact
Spotted frog	0	39	No impact	No impact; no riparian area.

Special Status Species[1]	Direct Habitat Impacts (acres)[2]	Total BLM/ USFS Habitat (acres)[3]	No Action Alternative	Proposed Action
Mountain quail	0	0	No impact	No impact
Pygmy rabbit	0	0	No impact	No impact
Peregrine falcon	17.2	1,484	No impact	No impact
Bald eagle	0	0	No impact	No impact (no loss of foraging or nesting habitat)
Rocky Mountain bighorn sheep	22.7	3,411	No impact	No impact (not likely to occur in project area)
Gray wolf	22.7	3,411	No impact	No impact (low probability to occur due to year-round human presence)
Black-backed woodpecker	17.2	1,957	No impact	Could be adversely affected by loss of foraging and nesting habitat (snags[4]) and displacement due to increased human activity on mountain bike trails
Lewis' woodpecker	17.2	1,483	No impact	Could be adversely affected by loss of foraging and nesting habitat (snags[4]) and displacement due to increased human activity on mountain bike trails
Fringed myotis	17.2	1,485	No impact	Could be adversely affected by loss of foraging and roosting habitat and displacement due to increased human activity on mountain bike trails
Calliope hummingbird	3.9	1,884	No impact	Could be adversely affected by loss of foraging and nesting habitat and displacement due to increased human activity on mountain bike trails
Willow flycatcher	0	39	No impact	Could be adversely affected by loss of foraging and nesting habitat and displacement due to increased human activity on mountain bike trails
Olive-sided flycatcher	17.2	1,485	No impact	Could be adversely affected by loss of foraging and nesting habitat and displacement due to increased human activity on mountain bike trails
Golden eagle	3.9	1,430	No impact	Could be adversely affected by loss or disturbance grassland-shrubland habitat used for foraging.
Green-tailed towhee	3.9	1,430	No impact	Could be adversely affected by loss or disturbance grassland-shrubland habitat used for foraging and nesting
Mule deer and elk	22.7	3,411	No impact	Could be adversely affected by loss of foraging habitat and displacement due to increased human activity on mountain bike trails

Notes:

[1]As no habitat for Wood River sculpin, northern leatherside chub, Bliss Rapids snail, Banbury Springs limpet, or Snake River physa snail (USFS/BLM 2007) is present in the project area, no impacts would occur and these species are not listed in this table.

[2]Habitat impacts include habitat lost within the trail tread footprint and disturbed or converted to a different habitat type within the construction corridor. Habitat impacts are quantified as total acreage of linear trail corridor with a 25-foot maximum construction disturbance.

[3]Total BLM/USFS habitat is suitable habitat for each species within the Bald Mountain Ski Permit Area, regardless of whether the species occurs in the ski area (Source BLM/USFS 2007).

[4] Large snags greater than 24 inches DBH (especially those with cavities) would not be removed unless they posed an unacceptable safety risk. No tree cutting would occur between May 1 and July 31 to prevent disturbance to nesting birds during the breeding season, unless a site-specific survey is conducted to confirm the tree is not occupied by nesting birds.

3.6. MIGRATORY BIRDS

The scope of the migratory bird analysis is limited to the BLM-administered portion of the Bald Mountain Ski Permit Area. Executive Order 13186, signed January 10, 2001, lists several responsibilities of federal agencies with respect to the conservation of migratory birds and their habitats. In addition to the BLM sensitive species described above under Section 3.5 *Special*

Status Species, the project area likely provides habitat for seven bird species of conservation concern that are not listed as BLM sensitive species (Table 9).

Table 9. Birds of Conservation Concern Potentially Occurring in the Project Area.

Common Name	Scientific Name	Habitat Description
Great gray owl	*Strix nebulosa*	Coniferous forests. Uses stick nests built by other species.
Williamson's sapsucker	*Sphyrapicus thyroideus*	Forages and breeds in open coniferous forests.
Red-naped sapsucker	*Sphyrapicus nuchalis*	Breeds in mixed forests. Excavates nest cavities in dead trees.
Mountain chickadee	*Poecile gambeli*	Coniferous forests. Often excavates nest cavity in aspen trees.
Red-breasted nuthatch	*Sitta canadensis*	Coniferous forests. Excavates nest cavities in dead trees.
Pygmy nuthatch	*Sitta pygmaea*	Open pine forests, especially ponderosa pine. Nests and roosts in tree cavities.
Mountain bluebird	*Sialia currucoides*	Sagebrush and high-elevation meadows. Nests in tree cavities.

3.6.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of the Bald Mountain Ski Permit Area and the existing trails and trail-based recreational uses would remain. Under this alternative, SVC would complete portions of the approved trail system on USFS land. This would result in a direct loss of habitat on USFS-administered lands for some species and species displacement similar to that described in Section 3.5.2. Existing habitat conditions on the BLM-administered lands are not anticipated to change because no trails would be constructed and this alternative is anticipated to have no impact to migratory birds on the BLM administered portion of the Bald Mountain Ski Permit Area.

3.6.2. Proposed Action

Construction would result in the removal, trampling, conversion or cutting of existing vegetation communities and thereby migratory bird habitat within the trail corridor. Operation and maintenance of the trails would increase human presence and activity in areas both with and without current levels of human activity that could potentially impact migratory bird species on BLM-administered lands.

Short-term habitat impacts of the Proposed Action would include noise and increased human presence during construction, resulting in impacts on migratory birds and birds of conservation concern from displacement. Long-term impacts would include direct habitat loss or conversion, habitat disturbance that could result in avoidance or abandonment, and habitat fragmentation. Increased human use of the area following construction may alter migratory bird nesting, foraging, roosting or security behavior patterns. Similar to the impacts described in Section 3.5.2, changes in habitat and behavior patterns may result in avoidance or abandonment of the area by species not acclimated to human presence. This, in turn, may reduce species nesting, reproduction, and productivity. Indirect impacts would be similar to those described in Section

3.5.2 and include reduction in species diversity due to avoidance or fragmentation and a decrease in habitat sustainability for various species.

The Proposed Action would result in the permanent loss of up to 6.2 acres and conversion of up to 11 acres of coniferous forest would result in a loss of foraging and nesting habitat for great gray owl, Williamson's sapsucker, red-naped sapsucker, mountain chickadee, red-breasted nuthatch, and pygmy nuthatch. The loss or disturbance of 3.9 acres of grassland-shrubland would result in a loss of foraging habitat for the mountain bluebird. Cavity-nesting species such as red-naped sapsucker, mountain chickadee, red-breasted nuthatch, pygmy nuthatch, and mountain bluebird could be affected by removal of snags that provide nesting sites. Some snags are likely to be removed for safety reasons during ongoing operations and maintenance of the trails, resulting in a long-term reduction in the number of cavity-nesting birds expected to nest in habitat near the proposed trails.

Recreational use of the proposed trails would result in some displacement or increased disturbance to migratory birds. Increased human presence on the trails, especially in the summer months, could cause migratory birds to avoid the area. As described above under *Special Status Wildlife Species (Section 3.5)*, the area affected by new displacement effects from the proposed trails is surrounded by existing ski runs and is underneath the existing gondola. This area is already impacted by human activity. Migratory birds occurring in this already-impacted area are likely to be acclimated to human activity in the area, and therefore, when coupled with wildlife PDCs, adverse impacts are likely to be minor.

Wildlife-specific PDC consists of the following to mitigate potential impacts:

- No tree cutting between May 1 and July 31 would be permitted to prevent disturbance to nesting birds during the breeding season. If vegetation removal is required prior to July 31, nesting bird surveys would be conducted by a qualified biologist to ensure no active nests are affected.

3.7. RECREATION

The scope of the recreational opportunities analysis is limited to the summer uses within the Bald Mountain Ski Permit Area. The proposed project is located within the Bald Mountain Special Recreation Management Area (SRMA) and the Bald Mountain Ski Permit Area. A SRMA is an area identified in BLM land use plans to provide specific structured recreational opportunities.

Most recreational values in the project area are those associated with the Sun Valley Resort, which is a world-famous destination ski resort in the winter months that has been operating since 1936. The ski resort encompasses public lands on the BLM parcel, adjacent USFS lands to the west, and small sections of private land owned by SVC. Ski area recreation management is the primary resource use of the area. The ski amenities within the study area include most of the lower east-facing ski runs that terminate on the River Run ski run and River Run Plaza. Notable ski lifts in the area include the River Run Express, Lookout Express, and the Roundhouse Gondola.

In 2012, the Blaine County Recreation District (BCRD) conducted a comprehensive trail survey for summer trail use in the Wood River Valley to develop a better understanding of trail user and

trail use patterns. The study documented about 725,000 total trail user days throughout the Wood River Valley trail system, with an average of 9,000 days per trail. Systemwide single-track trail use is about 58% hiking, and 30% mountain biking. About 62% of the use was by (Blaine County) locals, while 38% was by visitors (BCRD 2012).

The Bald Mountain Ski Permit Area (including BLM and USFS lands) has an existing network of natural surface recreation trails that provide access to Bald Mountain. The primary trail access is from River Run Plaza along the Big Wood River in Ketchum, while additional access is from the Warm Springs Plaza and the Cold Springs drainage. All existing trails are open to both hiking and mountain biking, uphill and downhill, except for the Bald Mountain Trail, which is an uphill-only trail for mountain bikers. Many service roads on Bald Mountain are used for administrative purposes and are not open for downhill mountain biking; however, hikers seeking steeper grades often use the roads. The Roundhouse Gondola and Christmas Lift operate in the summer and provide upload capacity for mountain bikers and hikers and download options for one-way hikers during the summer operating season (SVC 2012). The key existing trails on Bald Mountain are described in Table 10 and are shown on Figure 3.

Table 10. Existing Bald Mountain Trails.

Trail	Length (miles)	BLM Project Area	Notes
River Run Trail	3.5	Yes	Twisting trail with multiple switchbacks used to both climb and descend the northeast face of the mountain
Bald Mountain Trail	5	Yes	Popular hiking and uphill biking route to a scenic overlook and the top of Bald Mountain
Traverse Trail	2	Yes	Road connection across the north face of the mountain, connecting several trails
French Connection	0.7	Yes	Road connection from the Bald Mountain Trail to the Traverse Trail
Cold Springs Trail	6.6	Yes	Long traversing trail along the open south-facing slopes of Bald Mountain
Roundhouse Connector Trail	0.6	No	Hiking-only connection from the Bald Mountain Trail to the Roundhouse Restaurant
Warm Springs Trail	8.2	No	Scenic trail through wooded terrain on the west slopes of Bald Mountain
Broadway Saddle Trail	2.2	No	Trail along the west face of the Bald Mountain summit ridge
Total Length	28.8		

Source: Sun Valley Summer Trail Maps, Bald Mountain and White Clouds Trails, 2012.

Most of the single-track trails on Bald Mountain (those that are not routed on access roads) were constructed by SVC in the late 1990s. The Warm Springs and Cold Springs perimeter trails were built in 1998, and the River Run Trail was built in 1999. These trails were originally machine built with about a 48-inch bench and have since narrowed in many places as a result of sloughing, revegetation, and use (Tyo, pers. comm. 2014).

Typical trail use includes a mix of mountain bikers and hikers and some trail runners. The dominant use of the River Run Trail is uphill mountain bikers, while the use of the Bald

Mountain Trail is dominated by hikers. Many hikers also prefer to climb the access roads and ski runs instead of trails. Ascending the Bald Mountain Trail and downloading the Roundhouse Gondola is a common route for visitors (Tyo, pers. comm. 2014). The BCRD trail survey found a total of 27,000 trail days in 2012, with the most popular trail being the Bald Mountain Trail (16,200 trail days), followed by River Run (7,000), Warm Springs (2,100), and Cold Springs (1,500) trails. The average party size was just under two people, and the types of trail uses were 68% hiking, 22% mountain biking, 7% running, and about 3% other (BCRD 2012).

The BLM has compiled summer recreational use data for Bald Mountain, based on actual lift ticket sales from the resort. These visitation numbers from 2003 through 2013 are shown in Table 11.

Table 11. Bald Mountain Visitation, 2003-2013

Year	Summer Lift Ticket Sales
2003	20,493
2004	23,044
2005	23,740
2006	29,868
2007	16,000
2008	17,000
2009	14,000
2010	17,300
2011	17,000
2012	17,000
2013	17,124

Source: Kurtz 2014.

In 2010, the SVC began the process of designing a new and expanded network of mountain bike trails on Bald Mountain, with the intention of providing additional lift-assisted downhill mountain biking opportunities, and more beginner to intermediate-level gravity flow trails. A feasibility study was completed in 2010, and field-level planning was conducted in 2011 to identify and refine proposed trail corridors. The resulting plan is the Proposed Action – the construction or reconstruction of 19 miles of trails, about 7.5 miles of which are located within BLM-administered lands.

3.7.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of the Bald Mountain Ski Permit Area and the existing trails and trail-based recreational uses would remain. The mountain bike trails on the USFS portion of the resort would continue to be constructed, with the exception of Trails #3 and #5, thereby decreasing the recreational benefits originally anticipated within the USFS approval. This would impact how mountain bikers can use the trails on Bald Mountain, including the need for them to download using the gondola or use existing service roads to access the River Run Trail, as there is no trail that allows mountain bikers to ride from the Roundhouse down to the River Run Trail. There would be no change in the configuration or use of trails within the BLM analysis area, and

the existing River Run Trail would remain accessible for two-way, hiker, and mountain bike traffic. No new directional downhill mountain bike opportunities would be provided on BLM-administered lands.

3.7.2. Proposed Action

Implementation of the Proposed Action would provide new recreational opportunities and would also result in changes to the existing patterns of trail access and use in the study area.

New recreational opportunities would include three new intermediate-level downhill mountain bike flow trails (proposed Trails #2, #3, and #8), one of which would be the reconfiguration of the existing River Run Trail. In addition, completion of Trail #5 would add an advanced downhill mountain bike flow trail and, with the ability to construct Trails #3 and #5, would realize the recreational benefits anticipated within the USFS approval. These facilities would provide new recreational opportunities on Bald Mountain and would expand the facilities and opportunities for lift-serviced downhill mountain biking.

The new trails would change existing access patterns. The existing River Run Trail, a popular two-way multiuse access route, would be reconfigured to be a directional downhill bike trail and would no longer be available for uphill bike access or hiking and running. Construction of proposed Trail #1 would replace the River Run Trail for uphill bike access and hiking/running. While uphill biking and hiking access would be retained, the type of trail experience being provided would change for the following reasons:

- The average grade for the new access Trail #1 would be steeper at 9%, compared with 5% for the River Run Trail.
- The River Run Trail is tight and twisty, with many stacked switchbacks, while the new access Trail #1 would be slightly shorter and more direct with fewer switchbacks.
- The bottom section of Trail #1 would be located on open south-facing slopes, compared with the River Run Trail, which is almost entirely within dense north-facing forest.

Concern about changes to uphill bicycle access was a prevalent theme in the public scoping comments that were received. The relative value of the above characteristics (trail grade, use of switchbacks, and vegetation setting) to the recreation experience is a personal and subjective judgment based on the preferences and expectations of each individual trail user. Locals and frequent visitors who have become accustomed to enjoying the River Run Trail as an uphill access route may be disappointed to lose that experience, as would be visitors who prefer a lower grade trail or an access through the trees. Conversely, trail users who prefer a more direct route through more diverse terrain may prefer the new access trail. Changes to trail and access configurations are shown on Figure 4.

Overall, implementation of the proposed trails on the BLM-administered portion of Bald Mountain would increase recreational opportunities in the area by completing a new and fully functional recreation amenity (lift-assisted downhill mountain biking) that currently does not exist in the region. Considering other forms of recreation trail use, no trail users would lose access to Bald Mountain and a sustainable trail route in this area would be provided and maintained for uphill mountain bikers and hikers or runners, though the route of that access would change.

3.8. SOCIOECONOMICS

The scope of the analysis for socioeconomic resources includes a discussion of population, demographics, and the local economic factors (such as income and tourism-related revenue) that are relevant or may be affected by the proposed project, including populations, demographics, and economic considerations within Blaine County, Idaho.

The project area is located within unincorporated Blaine County, Idaho, immediately adjacent to and southwest of the City of Ketchum. The population of Blaine County and Ketchum grew substantially between 1970 and 2007, followed by a decrease in population after 2009 as a result of the economic downturn (City of Ketchum 2014). Population and demographic statistics for the area include the following:

- **Population:** In the 2010 U.S. Census, the population of Blaine County was 21,376 and 2,689 in Ketchum.
- **Ethnicity:** The population of Blaine County is primarily white (89%) with Hispanic or Latino making up the largest minority population (9%).
- **Cost of Living:** Ketchum and Blaine County have a high cost of living, with a median home price in Ketchum (2005-2009) of $720,400, and $501,300 in Blaine County, compared with $166,700 for the State of Idaho.
- **Income:** The per capita income for Blaine County in 2009 was $57,636.
- **Unemployment:** The Blaine County unemployment rate was at 9.2% in 2010.
- **Employment Sectors:** In 2010, the leading job industries were in leisure and hospitality (26%); followed by trade, utilities, and transportation (17%); professional and business services (12%); and educational and health services (12%).

Sources: U.S. Census Bureau (2012), Idaho Commerce and Labor; Idaho Department of Labor, City of Ketchum Economic Profile; as reported in City of Ketchum 2014.

Tourism and recreation are the largest economic drivers in the study area, which has been traditionally led by Sun Valley Ski Resort as well as other year-round mountain recreation amenities. Compared with other famous resort destinations, Sun Valley is relatively isolated from significant urban populations. About 475,000 people live within a three-hour day trip distance (primarily from the Boise and Twin Falls areas) (Gravity Logic, Inc. 2011). While this is part of the resort appeal of the Wood River Valley, it also limits the potential economic generation of visitation to the area. Alpine skier visits in 2011 reached about 408,000 (City of Ketchum 2014). Summer visitation to the resort, based on lift ticket sales, has usually ranged between 17,000 and 24,000 per year between 2003 and 2013. Dispersed summer trail use on Bald Mountain (where no lift ticket is purchased) was estimated to be about 27,000 in 2012 (BCRD 2012).

3.8.1. No Action

Under the No Action Alternative, the BLM would not approve construction of the new trails on the BLM-administered portions of Bald Mountain and the existing trails and trail-based recreational uses would remain. Expanded flow-style mountain bike experiences on Bald Mountain would be limited to the approved trails on USFS land, with Trails #3 and #5 not

constructed. This would likely result in some increased visitation and economic generation for the resort and the community.

However, the limited implementation of the overall trail plan would make these facilities less comprehensive and less attractive to many visitors. The 2011 feasibility study cautioned that "resorts which 'dabble' or fail to treat their bike parks as legitimate operations have a difficult time realizing a return on investment conducive to long term success" (Gravity Logic, Inc. 2011).

Based on the above factors, the No Action Alternative, along with the implementation of a partial trail plan, would result in limited economic benefits to SVC and the community. Partial construction of trails only on the USFS lands and not within the BLM project area may also have a detrimental effect to the SVC reputation as a world-class resort because SVC would only be able to offer a partial amenity commonly found at competing resorts with fully developed mountain biking facilities. The No Action Alternative would have no effect on population or demographics in the project area.

This alternative would not result in disproportionately high and adverse human health or environmental effects on a minority population, low-income populations, or Native American tribe.

3.8.2. Proposed Action

Implementation of the Proposed Action would create new recreational opportunities for economic activity in the study area.

The proposed lift-assisted mountain bike flow trails on Bald Mountain are a new resort offering in Sun Valley that has proven to be a successful summer amenity at other ski resorts. The completion and effective marketing of this amenity is expected to draw additional visitors and revenue opportunities to Sun Valley. General revenue associated with additional visitation includes lodging, meals, and other spending associated with resort visitation. Other more-specific revenue sources associated with the proposed downhill bike trails include the following (SVC 2014; Gravity Logic, Inc. 2011):

- Lift tickets ($30 per day)
- Downhill bike rental ($89 to $109 per day)
- Clothing and equipment purchases
- Programs (such as lessons, guides, camps, and races)

After full implementation, visitation and use of the proposed trails as a resort amenity (beyond the current use of the existing Bald Mountain trails) is expected to reach between 5,000 and 6,000 visitors per year (Tyo, pers. comm. 2014). It is still not certain how many of those visitors would be new visitors to Sun Valley (who come specifically to use the downhill trails) compared with existing visitors who add downhill mountain biking to their suite of activities.

While visitation and revenue projections associated with the proposed trails are somewhat uncertain, it is possible to anticipate the general economic effects based on the following figures:

- The BCRD trails survey reported an average visitor spending of $1,751 per visit (BCRD 2012).
- Downhill mountain bike trail users are expected to reach more than 5,000 visits per year (Tyo, pers. comm. 2014).
- For analysis purposes, it is assumed that one-half of these mountain bike visits (2,500 per year) would be new visitors who came to Sun Valley to use these trails.

Based on these general assumptions, it is anticipated that *new* visitors to the proposed bike trails (about 2,500 visitors per year) would be expected to generate more than $4 million in new revenue per year. This revenue would be realized by SVC as the primary provider of the amenity, as well as other businesses throughout the community that provide associated services such as bike rentals, clothing and equipment sales, meals, and lodging. This additional revenue would result in direct and indirect economic impacts to SVC and businesses and individuals in the surrounding community.

3.9. CUMULATIVE EFFECTS

Cumulative impacts result from the incremental impact of an action when added to other past, present, and reasonably foreseeable actions regardless of what agency or person undertakes such other actions. Reasonably foreseeable actions vary by resource and analysis area and are described within each section.

3.9.1. Analysis Area for Cumulative Effects

The approach for the geographic scope of the cumulative effects analysis is consistent with the scope for the cumulative effects analysis for the USFS/BLM Final Environmental Impact Statement for the 2005 Sun Valley Resort (Bald Mountain) Master Plan – Phase I Projects (USFS/BLM 2007). For most of the resources evaluated (soils, vegetation, noxious weeds and invasive plants, and migratory birds), the geographic scope of the cumulative effects analysis is the Bald Mountain Ski Permit Area (both BLM and USFS land) because this is the area and extent of similar human activities on the natural resources. For visual resources, the analysis area is limited to the public and private lands making up the Bald Mountain Ski Area. While the ski permit area is the analysis area for most wildlife species, it is broader for several wide-ranging species including Canada lynx, gray wolf, wolverine, and elk, since these species occur in a larger area. For these species, the cumulative effects analysis area includes the ski area and surrounding adjacent habitat. The scope is broader for socioeconomic and recreation resources because of the potential impact on these resources. The geographic scope for socioeconomic and recreation resources is Wood River Valley in Blaine County, Idaho, from the junction of State Highway 75 and U.S. Highway 20 to the City of Ketchum.

The temporal scope of the cumulative effects analysis extends from Sun Valley Resort's inception as a destination ski resort in 1936 to the foreseeable future in which Bald Mountain can be expected to operate.

3.9.2. Past, Present, and Reasonably Foreseeable Actions

Past and present actions and conditions within or near the analysis area include the construction and operation of the ski area, forest and vegetation management within and near the Bald

Mountain area, and wildland fires near the analysis area. Major past and present actions include the following:

- Sun Valley Resort Development - Past and present projects began in the 1930s with the development of Sun Valley Resort as a destination ski area. Subsequent development of ski runs, lift capacities, and on-mountain amenities have occurred and continue to occur in accordance with previous and current MDPs or market forces. Specific recent developments at the ski area include the 2009 installation of the Roundhouse Gondola; the removal of Exhibition Chairlift (installed 1977); the removal of Sunnyside Chairlift (installed 1978); the 2014 removal of the Flying Squirrel Chairlift (installed 1972); installation of the Frenchman's (1994), Lookout Express (1993), and River Run (1993) chairlifts; and installation of snowmaking equipment and infrastructure (beginning in the 1970s) including snowmaking on Olympic Lane, Olympic Ridge, Lower Olympic, Broadway Face, Lower Broadway, Guyer Ridge, Upper Cozy, Upper Hemingway, Christmas Bowl, Brick's Island, Can-Can, French Dip, and the Seattle Ridge Trail. In addition, miles of service roads cross the Bald Mountain Ski Permit Area, providing summer access to facilities.
- Mountain Bike Trail Development - The Wood River Valley became known as a destination for mountain biking in the late 1990s and early 2000s with several current trails constructed on Bald Mountain, including the 2014 construction of trails approved by the USFS within the permit area. Additional mountain biking trails in the surrounding area include 32 miles of trails in the Croy Creek Trail System, 3.5 miles west of Hailey (constructed in 2009); 5.2 miles of the White Cloud Trails in Sun Valley (2007-2008); and the Galena Lodge trail system on the Sawtooth National Recreation Area (scheduled for construction from 2014 to 2016). Bike pump tracks – dirt tracks with rollers and berms for use by BMX and mountain bikes – were recently built in Ketchum (2009) and Hailey (2009) and provide trail/bike opportunities and niches not historically available in the Wood River Valley. In addition, mountain bike races have been held at Bald Mountain from 2012 to 2014, which also require individual BLM SRPs.
- Castle Rock Wildfire - In 2007, the lightning-caused Castle Rock Wildfire burned 48,520 acres on three sides of the Bald Mountain Ski Area. The fire burned right up to the ski area boundary. Within the ski area boundary were four spot fires, each less than 1 acre, that were rapidly extinguished. Backfires were used in the Guyer Ridge area by firefighters to prevent the wildfire from spreading to the rest of the ski area. Following the fire, the USFS conducted 2010 and 2011 applications of Disrupt Micro-Flake MCH bark beetle antiaggregant flakes to forested areas of the Bald Mountain Ski Permit Area to control the spread of bark beetles.
- Vegetation Management - Another past and present action is vegetation management. The USFS has approved 182 acres of forest thinning and the BLM is considering for approval an additional 68 acres within the ski area.

Reasonably foreseeable future activities are actions that are independent of the proposed alternative(s), but could result in cumulative effects when combined with the effects of the alternatives. Such activities are anticipated to occur regardless of whether the action alternative is selected or implemented. Based on discussions with BLM and SVC staff, the reasonably

foreseeable actions that could potentially result in cumulative effects include the permitted construction of 11 miles of mountain bike trails on the adjacent USFS lands, ongoing management and improvements on Bald Mountain, as described in the Sun Valley MDP (SVC 2005), Final Environmental Impact Statement (USFS/BLM 2007) and ROD (BLM 2007a). These activities include upgrades and improvements to ski area infrastructure, snowmaking system improvements, forest management, ski slope contouring, the promotion and expansion of various types of bike races and other types of human powered competitions or activities, and vegetation management. No other reasonably foreseeable actions were identified for the proposed project.

3.9.3. Soils

3.9.3.1. *No Action*

Although the past, present, and reasonably foreseeable actions within the Bald Mountain Ski Permit Area may affect soil resources, no new effects would occur under the No Action Alternative and, therefore, there would be no cumulative effects.

3.9.3.2. *Proposed Action*

The past, present, and reasonably foreseeable actions within the ski area permit boundary may affect soil resources, independent of the Proposed Action; however, all activities within the Bald Mountain Ski Permit Area (independent of the Proposed Action) are required to be constructed, monitored, and maintained in accordance with the PDC and BMPs stipulated in the ROD for the MDP EIS (USFS/BLM 2007). As these PDCs and BMPs were incorporated into the BA/BE conducted for the trail construction on USFS-administered lands, the PDCs and BMPs are included in Appendix A. Neither SVC nor BLM have identified measureable soil or erosional impacts on past soil-disturbing activities, including recent 2014 lift removal and constructed trails similar to those within the Proposed Action, on the USFS-administered portion of the Bald Mountain Ski Permit Area.

The Proposed Action would result in a maximum impact of 0.7% of land area within the Bald Mountain Ski Permit Area, decreasing to 0.2% of the land areas upon successful vegetation rehabilitation. When combined with the effects of past, present, and reasonably foreseeable actions that have resulted in soil disturbances on similar soils, the absence of chronic soil or erosional impacts within the ski permit area, and the PDC and BMPs required for both ski area operations and construction, the incremental additional effects of the Proposed Action on soil resources are negligible.

3.9.4. Visual Resources

3.9.4.1. *No Action*

The Bald Mountain Ski Permit Area has been significantly altered for recreational purposes and is managed under a VRM Class III classification. Although the past, present, and reasonably foreseeable actions within the Bald Mountain Ski Permit Area may affect visual resources, no new effects would occur under the No Action Alternative and, therefore, there would be no cumulative effects.

3.9.4.2. *Proposed Action*

The past, present, and reasonably foreseeable actions within the ski area permit boundary may affect visual resources, independent of the Proposed Action; however, all activities within the ski area permit boundary or independent BLM permits are required to be consistent with VRM Class III objectives. For this reason, when combined with the effects of past, present, and reasonably foreseeable actions, the cumulative effects of trail development on visual resources would be negligible.

3.9.5. Vegetation including Special Status Species

3.9.5.1. *No Action*

Under this alternative, SVC would likely complete portions of the approved trail system on USFS land, resulting in a loss of vegetation from trail construction. Impacts from past, present, and reasonably foreseeable actions would be the same as described below for the Proposed Action. Cumulative impacts would be negligible as no new impacts on vegetation and special status plant species would occur on BLM-administered land.

3.9.5.2. *Proposed Action*

The Proposed Action would result in cumulative impacts on vegetation and special status plant species when added to the effects of past, present, and future actions. Past, present, and reasonably foreseeable future actions within the project area such as past wildland fires, vegetation treatments, and recreation development and use described above would affect vegetation. Past construction of the ski area resulted in clearing of vegetation and tree cutting to construct ski runs, trails, and other support infrastructure such as roads, buildings, lifts, and snowmaking infrastructure. Future operations, maintenance, and upgrades would result in additional impacts, such as vegetation removal for potential construction of additional future mountain bike trails. The Castle Rock Fire in 2007 burned much of the land surrounding the ski area, resulting in changes to vegetation communities. Wildland fires and vegetation treatments would result in changes to the vegetation community, potentially lasting for years until the vegetation community has a chance to return to pre-fire conditions.

The Proposed Action would result in a maximum impact of 0.7% of vegetation communities within the Bald Mountain Ski Permit Area. Of these impacts, 40% of the Proposed Action disturbance would be located on previously disturbed ski slopes. When combined with the effects of past, present, and reasonably foreseeable actions on vegetation associated with the recreational development and operations within the Bald Mountain Ski Permit Area, the cumulative effects of trail development on vegetation communities would be negligible.

3.9.6. Noxious Weeds and Invasive Plants

3.9.6.1. *No Action*

Although other past, present, and reasonably foreseeable actions may affect noxious weeds and invasive plants, no new effects on noxious weeds and invasive plants would occur under the No Action Alternative and, therefore, there would be no cumulative effects.

3.9.6.2. *Proposed Action*

Other past, present, and reasonably foreseeable future actions within the project area such as past wildland fires, vegetation treatments, and recreational use could affect noxious weeds and invasive plants. Wildland fires and vegetation treatments would result in changes to the vegetation community, potentially creating disturbances that would allow the establishment or spread of noxious weeds and nonnative plants. The cumulative effects of the Proposed Action on noxious weeds, when combined with other past, present, and reasonably foreseeable actions within the analysis area, would be negligible.

3.9.7. Wildlife, including Special Status Wildlife Species

3.9.7.1. *No Action*

Under this alternative, SVC would likely complete portions of the approved trail system on USFS land, resulting in the loss of habitat from trail construction and displacement of wildlife from increased recreational use. Impacts from past, present, and reasonably foreseeable actions would be the same as described below for the Proposed Action. Cumulative impacts would be less under the No Action Alternative because no new impacts would occur on BLM-administered land.

3.9.7.2. *Proposed Action*

Past, present, and reasonably foreseeable future actions within the project area such as past wildland fires, vegetation treatments, and recreation development and use could affect wildlife species. Original and subsequent construction of the ski area resulted in clearing of vegetation and direct loss of habitat for special status species. Past and ongoing recreational use of the ski area has increased the human presence compared with similar areas that are not developed for recreational use, thereby likely resulting in avoidance of the area by most special status wildlife species. Reasonably foreseeable construction of additional mountain bike trails would contribute to this effect. Species that do not avoid the area are likely acclimated to the increased human presence. Construction of mountain bike trails under the Proposed Action likely would result in avoidance or abandonment of more area by those species not acclimated to human presence. However, when combined with the effects of past, present, and reasonably foreseeable actions such as the development, operation, and use of the ski area for recreational purposes, the cumulative effects of the Proposed Action on wildlife would be minor, but not quantifiable. Because the Proposed Action would not result in direct impacts on yellow-billed cuckoo, greater sage-grouse, Bliss Rapids snail, Banbury Springs limpet, and Snake River physa snail, there would be no cumulative impacts on these species. The Proposed Action could result in cumulative impacts on Canada lynx, spotted bat, Townsend's big-eared bat, hoary bat, little brown bat, long-eared bat, long-legged bat, silver-haired bat, western small-footed bat, wolverine, boreal owl, flammulated owl, black-backed woodpecker, Lewis' woodpecker, fringed myotis, Calliope hummingbird, willow flycatcher, olive-sided flycatcher, mule deer, and elk if these species are present in or near the project area.

3.9.8. Migratory Birds

3.9.8.1. *No Action*

Under this alternative, SVC would likely complete portions of the approved trail system on USFS land, resulting in a loss of habitat from trail construction and displacement of wildlife and migratory birds from increased recreational use. Impacts from past, present, and reasonably foreseeable actions would be the same as described below for the Proposed Action. Cumulative impacts would be less under the No Action Alternative because no new impacts would occur on BLM-administered land.

3.9.8.2. *Proposed Action*

Other past, present, and reasonably foreseeable future actions within the project area such as past wildland fires, vegetation treatments, and recreational use could affect migratory birds. Construction of the ski area resulted in a direct loss of habitat. Future maintenance and operations could also result in disturbance or loss of habitat for migratory birds. Past and ongoing recreational use of the ski area would likely result in avoidance of the area by some species. Reasonably foreseeable construction of additional mountain bike trails would contribute to this effect. However, when combined with the effects of past, present, and reasonably foreseeable actions such as the development, operation, and use of the ski area for recreational purposes, the cumulative effects of the Proposed Action on migratory birds would be minor, but not quantifiable.

3.9.9. Recreation

3.9.9.1. *No Action*

The geographic scope for the cumulative effects analysis is the Wood River Valley because the existing Bald Mountain trails function as part of the overall trail network used by recreationists in the valley and due to the unique nature of the Proposed Action, the cumulative impact assessment area necessitates a broader scope than the approach outlined in the MDP Environmental Impact Statement. Under this alternative, SVC would likely complete portions of the approved trail system on USFS land, which would have recreation benefits to mountain bikers interested in lift-assisted downhill flow trails. However, the inability to construct trails on BLM-administered land would result in an incomplete trail system, resulting in a minor cumulative effect on recreation.

3.9.9.2. *Proposed Action*

Implementation of the proposed trails, when combined with the planned and constructed trails on USFS land, would result in cumulative increases in recreation opportunities by enabling the completion of the full system of proposed downhill biking trails. When combined with the effects of past, present, and reasonably foreseeable actions such as the development and planned trail additions within the valley, the cumulative effect of the Proposed Action would be an increase in variety and availability of recreational opportunities within the valley.

3.9.10. Socioeconomics

3.9.10.1. *No Action*

The geographic scope for the cumulative effects analysis is the Wood River Valley because recreation associated with Bald Mountain is recognized to be a primary economic driver for the area. Selection of this alternative would limit the overall function and completeness of the downhill mountain bike facilities as a recreation amenity and, therefore, would limit the long-term economic potential of this new resort offering.

3.9.10.2. *Proposed Action*

The Proposed Action is expected to result in cumulative economic benefits when compared and combined with the other ongoing improvements to infrastructure and services (both summer and winter) on Bald Mountain and throughout the Wood River Valley.

4. CONSULTATION AND COORDINATION

4.1. TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

The project description, scoping package and maps were initially presented to the Shoshone-Paiute Tribes as part of Wings and Roots meetings held on December 4, 2014. Subsequently, the Draft EA was presented to the Shoshone-Paiute Tribes as part of Wings and Roots meetings held on April 24, 2015. Comments on the project were formally requested by May 2015. BLM was not presented with any comments on the project or Draft EA during the May 20, 2015 meeting aside from those directed toward that USFS-approved portions of the project and therefore not applicable to the project on the BLM-administered lands.

The Shoshone Bannock Tribe was mailed a scoping package on October 31, 2013 and did not receive comments.

4.2. LIST OF PREPARERS

John Kurtz, Outdoor Recreation Planner

Gary Wright, Wildlife Biologist

Clare Josaitis, Rangeland Management Specialist

Lisa Cresswell, Archeologist

Danelle Nance, Natural Resource Specialist

John Garth, Geologist

Jack Denman, Geologist/Project Manager, ERO Resources Corporation

Bill Mangle, Natural Resource Planner, ERO Resources Corporation

Steve Butler, Natural Resource Specialist, ERO Resources Corporation

Wendy Hodges, GIS Specialist, ERO Resources Corporation

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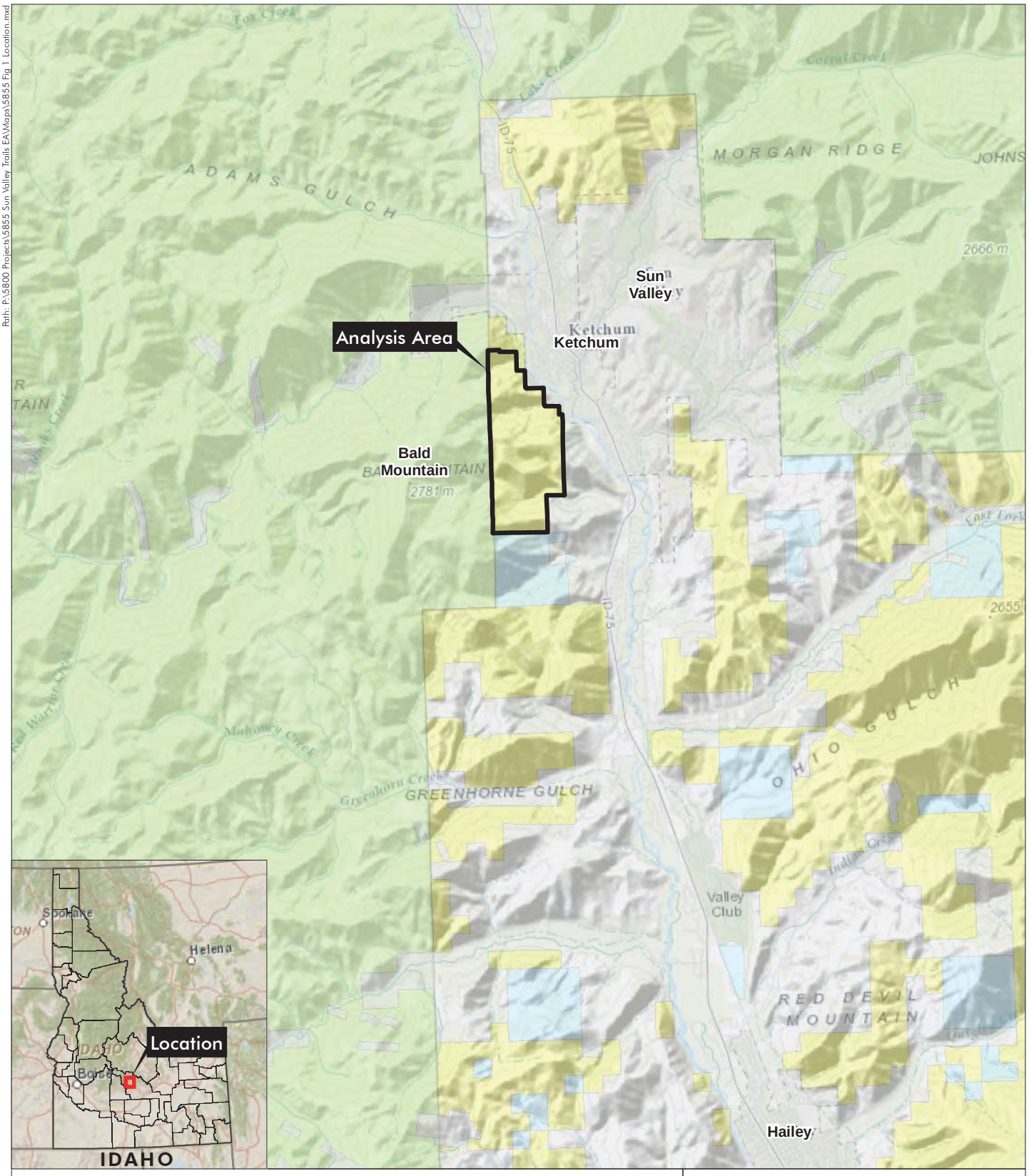
6. FIGURES

Path: P:\5800 Projects\5855 Sun Valley Trails EA\Maps\5855 Fig 1 Location.mxd



Sun Valley Trails EA

Section 13, 24, and 25, T4N, R17E; Boise Meridian

UTM NAD 83: Zone 11N; 711426mE, 4837529mN

Latitude, Longitude: 43.660694°N, 114.377851°W

USGS Griffin Butte and Sun Valley, CO Quadrangles

Blaine County, Idaho

0 1 2 Miles

N

Figure 1
Vicinity Map

Prepared for: Sun Valley Corporation

File: 5855 Fig 1 Location.mxd (WH)

August 27, 2014

ERO Resources Corp.

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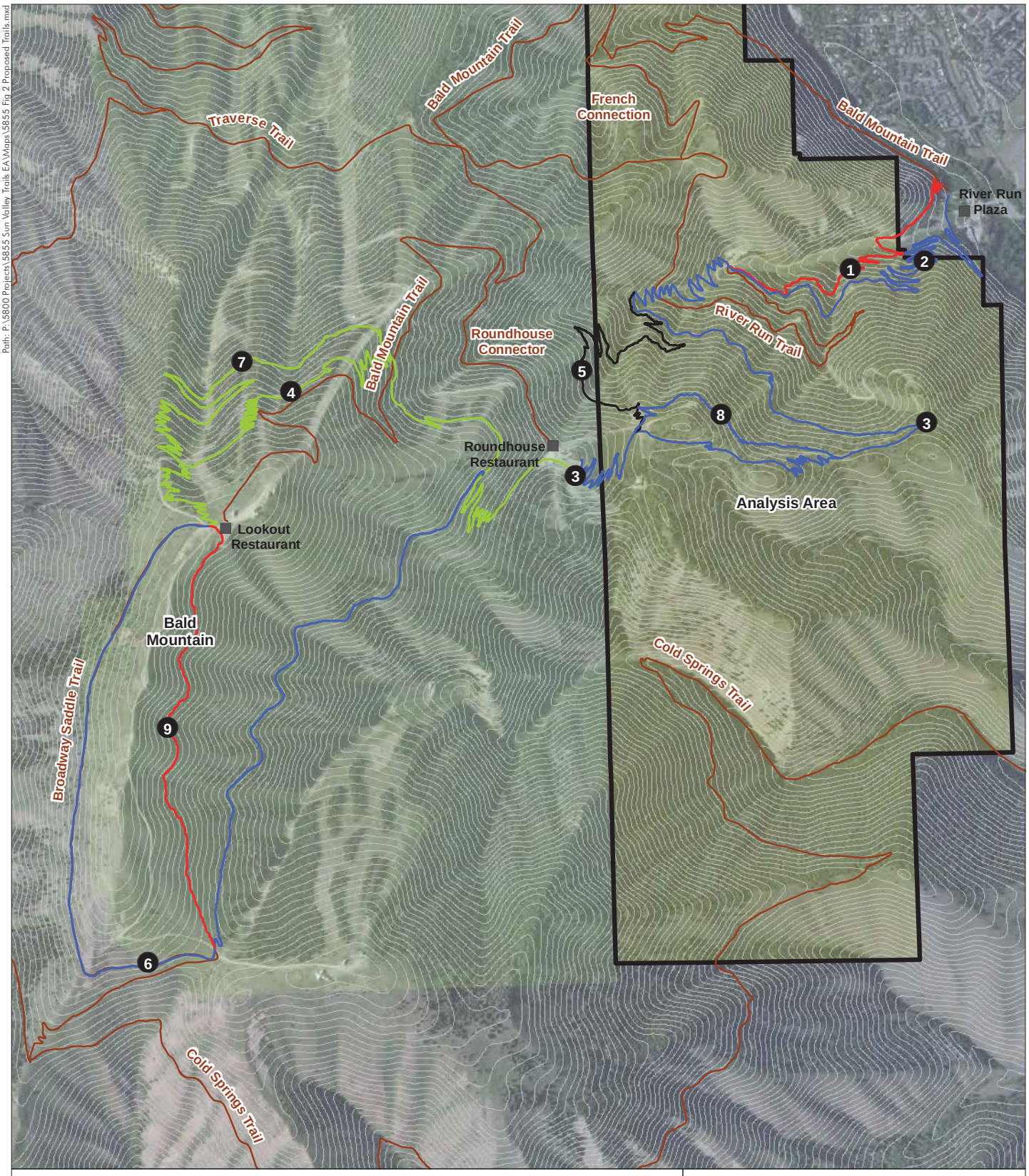

Sun Valley Trails EA

Existing Trail

Proposed Trail

- Advanced
- Intermediate
- Beginner
- Uphill

Analysis Area

Bureau of Land Management Land

U.S. Forest Service Land

0 900 1,800 Feet

N

Figure 2
Proposed Trails

Prepared for: Sun Valley Corporation
File: 5855 Fig 2 Proposed Trails.mxd (WH)
October 2, 2014

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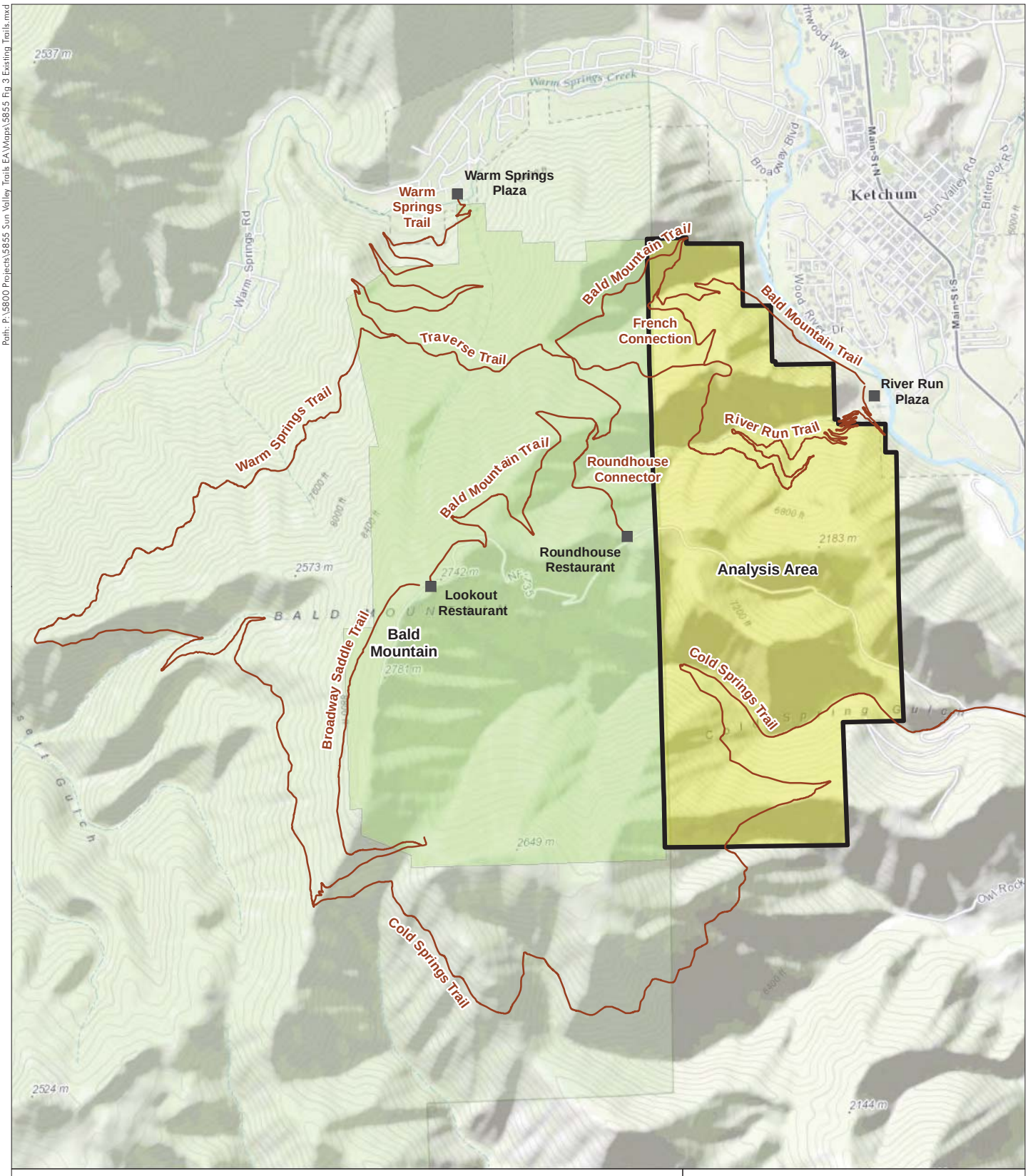
Path: P:\5800 Projects\5855 Sun Valley Trails EA\Maps\5855 Fig 3 Existing Trails.mxd



Sun Valley Trails EA

- Existing Trail
- Analysis Area
- Bureau of Land Management Land
- U.S. Forest Service Land

0 1,500 3,000 Feet

N

Figure 3
Existing Bald Mountain Trails

Prepared for: Sun Valley Corporation
File: 5855 Fig 3 Existing Trails.mxd (WH)
February 13, 2015

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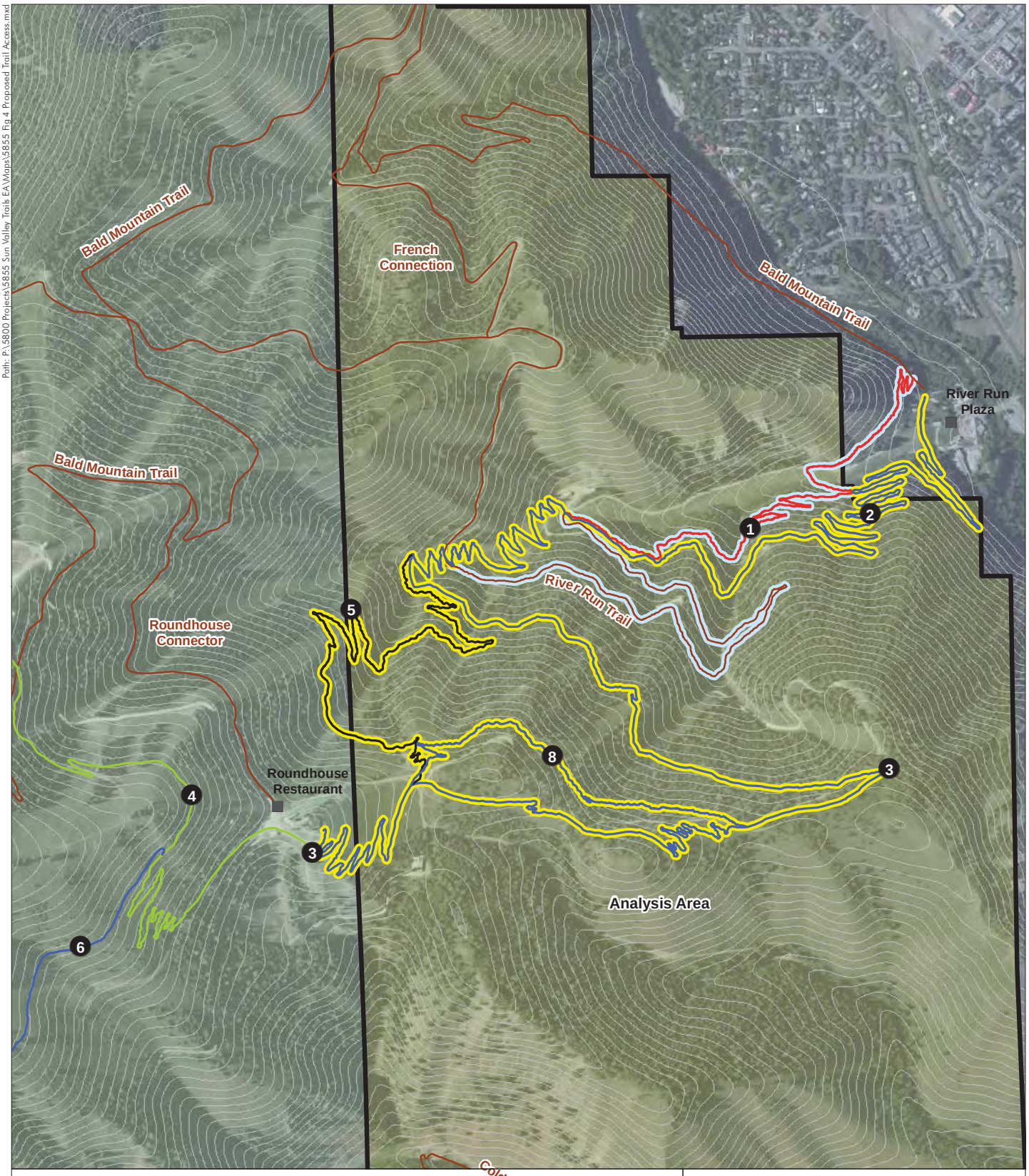
Path: P:\5800 Projects\5855 Sun Valley Trails EA\Maps\5855 Fig 4 Proposed Trail Access.mxd



Sun Valley Trails EA

Image Source: Microsoft©, July 2010

Proposed Trail
- Advanced
- Intermediate
- Beginner
- Uphill

- Existing Trail (Multi-use, Two-way)
- Downhill Bike Only
- Uphill Only Bike/Hike
- Bureau of Land Management Land
- U.S. Forest Service Land

Analysis Area

0 550 1,100 Feet

N

Figure 4
Proposed Trail Access

Prepared for: Sun Valley Corporation
File: 5855 Fig 4 Proposed Trail Access.mxd (WH)
February 13, 2015

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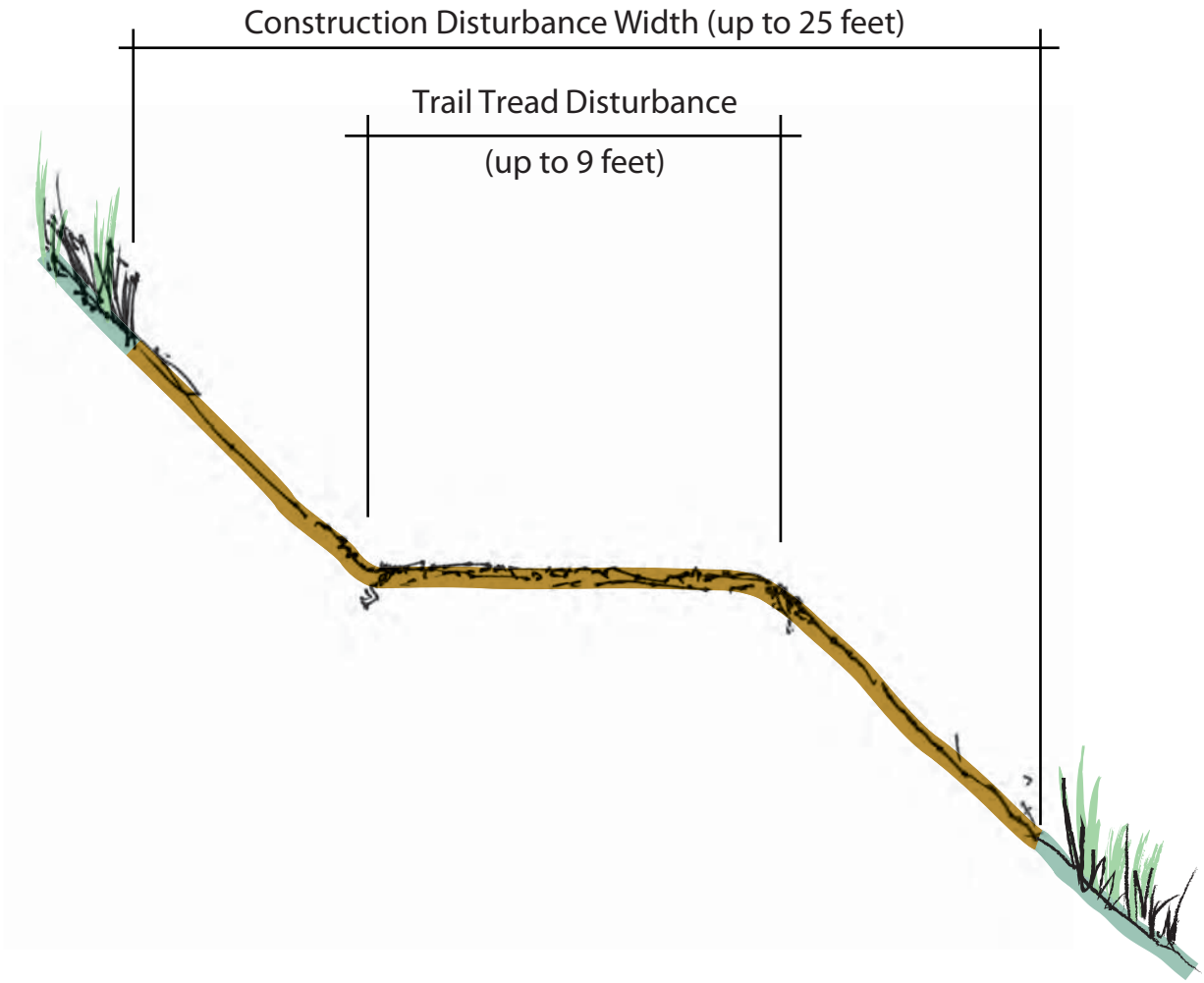


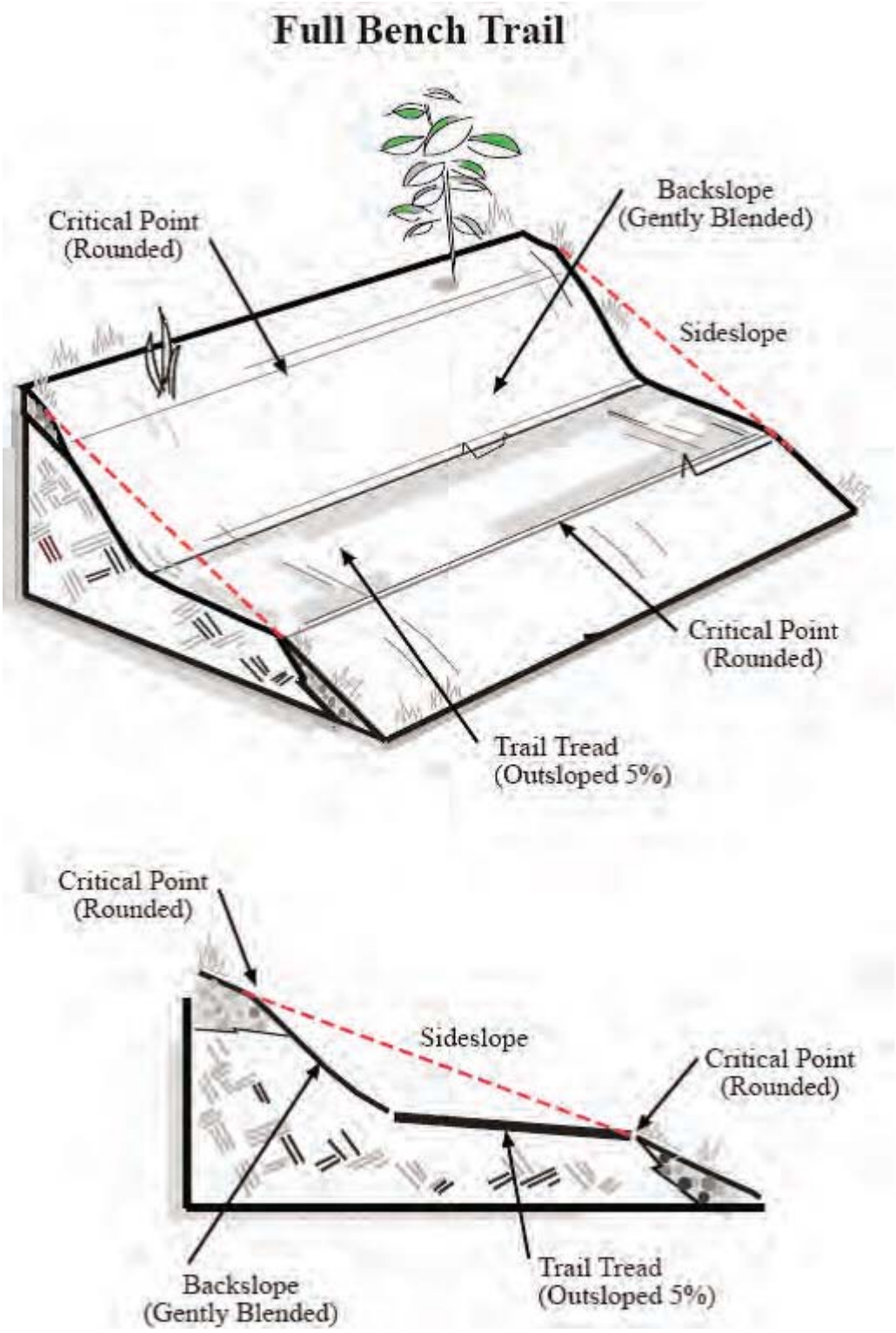
Sun Valley Trails EA

Figure 5

Trail Disturbance Cross-Section

No scale

Prepared for: BLM
File: 5855 Figure 5 Cross Section.pdf [dlH]
February 12, 2015



Sun Valley Trails EA

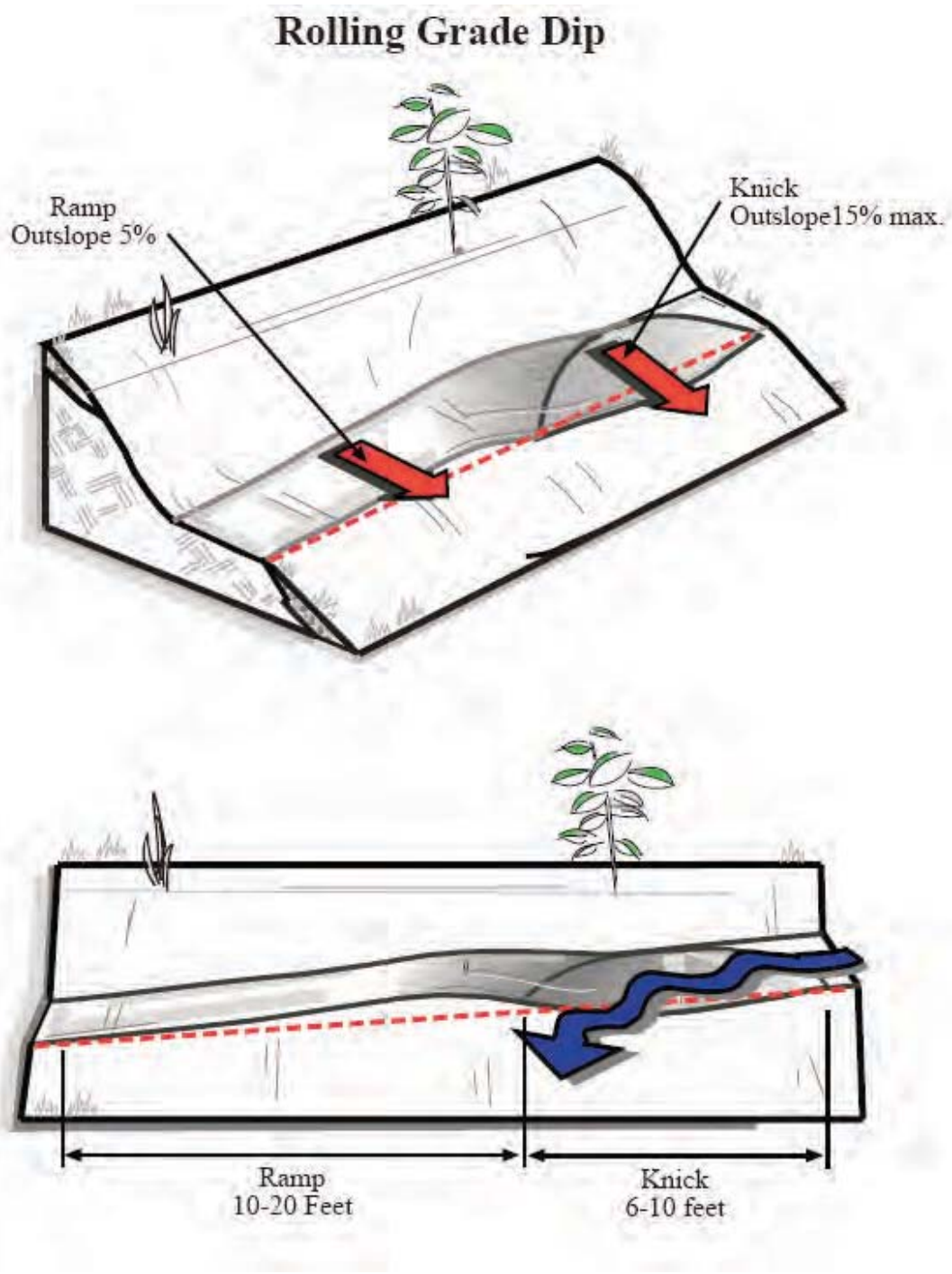
Figure 6

Full Bench Trail Design

Used with the permission of the International Mountain Bicycling Association

No scale

Prepared for: BLM
File: 5855 Figure 6 Full Bench Trail.pdf [dlH]
February 12, 2015



Sun Valley Trails EA

Figure 7
Rolling Grade Dip
Design Feature

Prepared for: BLM
File: 5855 Figure 7 Rolling Grade Dip.pdf [dlH]
February 12, 2015

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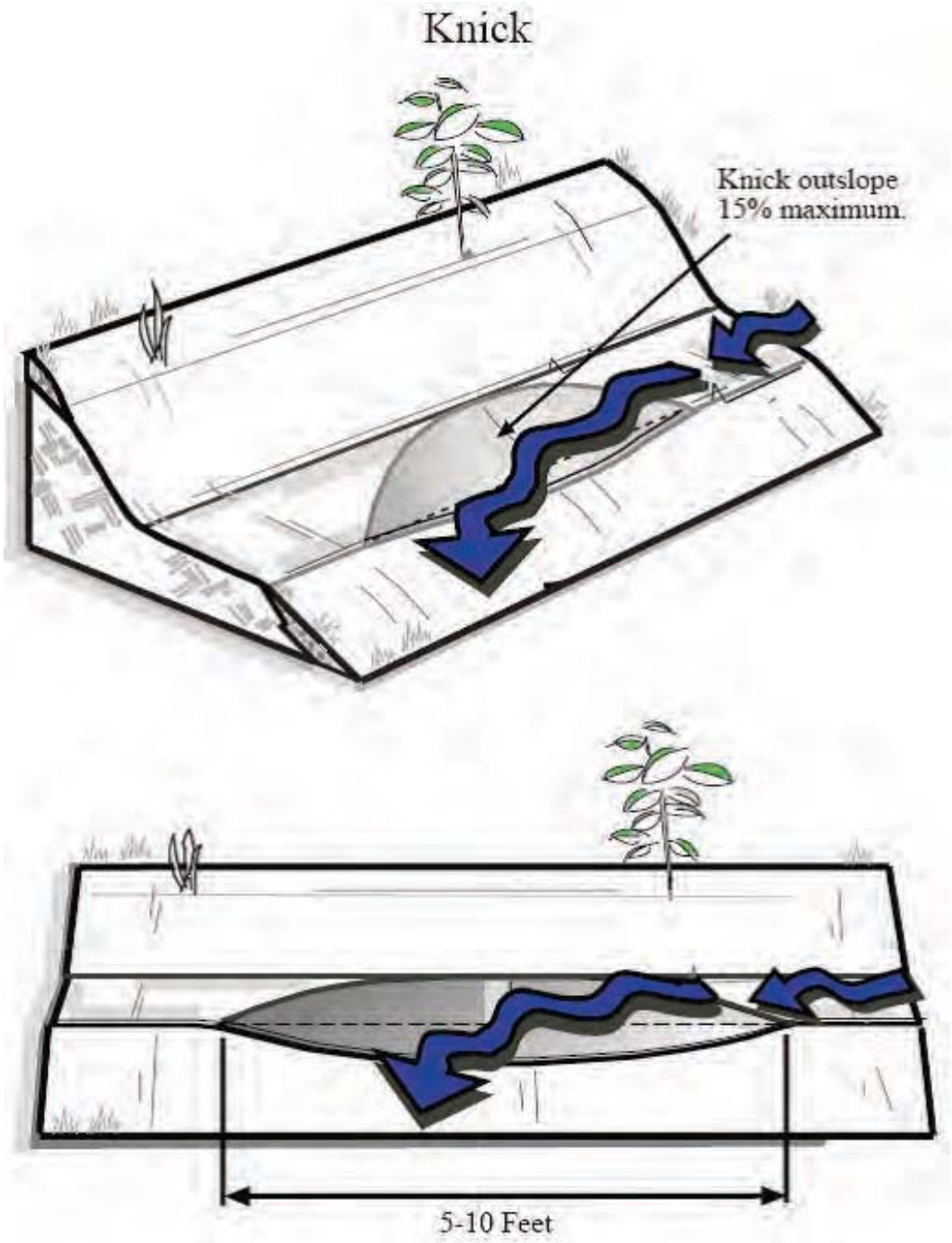

Sun Valley Trails EA

Figure 8

Knick Design Feature

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No scale

Prepared for: BLM
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February 12, 2015

7. APPENDICES

Appendix A. Required Project Design Criteria and Best Management Practices

Appendix B. Biological Assessment and Evaluation

Appendix A – Project Design Criteria

Required Project Design Criteria and Best Management Practices

The 2007 Bald Mountain Master Plan EIS Record of Decision did not specifically address hiking and biking trails and therefore did not specify required project design criteria and Best Management Practices for trail construction. Therefore Required Project Design Criteria and Best Management Practices for this proposed action include:

Soils and Watershed Resources

Sun Valley staff will work with the public land agencies to inspect BMP implementation and effectiveness on a regular basis during project implementation (at least every 2 weeks, and after any rainfall event of greater than 0.5 inches). Any identified deficiencies in implementation or effectiveness will be addressed.

Re-vegetate areas, as designated by the BLM, where the soil has been exposed by ground-disturbing activity.

Re-planting/seed distribution shall occur in the early spring or late fall.

An appropriate native seed mix for re-vegetation will be agreed upon for use by the BLM Shoshone Field Office.

Soil-disturbing activities will be avoided during periods of heavy rain or wet soils.

Wildlife

To avoid potential impacts to nesting northern goshawks and migratory birds, no tree cutting will occur between May 1 and July 31, unless a site specific survey is conducted to preclude occupation by nesting birds.

Noxious Weeds

Implement BLM and State requirements pertaining to noxious weed management.

Trail construction/earth-disturbing equipment used on all public lands – such as trail dozers, mini excavators – shall be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestations.

Integrated Weed Management shall be used to maintain or restore habitats for sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.

Appendix B – USFS Biological Assessment and Evaluation

Appendix B cannot be made Section 508 compliant. For help with its data or information, please contact the BLM Idaho State Office Webmaster at 208-373-4000.

BIOLOGICAL ASSESSMENT AND EVALUATION
OF THE EFFECTS OF THE BALD MOUNTAIN SUMMER BIKE TRAIL AND TIMBER STAND THINNING PROJECT
ON FISH, WILDLIFE, AND PLANT SPECIES

Ketchum Ranger District
Sawtooth National Forest
Ketchum, Idaho

Prepared by: __*/s/ Erika G. Phillips*_____ Date:_____
Erika Phillips
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Deb Taylor
Botanist

I. INTRODUCTION

This Biological Assessment and Evaluation addresses the effects of allowing the Bald Mountain Ski Area to construct (and reconstruct) summer bike trails and thin forested stands over a ten year period on federally-owned land managed by the Ketchum Ranger District, Sawtooth National Forest and by the Shoshone Field Office, Twin Falls District of the Bureau of Land Management. The effects to threatened, endangered, Forest Service Region 4 sensitive, and Shoshone BLM sensitive species are addressed.

The Ketchum Ranger District provides habitat for six species listed under the Endangered Species Act (ESA). This list has been confirmed by the Fish and Wildlife Service (FWS) annual Species List last updated November, 28, 2012 (see letter in project file dated December 17, 2012). These species are listed below.

1. Ute ladies'-tresses	*Spiranthes diluvialis*	Threatened*
2. Canada Lynx	*Lynx canadensis*	Threatened
3. Yellow-billed Cuckoo	*Coccyzus americanus*	Candidate
4. Greater Sage-grouse	*Centrocercus urophasianus*	Candidate
5. Wolverine	*Gulo gulo*	Proposed
6. Whitebark Pine	*Pinus albicaulis*	Candidate

*Although Ute ladies'-tresses orchid is listed as threatened on the ESA list, it is not currently included on the FWS list for Blaine County where the proposed project would occur. Due to previous direction by the FWS and the existence of potential habitat for this threatened species, the Sawtooth NF proactively includes this species in BAs in accordance with Section 7(a)(1) of the ESA.

The Bureau of Land Management (BLM), which manages a small portion of the land where the project is proposed, has the following three invertebrates on its list of species that may occur on BLM lands:

1. Bliss Rapids snail	*Taylorconcha serpenticola*	Threatened
2. Banbury Springs limpet	*Lanx* sp.	Endangered
3. Snake River Physa snail	*Physa natricina*	Endangered

The Ketchum Ranger District provides potential habitat for 19 vertebrate species on the Regional Forester's sensitive species list. These species are listed below.

1. Spotted Bat	*Euderma maculatum*
2. Townsend's Big-eared Bat	*Corynorhinus townsendii*
3. Wolverine	*Gulo gulo*
4. Fisher	*Martes pennanti*
5. Northern Goshawk	*Accipter gentilis*
6. Boreal Owl	*Aegolius funereus*
7. Flammulated Owl	*Otus flammeolus*
8. Northern Three-toed Woodpecker	*Picoides tridactylus*
9. White-headed Woodpecker	*Picoides albolarvatus*

10. Spotted Frog *Rana luteiventris*
11. Wood River sculpin *Cottus leiopomus*
12. Northern leatherside *Lepidomeda copei*
13. Mountain Quail *Oreortyx pictus*
14. Greater Sage-Grouse *Centrocercus urophasianus*
15. Pygmy Rabbit *Brachylagus idahoensis*
16. Peregrine Falcon *Falco peregrines*
17. Bald Eagle *Haliaeetus leucocephalus*
18. Rocky Mountain Bighorn Sheep *Ovis canadensis*
19. Gray Wolf *Canis lupus*

The Shoshone Field Office of the BLM lists additional vertebrate species considered sensitive. While many species are considered sensitive by both agencies, the following species are only listed by the BLM.

1. Black-backed Woodpecker *Picoides arcticus*
2. Lewis' Woodpecker *Melanerpes lewis*
3. Fringed Myotis *Myotis thysanodes*

The Sawtooth National Forest has known occurrences and provides habitat for 45 Regional Forester's Sensitive Plant Species and Sawtooth Forest Watch Plant Species (See Appendix A for complete list). The North Zone of the Forest has known occurrences and/or provides habitat for 34 of these plant species.

1. Tall Swamp Onion *Allium validum*
2. Northern Sagewort *Artemisia campestris ssp. borealis var. purshii*
3. Challis milkvetch *Astragalus amblytropis*
4. Lemhi Milkvetch *Astragalus aquilonius*
5. Park Milkvetch *Astragalus leptaleus*
6. White Cloud Milkvetch *Astragalus vexilliflexus var. nubilus*
7. Slender Moonwort *Botrychium lineare*
8. Least Moonwort *Botrychium simplex*
9. Byrum Moss *Bryum calobryoides*
10. Engleman's Sedge *Carex engelmannii*
11. Buxbaum's sedge *Carex buxbaumii*
12. Sand sedge *Carex incurviformis var. incurviformis*
13. Pale Sedge *Carex livida*
14. Mt. Shasta Sedge *Carex straminiformis*
15. Idaho Douglasia *Douglasia idahoensis*
16. Pointed Draba *Draba globosa*
17. Yellowstone Draba *Draba incerta*
18. Stanley's whitlow-grass *Draba trichocarpa*
19. Spoon-leaved Sundew *Drosera intermedia*
20. Giant helleborine orchid *Epipactis gigantea*
21. Guardian buckwheat *Eriogonum meledonum*
22. Blandow's Helodium *Helodium blandowii*
23. Sacajawea's Bitterroot *Lewisia sacajaweana*

24. Stanley Idaho thlaspi mustard — *Nocceae idahoensis var. aileeniae*
25. Least Phacelia — *Phacelia minutissima*
26. Whtiebark pine — *Pinus albicaulis*
27. Marsh's Bluegrass — *Poa abbreviata ssp. marshii*
28. Kruckeberg's hollyfern — *Polystichum kruckebergii*
29. Jones' Primrose — *Primula incana*
30. Bugleg Goldenweed — *Pyrrocoma insecticruris*
31. Farr's Willow — *Salix farriae*
32. Wedge-leaf Saxifrage — *Saxifraga adscendens ssp. oregonensis*
33. Nodding Saxifrage — *Saxifraga cernua*
34. Petalless Campion — *Silene uralensis ssp. montana*

The Shoshone Field Office of the BLM maintains a separate list of plant species considered sensitive. Of the 11 plant species (some species are listed by both agencies) listed below.

1. Mourning milkvetch — *Astragalus atratus var. inseptus*
2. Picabo milkvetch — *Astragalus oniciformis*
3. Earth lichen — *Catapyrenium congestum*
4. Bacigalupi's downingia — *Downingia bacigalupii*
5. White eatonella — *Eatonella nivea*
6. Chatterbox orchid — *Epipactis gigantea*
7. Bug-leg goldenweed — *Pyrrocoma insecticruris*
8. Least phacelia — *Phacelia minutissima*
9. Obscure phacelia — *Phacelia inconspicua*
10. Tall dropseed — *Sporobolus asper*
11. Malheur princesplume — *Stanleya confertiflora*

II. CURRENT MANAGEMENT DIRECTION

The Endangered Species Act Section 7(a)(2) requires that each federal agency shall insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat.

The revised Sawtooth Forest Land and Resource Management Plan (FLRMP) outlines management direction for the Sawtooth National Forest in Chapter III, including direction for Forest-wide desired conditions, goals, objectives, standards, and guidelines for the management of habitat for threatened, endangered, and proposed species (FLRMP III 8-15). Standard TEST01 states, "The Forest shall consult with the NMFS and Fish and Wildlife Service as needed, and appropriate, to comply with consultation requirements under the Endangered Species Act and Magnuson-Stevens Act." The Forest Service Manual directs the Forest Service to avoid all adverse impacts on threatened and endangered species and their habitats except when it is possible to compensate through alternatives identified in a biological opinion rendered by the U.S. Fish and Wildlife Service (FSM 2670.31).

Forest Service Manual 2670.32 directs the Forest to avoid or minimize impacts to species whose viability has been identified as a concern, and therefore listed as sensitive by the Regional Forester.

If impacts cannot be avoided then the Forest must analyze the significance of the potential adverse effects on the population or its habitat within the area of concern and on the species as a whole. Impacts may be allowed but the decision must not result in a trend toward federal listing.

In January 2000, an interagency team consisting of U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service members released a Canada Lynx Conservation Assessment and Strategy (USDA Forest Service). This document provides direction for management of lynx habitat on federal lands. The conservation measures discussed in the document are the basis for analysis of effects of projects on Canada lynx during consultations. This document also directs Forests to develop Lynx Analysis Units (LAU) and define foraging and denning habitat within each LAU. On the Sawtooth National Forest, LAUs were derived by aggregating 6th level Hydrologic Units and lynx habitat was derived using vegetation layers from satellite imagery and GIS mapping techniques. Additionally, watershed biological assessments of the effects of ongoing projects to Canada lynx were completed in February 2003. As part of these analyses, baseline conditions for each LAU were described and evaluated as to their ability to conserve lynx. Effects of new projects will be evaluated in relation to these baseline conditions, using an effects matrix, which was developed in November of 2003.

III. DESCRIPTION OF PROPOSED ACTIVITY

Proposed Bike Trail Construction/Reconstruction

The Ketchum Ranger District and Shoshone Field Office propose to authorize Sun Valley Company (holder of a joint Forest Service/BLM ski area term permit) to construct up to 16 miles of new summer trail and reconstruct 3.6 miles of existing trail on federally managed land in the Bald Mountain Ski Area (see Figures 1, 2, and Table 1). The purpose of the proposed trails is to increase lift assisted mountain biking recreational opportunities at the Bald Mountain Ski Area. Nine new bike trail segments are proposed and are listed in Table 1 in order of priority. Trails would be constructed using a combination of hand tools and trail construction machinery over a period of four to six years. Grading and tree removal would be required for the length of the trails.

Project Design Criteria (PDC) and Best Management Practices (BMP) for Bald Mountain activities, established with the November 7, 2007 Record of Decision on the *Final Environmental Impact Statement for Sun Valley Resort (Bald Mountain) 2005 Master Plan – Phase I Projects*, will be incorporated into the construction of any approved trail. PDCs and BMPs are intended to protect scenery, cultural, soil, watershed, wildlife, vegetation, air, and recreation resources and reduce the spread of noxious weeds. The PDC/BMP table from the ROD is incorporated into this BABE and attached as Appendix 2. PDC/BMP's specific to wildlife, fish, or plants are also incorporated as mitigation measures.

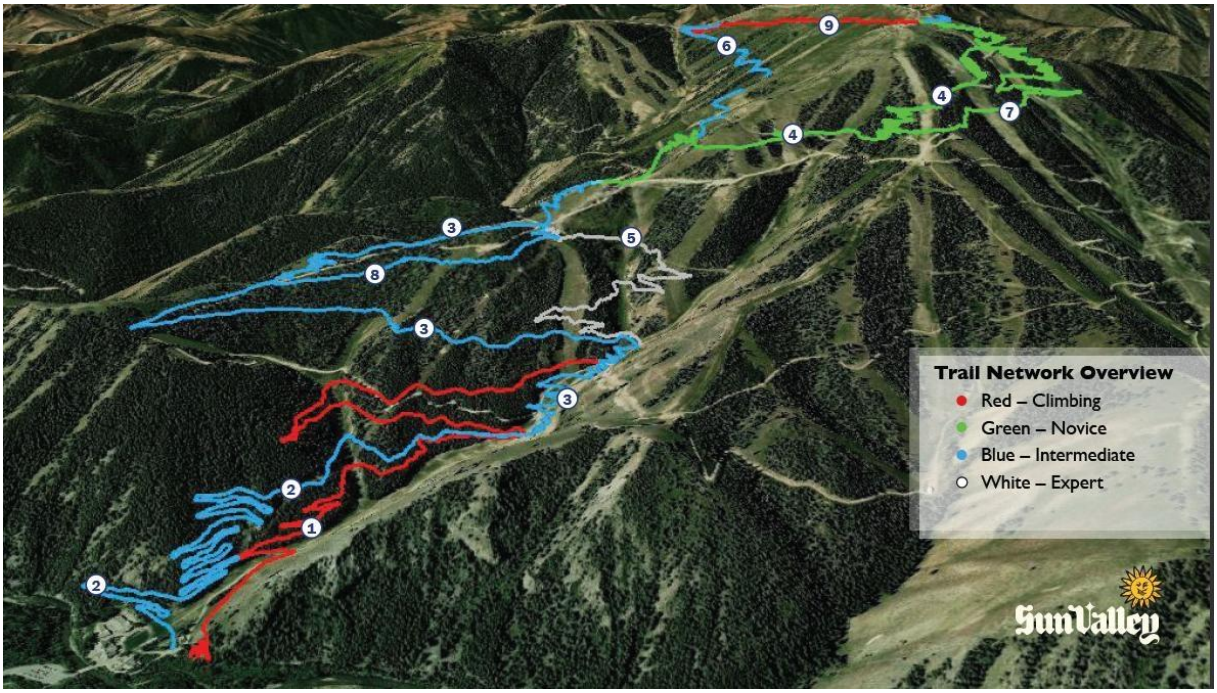

Figure 1. Proposed mountain bike trails on Bald Mountain photo

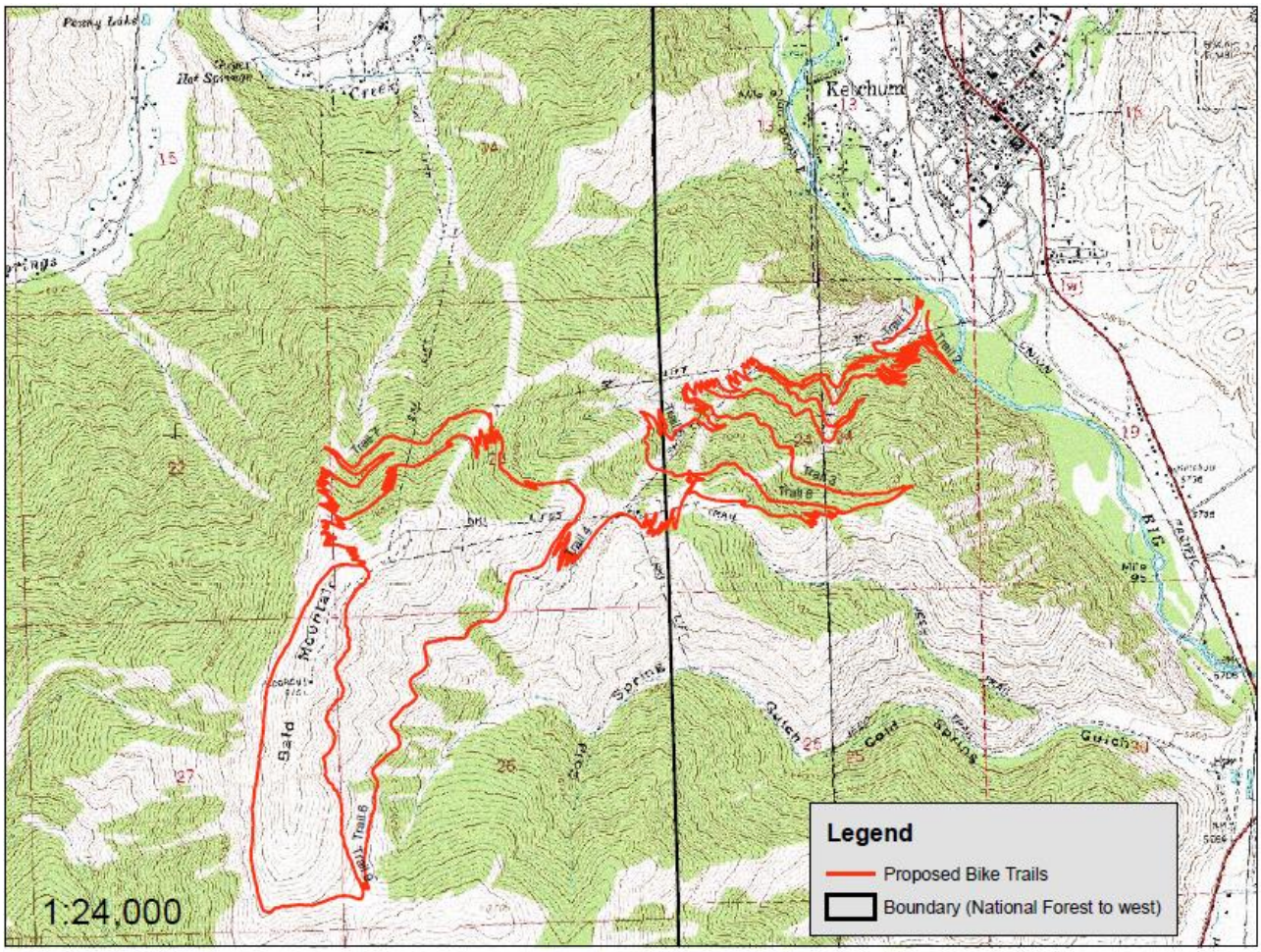

Figure 2. Proposed mountain bike trails on Bald Mountain topographic map

Table 1. Proposed Summer Mountain Bike Trail Details

Trail Number	Trail Type	Trail Length (Miles)	Average Grade (%)	Average Tread Width	Average Disturbance Width	Disturbance Area (acres)	Construction Type	Constr. Phase
1	Hike (up/down) Bike (up)	1.2	9	48”	72”	0.87	New	1
2	Bike, Flow, Intermediate Downhill	2.1	5	72”	108”	2.29	Redesigned to downhill flow trail	1
3	Bike, Flow, Intermediate Downhill	3.7	7	72”	108”	4.04	New	1
4	Bike, Flow, Novice Downhill	3.8	6	72”	108”	4.14	New	2
5	Bike, Flow, Advanced Downhill	1.4	18	72”	108”	1.53	New	3
6 (upper)	Bike, Flow, Intermediate Downhill	1.5	6	72”	108”	1.64	Redesigned to downhill flow trail	4
6 (lower)	Bike, Flow, Intermediate Downhill	1.81	5	72”	108”	1.97	New	4
7	Bike, Flow, Novice Downhill	2.1	5	72”	108”	2.29	New	5
8	Bike, Flow, Intermediate Downhill	0.76	8	72”	108”	0.83	New	6
9	Hike (up/down) Bike (up)	1.2	8	48”	72”	0.87	New	7
Totals		19.57				20.47		

Mitigation Measures for Bike Trail Construction/Reconstruction Activities:

Wildlife:

1) In order to avoid disturbance to deer fawning, elk calving, migratory bird nesting, or sensitive bird species nesting, no trail construction activities would occur between May 1 and July 31 of any calendar year (except that project activities may occur between July 1 and July 31 if surveys by a Forest Service Wildlife Biologist determine that no effect to these species would result from early implementation).
2) Large snags, stick nests, or wildlife dens discovered during trail layout or construction/reconstruction activities would be avoided (to insure that future maintenance activities would not need to remove these habitat features and minimize future disturbance to wildlife from future recreational trail use.

Vegetation:

1) Mature cone bearing whitebark pine trees will be avoided. Where whitebark pine are present they will be flagged to avoid injury. If whitebark pine seedling or saplings are unavoidable transplanting to a safe suitable area would be considered.
2) Rehabilitation and restoration actions using native species would be implemented on all disturbed areas vulnerable to invasive species (i.e. roads) immediately following construction and reconstruction activities to prevent the invasion or expansion of noxious weeds.
3) Coordination with Ketchum Ranger District noxious weed program manager will include reporting a GPS coordinate or map of noxious weed occurrences to ensure that noxious weed treatments are carried out as per the "*Biological Assessment and Biological Evaluation Of Effects From Noxious and Invasive Weed Management Program On Fisheries, Terrestrial Wildlife and Rare Plant Species, Fairfield Ranger and Ketchum Ranger Districts, and Sawtooth National Recreation Area, Sawtooth National Forest, April 6, 2012",* and follow up monitoring is conducted where necessary.
4) As per LRMP Standard NPST08 - Gravel or borrow material source sites with noxious weed species present shall not be used, unless effective treatment as per the *"Biological Assessment and Biological Evaluation Of Effects From Noxious and Invasive Weed Management Program On Fisheries, Terrestrial Wildlife and Rare Plant Species, Fairfield Ranger and Ketchum Ranger Districts, and Sawtooth National Recreation Area, Sawtooth National Forest, April 6, 2012"*or other mitigation measures are implemented.
5) As per LRMP Standard NPST02- Heavy equipment will be high pressure washed to remove all visible plant parts, dirt, and material that may carry noxious weed seeds, and/or invasive life forms, prior to entry into the project area. The same equipment will be cleaned again prior to leaving if warranted.
6) As per LRMP Standard NPST06 - To comply with the USFS 1996, ``Weed Free Hay Order," Noxious-Weed-Free Forage and Straw Rules (IDAPA 02.06.31), and the Final Supplementary Rules to Require the Use of Certified Noxious-Weed-Free Forage and Straw (Federal Register Volume 76, Number 140 (8/21/2011). Restoration, rehabilitation, and stabilization projects also will be required to use weed-free straw bales and mulch for project work

Water Quality and Aquatic Resources:

1) When routing trails, avoid sensitive areas such as riparian areas, wetlands, seeps, inner gorges and unstable land areas.

2) Riparian Conservation Areas (RCAs) are delineated as directed in Appendix B of the Forest Plan. For the Project Area, the RCA buffers are defined as follows:
    a. For forested perennial streams, the buffer is flood prone width or two site potential tree heights (150-foot slope distance), whichever is greatest;
    b. For forested intermittent streams, the buffer is flood-prone width or one site potential tree height (75-foot slope distance), whichever is greatest;
    c. For any non-forested streams, the buffer is the extent of the flood prone width or riparian vegetation (whichever is greatest).
3) Install and maintain suitable drainage measures to collect and disperse runoff and avoid or minimize erosion of trail surface and adjacent areas.
4) Close and rehabilitate any unauthorized trails that are causing adverse effects on soil, water quality, and/or riparian resources.
5) Develop and implement an erosion control and stormwater plan that covers all disturbed areas, including borrow, stockpile and staging areas, as well as refueling areas.
6) Trail realignments should not add trail length within RCAs unless an overall expected benefit to riparian resources can be demonstrated. When implementing reconstruction and realignments within RCAs, utilize practices and materials that minimize ground disturbance, retain sediments on site (i.e. use of sediment fencing, straw wattles or other erosion control materials) and promote rapid revegetation.
7) Do not authorize storage of fuels and other toxicants or refueling within RCAs (including on private land) unless there are no other alternatives. Storage of fuels and other toxicants or refueling sites within RCAs shall be approved by the responsible official and have an approved spill containment plan commensurate with the amount of fuel.
8) Establish designated areas outside of RCAs for equipment staging, stockpiling materials and construction vehicle parking, in order to minimize the footprint of ground disturbance.

Proposed Timber Stand Thinning

The Ketchum Ranger District and Shoshone Field Office also proposes to authorize Sun Valley Company to thin and sanitize up 396 acres of forested stands on the Bald Mountain Ski Area (see Figure 3 and Table 2). The purpose of the thinning proposal is to create forests where remaining trees are: healthier because they have reduced competition for sunlight, water, and soil nutrients; are more resistant to fire, insects, and disease; and would provide glade skiing opportunities (skiing through trees).

Each forested stand would have a written treatment prescription prior to thinning work beginning. Prescriptions would be based on desired species and age composition to achieve long-term forest health compatible with historic and future recreation uses within the ski area permit boundary. All prescriptions would meet Sawtooth Forest Plan standards, guidelines, and desired conditions including desired range of snags per acre outlined in Appendix A of the Forest Plan (Table A-6 on page A-9).

Approximately 25 to 50 acres would be treated annually over the next ten years. Trees would be thinned using chainsaws and/or specialized harvesting equipment capable of navigating on steep slopes with minimal ground disturbance. Trees between 2 feet in height and 12.0 inch diameter-at-breast-height (DBH) would be cut to a trunk spacing of 25 feet x 25 feet. If trees greater than 12.0”

DBH are closer than 25 feet then every tree under 12.0 inch DBH would be cut between them. Larger trees would be favored over smaller trees.

In addition to thinning treatments, a mix of thinning coupled with small group selection harvest of all size classes would also be completed in order to create small openings to enhance species and structural diversity. The overstory is currently comprised of mostly older and larger Douglas-fir and subalpine fir. Many of the Douglas-fir trees are dying due to recent bark beetle infestations and many are heavily diseased with mistletoe. New trees are not regenerating due to lack of openings and high levels of downfall. Regeneration is needed to replace the older existing large trees in the future. The goal of these treatments is to mimic fire (natural fire has been excluded since the turn of the 20th century). The small openings created through selection harvest would increase sunlight and encourage regeneration and increase tree planting opportunities including whitebark pine, lodgepole pine or Engelmann spruce.

Merchantable timber (7+" diameter) would be sold by the Forest Service and BLM to Sun Valley Company for their use and disposal.

Tasks to be completed under all vegetation treatment prescriptions include:

1. Perform a pre-treatment regeneration survey with special notes on ski-related concerns;
2. Use specialized ground and line harvest equipment to remove merchantable materials. Although unlikely due to steep slopes, the potential exists to construct temporary roads if needed to facilitate harvest then rehabilitate and replant. Haul on the existing road system;
3. Retain all whitebark pine, aspen and large, healthy Douglas-fir and subalpine fir possible;
4. Preserve shrubs and healthy seedlings, saplings, poles and young mature trees when possible;
5. Reduce the fuel load to 5-10 tons per acre for each potential vegetation group in the stand;
6. Remove potential hazards to skiers including slash piles and logging debris;
7. Masticate (grind into large chunks) unmerchantable debris (small logging slash and fine fuels) if not appropriate for firewood or other use;
8. Control weeds according to state law and USFS/BLM standards;
9. Perform a second treatment in the future as stands age further and regeneration satisfies reforestation and wind protection goals.
10. Plant new trees in openings created by tree removal treatments to enhance species diversity.
11. Retain snags at levels outlined in Appendix A of the Forest Plan

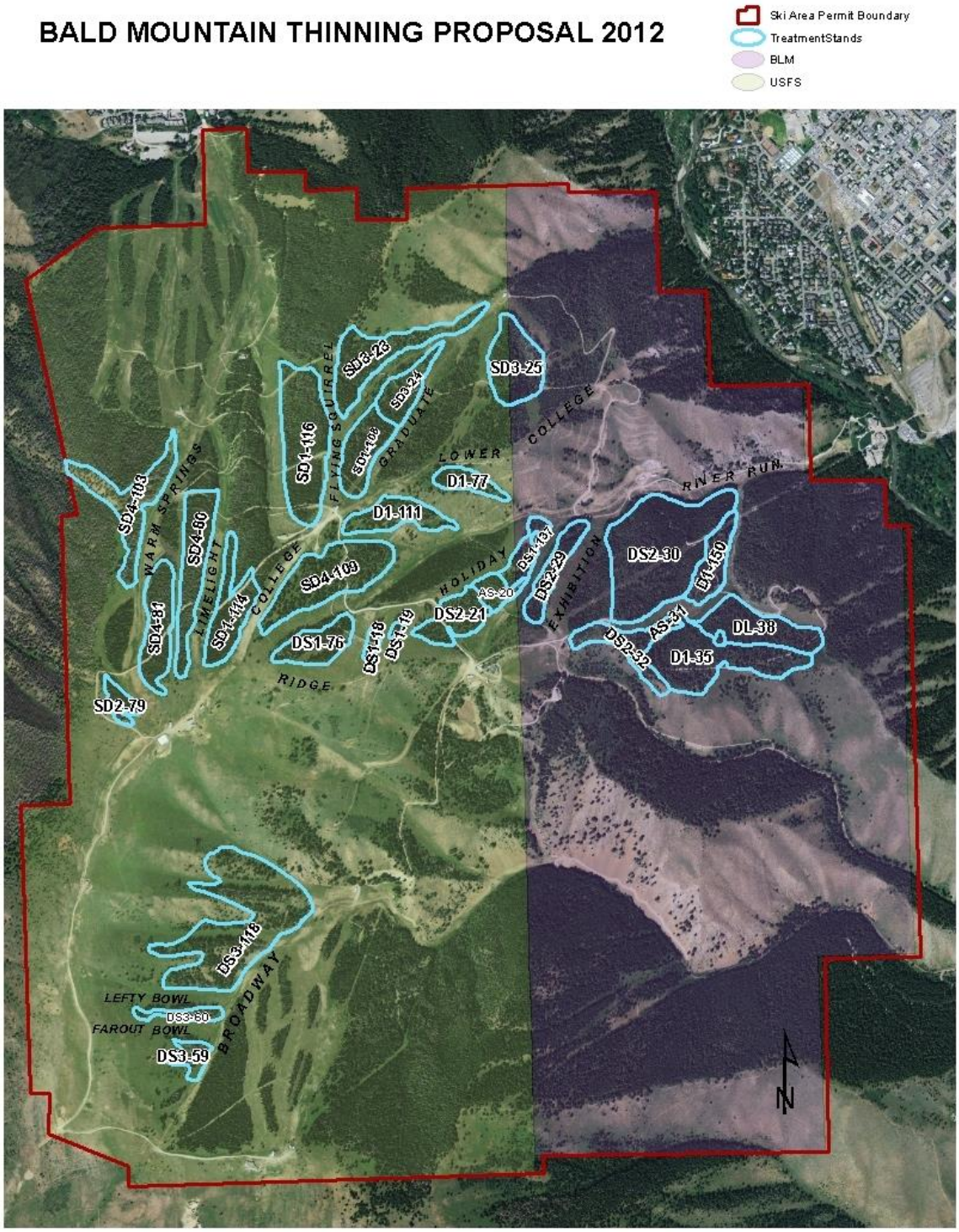

Figure 3. Proposed timber stands to be thinned (and sanitized) on Bald Mountain

Table 2. Bald Mountain Vegetation Data – Sorted by Forest Stand (Vegetation Polygon) Number

Veg Type Code	Forest Stand or Veg Polygon	Acres	Vegetation Type	Description	Ave Age (yr)	Ave Ht (ft)	Ave Dia (in)	Mistletoe
DS1	18	2	Douglas-Fir / Subalpine Fir - Mature	DF and SF	200	58	14	H
DS1	19	1	Douglas-Fir / Subalpine Fir - Mature	DF and SF	200	58	14	H
AS	20	5	Aspen	DF and SF with abundant Aspen in openings.				M-H
DS2	21	10	Douglas-Fir / Subalpine Fir - Mature	DF and SF	80	49	11	H
SD3	23	18	Subalpine Fir / Douglas-Fir - Dying Forest	DF, LP and SF	180	85	17	VH
SD3	24	9	Subalpine Fir / Douglas-Fir - Dying Forest	DF, LP and SF	180	85	15	VH
SD3	25	16	Subalpine Fir / Douglas-Fir - Dying Forest	SF and DF	180	85	16	VH
DS2	29	16	Douglas-Fir / Subalpine Fir - Pole to Mature	DF and SF	140	60	12	H
DS2	30	49	Douglas-Fir / Subalpine Fir - Pole to Mature	DF and SF	98	65	11	H
AS	31	2	Aspen	DF and SF with abundant Aspen in openings.				M-H
DS2	32	5	Douglas-Fir / Subalpine Fir - Pole to Mature	DF and few SF	130	27	9	H
D1	35	26	Douglas-Fir - Mature	DF and SF with few LP. Lots of Scouler' willow, mountain maple and aspen in openings.	170	80	17	M-H
DL	38	14	Douglas-Fir / Lodgepole Pine / Subalpine Fir	DF, SF and LP. LP smaller and younger (82yrs,44ft, 6in) and all recent dead or dying from Mountain Pine Beetle	200	78	14	M-H
DS3	59	4	Douglas-Fir / Subalpine Fir - Mature on South Slopes	DF and SF				L-M
DS3	60	4	Douglas-Fir / Subalpine Fir - Mature on South Slopes	DF and SF				L-M
DS1	76	11	Douglas-Fir / Subalpine Fir - Mature	DF and SF	200	64	14	H
D1	77	7	Douglas-Fir - Mature	DF and few SF				M-H
SD2	79	4	Subalpine Fir / Douglas-Fir - Pole to Mature	SF, WBP and DF	108	50	11	L
SD4	80	17	Subalpine Fir / Douglas-Fir - Old Forest	SF, DF and WBP	178	80	16	M
SD4	81	17	Subalpine Fir / Douglas-Fir - Old Forest	SF and DF with few WBP	180	80	16	M
SD4	103	16	Subalpine Fir / Douglas-Fir - Old Forest	SF and few WBP	198	92	24	M
SD1	108	11	Subalpine Fir / Douglas-Fir - Mature	SF and DF	120	72	14	H
DS4	109	25	Subalpine Fir / Douglas-Fir – Old Forest	SF and SF with few WBP	300	96	33	H
D1	111	11	Douglas-Fir - Mature	DF and few SF	250	90	25	M-H
SD1	114	13	Subalpine Fir / Douglas-Fir - Mature	SF with few DF and WBP	138	63	14	M
SD1	116	25	Subalpine Fir / Douglas-Fir - Mature	SF with few DF and WBP	318	81	15	H
DS3	118	43	Douglas-Fir / Subalpine Fir - Mature on South Slopes	DF and SF				L-M
DS1	137	6	Douglas-Fir / Subalpine Fir - Mature	DF and SF	90	66	15	M
D1	150	9	Douglas-Fir - Mature	DF and few SF	158	88	14	M-H

DF=Douglas-fir, SF=Subalpine Fir, LP=Lodgepole Pine, WBP=White Bark Pine

L=Low, M=Medium, H=High

Mitigation Measures for Timber Stand Thinning Activities:

Wildlife:

1) In order to avoid disturbance to deer fawning, elk calving, migratory bird nesting, or sensitive bird species nesting, timber cutting (or skidding) would not occur between May 1 and July 31 of any calendar year (except that project activities may occur between July 1 and July 31 if surveys by a Forest Service Wildlife Biologist determine that no effect to these species would result from early implementation).
2) Large snags (greater than 24" DBH) particularly those with bird cavities, would not be removed unless pose an unacceptable safety risk.
3) Raptor nests, wildlife dens, etc. discovered during proposed activities would be reported to the Ketchum Ranger District wildlife biologist and would be protected from proposed activities.

Vegetation:

1) Mature cone bearing whitebark pine trees will be avoided. Where whitebark pine are present they will be flagged to avoid injury. If whitebark pine seedling or saplings are unavoidable transplanting to a safe suitable area would be considered.
2) Rehabilitation and restoration actions using native species would be implemented on all disturbed areas vulnerable to invasive species (i.e. roads) immediately following thinning activities to prevent the invasion or expansion of noxious weeds.
3) Coordination with Ketchum Ranger District noxious weed program manager will include reporting a GPS coordinate or map of noxious weed occurrences to ensure that noxious weed treatments are carried out as per the "*Biological Assessment and Biological Evaluation Of Effects From Noxious and Invasive Weed Management Program On Fisheries, Terrestrial Wildlife and Rare Plant Species, Fairfield Ranger and Ketchum Ranger Districts, and Sawtooth National Recreation Area, Sawtooth National Forest, April 6, 2012",* and follow up monitoring is conducted where necessary.
4) As per LRMP Standard NPST02- Heavy equipment will be high pressure washed to remove all visible plant parts, dirt, and material that may carry noxious weed seeds, and/or invasive life forms, prior to entry into the project area. The same equipment will be cleaned again prior to leaving if warranted.
5) As per LRMP Standard NPST06 - To comply with the USFS 1996, ``Weed Free Hay Order," Noxious-Weed-Free Forage and Straw Rules (IDAPA 02.06.31), and the Final Supplementary Rules to Require the Use of Certified Noxious-Weed-Free Forage and Straw (Federal Register Volume 76, Number 140 (8/21/2011). Restoration, rehabilitation, and stabilization projects also will be required to use weed-free straw bales and mulch for project work.

Aquatic Resources:

1) If temporary roads and landings are used, they will be restored to natural hydrologic flow and characteristic landscape slope and form at the conclusion of the project. Restoration may require ripping of temporary roads, skid trails, or landings to decompact soils and restore site hydrology, and may require placement of slash and coarse woody debris and closure signage to deter recreational use. Seeding and replanting of landings and/or temporary roads with native species may also be necessary.
2) Where possible, temporary roads will be constructed with an outsloping design.

3) Riparian Conservation Areas (RCAs) are delineated for the project site as described above in the "Mitigation Measures for Bike Trail Construction/Reconstruction Activities" sub-section of this document.

4) Woody materials removed from the site must be fully-suspended when crossing any channel, whether a perennial, intermittent, or ephemeral stream with scour.

5) No storage of fuel or other potential contaminants or fueling of equipment used in the proposed project would occur within any Riparian Conservation Area (RCA). All equipment will be free of leaks.

IV. EXISTING CONDITION

The 3,411 acre Bald Mountain Ski Area comprises of a mosaic of wildlife habitats and vegetation communities. Elevations within the area range from approximately 5,500 feet to over 9,000 feet. Existing wildlife habitat conditions have been influenced by past natural and human-caused modifications including, timber harvest, wildfires, road construction, ski area development, and other developed recreation.

Vegetation in the Bald Mountain Ski Area is represented by mixed-age conifer forest stands of Douglas fir and subalpine fir communities. Lodgepole pine, aspen, and whitebark pine also occur within portions of the ski area. Shrub and grass communities of sagebrush, bitterbrush, bluebunch wheatgrass, Idaho fescue, and various forbs are typically found on ski trails, though upper elevations contain natural herbaceous communities. Wildlife observed in the area include summering mule deer, Rocky Mountain elk, black bear, pileated woodpeckers, red-naped sapsuckers, great horned owls, red squirrels, etc. Although Warm Springs Creek is not in any great proximity to the areas of proposed ground disturbance, this stream supports native redband rainbow trout and mountain whitefish, Region 4 "sensitive" Wood River sculpin, several other native non-game fish species, and non-native brook trout.

V. EFFECTS ON THREATENED, ENDANGERED AND SENSITIVE SPECIES

A. Endangered Species Act Listed Species

Ute ladies'-tresses (*Spiranthes diluvialis*)

Status of Species

The Ute ladies'-tresses orchid was federally listed as threatened on January 17, 1992 under the ESA. Ute ladies'-tresses occurs riparian, spring, and lakeside wetland meadows in these general areas of the interior western United States: near the base of the eastern slope of the Rocky Mountains in southeast Wyoming and north-central and central Colorado; in the upper Colorado River Basin; along the Wasatch Front and westward in the eastern Great Basin, in north-central and western Utah, and extreme eastern Nevada. In 1994, the range was expanded north by discoveries in central Wyoming and western Montana, and in 1996, Ute ladies'-tresses was discovered in southeast Idaho, along the Snake River. Potential habitat for Ute ladies'-tresses occurs within the Sawtooth National Forest, according to Idaho-Conservation Data Center predictive study modeling potential Ute ladies'-tresses habitat in National Forests of Idaho using correlations of selected environmental

attributes in GIS (Jankovsky-Jones and Graham 2001). However, to date no occupied habitat has been discovered.

Habitat Factors

Ute ladies'-tresses is endemic to moist soils in mesic or wet meadows near springs, lakes, and perennial streams. The elevation range of known habitat is 700 to 7000 feet. Most of the occurrences are along riparian edges, gravel bars, old oxbows, moist to wet meadows along perennial streams and rivers, although some localities are near freshwater lakes or springs. Ute ladies'-tresses appears to be well adapted to disturbances caused by water movement through flood plains over time. It occurs primarily in areas where the vegetation is relatively open and not very dense. It often grows on point bars and other recently created riparian habitat. The orchid appears to require permanent sub-irrigation, with the water table holding steady throughout the growing season and into late summer and early autumn. This species is considered a general riparian species (US FWS, 1995).

Populations appear to fluctuate dramatically from year to year, making it difficult to assess population status and distribution. This has held true during studies conducted on the Idaho population since its discovery. The genus *Spiranthes* also undergoes a dormant period that may last 7-10 years, apparently with no evidence of above ground structures. Nothing is known about the dormancy-triggering mechanisms. In order to locate this species, potential habitat should be surveyed every year before ground-disturbing activities take place.

Description

Ute ladies'-tresses is a perennial orchid with one or multiple stems growing 8- 20 inches tall from thick, tuberous roots. Its narrow leaves grow from the base of the stern and reach a length of about 11 inches. It has 3-15 white or ivory flowers spiraling upward and around the stem (spike). Flowers are oriented perpendicular to the stem; lateral sepals are gaping from the base of the flower. The oval or lance-shaped (lanceolate) lip is exposed in side view and somewhat constricted in the middle. The unfused (free) sepals rarely make an evident hood (US FWS, 1995). The orchid blooms from early August through mid-September.

Reproduction is strictly sexual, with ground- and log-nesting bumblebees as the primary pollinators (Pierson and Tepedino 2000). Successful conservation of this orchid will require protecting suitable habitat and pollinator habitat in and around orchid populations.

Threats

Threats to Ute ladies'-tresses orchid include; habitat loss and modification through urbanization, water development, and conversion of wetlands to agriculture, competition from invasive non-native species, herbicides application to treat non-native species, recreational uses such as direct trampling by foot and off road vehicle use, soil compaction and subsequent soil erosion, and trail maintenance and construction, domestic livestock grazing effects including trampling, herbivory, and habitat alterations, hydrology change caused by modification of wetland habitats through development, flood control, de-watering, and other changes to hydrology, drought, herbivory by native wildlife (ungulates and voles), reduction in the number and diversity of insect pollinators, absence or rarity of mycorrhizal symbionts.

Direct and Indirect Effects

The proposed action to construct and reconstruct summer bike trails and thin forested stands over a ten year period on Bald Mountain would have no effects on the Ute ladies'-tresses orchid, its habitat or reproductive success. This determination is based on both field surveys and Idaho-Conservation Data Center predictive study modeling. The field surveys conducted between 1999 and 2012 in various locations on Bal Mountain have located no individual Ute ladies' – tresses orchid. The lower portions of Warm Springs Creek provide low potential habitat for Ute ladies' – tresses orchid in gravel sub-irrigated flood channels. These areas would not be effected during the proposed activities. Therefore, proposed activities outlined are expected to have **no effect (NE)** on the Ute ladies'-tresses orchid.

Canada Lynx (*Lynx canadensis*) – Lynx are typically associated with spruce, subalpine fir, and lodgepole pine forests in the mountains of the west (Koehler 1989). They are well adapted to cold winters and deep snows of northern latitudes typically above 4,000 feet elevation (Koehler et al. 1979). Unlike other carnivores whose diet may be quite varied, lynx prey almost exclusively on snowshoe hares (*Lepus americanus*) (Koehler 1989). Forest conditions that favor snowshoe hare abundance benefit lynx. Koehler (1989) found the highest snowshoe hare densities in 10-20 year old stands of lodgepole pine, which is where lynx concentrate their hunting efforts. In these stands, the lodgepole was <1 inch DBH and stem density was approximately 15,840 per acre, providing forage, escape and thermal cover for the snowshoe hares. Although lynx are specialized for hunting hares, alternate food sources including tree squirrels, voles, mice and grouse are also important.

Lynx require a mosaic of forest conditions, including early successional habitat for hunting and mature forests for dens. Den sites are typified by lodgepole pine, spruce, and subalpine fir forests older than 200 years with northerly aspects and a high density of down-fall logs (Koehler, 1989). These mature stands for dens were as small as 1-5 acres in size with stringers of connected travel corridors that provide security cover for adults and kittens.

Physical adaptations, such as large paw size give the lynx a competitive advantage in deep snow conditions over other predators such as bobcats and coyotes. Winter recreation activities that result in snow packing, could reduce the competitive advantage lynx have over the more generalist predators.

Mapped, predicted habitat for lynx occurs within the Sawtooth National Forest portion of the Bald Mountain Ski Area (see Appendix 3). No records of any lynx observations on Bald Mountain exist. Idaho CDC records from 2002 reported a sighting of a lynx in 1991 by an unknown observer approximately ten air miles to the northwest of Bald Mountain near the confluence of Newman and Baker Creeks. A lynx was apparently hit by a vehicle in 1984 ten miles south of Bellevue (33 miles south of Bald Mountain). Lewis and Wenger (1998) report that lynx observations, road kills, and trapping incidents were reported as fairly common during the late 1960's and early 1970's in the Hailey area (Hailey occurs approximately nine air miles south of Bald Mountain Ski Area). No recent observations of lynx have been made on the Ketchum Ranger District or across the north end of the Sawtooth National Forest.

Watershed biological assessments on the effects of ongoing projects on the Sawtooth National Forest to Canada lynx were completed in February 2003. As part of these analyses, baseline conditions for each Lynx Analysis Unit (LAU) were described and evaluated as to their ability to conserve lynx. Effects of the proposed trail construction and timber stand improvement project

were evaluated in relation to these baseline conditions using an effects matrix. The baseline matrices describing existing conditions of lynx habitat within the Lower Warm Springs-Greenhorn-Deer LAU (where Bald Mountain occurs) can be found in Appendix 4. The effects matrices and determinations for the proposed actions are located in Appendix 3.

In 2007, the Castle Rock Fire burned approximately 11,909 acres out of 30,965 acres (38%) of the mapped, predicted lynx foraging habitat within Lower Warm Springs-Greenhorn-Deer LAU (based on areas burned at moderate and high intensity) making these areas temporarily unsuitable for lynx foraging (USFS 2007). It is possible some or most of this acreage has re-vegetated to a level sufficient to be considered lynx foraging habitat again (currently 5.5 years post-fire). How much habitat has recovered is currently unknown. In addition, approximately 5,131 acres out of 11,137 acres (46%) of mapped, predicted lynx denning habitat was also burned within this LAU (based on areas burned at moderate and high intensity) making these areas unsuitable for lynx denning for many years (> than 20 years, but more likely it will take up to 100 years for recovery of denning habitat).

Of the 600 acres of mapped, predicted lynx foraging habitat occurring within the Bald Mountain Ski Area, 50 acres of it burned in 2007 at a sufficient level to no longer be considered lynx foraging habitat until sufficient regeneration occurs to provide habitat for prey species (thus a total of 550 acres of predicted foraging habitat currently occurs in the ski area). Of the 363 acres of mapped, predicted lynx denning habitat occurring in the Bald Mountain Ski Area, 34 acres of it burned in 2007 at a sufficient level to not be considered potential denning habitat in the long term (up to 100 years or more). Thus there are 329 acres of mapped, predicted lynx denning habitat currently within the ski area.

To summarize from Appendix 3 (effects matrix), the proposed action would likely result in some minor habitat alterations to mapped, predicted lynx foraging and denning habitat, but overall conditions for lynx on the Bald Mountain Ski area would be maintained. Levels of year round recreation and ski area maintenance activities likely preclude lynx from using the ski area. While habitat quality may be somewhat reduced for snowshoe hares as a result of thinning and trail construction, and increased summertime mountain bike use may occur, neither would likely have an effect on the possibility of lynx using the Bald Mountain Ski Area. Levels of change in habitat and recreational use from current conditions are considered negligible. As shown in Appendix 3, implementation of activities outlined in Section III **may affect, but not likely adversely affect** lynx.

Yellow-billed Cuckoo (*Coccyzus americanus*) – It is unknown if yellow-billed cuckoos occur on Ketchum Ranger District. Portions of the District contain potentially suitable habitat for the western subspecies of the yellow-billed cuckoo within riparian woodlands along streams and rivers. No records exist of yellow-billed cuckoos occurring on the north end of the Sawtooth National Forest, but two observations have been recorded along the Big Wood River to the south of the Forest on private and BLM lands (both occurring over twenty air miles to the south of the Bald Mountain Ski Area). No potential habitat for the species occurs upon federal lands in the Bald Mountain Ski Area where activities are proposed.

The yellow-billed cuckoo preferentially selects moderately dense thickets and deciduous trees near water. They may require large (100 to 200 acres), contiguous tracts of riparian habitat for breeding and typically nest 4 to 8 feet off of the ground. Nesting habitat has been described as dense lowland

riparian with a dense sub-canopy or shrub layer (regenerating canopy trees, willows, or other riparian shrubs) within approximately 335 feet of water. Overstory in these habitats is usually comprised of closed-canopy stands of large or developing cottonwoods. Nesting habitats have been reported between 2,500 and 6,000 ft in Utah. (Parrish et al. 2002.) Very few distributional records of this species in the Rocky Mountain region are at elevations above 6,600 feet (U.S. FWS 2001). Diet of the yellow-billed cuckoo consists mainly of insects although they will feed on some fruit and an occasional frog or lizard.

Since no potential habitat for yellow-billed cuckoos would be affected by the proposed activities and since the probability of the species occurring within the analysis area is extremely low, the activities outlined in Section III are expected to have **no effect** on the yellow-billed cuckoo.

Greater Sage-Grouse (*Centrocercus urophasianus*) – On March 5, 2010, the US Fish and Wildlife Service determined that Greater Sage-grouse (hereafter referred to as sage grouse) warranted protection under the Endangered Species Act, but that listing at that time was precluded by the need to address higher priority species first. Sage grouse was placed on the candidate species list for future action. Sage grouse are also listed as a Forest Service (Region 4) sensitive species.

The importance of sagebrush (Artemisia spp.) as habitat for sage grouse is well documented (Patterson 1952, Connelly et al. 2000, etc.). Nesting success, early-brood rearing, and wintering are all tied to sagebrush. During late brood-rearing (July-October) sage grouse can be found in grasslands, agricultural fields, and even alpine peaks, but are generally within a mile of sagebrush habitat. Sage grouse can be migratory or non-migratory (Connelly et al. 2000). Individuals on the Ketchum Ranger District are considered migratory and likely nest, raise young broods (ages 0-6 weeks old), and winter to the south of the District on BLM and private lands (personal obs.). Forb abundance is an important habitat factor for nesting and brood rearing habitat. Insect availability is also a key component for brood rearing habitat. Wet meadows and riparian areas provide critical brood rearing habitat due to presence of forbs and insects (Wambolt et al. 2002, Connelly et al. 2000).

Declines in sage grouse populations have been documented range-wide, as high as 45-80% since the 1950's (Braun 1998). Reasons for this decline is thought to be from cumulative factors, particularly the reduction of sagebrush habitat due to wildfire, changes in natural fire frequencies related to annual exotic grass invasions, agricultural and urban development, and mining. Other factors include habitat degradation from overgrazing, hydrological alterations affecting brood rearing habitat, fences, power lines, wind turbines, etc. (Wambolt et al. 2002, Connelly et al. 2000, Braun 1998).

Sage grouse have been observed in several lower elevation areas on the Ketchum Ranger District in late summer/early fall in non-forested sagebrush habitat. Sage grouse are known to nest and winter in suitable sagebrush habitats to the south of the Ketchum Ranger District on BLM and private land.

There is one anecdotal report of a past observation of a sage grouse on Seattle Ridge on Bald Mountain on an open, sagebrush ridge (pers. com. Whittaker 2013). There nearest known recent observations of sage grouse to the project area were a lone radio-collared male strutting (lekking) approximately 4.6 miles to the southeast in Ohio Gulch in spring 2012 (pers. com. Berkely 2012). There were also two observations of sage-grouse during the late brood-rearing time period in Deer Creek on private alfalfa fields approximately five air miles to the south of Bald Mountain. Mapped

"key" habitat (USDI BLM 2010) does not occur on Bald Mountain, but exists within six air miles to the south. The nearest cluster of active, occupied sage grouse leks occur approximately 18 air miles to the south of the project area in Rock Creek (IDFG lek database 2010). There are a cluster of currently unoccupied leks within 12 air miles to the south of Bald Mountain.

The Bald Mountain Ski area has marginally suitable, potential, late-brood rearing habitat for sage grouse on the un-forested ridges at the south end of the ski area. While there is a small potential to observe individual male sage grouse in this area in the late summer or early fall, the area would is very unlikely to support sage grouse during critical stages such as breeding, brood-rearing, or wintering due to lack of suitable habitat and distance from known populations (personal observation). Year-round recreational and maintenance activities also likely preclude much use of this habitat by sage grouse. The only activity associated with the proposed project that would occur in this marginally potential sage grouse habitat is the proposed reconstruction of approximately 2.5 miles of existing mountain bike/hiking trail (upper section of trail segment 6 and 9). While a minor amount of additional ground disturbance is proposed during the re-construction activities, these trails currently exist and are used extensively. The rest of the proposed activities do not occur in potential sage-grouse habitat.

Proposed activities as described in Section III would unlikely have any effect on sage grouse since most of the activities do not occur in sage grouse habitat. In the case of the proposed re-construction of 2.5 miles of existing trail in marginally suitable habitat, it is not expected to have any influence on sage grouse due to the low probability of the species occurring there and the fact that the trail currently exists and is used extensively already. No new effects to potential habitat are expected and little, if any, increase in use of the trail is predicted (therefore no increase in potential disturbance or mortality to the species). It is expected that allowing the proposed activities would have **no effect** (and **no impact**) on Greater sage-grouse.

Wolverine (*Gulo gulo*) – On February 4, 2013, the FWS proposed to list the distinct population segment of the North American wolverine occurring in the contiguous United States as "threatened" under the Endangered Species Act (FWS 2013). The primarily listed threat to the species is habitat loss as a result of climate change (reduced levels of snow persisting into late spring/early summer). Secondary threats, considered in concert with climate change, are low effective population size and harvest/ incidental harvest.

Wolverines are primarily scavengers and forage on carcasses of ungulates such as elk, deer, mountain goats, and bighorn sheep. They also may hunt for snowshoe hares, marmots, mice, voles, ground squirrels, and grouse but will also eat fruits, berries, and insects when other prey is unavailable (Hash 1987).

Home range sizes of wolverines are highly influenced by prey remains and other food sources. Individual animals generally have very large ranges and can cover large distances in very little time. In central Idaho home ranges average 384 square kilometers (148 square miles) for females and 1,582 square km (582 square miles) for males and may have overlapping ranges. They use several habitats and have been located in low-elevation, forested drainage bottoms to high-elevation, sparsely-timbered cirque basins. Two natal den sites were located in subalpine cirque areas on north-facing slopes suggesting that this type of habitat is critical to wolverines in central Idaho (Copeland 1996).

Female wolverines are very sensitive to disturbance during mid-February through May while they are searching for, establishing, and occupying their natal dens. Seeing people and their tracks near an existing den was enough disturbance to cause a female wolverine to move her kits to a different site. During this time females are lactating, and disturbance that leads to increased energy expenditure can be very detrimental. It is a critical time for females. They are trying to maintain energy levels in order to properly nourish their kits during a time when food is scarce (Copeland 1996).

A study of wolverines in central Idaho was conducted from 1992-1995. The western portion of the Ketchum Ranger District was part of the study area for this project. During this study, radio-marked wolverines were documented in several areas on the District including a male that was observed on March 1, 1995 approximately two air-miles to the northwest of the Bald Mountain Ski area (see Figure 4). The same male was also recorded a month earlier approximately 3.5 miles to the north of the ski area. No observations of wolverines have been recorded directly on the ski area, but incidental wolverines observations have occurred since the 1990's by members of the public within the general vicinity (see Figure 4).

Figure 4 also depicts persistent snow that occurred annually up to May 1 in five, six, and seven years out the 7 years studied (Copeland et al 2010). Persistent snow up to May 1 has been positively correlated with wolverine den sites. The snow layer depicts a way to delineate potential wolverine denning habitat and shows that no potential denning habitat occurs on the Bald Mountain Ski Area or in the immediate vicinity.

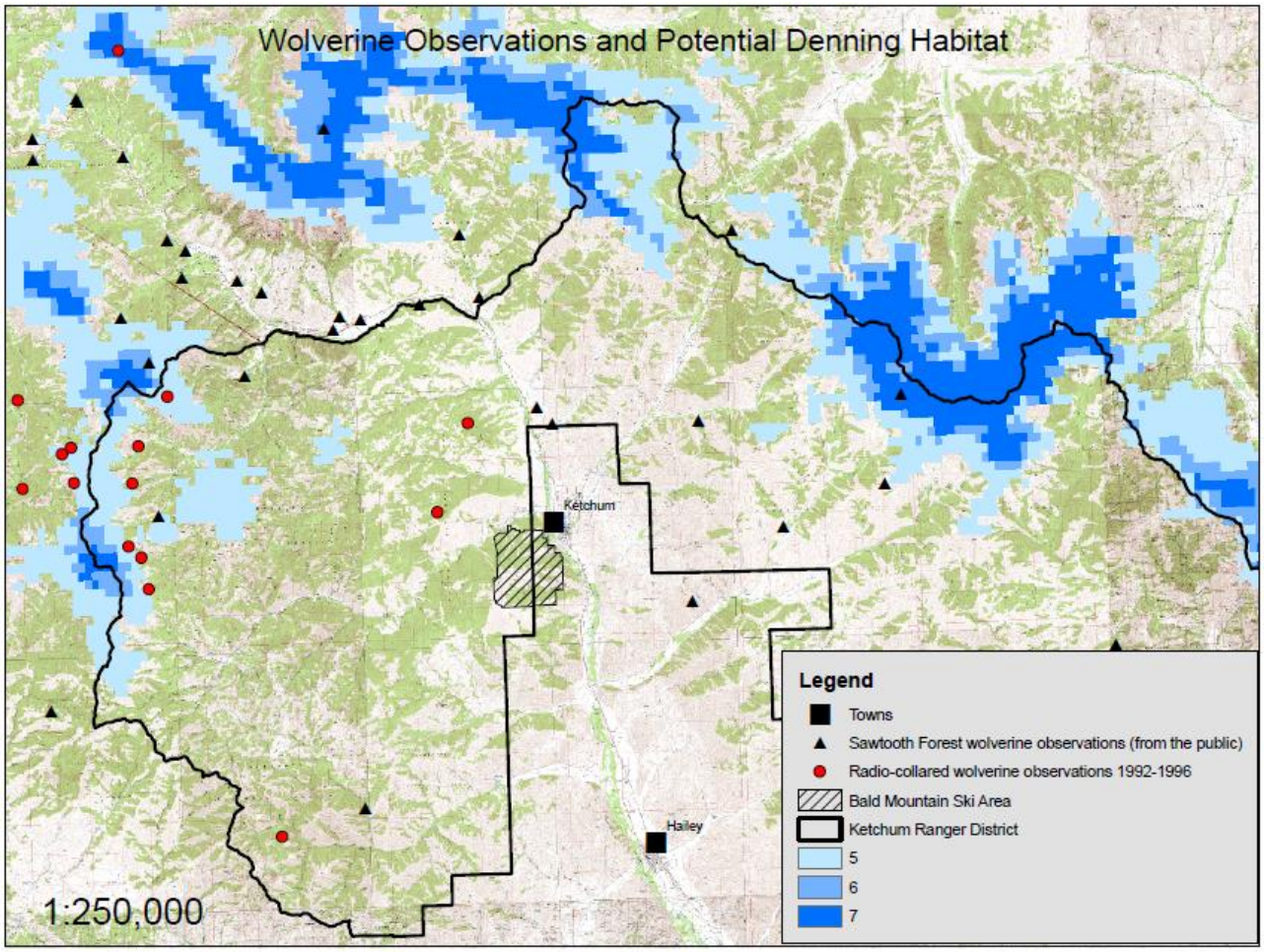

Figure 4. Wolverine Observations and Potential Wolverine Denning Habitat on the Ketchum Ranger District

Allowing the proposed activities on the Bald Mountain Ski Area as described in Section III is not expected to have any effect on wolverines. The proposed projects do not occur in potential wolverine denning habitat and would not increase potential disturbance to wolverine during the critical stage of denning. The proposed activities would not affect wolverine foraging or food sources or increase potential mortality to the species. Allowing the proposed activities would have **no effect** (and **no impact**) on wolverines.

Whitebark pine (*Pinus albicaulis*)

Status of Species

The US Fish and Wildlife Service (FWS) issued a 12-month finding on a petition to list whitebark pine as endangered or threatened with Critical Habitat in the July 19, 2011, Federal Register (http://www.gpo.gov/fdsys/pkg/FR-2011-07-19/html/2011-17943.htm). In summary, the primary threat to the species is from disease in the form of the nonnative white pine blister rust and its interaction with other threats, including significant mortality from predation by the native mountain pine beetle, past and ongoing fire suppression resulting in direct habitat loss, and environmental effects resulting from climate change threaten the species through direct habitat loss and by exacerbating the effects of some of the other threats. Also, the existing regulatory mechanisms are inadequate to protect whitebark pine or its habitat. Therefore, based on the aforementioned threats, USFWS found whitebark pine is in danger of extinction, or likely to become so in the foreseeable

future, throughout all or a significant portion of its range. However, an immediate proposal of a regulation implementing this action is precluded by higher priority listing actions. Whitebark pine is now a candidate species, and has been added to the Regional Forester's Sensitive Species list as of July 27, 2011.

Habitat Factors

Whitebark pine occurs in scattered areas of the warm and dry Great Basin but it typically occurs on cold and windy high-elevation or high-latitude sites in western North America. As a result, many stands are geographically isolated (Arno and Hoff 1989, p. 1; Keane *et al.* 2010, p. 13). Its range extends longitudinally between 107 and 128 degrees west and latitudinally between 27 and 55 degrees north (McCaughey and Schmidt 2001, p. 33). It extends to 3,660m (12,000ft) elevation at the southern end of its range in the Sierra Nevada, 3,200m (10,500ft) in Wyoming and 900m (2,950ft) in British Columbia, with its elevational limit dropping with increasing latitude (McCaughey and Schmidt 2001). The Rocky Mountain distribution ranges from northern British Columbia and Alberta to Idaho, Montana, Wyoming, and Nevada (Arno and Hoff 1990, p. 268; Keane *et al.* 2010, p. 13), with extensive stands occurring in the Yellowstone ecosystem (McCaughey and Schmidt 2001, p. 33). The Wind River Range in Wyoming is the eastern most distribution of the species (Arno and Hoff 1990, p. 268; McCaughey and Schmidt 2001, p. 33).

Whitebark pine is a slow-growing, long-lived tree with a life span of up to 500 years and sometimes more than 1,000 years (Arno and Hoff 1989, pp. 5–6). It is a hardy conifer that tolerates poor soils, steep slopes, and windy exposures and is found at alpine tree line and subalpine elevations throughout its range (Tomback *et al.* 2001, pp. 6, 27). It grows under a wide range of precipitation amounts, from about 51 to over 254 cm (20 to 100 in.) per year (Farnes 1990, p. 303). It may occur as a climax species, early successional species, or seral (mid-successional stage) co-dominant associated with other tree species. Although it occurs in pure or nearly pure stands at high elevations, it typically occurs in stands of mixed species in a variety of forest community types.

Description

Whitebark pine is a 5-needled conifer species placed in the subgenus *Strobus*, and stone pine subsection *Strobus*. Stone pines (so-called for their stone-like seeds) include five species worldwide, and whitebark pine is the only stone pine that occurs in North America (McCaughey and Schmidt 2001, p. 30). Whitebark pine is typically 5 to 20 meters (m) (16 to 66 feet (ft)) tall with a rounded or irregularly spreading crown shape. On higher density conifer sites, it tends to grow as tall, single-stemmed trees, whereas on open, more exposed sites, it tends to have multiple stems (McCaughey and Tomback 2001, pp. 113–114). Above tree line, it grows in a krummholz form (stunted, shrub-like growth) (Arno and Hoff 1989, p. 6). It produces both male pollen and female seed cones are on the same tree (monoecious). Its characteristic dark brown to purple seed cones are 5 to 8 centimeters (cm) (2 to 3 inches (in.) long and grow at the outer ends of upper branches (Hosie 1969, p. 42). The cones are indehiscent (scales remain essentially closed at maturity) stay on the tree, and are wingless seeds that remain fixed to the cone and cannot be dislodged by the wind. Because whitebark pine seeds cannot be wind-disseminated, primary seed dispersal occurs almost exclusively by Clark's nutcrackers (*Nucifraga columbiana*).

Threats

Threats to this species include; habitat loss, destruction, modification, or curtailment (by fire and fire suppression and climate change), disease and predation (white pine blister rust and predation from mountain pine beetle epidemic), and inadequate regulatory mechanisms currently in place

throughout the range of whitebark pine to reduce or eliminate any of the four main threats to the species (loss of habitat from fire suppression and the exacerbating environmental effects of climate change, and mortality from white pine blister rust and mountain pine beetle).

Direct and Indirect Effects

Whitebark pine occurs in the project area in a subalpine habitat plant communities have fragile nutrient poor soils and a limited growing season. The most likely proposed action's activities that could affect these individuals are trail construction and reconstructions. It is likely that whitebark pine small trees and saplings occur in thinning units. Ground disturbances associated with trail constructions and thinning activities include disturbance or removal of biotic crust, soil erosion and subsequent loss, and soil compaction that creates a reduction in soil moisture holding capacity. Vegetation disturbances include trampling, uprooting, and removal of vegetation. Whitebark pine seeds are collected and stored in squirrel middens or Clark's nutcracker (*Nucifraga columbiana*) caches. They are cached in the ground or logs where if not consumed often germinate and produce seedlings. These seedlings and seed caches could be trampled or removed during construction and thinning activities leading to death of individual seedlings, exposure of seed caches rendering the seeds unable to germinate .

There is a moderate risk that proposed activities could negatively affect whitebark pine individuals, regeneration and habitat. To minimize the affects described previously, design criteria and best management practices that consist of avoidance of whitebark pine, limiting disturbances in occupied whitebark pine habitat, and taking preventative measures regarding introduction and spread of non-native invasive plant species would be implemented. Therefore, the proposed action's activities **may affect but not likely to adversely affect (MA-NLAA)** whitebark pine and potential habitat.

Bliss Rapids snail (*Taylorconcha serpenticola*) **-** The Bliss Rapids aquatic snail was listed as Threatened in 1992. Historically, the species ranged discontinuously over 204 river miles in the main stem Middle Snake River and associated springs between Indian Cove Bridge and Twin Falls in south-central Idaho (USFWS 1992; Hershler *et al*. 1994). Remnant populations of the snail are believed to be distributed across an approximately 138 km stretch of the middle Snake River and a few tributaries, primarily concentrated in the Hagerman area (USFWS 2005) and the Thousand Springs reach of the Snake River (Richards and Arrington 2008).

Bliss Rapids snails are found in springs and unpolluted, unimpounded stretches of river at a variety of water depths, typically flanking shorelines (USFWS 1992; Hershler *et al*. 1994). Individuals are usually found on cobble-boulder sized substrates, or on gravel-sized substrates in habitats with good water quality and stable flows (USFWS 2005). The species appears to have an atypically broad habitat tolerance. Potential threats include oxygen depletion, water pollution from agricultural runoff, habitat desiccation due to irrigation practices, and competition from the introduced snail *Potamopyrgus antipodarum* (USFWS, 2005). There are no historic or current records of any individuals being found in the Wood River subbasin. Therefore, implementation of the activities outlined in Section III should have **no effect** on the Bliss Rapids snail.

Banbury Springs limpet (*Lanx sp*.) -- The Banbury Springs limpet was listed as Endangered in 1992. Currently, this aquatic invertebrate species only exists at four isolated cold-spring complexes, all located along the Snake River in south central Idaho: Thousand Springs, Box Canyon Springs, Briggs Springs and Banbury Springs (USFWS 2006). Primary factors affecting

the remaining lanx populations are habitat modification, spring flow reduction, groundwater quality and the invasive New Zealand mudsnail (USFWS 1992). There are no historic or current records of any individuals being found in the Wood River subbasin. Therefore, implementation of the activities outlined in Section III should have **no effect** on the Banbury Springs limpet.

Snake River Physa Snail (*Physa natricina*) – This aquatic invertebrate species was listed as Endangered in 1992. No critical habitat has been designated. Fossil records indicate that the Physa snail is endemic to southern Idaho, northern Utah and eastern Nevada. Currently, its distribution is restricted to the Snake River (not including the tributaries) from the vicinity of Bliss, Idaho to Hammett (Gooding County) (Taylor 2003). Only three populations are believed to be extant (USFWS 1995). Potential threats include oxygen depletion, water pollution from agricultural runoff, irrigation, and competition from the introduced snail *Potamopyrgus antipodarum* (USFWS 2005). There are no historic or current records of any individuals being found in the Wood River subbasin. Therefore, implementation of activities outlined in Section III is expected to have **no effect** on the Snake River Physa snail.

B. Sensitive Species

Spotted Bat (*Euderma maculatum*) - There are no documented sightings of the spotted bat on the Ketchum Ranger District, but extensive surveys for the species have not been conducted.

Spotted bats forage nocturnally, and feed mainly on moths in open ponderosa pine stands, marshy areas and open pastures. They roost in rock crevices on steep cliff faces (Watkins 1977, Wai-Ping and Fenton 1989). Spotted bats hibernate during the winter and emerge in spring, generally March or April depending on daytime temperatures during those months.

It is unknown if spotted bats occur within the Bald Mountain Ski Area. Minimal potential habitat for the species would be affected by the proposed activities. Where new trail construction is proposed to go through rock outcrops, it is possible that some amount of potential bat roosting habitat could be impacted. The proposed thinning may improve potential foraging habitat long term for the species by opening up the forested canopy and creating more open stands conducive to foraging for insects. Since activity timing restrictions would not allow construction of trails or forest thinning during the critical breeding or wintering hibernation time periods, disturbance to the species would not occur during these periods. It is unlikely implementing the proposed activities would cause direct mortality to any spotted bat. The proposed activities may slightly affect potential habitat for the species, but would **not likely lead to a trend toward federal listing or a loss of viability for the species**.

Townsend's Big-eared Bat (*Corynorhinus townsendii*) - Documented sightings of Townsend's big-eared bat have been made on the Ketchum Ranger District including within four air miles to the west of the Bald Mountain Ski Area near Frenchman Bend Hotsprings. Potential habitat for the species occurs on the ski area, but surveys (for bats) have not been conducted.

Townsend's big-eared bats are nocturnal insectivores feeding primarily on moths along forest edges. They roost in crevices of rocky outcrops, caves, old mines or buildings. Unlike many species, which seek refuge in crevices, Townsend's big-eared bat forms highly visible clusters on open surfaces making them extremely vulnerable to disturbance (Christy and West 1993). Townsend's

big-eared bats hibernate during the winter and emerge in spring, generally March or April depending on daytime temperatures during those months.

It is unknown if Townsend's big-eared bats occur within the Bald Mountain Ski Area. Minimal potential habitat for the species would be affected by the proposed activities. Where new trail construction is proposed to go through rock outcrops, it is possible that some amount of potential bat roosting habitat could be impacted. The proposed thinning may improve potential foraging habitat long term for the species by opening up the forested canopy and creating more open stands conducive to foraging for insects. Since activity timing restrictions would not allow construction of trails or forest thinning during the critical breeding or wintering hibernation time periods, disturbance to the species would not occur during these periods. It is unlikely implementing the proposed activities would cause direct mortality to any Townsend's big-eared bat. The proposed activities may slightly affect potential habitat for the species, but would **not likely lead to a trend toward federal listing or a loss of viability for the species**.

Wolverine –refer to Wolverine under Section V. A., **no impact**

Fisher (*Martes pennanti*) - No sightings of fisher have been reported on the Ketchum Ranger District. There are trapping records of fisher from the early 1980's on the west side of the Sawtooth Wilderness in the South Fork Payette and North Fork Boise drainages, and one record in Sawtooth Valley from 1982 approximately 55 air miles to the north of Bald Mountain Ski Area. A photograph was taken of what is presumed to be a fisher in March of 2007 near Alturas Lake (within 30 air miles to the northwest of Bald Mountain).

Fishers are found in mature to old-growth forests with high canopy closure and generally avoid large openings. They are associated with mesic forest conditions and forested riparian areas. They eat small mammals, birds, fish, amphibians, insects, carrion, fruits, nuts, and berries (Douglas and Strickland 1987).

Although potential habitat for fishers exists on the Bald Mountain Ski Area, the probability of fishers occurring there is extremely low (no known observations in the project area or across the entire Ranger District). The Ketchum Ranger District likely occurs outside of the range of fishers in Central Idaho. The proposed thinning of conifer stands would maintain the area as potential habitat for fishers (thinning from below and small group selection harvest as opposed to clear-cutting, and no thinning in riparian areas). It is unlikely that allowing the construction and future recreational use of the proposed bike trails would have any effect on fishers since high levels of year-round recreational use already occurs on Bald Mountain and the probability of fishers occurring there is so low. Therefore, the activities described in Section III would have **no impact** on fisher, their habitat, or increase potential mortality to individuals of the species.

Northern Goshawk (*Accipter gentilis*) – There are several known active goshawk nesting territories on the Ketchum Ranger District (and adjacent districts of the Sawtooth National Forest). The closest nest to the proposed project area is within one mile to the north. The project area is within the foraging area of this nest territory. Two other active goshawk next territories occur within six air miles of the Bald Mountain Ski Area (one to the north another to the northeast). Potential nesting habitat of goshawks occurs within the proposed project area, but no goshawk nests have been discovered there during several surveys conducted in the area.

Goshawk home ranges in mixed conifers forests have been described as 6,000 acres in size and comprised of a nest area (approximately 30 acres), a post fledging-family area or PFA (approximately 420 acres), and a foraging area (approximately 5,400 acres) (Reynolds et al. 1992). Nest areas generally have high tree canopy cover (50-60%) and a high density of large trees (average 20" DBH). The PFA provides cover and prey for the fledglings while developing their flying and hunting skills. These areas should have canopy cover of greater than 50% with well-developed understories. Goshawks prey on a wide variety of forest-dwelling birds and mammals such as grouse, woodpeckers, squirrels, and rabbits. Goshawks tend to use mature forests (and forest edges) for foraging, but also need other habitat elements which provide the necessary requirements for their prey such as snags, downed logs, small openings, herbaceous and shrubby understories (Reynolds et al. 1992).

Due to the high levels of year-round recreation in the Bald Mountain Ski Area, it is unlikely that goshawks would nest in the ski area (likely too much disturbance currently occurs). The proposed forest stand thinning and select patch cut harvest is not expected to negatively affect prey species of goshawks and may actually improve foraging habitat for goshawks (maintains forest cover which provides protection from competing red-tailed hawks while opening up the canopy and increasing accessibility of prey to hunting goshawks). Sufficient canopy of large trees would be retained after the proposed harvest to maintain the stands as potential goshawk nesting habitat although as previously stated, due to the high levels of year-round recreation, the likelihood of goshawks nesting within the ski boundary is considered low. Allowing the construction, development, and use of additional mountain bike trails on the Bald Mountain Ski Area may potentially further reduce the likelihood of goshawks nesting in the project area due to increased potential future disturbance in several of the forested stands. The construction and use of the mountain bike trails is not expected to negatively affect prey species of goshawks or the likelihood that goshawks would forage in the ski area. Overall, allowing the activities described in Section III may slightly reduce the potential for goshawks to nest in the project area, but would have **no impact** to goshawks, their habitat, prey species, or increase potential mortality to individuals.

Boreal Owl (*Aegolius funereus*) – Many observations of boreal owls have been made on the Ketchum Ranger District in open, mature Douglas-fir forests above 6,000 feet in elevation. Boreal owls have been heard within one mile to the west of the project area in Basset Gulch. No boreal owls were heard on the Bald Mountain Ski Area during surveys conducted for the species in 2004 and 2006.

Boreal owls are known to occur in spruce-fir, Douglas-fir, and mixed conifer forests above 5,000 feet elevation. They are cavity-dependent and generally use old woodpecker cavities for their nest sites. They feed on forest dwelling small mammals such as voles and shrews (Johnsgard 1988). Boreal owls depend on woodpecker cavities, which usually occur in dead trees for their nest sites. Males arrive at potential breeding territories in late winter (mid-February) and begin calling to attract females by late February or early March.

Potential habitat for boreal owls exists in the Bald Mountain Ski Area, but to date, boreal owls have not been found during surveys conducted in the project area. Due to the limited amount of ground disturbance and number of trees that would be removed, it is not expected that construction and recreational use of the proposed mountain bike trails would have any effect on boreal owls. While some snags would be removed as part of the proposed forest stand thinning and selection patch cut harvest, snags would be retained at levels prescribed by Appendix A of the Forest Plan (in general

at least two snags > 20" DBH per acre). As per timber stand thinning mitigation measure #2, large snags greater than 24" DBH (particularly those with bird cavities) would not be removed unless pose an unacceptable safety risk. With adherence to the Forest Plan guidance and the project mitigation measure, potential nesting habitat for boreals should be maintained in the project area albiet at potentially reduced levels (some snags would be removed). It is not expected that either the mountain bike trail construction or the proposed thinning would have any measureable effect on potential prey or foraging of boreal owls. Construction of mountain bike trails and forest thinning would not occur during the critical nesting period of boreal owls (as per wildlife mitigation measure #1), therefore these activities would not disturb any active nesting boreal owl were they to occur in the project area. Allowing activities outlined in Section III, could potentially impact some habitat for boreal owls (removing of snags), but would **not lead to a trend toward federal listing or a loss of viability for the species**.

Flammulated Owl (*Otus flammeolus*) - Observations of flammulated owls have been recorded on the Ketchum Ranger District and adjacent ranger districts in open, mature, Douglas-fir forests. No flammulated owls were heard during surveys conducted for the species within the Warm Springs portion of the project area in 2004. The nearest known observation of a flammulated to the Bald Mountain Ski Area occurred in 1994 within two and a half miles to the west in Moonlight Gulch.

Flammulated owls are known to occur in mature ponderosa pine and mature Douglas-fir forests with an abundance of snags or live trees with cavities for nesting. Flammulated owls eat mainly invertebrates such as various insects, beetles, grasshoppers, and moths. Prey is more abundant and accessible in open forest stands with grass and shrub understories (Johnsgard 1988). This species is truly migratory and does not arrive on its breeding territories until May in Central Idaho.

Potential habitat for flammulated owls exists in the Bald Mountain Ski Area, but to date, flammulated owls have not been found during surveys conducted in the project area. Due to the limited amount of ground disturbance and number of trees that would be removed, it is not expected that construction and recreational use of the proposed mountain bike trails would have any effect on flammulated owls. While some snags would be removed as part of the proposed forest stand thinning and selection patch cut harvest, snags would be retained at levels prescribed by Appendix A of the Forest Plan (in general at least two snags > 20" DBH per acre). As per timber stand thinning mitigation measure #2, large snags greater than 24" DBH, particularly those with bird cavities, would not be removed unless pose an unacceptable safety risk. With adherence to the Forest Plan guidance and the project mitigation measure, potential nesting habitat for flammulated owls should be maintained in the project area albiet at potentially reduced levels (some snags would be removed). Creating more open forest stands through the porposed stand thinning and selection patch cut harvest may potentially improve habitat for flammualetd owl foraging (known to use open forest stands for foraging). Construction of mountain bike trails and forest thinning would not occur during the critical nesting period of flammulated owls (as per wildlife mitigation measure #1), therefore these activities would not disturb any active nesting of the species if they were to occur in the project area. Allowing activities outlined in Section III, could potentially impact some habitat for flammulated owls (removing of snags), but would **not lead to a trend toward federal listing or a loss of viability for the species**.

Northern Three-toed Woodpecker (*Picoides tridactylus*) – Three-toed woodpeckers have been observed on the Ketchum Ranger District and adjacent Sawtooth National Recreation Area in

lodgepole pine stands where mountain pine beetles are present. The nearest known observations have occurred approximately seven miles to the north in 1998 and eight miles to the west in 2003.

Three-toed woodpeckers are found in northern coniferous forests, primarily associated with mature forests with outbreaks of bark beetles. They forage mainly in dead trees and a large percentage of their diet is wood-boring insect larvae. They excavate cavities in snags or occasionally live trees (Short 1982). This species may make small movements off its breeding territory in the winter to find food, but is generally a resident. Breeding begins in May in Central Idaho.

Some amount of lodgepole pine exists on the Bald Mountain Ski Area, but it occurs as a sub-dominate species with Douglas-fir. Minimal habitat for three-toed woodpeckers occurs in the project area; therefore it is unlikely that allowing proposed activities would have any effect on the species. Activity timing restrictions (wildlife mitigation measure #1) would ensure that woodpeckers would not be negatively affected during the critical nesting period. Snag retention guidelines would ensure adequate snags (as per Forest Plan direction) would be maintained. The activities described in Section III would have **no impact** on three-toed woodpeckers, their habitat, or increase potential of mortality to individuals of the species.

White-headed Woodpecker (*Picoides albolarvatus*) – No habitat for the white-headed woodpeckers is present on the Bald Mountain Ski Area and the nearest observation of a white-headed woodpecker is approximately 42 air-miles to the west on the Fairfield Ranger District. The Ketchum Ranger District does not have potential habitat for the species due to a lack of ponderosa pine.

White-headed woodpeckers are found in open, mature mixed conifer forests, mainly ponderosa pine and mixed ponderosa pine/Douglas-fir forests in Idaho (Frederick and Moore 1991). They feed on pine seeds and insects under bark and on branches (Ligon 1973). Nests are usually excavated in large diameter, dead trees in moderate to advance decay (Bull et al. 1986). Breeding begins in late April in Central Idaho.

Habitat for white-headed woodpeckers is not present within the project area. Therefore allowing the activities described in Section III would **no impact** on white-headed woodpeckers, foraging, reproduction, or increase potential mortality to individuals of the species.

Columbia Spotted Frog (*Rana luteiventris*) - Spotted frogs are found in areas where permanent water is present, such as marshes, ponds, or riparian areas. Adult spotted frogs feed on invertebrates, generally within one-half meter of shore on dry days. During and after rains, they may move away from permanent water to feed in wet vegetation or ephemeral puddles (Licht 1986). Spotted frogs breed from late February to early July. In areas where individual wetlands do not meet all life history requirements, they may move multiple times within a season in order to reach suitable breeding, foraging, and wintering sites. These movements can occur along wetland (ephemeral or permanent) corridors and overland, with stops at seeps, springs, and isolated pools or puddles where available (Turner 1960; Pilliod *et al*. 2002). Annual migrations of $\geq$ 2 km round-trip between wintering, breeding, and foraging sites have been observed in some high elevation populations in central Idaho, with adults traveling 500 meters across dry upland forested habitats (Pilliod *et al.* 2002). Spotted frogs hibernate during winter and emerge when open water becomes available, generally during spring thaw. A water temperature of 40 degrees Fahrenheit seems to be

the critical temperature for emergence from hibernation (Morris and Tanner 1969), which may occur as early as the first part of April in the project area.

Observations of spotted frogs have been recorded in several places on the Ketchum Ranger District. No spotted frogs have been documented in the proposed project area. The closest confirmed observation was documented in 2003 during an amphibian survey at a pond adjacent to Highway 75, approximately 4 miles north. Potential habitat for spotted frogs occurs in the vicinity of Bald Mountain Ski Area, so it is possible that spotted frogs are present within the proposed action area.

There are no documented perennial springs or wetlands in the project area. Therefore, the proposed thinning should have no effect on potential spotted frog breeding and wintering habitats. Because some thinning activity is proposed within the 150-foot RCA buffers of intermittent channels, there is the possibility of an effect on potential spotted frog migratory corridors. However, these areas of proposed thinning within RCAs are located in steep terrain approximately 0.5 miles uphill from the Big Wood River, without wetlands or standing water available nearby. Therefore, it is unlikely that any spotted frogs would be migrating through or present in the areas proposed for thinning. The trails component of the proposal does not include any trail construction along perennial streams, through wetlands or seeps, nor near known spotted frog habitats.

With adherence to the BMPs and mitigation measures outlined in Section III that protect aquatic resources, and given the low probability that spotted frogs are present the project area, implementation of the proposed activities should have **no impact** on Columbia spotted frogs.

Wood River Sculpin (*Cottus leiopomus*) –The Wood River sculpin (WRS) is endemic to the Big Wood, Little Wood, and Camas subbasins of central Idaho. Little is know about the specific habitat requirements of Wood River sculpin, but freshwater sculpin are typically found in clear streams with cobble or gravel bottoms and require cool water with high oxygen content (Meyer *et al*. 2008a). Sculpin are relatively intolerant of water pollution and their presence in a stream generally indicates good water quality. Research suggests that sculpin may be less sensitive to streambank and riparian conditions than salmonids, but that sediment embeddedness and low stream channel gradient appear to be associated with lower Wood River sculpin abundance (Griffith 1996). Meyer *et al*. (2008b) concluded that WRS was the most abundant fish species in 1st to 4th order streams within its range and that it was present at most locations in which any type of fish was present. In general, WRS appear to require habitat conditions similar to those required by native redband trout (Meyer *et al.* 2008a), but sculpin are not found in many stream reaches with relatively high gradient.

<u>Presence in the Project Area</u>

Wood River sculpin have been documented in the Big Wood River in the vicinity of Bald Mountain Ski Area, just downstream near the confluence with Trail Creek. Although there are no records of Wood River sculpin sampled in Warm Springs Creek near the proposed project site, nor in the two-mile long stream segment from the project area downstream to the confluence with the Big Wood River, there are records of WR sculpin being sampled at multiple sites in lower Warm Springs Creek above the project area (Griffith 1996, Abbruzzese and Henderson 1999). Wood River sculpin have also been documented at high densities in the Big Wood River one mile upstream from the Warm Springs Creek confluence (Merkley and Griffith 1993). Therefore, it is likely that individuals reside in Warm Springs Creek in the vicinity of the proposed project area.

Potential effects on Wood River sculpin

The proposed project will have no direct effect on Wood River sculpin or other aquatic species because there are no perennial streams in the action area. Although there are intermittent stream channels in the action area, those streams are not fish-bearing.

The proposed actions could have indirect effects on water quality due to increased hillslope erosion and sedimentation. The new trail construction will disturb existing vegetation and expose soils to runoff and erosion. In particular, the creation of new trails may increase hillslope erosion and sediment transport across the landscape. This could result in the delivery of fine sediments and gravel into the river and streams. Implementation of tree stand thinning and other vegetation management actions could also result in increased erosion and sediment input, with a near-term decrease in local large woody debris abundance.

However, the distance between flowing water and the areas where activities are proposed is substantial; the expanse of native vegetation in between would trap the fine sediments that may be mobilized across the landscape. Further, there are no intermittent or perennial tributaries within the project area to allow sediment to flow directly into the Big Wood River or Warm Springs Creek. Therefore it is unlikely that the proposed project will have a measureable effect on fish habitat, Wood River sculpin or other fish populations.

As noted in the project description section, various BMPs and mitigation measures will be required to minimize hydrologic resource damage and potential effects on aquatic resources. With adherence to the BMPs and mitigation measures, the project should have only negligible effects on water quality and aquatic habitat conditions in the Big Wood River and Warm Springs Creek. Therefore, the proposed activities should have **no impact** on Wood River sculpin.

Northern Leatherside Chub (*Lepidomeda copei*) – The northern leatherside chub is a rare desert fish in the minnow family (Cyprinidae) that occurs in northern Utah and Nevada, southern and eastern Idaho, and western Wyoming (Johnson *et al.* 2004). Despite one historic, unconfirmed observation of this species in the Big Wood River, there are no verified records of this species being observed or vouchered during extensive sampling efforts in the Big Wood River Subbasin. In its finding on a 12-month petition to list the species, FWS determined that the Big Wood River and its tributaries are no longer considered current or historical range for northern leatherside chub (76 FR 63443). Therefore, implementation of the proposed activities will have **no impact** on northern leatherside chub.

Mountain Quail (*Oreortyx pictus*) – Observations of mountain quail have occurred over 38 air-miles to the east of the Bald Mountain Ski Area on the west side of the Fairfield Ranger District and the east-side of the Mountain Home Ranger District (2000-2012). No observations of mountain quail have been made on the Ketchum ranger District. The Bald Mountain Ski Area is not considered potential habitat for the species.

Mountain quail are found in dense brush, coniferous forests, and around the edges of mountain meadows from 1,500- 10,000 feet elevation. Important year-round habitat needs consist of tall, dense shrubs and water. This species eats a variety of seeds and fruits. The mating season begins in April and extends into mid-July. Nests are within a few hundred feet of water because the chicks need water soon after hatching.

Since no habitat for mountain quail occurs on the Bald Mountain Ski Area and no individuals of the species have been observed within 30 miles of the area, allowing activities described in Section III, would have **no impact** on mountain quail.

Greater Sage-Grouse (*Centrocercus urophasianus*) – See Section IV. A. Endangered Species Act Listed Species for description of effects. Based on the conclusions in Section IV. A., implementation of activities outlined in Section III would have **no impact** on the species.

Pygmy Rabbit (*Brachylagus idahoensis*) – No observations of pygmy rabbits have been made on the Ketchum Ranger District, but extensive surveys have not been conducted. A University of Idaho research project was initiated in 2003, conducting surveys for pygmy rabbits in areas mapped as having the highest potential using GIS techniques and habitat characteristics from known species locations (Rachlow and Svancara 2003). Research technicians have located pygmy rabbits on BLM and State lands within 26 air-miles to the south of the Bald Mountain Ski Area. Potential habitat for the species does not occur in the project area.

Pygmy rabbits are considered a sagebrush obligate species. They tend to utilize areas with taller and denser sagebrush and since they excavate burrows, they have specificity for certain soil of depth and texture that allows for easier excavation. Populations and distribution of pygmy rabbits declined in the 1900's due to loss and fragmentation of suitable habitat for this species (Rachlow and Svancara 2003).

Since no potential habitat for pygmy rabbits would be affected by allowing activities decsribed in Section III, the proposed activities would have **no impact** on pygmy rabbits.

Peregrine Falcon (*Falco peregrinus*) - Currently, there are three known peregrine falcon eyries on the Sawtooth National Forest located in the Sawtooth Wilderness. The proposed project area is over 32 air miles to the southeast of the closest known eyrie. Potential nesting habitat exists on the District although no nesting has been ever been confirmed. No potential peregrine falcon nesting habitat occurs within or near the proposed project area.

Peregrine falcons require the presence of tall cliffs, approximately 150 feet in height, with adequate ledges for nesting and perching. An adequate prey base consisting of small to medium-sized birds within approximately 10 miles of the nest cliff is also needed (Johnsgard 1990).

Since no potential nesting habitat for peregrine falcons occurs in the project area, and peregrine falcons are not known to forage in the area, allowing activities described in Section III would have **no impact** on peregrine falcons.

Bald Eagle (*Haliaatus leucocephalus*) - The Ketchum Ranger District provides wintering habitat for bald eagles, primarily along the Big Wood River. No bald eagles are known to nest on the Ketchum Ranger District, but there are active nests on private land over twenty air-miles to the south and southeast of the project area (Big Wood River and Silver Creek). No potential bald eagle nesting habitat occurs in the project area.

Nesting requirements of bald eagles include suitable nest substrate (mainly tall, large diameter trees) with access to water nearby. Winter habitat is variable, but generally requires open water for

foraging or a reliable source of carrion with adequate perch trees nearby. Eagles need freedom from human disturbances year round (Stalmaster 1987).

No potential bald eagle nesting or wintering habitat would be affected by the proposed activities described in Section III. Therefore allowing the proposed activities would have **no impact** on bald eagles.

Bighorn Sheep (*Ovis canadensis*) –Bighorn sheep were listed as a Region 4 Forest Service sensitive species on July 29, 2009 for the following reasons: populations of bighorn sheep are less than 10% of historic, populations occupy less than one third of presettlement range, populations are relatively isolated and often consist of less than 100 individuals, habitat degradation, human disturbance, and disease transmission from domestic sheep (Forsgren 2009).

No known population of bighorn sheep occur on the Ketchum Ranger District, but observations of individual or small groups of bighorn sheep have occurred on the District over the past few decades, but none within the Bald mountain Ski Area. There nearest (unconfirmed) observation of a bighorn sheep to the project area was near the Hailey Airport in 2005 (approximately 11 air-miles south of Bald Mountain).

Bighorn sheep typically occur in areas where rugged topography is readily accessible, generally in mountain or canyon habitats. Sheep tend to prefer open habitats with an abundance of forage and without vegetation that obstructs visibility (Risenhoover and Bailey 1985). They forage on a variety of grasses, forbs, and shrubs throughout the year. In central Idaho, grasses made up the majority of bighorn sheep diets throughout the year, though forbs and shrubs were important during late summer and winter (Wagner and Peek 2006). In winter in Yellowstone and in the East Fork of the Salmon River in Idaho, diets were dominated by grasses (Keating et al. 1985, Lauer and Peek 1976). Breeding occurs in the fall and lambs are born May to mid-June. Bighorn sheep tend to form small groups, most likely for the increased vigilance that a herd provides. Many populations, including the population on the Sawtooth NRA, exhibit seasonal migration, moving to high elevations in the summer and lower elevations in the winter.

Historically bighorn sheep were considered to be the most abundant game animal in the mountains of Idaho prior to 1850. Declines began as human settlement and their associated activities increased in Idaho. Over hunting, mining, domestic livestock grazing, and diseases have all contributed to bighorn sheep declines. Rocky Mountain bighorn sheep in Idaho have continued to decline with numbers dropping from approximately 3700 in 1990 to 1700 in 1998 (Toweill and Geist 1999).

Since no known existing bighorn sheep populations occur on the Ketchum Ranger District, allowing the activities descrbed in Section III would have **no impact** on bighorn sheep.

Gray Wolf (*Canis lupus*) - The Ketchum Ranger District is adjacent to the Idaho Gray Wolf Recovery Area. Wolf activity was reported in many locations throughout the Ketchum Ranger District 2002-2013, although none directly within the proposed project area. Sightings of wolves have occurred on the north side of the Warm Springs drainage within a half mile of the proposed project area. Wolves have also been observed in Greenhorn Gulch approximately three miles south of the the Bald Mountain Ski Area. Both the Warms Springs and Greenhorn Gulch drainages provide habitat for wolves, though no packs are known to have established. Year round range for

mule deer and elk occur near the project area, both of which provide a food source for wolves. The project area is used extensively by mule deer in the summer and fall, and used by the occasional elk.

Confirmed breeding of wolves (Hyndman Pack) occurred on the Ketchum Ranger District within 2005, approximately 14 air miles east of the proposed project area. The alpha female of this pack was killed by Wildlife Services in 2005 in response to sheep depredation. It is unknown if breeding occurred on the Ketchum Ranger District 2006-2012, but confirmed reproduction of wolves occurred on adjacent ranger districts and BLM lands.

Suitable habitat for the wolf has been defined as any place with an adequate supply of ungulate prey and freedom from excessive human persecution (Fritts et al. 1993). Wolves prey mainly on ungulates year-round (Mech 1970). The basis of a wolf population is the pack, which Mech defined as a cohesive group of two or more individual wolves traveling, hunting, and resting together throughout the year. Packs generally consist of two breeding adults, pups, yearlings, and/or extra adults. Wolf packs generally require large home ranges. Actual size of a pack's home range depends mainly on pack size, weather, and prey abundance and distribution. Territories of 80 square miles have been reported in Minnesota to over 660 square miles in Alberta (U.S. Fish and Wildlife Service 1994).

The activities as described in Section III would not likely impact gray wolves. Extensive year-round recreation already occurs at Bald Mountain. The future use of the proposed mountain bike trails may increase recreation use of the area to some degree, but would not likely affect potential wolf foraging over current conditions or reduce their likelihood to den in the project area (would remain low probability due to year-round human presence). The proposed forest thinning and selection patch cut harvest is not expected to negatively affect wolves, their prey, base, etc. For these reasons, allowing the proposed activities would have **no impact** on gray wolves, foraging, or increase the potential of mortality for individuals of the species.

BLM Wildlife Sensitive Species

Black-backed Woodpecker (*Picoides arcticus*) – There is one recorded observation of a black-backed woodpecker on the Ketchum Ranger District from 2006 approximately 11 air-miles to the northwest of the Bald Mountain Ski Area. Habitat for the species occurs on the District, particularly in recent burned areas such as the Castle Rock Fire area, but surveys have not been conducted. Potential habitat for black-backed woodpeckers occurs in the burned areas on the west-side of the Bald Mountain Ski Area.

Black-backed woodpeckers utilize a variety of habitat types ranging from early successional forests of mixed conifer and lodgepole pine to late successional subalpine forests and riparian woodlands (Wisdom et al. 2000, Hutto 1995a, 1995b). They appear to prefer low elevation Douglas-fir and pine forest habitats (Bock and Bock 1974). Black-backed woodpeckers typically concentrate in recently burned forests for foraging and require standing snags and downed wood for foraging (Harris 1982). Black-backed woodpeckers forage on wood-boring insects by flaking off bark and gleaning insects from the surface (Dixon and Saab 2000). They are also known to feed on other insects, as well as fruit, nuts and sap.

Black-backed woodpecker nest in cavities excavated in live with heart-rot or recently dead trees (Wisdom et al. 2000). Preferred tree species for nesting include ponderosa pine, lodgepole pine,

and western larch. Breeding typically occurs in late spring through summer (Goggans 1989). Research in the Blue Mountains indicated that Black-backed woodpeckers preferred smaller size trees, average diameter of 14 inches, for nest cavities (Bull et al. 1986).

None of the area burned by the Castle Rock Fire within the project area is proposed for any timber harvest as a result of the proposed activities. Therefore this potential black-backed woodpecker habitat would not be affected by the proposed timber stand thinning and selection patch cut harvest. There is likely unburned potential habitat for the species within the proposed treatment stands. With adherence to design criteria and Forest Plan direction related to snags, potential habitat for the species would remain post-treatment, although with fewer snags present (reduced foraging substrate). A few snags and trees would be removed as part of the proposed mountain bike trail construction, but would be so few that the effect would be negligible. With adherence to wildlife mitigation measure #1 (activity timing restrictions), nesting black-backed woodpeckers would be protected from disturbance from project implementation if they were to nest in the project area. While some minor amount of potential black-backed woodpecker habitat may be affected by allowing the activities described in Section III, this would **not be sufficient to lead to a trend toward federal listing or a loss of viability of the species**.

Lewis' Woodpecker (*Melanerpes lewis*) – Lewis' woodpeckers are known to occur within and adjacent to the Ketchum Ranger District along cottonwood and aspen riparian corridors. No Lewis' woodpeckers have been recorded on the Bald Mountain Ski Area. However, Lewis' woodpeckers may utilize cottonwoods along the Big Wood River immediately adjacent to the ski area. Lewis' woodpeckers have been observed along the Big Wood River within and near the towns of Hailey and Ketchum.

Lewis' woodpecker is a medium-sized woodpecker that typically inhabits open coniferous forests composed of ponderosa pine and Douglas-fir (Tobalske 1997). Lewis' woodpeckers forage primarily by flycatching, which necessitates open canopies for flight. Forest stands with dense shrub understories and insect abundance are preferred (Linder 1994).

There are three principal habitats for breeding; open ponderosa pine forest, open riparian woodland dominated by cottonwood, and logged or burned pine forest (Wisdom et al. 2000). Breeding typically occurs in close proximity to abundant insect sources for foraging. Nests are typically excavated in large snags with advanced decay (Tobalske 1997, Saab and Dudley 1995). Lewis' woodpeckers will reuse nest cavities from primary cavity excavators or use natural cavities of trees (Saab and Dudley 1995). Primary tree species for nesting include ponderosa pine and cottonwood, but aspen and lodgepole pine are also used (Tobalske 1997).

None of the area burned by the Castle Rock Fire within the project area is proposed for any timber harvest as a result of the proposed activities. Therefore this potential Lewis' woodpecker habitat would not be affected by the proposed timber stand thinning and selection patch cut harvest. No cottonwoods are proposed for removal. There may be some unburned potential habitat for the species within the proposed treatment stands. With adherence to design criteria and Forest Plan direction related to snags, potential habitat for the species would remain post-treatment, although with fewer snags present. A few snags and trees would be removed as part of the proposed mountain bike trail construction, but would be so few that the effect would be negligible. With adherence to wildlife mitigation measure #1 (activity timing restrictions), nesting Lewis' woodpeckers would be protected from disturbance from project implementation if they were to nest

in the project area. While some minor amount of potential Lewis' woodpecker habitat could be affected by allowing the activities described in Section III, this would **not be sufficient to lead to a trend toward federal listing or a loss of viability of the species**.

Fringed Myotis (*Myotis thysanodes*) – It is unknown if fringed myotis occur on the Ketchum Ranger District or within the Bald Mountain Ski Area. Surveys for the species have not been conducted. Potential foraging habitat (forested stands) and roosting habitat (snags) occur in the project area. However, no caves or mines are known to occur that could be used for breeding or overwintering.

Fringed myotis utilizes a variety of habitat types throughout its range in western North America. Habitats used by this species include forests, woodlands, grasslands, and deserts (Marshall et al 1996, Keinath 2004). The most common habitats in which this species has been found are oak, pinyon pine, and juniper woodlands or ponderosa pine forest at middle elevations (Cockrum et al. 1996, Wilson and Ruff 1999, Ellison et al. 2004). Fringed myotis regularly roost underneath bark and inside hollows of tree snags, particularly ponderosa pine and Douglas-fir in medium stages of decay (Kurtzman 1994, Morell et al. 1999, Murphy 1994, Rasheed et al. 1995). Nursery colonies, roosting sites, and hibernacula have been found in caves, mines, and buildings (Marshall et al. 1996). Little is known about the winter biology of this species throughout its range (Nagorsen and Brigham 1993). This bat is considered to be sensitive to human disturbance in roosting sites and nursery colonies (Csuti et al.2001).

Fringed myotis typically forage for beetles and insects over vegetative canopies and water (Keinath, 2004). Reproduction studies conducted in New Mexico suggest that breeding occurs from April to July (Keinath, 2004). Little is known about breeding patterns in the rest of its range, but it is assumed to be similar.

It is unknown if fringed myotis bats occur within the Bald Mountain Ski Area. Some potential roosting habitat (snags) would be removed as part of the proposed forest stand thinning and selection patch cut harvest. However with adherence to design criteria and Forest Plan direction some snags would remain post harvest. The proposed thinning may improve potential foraging habitat in the long term for the species by opening up the forested canopy and creating more open stands conducive to foraging for insects. Since activity timing restrictions would not allow construction of trails or forest thinning during the critical breeding or wintering hibernation time periods, disturbance to the species would not occur during these periods. It is unlikely implementing the proposed activities would cause direct mortality to any fringed myotis bat. The proposed activities may slightly affect potential habitat for the species, but would **not likely lead to a trend toward federal listing or a loss of viability for the species**.

Twenty seven Sensitive & Watch Plant Species are not included further in this analysis. Rationales for exclusion are listed below.

Sensitive & Watch Plant Species Not Analyzed	Reason for Exclusion
Allium validum Tall Swamp Onion	This species occurs springs and riparian communities. Where present in the analysis area will not incur disturbances associated with proposed action.
Artemisia campestris ssp. *borealis* var. *purshi* Northern sagewort	This species occurs in the White Cloud Mountains in xeric alpine fellfield habitat between 8,000 and 12,000 feet elevation. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Astragalus amblytropis Challis milkvetch *Astragalus aquilonius* Lemhi milkvetch	These species restricted edaphically to the Challis volcanics soils. Found in the arid region formed by the rain shadow of the White Cloud and Salmon River mountain ranges East Fork of Salmon River area. This is outside of the analysis area.
Astragalus leptaleus Park milkvetch	This species occurs in willow /graminoid-dominated riparian communities which are not present in the analysis area.
Astragalus vexilliflexus. var. *nubilus* White Cloud milkvetch	An endemic species that occurs in alpine or subalpine habitats in the White Cloud Mountains. Not in the analysis area.
Bryum calobryoides Bryum moss	This species occurs in peat bogs and swampy riparian communities which are not present in the analysis area.
Carex buxbaumii Buxbaum's sedge	This species occurs in peat bogs and swampy riparian communities which are not present in the analysis area.
Carex engelmannii Englemann's sedge *Carex incurviformis var. incurviformis* Sand sedge	These species occurs above timberline (9,000-10,000') on wet or dry unstable rocky, talus slopes, and alpine tundra which are not present in the analysis area.
Carex livida Pale sedge	This species occurs in peat bogs and swampy riparian communities which are not present in the analysis area.
Carex straminiformis Mt. Shasta sedge	This species occurs open rocky slopes near or above timberline (8000-10,000') with low growing alpine vegetation. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Douglasia idahoensis Idaho Douglasia	This species occurs on open rocky slopes (7600-8200) with low growing alpine vegetation. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Draba globosa Pointed draba	This species is found on alpine fellfields, sparsely vegetated meadows, and northeast facing, dry rocky ridges of semi-bare granite, at the base of talus slopes, on rocky outcrops, or amongst granitic- boulders and talus. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.

Draba incerta Yellowstone draba	This species is found on ridgecrests and talus slopes with rocky, sandy or volcanic substrates in the subalpine to alpine zone. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Draba trichocarpa Stanley's whitlow-grass	This is an endemic species that occurs in the Stanley Basin which is not in the analysis area.
Drosera intermedia Spoon-leaved sundew	This species occurs in peat bogs and swampy riparian communities which are not present in the analysis area.
Epipactis gigantea Giant helleborine orchid	This species occurs springs and riparian communities. Where present in the analysis area will not incur disturbances associated with proposed action.
Eriogonum meledonum Guardian buckwheat	This is an endemic species that occurs in the Stanley Basin which is not in the analysis area.
Helodium blandowii Blandow's helodium	This species occurs in peat bogs and swampy riparian communities which are not present in the analysis area.
Lewisia sacajaweana Sacajawea's bitterroot	This species is found on ridgecrests and talus slopes with rocky, sandy or volcanic substrates in the subalpine to alpine zone. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Saxifraga adscendens ssp. *oregonensis* Wedge-leaf saxifrage *Saxifraga cernua* Nodding saxifrage	This species occurs in alpine wet meadows, on northerly-facing, cliffs, rock ledges and crevices that remain wet due to their proximity with creeks or alpine rivulets. These habitats are not in analysis area.
Polystichum kruckebergii Kruckeberg's hollyfern	This species is found growing in rocks and cliffs in subalpine to alpine habitats. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.
Primula incana Silvery primrose	This species is typically found in springs with calcareous soils, which are not present in the analysis area.
Salix farriae Farr's willow	This species is found wet subalpine meadows, fens and bogs, streambanks, and lakeshores, between 8,000-9,600 feet elevation. . These habitats are not in analysis area.
Silene uralensis ssp. montana Petal-less campion	This species is found on peaks and talus slopes with sparse cushion plant vegetation types. Habitat with these characteristics in the analysis would not incur disturbances from the proposed action activities.

Six Regional Forester's Sensitive & Forest Watch Plant Species are included in this analysis:

1) Slender moonwort *Botrychium lineare*
2) Least moonwort *Botrychium simplex*
3) Stanley Thlaspi *Noccaea idahoensis var. aileeniae*
4) Least phacelia *Phacelia minutissima*
5) Bugleg haplopappus *Pyrrocoma insecticruris*
6) Marsh's bluegrass *Poa abbreviata* ssp. *marshii*

Slender Moonwort (*Botrychium lineare*)

Status of Species

In July 1999, the U.S. Fish and Wildlife Service was petitioned to add the slender moonwort to the

List of Threatened and Endangered Plant Species. The Service published the 90-day petition finding and initiated a 12-month status review in May 2000. In June 2001, they published a finding that supported listing slender moonwort, but was precluded by work on higher priority listing actions and placed on the candidate species list (*Federal Register June 6, 2001 Vol. 66, number 109*). December 6, 2007 USFWS removed slender moonwort removed because it is more abundant than previously recognized and there is insufficient information to justify its continued candidate status. (*Federal Register December 6, 2007 Vol. 72, No. 234*). It is currently a Regional Forester's Sensitive species.

Habitat Factors

A specific habitat description for the species is problematic because of its current and historically disjunct range of more than 107,000 square miles. Some researchers consider *B. lineare* a habitat generalist that may be an opportunistic colonizer since it is found in a variety of natural sites, and several extant population sites are found in man-made disturbed sites (*Federal Register December 6, 2007 Vol. 72, No. 234*). Slender moonwort is found in a variety of montane forest or meadow habitats described as "deep grass and forbs meadows, under trees in woods, and on shelves on limestone cliffs, mainly at higher elevations" (Wagner and Wagner 1994), but they also state that to describe a typical habitat for this species would be problematic since the known sites are so different. Other slender moonwort sites occur in grass- to forb-dominated openings in forests characterized by cone-bearing trees such as pine, spruce, and fir species. Three of the known Montana slender moonwort populations occur on roadsides in early seral habitat.

Description

Slender moonwort is a small perennial fern with a pale green leaf (trophophore) 2-7 inches long. Leaf segments are typically linear and divided or forded at the ends. The sporophore (spore-bearing structure) is 1 to 2 times the length of the trophophore with a single main axis. *Botrychium* spores are small and lightweight enough to be carried by air currents. This dispersal mechanism may explain the broad and often disjunct distribution patterns exhibited by moonworts (Vanderhorst 1997).

All *Botrychium* species are believed to be obligately dependent on mycorrhizal fungi throughout their life cycle. A fungal associate is present within the plant at the earliest stages of development, and there are no reports of successful completion of the *Botrychium's* life cycle without mycorrhizal fungi. Very little information exists regarding the specificity or habitat requirements of the mycorrhizal fungi that are associated with moonworts (Vanderhorst 1997). Similar to orchids, *Botrychium* species can remain dormant for 1 or more years, and cannot be identified with certainty in their immature stages.

Threats

Threats to this species include: trampling from recreation uses recreation uses, off road vehicle use, maintenance or construction of trails and roads, timber sales and fuels projects, competition from non-native species, and affects of domestic livestock grazing.

Direct and Indirect Effects

Slender moonwort is a perennial ferns that often remains dormant for several years and could be unintentionally disturbed if occurrences are not known. The proposed action's activities could remove or trample individuals, create ground disturbances that alter the mycorrhizal fungi and soil

moisture holding capacity. Habitats such as roadsides and trails are highly susceptible to non-native plant species invasions. Disturbance increases susceptibility to non-native plant species invasion, but is not necessary for non-native plant species to become established particularly along roads, trails and recreation-use areas, and livestock use areas.

There is a low risk that proposed action's activities could negatively affect slender moonwort. Compliance with design criteria, and best management practices that involve taking preventative measures regarding introduction and spread of non-native invasive plant species would lessen the impacts to slender moonwort. Therefore, the proposed action's activities **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species**.

Least Moonwort (*Botrychium simplex)*

Status of Species

Least moonwort is a Regional Forester's Sensitive species and is known to occur in two locations on the Sawtooth NRA.

Habitat Factors

Least moonwort grows in moist to dry soils in a wide variety of habitats ranging from conifer woods and meadows to rocky places between 4,000 and 6,000 feet. It typically is found in deep shade and duff, making it even more inconspicuous and difficult to find (Lorain 1990).

Description

A tiny somewhat fleshy perennial fern that grows 1-5 inches tall, and produces a sterile leaf and a fertile stalk. The sterile leaf is highly variable in appearance, it can be simple, but more commonly is divided into three main branches (ternate). Each branch can further divide into 2-4 pairs of segments (pinnae). These segments are fan-shaped, have entire margins, and overlap one another. Generally, the sterile leaf attaches to stalk at or below ground level. The fertile stalk can range from 1-4 inches long, with yellow spore clusters (sporangia).

Threats

Threats to this species include: trampling from recreation uses, off road vehicle use, maintenance or construction of trails and roads, timber sales and fuels projects, competition from non-native species, and affects of domestic livestock grazing.

Direct and Indirect Effects

Least moonwort is a perennial ferns that often remains dormant for several years and could be unintentionally disturbed if occurrences are not known. The proposed action's activities could remove or trample individuals, create ground disturbances that alter the mycorrhizal fungi and soil moisture holding capacity. Habitats such as roadsides and trails are highly susceptible to non-native plant species invasions. Disturbance increases susceptibility to non-native plant species invasion, but is not necessary for non-native plant species to become established particularly along roads, trails and recreation-use areas, and livestock use areas.

There is a low risk that proposed action's activities could negatively affect least moonwort. Compliance with design criteria, and best management practices that involve taking preventative measures regarding introduction and spread of non-native invasive plant species would lessen the impacts to least moonwort. Therefore, the proposed action's activities **may impact but will not**

likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.

Idaho Stanley thlaspi mustard (*Nocceae idahoensis var. aileeniae)*

Status of Species

Idaho Stanley thlaspi mustard is a Regional Forester's Sensitive species. It is a regional endemic species to the intermountain valleys of central Idaho. There are 18 known occurrences in the Stanley Basin, Sawtooth Valley, and upper Big Wood River Valley near Easley Creek. Eight of theses occurrences are within the Sawtooth National Forest.

Habitat Factors

It is found on loose bare sandy soil on steep slopes among small rocks on sagebrush/fescue flats (both *Artemisia arbuscula* ssp. *thermopola* and *Artemisia tridentata* ssp. *vaseyana*) and alluvial terraces in the Big Wood River drainage. Elevation of known populations ranges from 6,000 to 11,000 feet (Moseley 1998).

Description

It is a perennial low growing plant with several stems less than 2 inches tall arising from a basal rosette of fleshy linear leaves. Flowers have 4 white petals and are arranged in clusters at top of stem. Flowering from May to June. Fruits are obovate to nearly elliptical siliques.

Threats

Threats to this species include: habitat loss (fire and cheatgrass invasion), mining activities, recreation activities such as trampling by foot or pack animal, the maintenance or construction of trails and roads, and off road vehicle uses, competition from non-native species, herbicides application, and affects of domestic livestock grazing.

Direct and Indirect Effects

Idaho Stanley thlaspi mustard is a low growing perennial forb that appears in the spring and is desiccates by late summer. Due to the timing of the field 2012 surveys it is possible individuals may have already disappeared. The proposed action's activities in mountain big sagebrush areas could potentially remove or trample individuals, or disturb the root systems of Idaho Stanley thlaspi. Mountain big sagebrush habitats are particularly vulnerable to non-native plant species invasions due to their dry, open character. Disturbance increases susceptibility to non-native plant species invasion, but is not necessary for non-native plant species to become established particularly along roads and trails in high recreation-use areas. The chemical herbicides used to treat invasive plant species could kill Idaho Stanley thlaspi mustard, alter soil chemistry and microbes associated with Idaho Stanley thlaspi mustard, and have affects on associated pollinator performance that inhibit tasks such as olfactory learning, foraging, and reproduction, which affects hive survival and Idaho Stanley thlaspi mustard reproduction.

There is a moderate risk that the proposed action's activities could negatively affect Idaho Stanley thlaspi mustard individuals and potential sagebrush habitat. Compliance with design criteria, and best management practices that involve taking preventative measures regarding introduction and spread of non-native invasive plant species near occurrences and potential habitat would lessen the impacts to Idaho Stanley thlaspi mustard. The proposed action's activities in sagebrush habitats **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

Least phacelia (*Phacelia minutissima)*

Status of Species

Least phacelia is a Regional Forester's Sensitive species. Multiple occurrences of least phacelia are known from the Owyhee Mountains. There are two occurrences north of the Snake River; one on a ridge extending east-southeast from Smoky Dome in the Soldier Mountains within the Fairfield Ranger District, Sawtooth NF, the other near Hash Spring, on the Shoshone BLM . Both are considered historic occurrence and recent surveys have failed to relocate the sites.

Habitat Factors

Least phacelia is a regional endemic species occurring at upper elevations (5,000 to 8,200 ft), in ephemerally moist sagebrush-steppe, aspen stands, or lower montane forests (Atwood 1995). It is often near areas of late snow banks, typically occurring in meadows, springs and seeps. Idaho populations occur mostly in stands of false hellebore and adjacent forbs/grasses or near mixed aspen, willow, subalpine fir communities (USDI, 1997).

Description

It is a dwarf, erect annual. It is .75-4 inches in height with simple or sometimes branching stems. The leaves are entire, reverse lance-shaped (oblanceolate), and about 1 inch long and 1/2 inch wide on the lower part of the plant. The plant is hairy and glandular. The flower stalk uncoils like a fiddlehead (helicoid cyme) and produces lavender/pale blue flowers in late June and July.

Threats

Threats to this species include: mining activities, recreation such as trampling, disturbance with the maintenance or construction of trails and roads, off road vehicle uses, water development, competition from non-native species, herbicides application, and affects of domestic livestock grazing.

Direct and Indirect Effects

Least phacelia is an annual forb found in mesic sagebrush steppe and aspen stands. The proposed action's activities occurring in these habitats could potentially remove or trample individuals, or disturb the root systems of least phacelia. Sagebrush steppe habitats are particularly vulnerable to non-native plant species invasions due to their open character and high levels of disturbances. Disturbance increases susceptibility to non-native plant species invasion, particularly along roads and trails in high recreation-use areas.

There is a moderate risk that the proposed action's activities could negatively affect least phacelia individuals and potential habitat. Compliance with design criteria, and best management practices taking preventative measures regarding introduction and spread of non-native invasive plant species near occurrences and potential habitat would lessen the impacts to least phacelia. The chemical herbicides used to treat invasive plant species could kill least phacelia, alter soil chemistry and microbes associated with least phacelia, and have affects on associated pollinator performance that inhibit tasks such as olfactory learning, foraging, and reproduction, which affects hive survival. Since least Phacelia is an annual it relies on pollination and seed production to reproduce. The proposed action's activities in aspen stands and sagebrush habitats **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

Marsh's bluegrass (*Poa abbreviata* ssp. *marshii*)

Status of Species

Marsh's bluegrass is a Region 4 Sensitive species that occurs in California, Nevada, and Idaho. There is one occurrence on the Sawtooth NRA in the Boulder Mountain Range.

Habitat Factors

It is found in alpine meadows and on granite talus slopes. Occurrences are known from 9,000 to 10,000 feet elevation. (Soreng 1991).

Description

Marsh's bluegrass is a perennial grass that forms small, dense tufts, growing about 2-6 inches high.

Threats

Threats to this species include: habitat loss due to climate change, trampling from recreation at high elevations, mining activities, non-native species, and affects of domestic livestock grazing.

Direct and Indirect Effects

Marsh's bluegrass is a perennial monocot that grows in grassy alpine habitats. Marsh's bluegrass was not located during 2012 fiels surveys however the upper bowls area is potntial habitat for it. The most likely proposed action's activities that could affect this habitat types is the trail costruction. Disturbances include vegetation removal and trampling, disturbance of biotic crust, and soil compaction and disturbance. These would lead to subsequent soil erosion and loss, leading to a reduction in soil moisture holding capacity.

There is a low risk that trail construction could negatively affect Marsh's bluegrass potential habitat. Compliance with design criteria, and best management practices that involve minimum disturbances, and taking preventative measures regarding introduction and spread of non-native invasive plant species near occurrences and potential habitat would lessen the impacts to Marsh's bluegrass potential habitat. Therefore, the proposed action's activities **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

Bugleg Goldenweed (*Pyrrocoma insecticruris)*

Status of Species

Bugleg goldenweed is a Regional Forester's sensitive species. It is an endemic species to in south central Idaho. There are several known occurrences within the Sawtooth National Forest.

Habitat Factors

Bugleg goldenweed is found on dry ground with sagebrush in vernally wet grasslands and meadows, swales, and dry edges of seeps underlain by shallow basalt, gravelly to clay soils. It is found between 4,500 and 7,500 feet (Lee 1985). Populations occur in both undisturbed and disturbed communities with various levels of competition. Numerous sites have past as well as on-going disturbance, including road shoulders, fence lines, pastures, corrals, and abandoned fields and road right-of-ways. Bugleg goldenweed blooms in July and August. Associated species include northern mule's-ears (*Wyethia amplexicaulis*), Gairdner's yampah (*Perideridia gairdneri*), camas lily (*Camassia quamash*), checker-mallow (*Sidalcea oregano*), sego lily (*Calochortus nuttallii*), western yarrow (*Achillea millefolium*), aster (*Aster spp*.), lupine (*Lupins spp*.), cinquefoil (*Sphaeromeria potentilloides*), Navarretia (*Navarretia spp*.), tarweed (*Madia spp*.), Great Basin

wildrye (*Leymus cinerus*), bluebunch wheatgrass (*Pseudoroegneria spicata*), bottlebrush squirreltail (*Elymus elymoides*), oatgrass (*Danthonia spp*.), bluegrass (*Poa secunda*), Idaho fescue (*Festuca idahoensis*), mountain big sagebrush (*Artemisia tridentata vaseyana*), early low (alkali) sagebrush (*Artemisia arbuscula longiloba*), low sagebrush (*Artemisia longifolia*), and rabbitbrush (*Chrysothamnus spp*.).

Description
Bugleg goldenweed is a perennial sunflower. It has 8 to 24 inches woody stems that arise out of a basal rosette of leaves that are roughly serrated. It flowers in July and August with several yellow flowers per stem and uniformly colored involucral bracts.

Threats
Threats to this species include: habitat loss (fire and cheatgrass invasion), recreation such as the maintenance or construction of trails and roads, and off road vehicle uses, competition from non-native species, herbicides application, and affects of domestic livestock grazing.

Direct and Indirect Effects
Bugleg goldenweed is a perennial sunflower found seasonally wet sagebrush steppe habitats. The proposed action's activities could potentially remove or trample individuals, or disturb the root systems of bugleg goldenweed. Sagebrush steppe habitats are particularly vulnerable to non-native plant species invasions due to their open character and high levels of disturbances. Disturbance increases susceptibility to non-native plant species invasion along roads and trails in high use recreation areas.

There is a moderate risk that the proposed action's activities could negatively affect bugleg goldenweed individuals and potential habitat. Compliance with design criteria, and best management practices that involve minimizing disturbances and taking preventative measures regarding introduction and spread of non-native invasive plant species near occurrences and potential habitat would lessen the impacts to bugleg goldenweed. The chemical herbicides used to treat invasive plant species could kill bugleg goldenweed, alter soil chemistry and microbes associated with bugleg goldenweed, and have affects on associated pollinator performance that inhibit tasks such as olfactory learning, foraging, and reproduction, which affects hive survival and bugleg goldenweed reproduction. Therefore, the proposed action's activities **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

The Shoshone Field Office BLM Plant Species of Concern

Mourning milkvetch (*Astragalus atratus var. inseptus)*
Habitat
Mourning milkvetch is a small, wiry, perennial milkvetch that occurs on thin, clay or clay-loam soil over basalt that is wet in spring but dries out later in the season. It occurs at approximately 4000 to 6000 ft elevation and blooms in May and June. This taxon is often found in early low (alkali) sagebrush (*Artemisia longiloba*) communities. Associated species include early low (alkali) sagebrush, Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), threetip sagebrush (*Artemisia tripartita*), tapertip onion (*Allium acuminata*), lava aster (*Ionocatis alpina*), Sandberg's bluegrass (*Poa secunda*), lesser rushy milkvetch (*Astragalus convallarius*), specklepod milkvetch (*Astragalus lentiginosus*), woolly-pod milkvetch (*Astragalus purshii*), Blepharipappus (*Blepharipappus spp.*), Beckwith's violet (*Viola beckwithii*), annual

sunflower (*Helianthus annua*), Thurber's needlegrass (*Achnatherum thurberianum*), and bluebunch wheatgrass (*Pseudoroegneria spicata*).

Mourning milkvetch is endemic to the northern edge of the Snake River Plain in Blaine, Camas, Lincoln, Twin Falls, and Gooding Counties. Its range includes the Timmerman Hills, Bennett Hills, Black Butte Hills, Sonners Flat, Macon Flat, and south to the area around Kinzie Butte.

Threats
Threats include early-season livestock grazing during wet/muddy conditions; soil-disturbing activities including road/trail construction, pipeline construction, mining activity, and high-intensity livestock use (such as around trough sites); and conversion of habitat to weedy species (cheatgrass, medusahead wildrye).

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on mourning milkvetch.

Picabo milkvetch (*Astragalus oniciformis)*

Habitat
Picabo milkvetch is a wiry, diffuse, perennial milkvetch that occurs on deep, stable sandy soils overlying basalt, with flat to rolling topography, at approximately 3500 to 5000 ft elevation. This species tends to occur in areas where competing vegetation is sparse. It flowers May to July. Associated species include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), Basin big sagebrush (*Artemisia tridentata tridentata*), threetip sagebrush (*Artemisia tripartita*), thickspike wheatgrass (*Elymus lanceolatus*), Indian ricegrass (*Achnetherum hymenoides*), needle-and-thread grass (*Hesperostipa comata*).

Picabo milkvetch is endemic to the northern edge of the Snake River Plain, from Gooding east to the eastern boundary of Craters of the Moon National Monument, and the lower foothills of the Pioneer Mountains near Picabo.

Threats
Threats include soil-disturbing activities including road/trail construction, pipeline construction, and high-intensity livestock use (such as around trough sites); Joe Russell; and competition with weedy species.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on Picabo milkvetch.

Earth lichen (*Catapyrenium congestum)*

Habitat
Earth lichen appears as little brown mounds on heavy silt soils, usually shallow, and in weak slick spots. It tends to occur in drier sites dominated by Wyoming big sagebrush, winterfat, or mixed salt desert shrub at approximately 3000 to 6000 ft elevation. Lichens are most visible and reproductive whenever they are moist, therefore this species may be less conspicuous during summer. Associated species include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), winterfat (*Krascheninnikovia lanata*), and shadscale (*Atriplex confertifolia*).

Earth lichen is not yet known from the Shoshone FO area, but is suspected to occur in the Bliss/King Hill area in lower elevations.

Threats
Threats include livestock trampling and other soil-surface disturbing activities and loss of plant community interspaces due to cheatgrass and/or medusahead wildrye invasion.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on Earth lichen.

Bacigalupi's downingia (*Downingia bacigalupii)*
Habitat
Bacigalupi's downingia occurs in the drying mud of vernal pools, and in the muddy margins of lakes, wet meadows, roadsides, irrigation ditches and streambanks at elevations of 3000 to 6000 ft. It flowers May through August. Assocatied species include sedges and rushes.

In the Shoshone Field Office this species is known from the Bennett Hills at Dempsey Meadows and the Timmerman Hills at Tom Gooding Lake. There is considerable potential habitat throughout the Bennett and Timmerman Hills.

Threats
Threats include livestock grazing and trampling, especially during wet/muddy conditions.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on Bacigalupi's downingia.

White eatonella (*Eatonella nivea)*
Habitat
White eatonella occurs in dry cindery or sandy soils, in barren areas surrounded by basin big sagebrush. It is also found in dry washes, especially in salt desert shrub habitat. The elevational range for this species is approximately 2500 to 5900 ft. White eatonella flowers from April to July, depending on microsite conditions and elevation.

In the Shoshone Field Office this species is known from the area just north of King Hill.

Threats
Threats include off-highway vehicles and spring livestock grazing and trampling.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on White eatonella.

Chatterbox orchid (*Epipactis gigantea)*
See Forest Service Sensitive Species analysis

Bug-leg goldenweed (*Pyrrocoma insecticruris)*
See Forest Service Sensitive Species analysis

Least phacelia (*Phacelia minutissima)*
See Forest Service Sensitive Species analysis

Obscure Phacelia (*Phacelia inconspicua)*

Habitat

Obscure phacelia is an erect-stemmed annual that grows primarily on north- or east- aspects in sagebrush, aspen, or mountain shrub communities at approximately 5000 to 8000 ft elevation. This species flowers in June and July. It often grows in rocky or bare sites that are lacking in other vegetation, and in areas that are disturbed by deer or elk, or areas that hold snow drifts late into the season. Soils are often loose, cindery, or sandy and rich in organic matter. Associated species include snowberry (*Amelanchier alnifolia*), quaking aspen (*Populus tremuloides*), chokecherry (*Prunus virginiana*), big sagebrush (*Artemisia tridentata vaseyana*), western waterleaf (*Hydrophyllum occidentale*), annual pink phlox (*Microsteris gracilis*), and bedstraw (*Galium spp.).*

Obscure phacelia is known from the NPS-managed area north of U.S. Highway 20/26/93 in Craters of the Moon, and Pratt Butte and Big Southern Butte in the Idaho Falls Field Office. There is considerable habitat for this species in the foothills of the Pioneer Mountains.

Threats

Threats to obscure phacelia include activities that cause permanent modification of the soil surface, e.g. mining activity or other types of excavation. This is an annual species that appears to require some disturbance (e.g. wildlife trailing) or tolerates little competition from other plants.

Direct and Indirect Effects

Obscure phacelia is an annual forb found in sagebrush, mountain shrub, and aspen stands. The proposed action's activities occurring in these habitats could potentially remove or trample individuals, or disturb the root systems of obscure phacelia. These habitats are particularly vulnerable to non-native plant species invasions due to their open character and high levels of disturbances. Disturbance increases susceptibility to non-native plant species invasion, particularly along roads and trails in high recreation-use areas.

There is a moderate risk that the proposed action's activities could negatively affect obscure phacelia individuals and potential habitat. Compliance with design criteria, and best management practices taking preventative measures regarding introduction and spread of non-native invasive plant species near occurrences and potential habitat would lessen the impacts to obscure phacelia. The chemical herbicides used to treat invasive plant species could kill obscure phacelia, alter soil chemistry and microbes associated with obscure phacelia, and have affects on associated pollinator performance that inhibit tasks such as olfactory learning, foraging, and reproduction, which affects hive survival. Since obscure phacelia is a n annual it relies on pollination and seed production to reproduce. The proposed action's activities in aspen stands and sagebrush habitats **may impact but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

Tall dropseed (*Sporobolus asper)*

Habitat

Tall dropseed occurs on dry sandy soils or prairies and foothills in its primary range, which is east of the Rocky Mountains. In the Shoshone Field Office, it occurs in cracks on flat basalt terraces along the Snake and Big Wood Rivers at approximately 4000 ft elevation. Tall dropseed flowers in August and September. Associated species include threeawn (*Aristida spp*.), sand dropseed (*Sporobolus cryptandrus*), needle-and-thread grass (*Hesperostipa comata*), Indian ricegrass (*Achnatherum hymenoides*), cheatgrass (*Bromus tectorum*), and broom snakeweed (*Gutierrezia sarothrae*).

The only known locations for tall dropseed in Idaho are just downstream of Milner Dam on the north side of the river, and along the Big Wood River south of Kinzie Butte. Tall dropseed is common east of the Rockies as a dominant on true prairie uplands, although it is rare in eastern Washington, Oregon, Utah, and Arizona, as well as Idaho.

Threats
Threats to tall dropseed include trampling, grazing, and soil surface disturbance by humans and livestock.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on tall dropseed.

Malheur princesplume (*Stanleya confertiflora*)
Habitat
Malheur princesplume is a showy annual to biennial mustard that occurs on clay soils derived from basalt that form slightly-raised, convex-shaped mounds at approximately 5000 ft elevation. It flowers from April to June. Associated species include low sagebrush (*Artemisia arbuscula*), bitterbrush (*Purshia tridentata*), Great Basin wildrye (*Leymus cinereus*), and barestem biscuitroot (*Lomatium nudicaule*).

The only known population in the Shoshone Field Office is in the Bennett Hills, on the bench above Little City of Rocks. There is considerable potential habitat for additional populations in that general area.

Threats
Threats to Malheur princesplume include weed invasion (particularly cheatgrass (*Bromus tectorum*) and medusahead (*Taeniatherum caput-medusae*), OHV activity, and mining activity.

Direct and Indirect Effects
Due to a lack of potential habitat, implementation of the project is expected to have **no impact** on Malheur princesplume.

VI. CUMULATIVE EFFECTS

The Endangered Species Act (ESA) defines cumulative effects (50 CFR 402.2) as the additive effects of state and private activities that are reasonably certain to occur in the watershed where the Federal Action occurs. Under the ESA, an analysis of cumulative effects on ESA-listed species and their critical habitat is relevant only in determining whether the continued existence of a species would be jeopardized or whether critical habitat would be adversely modified or destroyed. No ESA-listed species would likely be adversely affected and critical habitat would not be affected by the proposed action, so a cumulative effects analysis under the ESA is not relevant.

The National Environmental Policy Act (NEPA) defines cumulative effects as all past, present, and foreseeable future actions within the analysis area. The primary Federal activities that have impacted habitat within the analysis areas are past and current livestock grazing, past mining activities, dispersed recreation, and fire suppression. Since potential effects to habitat of Canada lynx, whitebark pine, spotted bat, Townsend's big-eared bat, boreal owl flammulated owl, black-backed woodpecker, Lewis' woodpecker, and fringed myotis could occur with proposed activities on Bald Mountain Ski Area, an incremental increase or continuance of cumulative effects to these species could also occur.

The actions described in this document have and would contribute to cumulative effects of Regional Forester's Sensitive and Sawtooth National ForestWatch plant species. The definitive cumulative effects from the proposed action are unknown, but it is likely that associated ground distrubance, vegetation removal, potential for nonnative invasive plant species, and alterations to native plant community composition would add to cumulative effects for slender moonwort, least moonwort, Stanley thlaspi, least phacelia, obscure phacelia, bugleg haplopappus, and Marsh's bluegrass.

VII. DETERMINATION AND RATIONALE

A. Endangered Species Act Listed and Candidate Species

Implementation of the proposed action would have **no effect** on Ute ladies'-tresses orchid. This determination is discussed in Section V and is based on conclusions that potential habitats would not be affected by the proposed project.

Implementation of the proposed action **may affect, but will not adversely affect** whitebark pine**.** This determination is discussed in Section V and is based on conclusions that negative effects to whitebark pine individuals, regeneration and habitat could occur, but would be minimized through design criteria and best management practices.

Implementation of the proposed action **may affect, but will not adversely affect** Canada lynx. These determinations are based on the conclusions (discussed in Section V and Appendix 3) that neither individuals of the species nor reproductive success would be impacted, but some discountable short and long term effects to habitat and/or prey base could result from implementation of the proposed project.

Implementation of the proposed action will have **no effect** on yellow-billed cuckoo, Greater sage-grouse, and wolverine. These determinations are based on the conclusions (discussed in Section V) that individuals of the species and their respective habitats, prey base, or reproductive success would not be impacted by the proposed project.

Implementation of the proposed actions will have **no effect** on Bliss Rapids snail, Banbury Springs limpet or the Snake River Physa snail. These determinations are based on the distributions of the species and conclusions (discussed in Section V) that neither individuals nor potential and known habitats would be affected by the proposed project.

B. Regional Forester's (and BLM) Sensitive Species & Sawtooth National Forest Watch Species

Implementation of the proposed project will have **no impact** on the wolverine, fisher, northern goshawk, northern three-toed woodpecker, white-headed woodpecker, spotted frog, Wood River sculpin, northern leatherside, mountain quail, pygmy rabbit, peregrine falcon, bald eagle, bighorn sheep, and gray wolf. These determinations are based on the conclusions (discussed in Section V) that individuals of the species and their respective habitats, prey base, or reproductive success would not be negatively impacted by the proposed actions.

The proposed project **may impact** individuals, habitat, or food availability for spotted bats, Townsend's big-eared bats, boreal owls, flammulated owls, black-backed woodpeckers, Lewis' woodpeckers, and fringed myotis but would **not likely contribute to a trend towards federal listing or a loss of viability** for the species. These determinations are based on the conclusions (discussed in Section V) that individuals of the species and their respective habitats, prey base, or reproductive success would be minimally affected by the proposed action over baseline conditions with adherence to mitigation measures (design criteria) and Forest Plan direction.

Implementation of the proposed project **may impact** slender moonwort, least moonwort, Stanley thlaspi, least phacelia, obscure phacelia, bugleg haplopappus, and Marsh's bluegrass, but would **not likely contribute to a trend towards federal listing or a loss of viability** for the species. These determinations discussed in Section V and based on the conclusions negative effects to individuals, regeneration and/or habitat but would be minimized through design criteria and best management practices.

Implementation of the proposed project will have **no impact** on Tall Swamp Onion, Northern sagewort, Challis milkvetch, Lemhi milkvetch, Park milkvetch, White Cloud milkvetch, Bryum moss, Buxbaum's sedge, Englemann's sedge, Sand sedge, Pale sedge, Mt. Shasta sedge, Idaho Douglasia, Pointed draba, Yellowstone draba, Stanley's whitlow-grass, Spoon-leaved sundew, Giant helleborine orchid, Guardian buckwheat, Blandow's hellodium, Sacajawea's bitterroot, Wedge-leaf saxifrage, Nodding saxifrage, Kruckeberg's hollyfern, Silvery primrose, Farr's willow, Petal-less campion, Mourning milkvetch, Picabo milkvetch, Earth lichen, Bacigalupi's downingia, White eatonella, Tall dropseed, and Malheur princesplume. These determinations are based on either lack of potential habitat within the project area or no negative impacts to these species, regeneration or habitat would occur.

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Appendix 1

Sawtooth National Forest Threatened and Candidate Plant Species						
Scientific Name	**Common Name**	**ESA Status**	**State Rank[2]**	**Forest Service Rank[3]**	**Global Distri-bution.[4]**	**Forest Distribution[5]**
Spiranthes diluvialis Sheviak	Ute Ladies'-tresses Orchid	T	not applicable	not applicable	Re	Fairfield RD Ketchum RD Minidoka RD Sawtooth NRA
Astragalus anserinus N.D. Atwood, Goodrich & S.L. Welsh	Goose Creek milkvetch	C	S1	S	Le	Minidoka RD
Pinus albicaulis Engelm.	Whitebark pine	C	S2	S	Re	Fairfield RD Ketchum RD Sawtooth NRA

Regional Forester's Sensitive Species and Sawtooth National Forest Watch Species						
Scientific Name	**Common Name**	**Global Rank[1]**	**State Rank[2]**	**Forest Service Rank[3]**	**Global Distri-bution.[4]**	**Forest Distribution[5]**
Allium validum S. Watson	Tall Swamp Onion	G4	S3	W	Re	Fairfield RD Ketchum RD Sawtooth NRA
Arabis falcatoria Rollins	Grouse Creek rockcress	G1	S1*	W	Le	Minidoka RD
Argemone munita Durand & Hilg.	Armed prickly-poppy	G4/T4	S1*	W	W	Minidoka RD
Artemisia campestris ssp. *borealis* var. *purshi* (Hook) Cronquist	Northern sagewort	G5/T5	S1	W	Le	Fairfield RD Ketchum RD Sawtooth NRA
Astragalus amblytropis Barneby	Challis milkvetch	G3	S3	W	Le	Sawtooth NRA
Astragalus anserinus N.D. Atwood, Goodrich & S.L. Welsh	Goose Creek milkvetch	ESA-C	S1	S	Le	Minidoka RD
Astragalus aquilonius (Barneby) Barneby	Lemhi milkvetch	G3	S3	S	Le	Sawtooth NRA
Astragalus leptaleus Gray	Park milkvetch	G4	S3	W	Le	Fairfield RD Ketchum RD Sawtooth NRA
Astragalus vexilliflexus Sheld. var. *nubilus* Barneby	White Cloud milkvetch	G4/T2	S2	S	Le	Sawtooth NRA
Botrychium lineare W.H. Wagner	Slender Moonwort	G2	S2	S	Cb	Fairfield RD Ketchum RD Minidoka RD Sawtooth NRA
Botrychium simplex E. Hitchc.	Least moonwort grapefern	G5	S2	S	W	Fairfield RD Ketchum RD Sawtooth NRA
Bryum calobryoides Spence	Bryum moss	G3	SH	S	Sd	Fairfield RD Ketchum RD Sawtooth NRA

Regional Forester's Sensitive Species and Sawtooth National Forest Watch Species						
Scientific Name	**Common Name**	**Global Rank[1]**	**State Rank[2]**	**Forest Service Rank[3]**	**Global Distri-bution.[4]**	**Forest Distribution[5]**
Carex engelmannii L.H. Bailey *(Carex breweri ssp. paddoensis* (Suksd.) Cronq.)	Engelmann's sedge	G4T4	S2	W	D	Fairfield RD Ketchum RD Sawtooth NRA
Carex buxbaumii Wahl.	Buxbaum's sedge	G5	S3	W	W	Fairfield RD Ketchum RD Sawtooth NRA
Carex incurviformis MacKenzie. *var. incurviformis*	Sand sedge	G4/G5	S1	W	D	Fairfield RD Ketchum RD Sawtooth NRA
Carex livida (Wahl.) Willd.	Pale sedge	G5	S2	W	Cb	Fairfield RD Ketchum RD Sawtooth NRA
Carex straminiformis L.H. Bailey	Mt. Shasta sedge	G5	S2	W	D	Fairfield RD Ketchum RD Sawtooth NRA
Castilleja christii N.H. Holmgren	Christ's Indian Paintbrush	G1	S1	S	Le	Minidoka RD
Cryptantha propria (Nels. & Macbr.) Payson	Malheur cryptantha	G4	SR	W	Le	Minidoka RD
Cymopterus davisii R.L. Hartman	Davis' wavewing	G3	S3	S	Le	Minidoka RD
Douglasia idahoensis D. Henderson	Idaho Douglasia	G2	S2	S	Re	Sawtooth NRA
Draba globosa Payson	Pointed draba	G3	S2	S	D	Fairfield RD Ketchum RD Sawtooth NRA
Draba incerta Payson	Yellowstone draba	G5	S2	W	Re	Sawtooth NRA
Draba trichocarpa Rollins	Stanley's whitlow-grass	G2	S2	S	Le	Sawtooth NRA
Drosera intermedia Hayne in Schrad.	Spoon-leaved sundew	G5	S1	W	D	Fairfield RD Ketchum RD Sawtooth NRA
Epipactis gigantea Dougl. Ex Hook.	Giant helleborine orchid	G3/G4	S3	W	Sd	Fairfield RD Ketchum RD Sawtooth NRA
Eriogonum desertorum (Maguire) Welsh	Desert buckwheat	G4	S1	S	Sd	Minidoka RD
Eriogonum meledonum Reveal	Guardian buckwheat	G2	S2	S	Le	Sawtooth NRA
Helodium blandowii (Web & Mohr) Warnst	Blandow's helodium	G5	S2	W	Cb	Fairfield RD Ketchum RD Sawtooth NRA
Lewisia sacajaweana Brandg.	Sacajawea's bitteroot	G2	S2	S	Re	Fairfield Ketchum Sawtooth NRA

Regional Forester's Sensitive Species and Sawtooth National Forest Watch Species						
Scientific Name	**Common Name**	**Global Rank[1]**	**State Rank[2]**	**Forest Service Rank[3]**	**Global Distri-bution.[4]**	**Forest Distribution[5]**
Noccaea idahoensis (Payson) Kartesz *var. aileeniae* (Rollins) Kartesz, ined. *(Thlaspi idahoense* var. *aileeniae)*	Stanley Thlaspi	G3G4/T3	S3	S	Le	Ketchum Sawtooth NRA
Pediocactus simpsonii (Engelm.)Britt. And Brown	Simpson's hedgehog cactus	G4	S3	W	Sd	Minidoka RD
Penstemon idahoensis Atwood & Welsh	Idaho penstemon	G2	S2	S	Le	Minidoka RD
Pinus albicaulis Engelm.	Whitebark pine	ESA - C	S2	S	Re	Fairfield RD Ketchum RD Sawtooth NRA
Phacelia minutissima L.F. Henderson	Least phacelia	G3	S2	S	Re	Fairfield RD Ketchum RD Sawtooth NRA
Poa abbreviata R.Br. ssp. *marshii* R.J. Soreng	Marsh's bluegrass	G5/T2	S1	S	Re	Fairfield RD Ketchum RD Sawtooth NRA
Polystichum kruckebergii W.H. Wagner	Kruckeberg's holly fern	G4	S2	W	Sd	Fairfield RD Ketchum RD Sawtooth NRA
Potentilla cottami N. Holmgren	Cottam cinequefoil	G1	S1*	S	Le	Minidoka RD
Primula incana M.E. Jones	Silvery/Jones' primrose	G4G5	S1	W	Sd	Fairfield RD Ketchum RD Sawtooth NRA
Pyrrocoma insecticruris L.F. Hend.	Wholeleaf goldenweed Bugleg haplopappus	G3	S3	S	Le	Fairfield RD Ketchum RD Sawtooth NRA
Salix farriae Ball.	Farr's willow	G4	S1	W	D	Fairfield RD Ketchum RD Sawtooth NRA
Saxifraga adscendens L. ssp. *oregonensis* (Raf.) Breit.	Wedge-leaf saxifrage	G5T4T5	S2	W	Le	Fairfield RD Ketchum RD Sawtooth NRA
Saxifraga cernua L.	Nodding saxifrage	G4	S2	W	Cb	Fairfield RD Ketchum RD Sawtooth NRA
Silene uralensis (Rupr.) Bocquet *ssp. montana* (S. Watson) McNeill	Petal-less campion	G4/TNR	S1	W	Cb	Fairfield RD Ketchum RD Sawtooth NRA
Viola lithion N. & P. Holmgren	Violet	G1	S1*	W	Le	Minidoka RD

Global[1]: Global ranking as assigned by Idaho Natural Heritage Program and Idaho Native Plant Society.
State[2]: Idaho State ranking, Idaho Native Plant Society Rare Species list 2010; * = Utah State ranking, Utah Natural Heritage Program, 2010.
G rank: Global rank indicator; denotes rank based on range wide status
T rank: Trinomial rank indicator; denotes range wide status of infraspecific taxa.
S rank: State rank indicator; denotes rank based on status within borders of a State.

G1, T1,S1: Critically imperiled due to extreme rarity or factors of biology that makes a species especially vulnerable to extinction. Typically 5 or fewer occurrences, or less than 1,000 individuals or very few remaining acres.
G2,T2,S2: Imperiled due to rarity or because other factors demonstrably make the species very vulnerable to extinction. Typically 6-20 occurrences, 1,000-3,000 individuals and few remaining acres.
G3,T3,S3:Rare or uncommon but not imperiled. Typically 21-100 occurrences, 3,000-10,000 individuals. Can be found abundantly in a restricted range.
G4,T4,S4:Not rare and apparently secure, but with cause for long-term concern. Usually more than 100 occurrences, 10,000+ individuals. May be quite rare in parts of range.
G5,T5,S5: Demonstrably widespread, abundant and secure. May be quite rare in parts of range, especially at the periphery.
Forest Service Rank[3]: S = Sensitive: W = Watch (may not meet all the criteria for being designated a Sensitive species, but is tracked by Forests when sufficient population viability concerns exist).
Global Distribution[4]: d =disjunct, le = local endemic (< 100 square miles), re = regional endemic (distribution 100-10,000), sd = sparsely distributed (isolated populations), p = peripheral, w = widespread, cb = circumboreal, circumpolar.

Forest Distribution[5]: Sawtooth NF Districts where element occurrences or potential habitat exists

Appendix 2

Required Project Design Criteria and Best Management Practices

SCENERY RESOURCES
All projects shall be designed to meet the Visual Quality Objectives (VQOs) proposed through the non-significant Forest Plan amendment for all alternatives.
To the extent possible, the appearance of human-made openings will simulate existing natural openings on public lands, when appropriate considering other resource impacts (e.g., wildlife due to removal of habitat). For example, when practical, edges along lift corridors and trails shall be non-linear, and changes in tree heights along the edges of openings must be gradual rather than abrupt.
Hard edges shall be softened by selective removal of trees of different ages and heights to produce irregular corridor edges.
The design materials, color, and location will blend with the characteristic landscape. The use of natural or neutral colors and non-reflective surfaces will be considered for structures.
All exterior lights at new or remodeled facilities will be downcast and shielded to minimize fugitive light.
Structures will be constructed of materials which blend with the landscape character as is practicable. Lift components shall meet FSM 2380 policy for color and reflectivity, which is 4.5 on the Munsell neutral value color scale. Colors and building design plans will be submitted to the Forest Service for approval prior to the beginning of construction and should follow the Forest Service's Built Environmental Image Guide (BEIG).
CULTURAL RESOURCES
If additional sites are discovered during on-the-ground layout, design or implementation of any action alternatives or other on-going survey activities, the Forest archaeologist will consult with the SHPO, as required by law, to document and determine the significance of the discovery and the effects of the project on it. Sites will be treated as specified in 36 CFR 800.11 concerning Properties Discovered During Implementation of an Undertaking and will comply with Native American Graves Protection and Repatriation Act (NAGPRA) should Native American remains ever be inadvertently discovered during construction. The Shoshone-Bannock Tribes and the Shoshone-Paiute will be consulted regarding Native American sites.
SOILS AND WATERSHED RESOURCES
Prior to approved construction activities on public lands, SVC will prepare the following plans for Forest Service approval: • Grading • Erosion control • Pre-construction erosion control/drainage management plans • Post-construction revegetation plans[a]
Sun Valley staff will work with the public land agencies to inspect BMP implementation and effectiveness on a regular basis during project implementation (at least every 2 weeks, and after any rainfall event of greater than 0.5 inches). BMP inspection reports will be filed regularly with the Ketchum Ranger District. Any identified deficiencies in implementation or effectiveness will be addressed immediately.

Appendix 2

Required Project Design Criteria and Best Management Practices

A water quality monitoring plan will be developed, with monitoring locations established at four sites. Two sites each would be established on the Big Wood River and on Warm Springs Creek, respectively. The sites would be positioned with one site upstream of the project area to provide baseline conditions, and one site downstream of the project area to monitor possible water quality changes due to project implementation. Monitoring would occur on a weekly basis during construction, and would include the following parameters: - Turbidity (NTU) - Conductivity (micromhos/cm) - pH Turbidity values for downstream sites would be compared with the baseline value of the upstream site. If turbidity values at either downstream site exceed the baseline by more than 20 percent of baseline due to controllable water quality factors, corrective measures would be applied immediately, and construction halted until the problem is addressed.
Surface runoff and erosion control measures shall be implemented on all disturbed areas immediately following initial disturbance.
Surface netting in conjunction with mulching will be used where applicable to reduce the erosion hazard on steeper slopes.
Re-vegetate areas, as designated by the Forest Service, where the soil has been exposed by ground-disturbing activity.
In all areas where grading or soil disturbance will occur, the top 10 inches (if present) of topsoil will be stockpiled and re-spread following slope grading and prior to re-seeding.
Re-planting/seed distribution shall occur in the early spring or late fall.
Silt fences, wattles, and/or straw bales shall be extensively utilized along the lower portion of disturbed areas. Installation of silt fences shall follow manufacturers' instructions.
Re-graded, top-soiled, and seeded areas shall be protected from erosion by effective revegetation and through immediate application of mulch, stapled netting, and/or tackifier.
Mulch shall be applied at a rate of at least 2 tons/acre. Where practical, mulch shall be crimped into the soil with a serrated disk crimper, sheepsfoot roller, or similar implement.
All erosion control straw bales and/or re-vegetation mulching will be certified weed-free.
SVC will work with the public land agencies to develop an appropriate native seed mix for re-vegetation.
During project implementation, areas of potentially unstable slopes will be identified and intensive ground-disturbing activities will be avoided in these areas.
Appropriately spaced water bars and other drainage structures for erosion control will be placed as necessary on all trails.
Water bars shall be 12-18 inches deep and constructed by digging a small trench and casting soil material to the downhill side in a berm.
Each water bar shall begin in undisturbed vegetation; traverse the disturbed area at a gradient of 5-10 percent, and discharge into undisturbed vegetation on the lower side of the disturbed area. Alternatively, "parabolic slope water bars" may be constructed at this gradient beginning at the center of the road or trail surface and traversing outward to spill into undisturbed vegetation on both sides of the road or trail prism.
Soil-disturbing activities will be avoided during periods of heavy rain or wet soils.

Appendix 2

Required Project Design Criteria and Best Management Practices

Areas determined to have been compacted by construction activities may require mechanical subsoiling or scarification to the compacted depth to reduce bulk density and restore porosity.
If logging over the snow, conditions shall allow for 1 foot of packed snow to be continuous (i.e., not patchy) and compacted enough so that wheeled or tracked vehicles do not break through. When logging over frozen ground, a minimum of 3 inches of continuous frozen ground shall be present.
WILDLIFE
To avoid potential impacts to nesting northern goshawks and migratory birds, no tree cutting will occur between May 1 and July 31, unless a site specific survey is conducted to preclude occupation by nesting birds.
Project elements that require vegetation removal will occur after July 31 of the calendar year to avoid disturbance to nesting birds. Vegetation removal may occur prior to July 31 if bird nesting surveys are conducted by a qualified person approved by the Sawtooth National Forest prior to the vegetation removal and no active nests are found. If active nests are found, vegetation removal can occur after fledging of young. This mitigation measure meets the intent of the Migratory Bird Treaty Act (avoiding take of migratory birds) and minimizes direct affects to Forest Service sensitive bird species.
VEGETATION
Revegetation will use native plants. Genetically local (at the ecological subsection level) seeds will be used if available. Seed mixtures and mulches will be noxious weed-free. The Forest Service must approve the seed mixtures prior to implementation.
Effective ground cover (mulch) upon completion of ground disturbing activities will meet minimum level of the pre-treatment habitat type.
NOXIOUS WEEDS
Follow Forest Service and State requirements pertaining to noxious weed management. Implement the Sawtooth Forest Plan Noxious Weed Management Standards upon completion proposed ground disturbing activities.
In disturbed areas, implement measures, as designated by the Forest Service, to supplement re-vegetation and prevent the invasion or expansion of noxious weeds. Potential areas would include: construction and development sites, underground utility corridors, skid trails, landings, firebreaks, slides, slumps, temporary roads, cut and fill slopes, and traveled ways of specified roads.
Earth-disturbing equipment used on NFS lands – such as cats, graders, and front-loaders – shall be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestations.
Materials such as hay, straw, or mulch that are used for rehabilitation and reclamation activities shall be free of noxious weed seed, and shall comply with the 1995 weed-free forage special order against use of non-certified hay, straw, or mulch. Materials that are not covered under a weed seed free certification, and that have the potential to contain noxious weed seed, shall be inspected and determined to be free of weed seed before purchase and use.
Source sites for gravel and borrow materials shall be inspected for noxious weeds before materials are processed, used, or transported from the source site into the SUP area.
Integrated Weed Management shall be used to maintain or restore habitats for sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.
Projects that may contribute to the spread or establishment of noxious weeds shall include measures to reduce the potential for spread and establishment of noxious weed infestations.

Appendix 2

Required Project Design Criteria and Best Management Practices

Revegetate areas, as designated by the Forest Service, where the soil has been exposed by ground-disturbing activity.
Clean earth-disturbing, construction, and road maintenance equipment, of all sizes, to remove all plant parts, dirt, and material that may carry noxious weed seeds, prior to entry onto public lands, or movement from one project area to another.
AIR QUALITY
All burning will be in full compliance with the Forest Service's annual North Zone Fire activity fuel reduction plan. This plan adheres to Montana/Idaho Airshed Group operational procedures. All burning is coordinated with the Group to assure air quality standards in the airshed are not exceeded.
Restrict burning if local conditions indicate unacceptable smoke impacts to air quality or visibility, particularly if prevailing winds are such that particulate matter would be transported towards the Sawtooth Wilderness Area and Craters of the Moon National Monument Class I airsheds.
Before any prescribed burning activity occurs within the Bald Mountain SUP, SVC will cooperate with the Forest Service to develop a burn management plan to be submitted to Idaho Department of Environmental Quality (IDEQ). The burn management plan will ensure coordination and communication between these agencies, and will ensure adherence to the Montana/Idaho Airshed Group and Utah Interagency Smoke Management Program operations and procedures. The burn management plan will include provisions for public notification of any burning activities in order to ensure that potentially affected communities are aware of planned burns.
To the extent feasible, site improvements will be installed promptly in order to reduce the potential for dust emissions. The area disturbed by clearing, earth moving, or excavation activities will be kept to a minimum at all times, allowing improvements to be implemented in sections.
Grading areas will be watered as necessary and practical to prevent excessive amounts of dust. In the absence of natural precipitation, watering of these areas will occur as practical.
RECREATION
Post signs and rope boundary on skier's left edge of the proposed *Guyer Ridge* trail to indicate that it is illegal to trespass onto private property and to dissuade guests from skiing out of bounds.

a - While post-construction erosion control plans have not been completed for this EIS, for the purposes of this analysis, it is assumed that all disturbed areas will be fully restored and stabilized within a three to five year period. Erosion and sedimentation modeling conducted for the watershed resources section reflects this assumption.

Appendix 3:
Canada Lynx
Key and Checklist for Documenting Anticipated Effects, and Determination for Federal Actions

Agency/Unit: USFS/Sawtooth NF/ Ketchum RD
Ongoing Projects Lynx Biological Assessment: Ketchum BA
Lynx Analysis Unit(s): Lower Warm Springs-Greenhorn-Deer LAU
Baseline Assessment Year: 2002
Project Name: Bald Mountain Bike Trail Construction/reconstruction and Timber Stand Improvement Project
Type of Action (s): Recreation Trail Construction (and Designation) and Timber Thinning

	Effects of the Action(s)	
Pathways[a] **Indicators**	**Effects[b]**	**Discussion of Effects**
LAU Population Characteristics for Lynx and Prey		
Lynx Occurrence	**M**	Authorizing the proposed 16 miles of new trail construction, 3.6 miles of trail re-construction and up to 396 acres of forest stand thinning and group selection harvest on the Bald Mountain Ski Area would not likely affect the potential for lynx to occur within the LAU. This is primarily due to the low probability of a lynx occurring at the ski area since the area already receives a high amount of year round recreation and maintenance activities. No lynx observations have been recorded at the ski area, and no observations of lynx have been made on the Ketchum Ranger District or Sawtooth National Forest as a whole in recent years.
Availability and Distribution of Primary Prey – Snowshoe Hare	**M**	Snowshoe hares have been observed within the Bald Mountain Ski Area. Authorizing the thinning of 396 acres of forested stands is not expected to result in habitat loss for the species, but may potentially reduce the quality of habitat for snowshoe hares (due to thinning and removal of small diameter conifers). It is not expected the timber stand thinning would reduce snowshoe hare population levels, availability or distribution in the ski area. Trail construction activities could reduce up to 3.5 acres total of potential snowshoe hare habitat in long, linear strips. However, this would not likely negatively affect snowshoe hare availability or distribution since it is unlikely that such linear habitat loss would result in population changes for the species or make any areas unusable.
Availability and Distribution of Alternate Prey – Red Squirrel, Grouse	**M**	Red squirrels occur throughout forested areas within the Bald Mountain Ski Area and blue grouse have been observed on ridge tops in the area. Quality of red squirrel habitat may be reduced as a result of proposed group selection harvest but it is not expected that it would reduce red squirrel populations by any measurable degree. Availability and distribution of red squirrels and blue grouse is expected to remain unchanged as a result of the proposed activities.
Habitat Access		
Migratory/Dispersal Barriers	**M**	Allowing the proposed activities would not affect migratory/dispersal barriers from current conditions.

Road Density	**N**	No increase or reductions in roads is proposed as part of the proposed project.
Connectivity with Lynx Habitat in Adjacent LAUs	**M**	The proposed activities would not influence any change in connectivity between LAU's.
Habitat Elements		
Condition of Foraging Habitat	**M**	The Castle Rock Fire of 2007, burned 50 acres of the 600 acres of mapped, predicted lynx foraging habitat on the Bald Mountain Ski Area at moderate and high intensity thereby temporarily removing the 50 acres as potential foraging habitat (leaving 550 acres of mapped, predicted foraging habitat on Bald Mountain). The proposed project would thin up to 112 acres of the 550 acres (see Figure 3a). While the thinning of trees <12" DBH may potentially reduce the quality of foraging habitat, it is not expected to remove these acres as predicted foraging habitat. Snowshoe hare habitat quality may be reduced, but not eliminated (trees only being thinned, not all trees being removed). In addition, it is not expected the proposed activities would negatively affect habitat for red squirrels or blue grouse. The proposed 16 miles of new mountain bike trail construction and 3.6 miles of trail re-construction would go through mapped, predicted lynx foraging habitat for approximately 3.4 miles (see Figure 3b). Given a potential eight and a half foot wide clearing of vegetation along the trails, this could reduce a total of approximately 3.5 acres of the 550 acres of predicted foraging habitat on Bald Mountain. Over the scale of the LAU, this amount of potential foraging habitat loss would be negligible (0.018% loss of predicted, post-fire foraging habitat).
Condition of Denning Habitat	**M**	The Castle Rock Fire of 2007, burned 34 acres of the 363 acres of mapped, predicted lynx denning habitat on the Bald Mountain Ski Area at moderate and high intensity thereby removing the 34 acres as potential denning habitat (leaving 329 acres of mapped, predicted denning habitat on Bald Mountain). The proposed project would thin and sanitize up to 69 acres of the 329 acres (see Figure 3c). While the thinning of trees <12" DBH and group selection harvest may potentially reduce the quality of denning habitat, it is not expected to remove these acres as predicted denning habitat. In addition, the likelihood of a lynx actually denning in the Bald Mountain Ski Area is considered very low due to the year-round recreation and maintenance activities occurring there (near constant potential disturbance). The proposed 16 miles of new mountain bike trail construction and 3.6 miles of trail re-construction would go through mapped, predicted lynx denning habitat for approximately 2.1 miles (see Figure 3d). Given a potential eight and a half foot wide clearing of vegetation along the trails, this could reduce a total of approximately 2.2 acres of the 329 acres of predicted foraging habitat on Bald Mountain. Over the scale of the LAU, this amount of potential denning habitat loss would be negligible (0.037% loss of predicted, post-fire denning habitat).
Habitat Unsuitable	**M**	Allowing the proposed activities on the Bald Mountain Ski Area could result in conversion of 3.5 acres of mapped, predicted lynx foraging habitat and 2.2 acres of mapped, predicted denning habitat to unsuitable habitat. These amounts are considered negligible at the level of the LAU (see above).
Disturbance Regime		
Disturbance	**M**	Allowing the proposed activities would not likely change the disturbance regime of the area from current conditions.
Winter Recreation Use	**M**	No increase in overall winter recreation would likely result from the proposed mountain bike trail and timber stand thinning project. While skiing in some forested areas of the mountain might increase, overall skier numbers would not be expected to increase as a result of the project.
Summer Recreation Use	**M**	Mountain biking and other summertime recreation activities on the Bald Mountain Ski Area are already popular. It is foreseeable that mountain biking would likely increase as a result of the proposed 16 miles of new mountain bike trail construction and 3.6 miles of trail reconstruction, however, it is doubtful that this increase would be significant in terms of affecting potential lynx occurrence. The high levels of year-round use already likely preclude use by lynx.

Integration of Pathways		
Integration of population, habitat, and disturbance indicators	**M**	While some minor habitat alterations would occur as a result of the proposed activities, overall conditions for lynx on the Bald Mountain Ski area would be maintained. Levels of current year round recreation and ski area maintenance activities likely preclude lynx use of the ski area. While habitat quality may be somewhat reduced for snowshoe hares as a result of thinning and trail construction and increased summertime mountain bike use may occur, neither would likely have any affect on the possibility of a lynx to use the Bald Mountain Ski Area. Levels of change in habitat and recreational use from current conditions are considered negligible.

KEY:

[a]Lynx matrix checklist endorsed by Sawtooth National Forest Level 1 Team, June, 2001.

[b]This displays the potential effects of the action on habitats or individuals.

I = Improve, M = Maintain, D = Degrade, N = No Influence

1. Does the project/activity meet the objectives and standards identified within the Sawtooth Forest Land and Resource Management Plan and the Lynx Conservation Assessment and Strategy? ☒ Yes, ☐ No

2. Does any direct or indirect effect of the action "Improve", "Maintain", or "Degrade" a population or habitat indicator? ☒ Yes, ☐ No
   If "No" (all indicators are "No Influence"), document the "No Effect". If "Yes", Go to 3.

3. Would any indicator be "Degraded" as a result of any direct or indirect effect of the action(s? ☐ Yes, ☒ No
   If "No" (all indicators are combination of "Maintain" and "No influence") then the determination may be No Effect or NLAA. Biologists make determination based on professional judgment with rationale explained under the Integration indicator.
   If "Yes" go to 4.

4. Are the effects that degrade indicator conditions, temporary (0-3 years) or short term (3-15 years) in nature, in other words not likely to degrade habitat in the long term (>15 years)? ☐ Yes, ☐ No

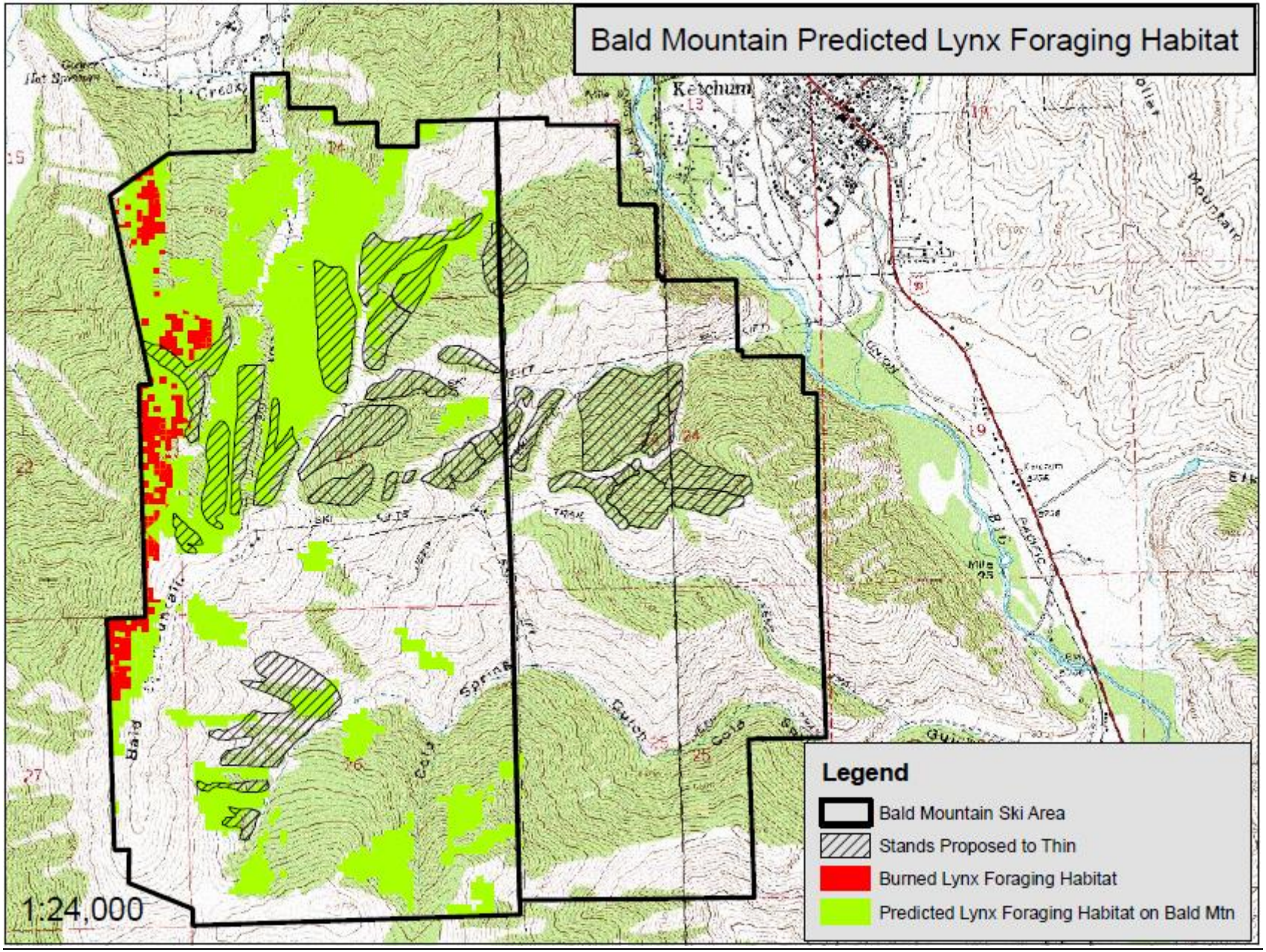
If "Yes", the determination results in "Not Likely to Adversely Affect". If "No", consider mitigation to reduce or remove probable adverse effects, otherwise LAA.

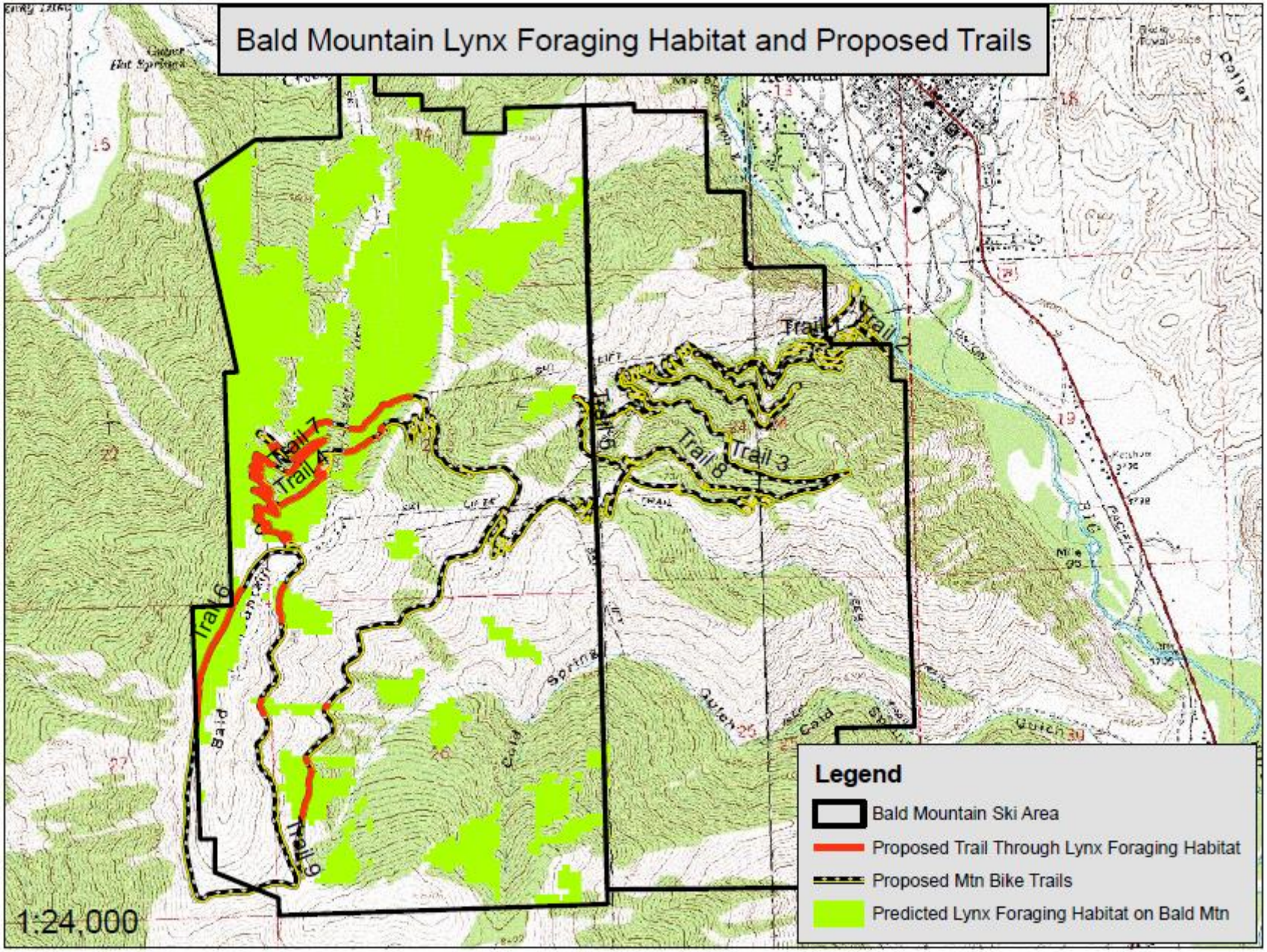
List mitigation (if applicable) and describe effect of mitigation on indicators (rationale describing how mitigation would make the determination move from LAA to NLAA or NLAA to No Effect). Note: include measures that would change the determination from LAA to NLAA or from NLAA to No Effect. These will be measures that were not included in the project description previously.

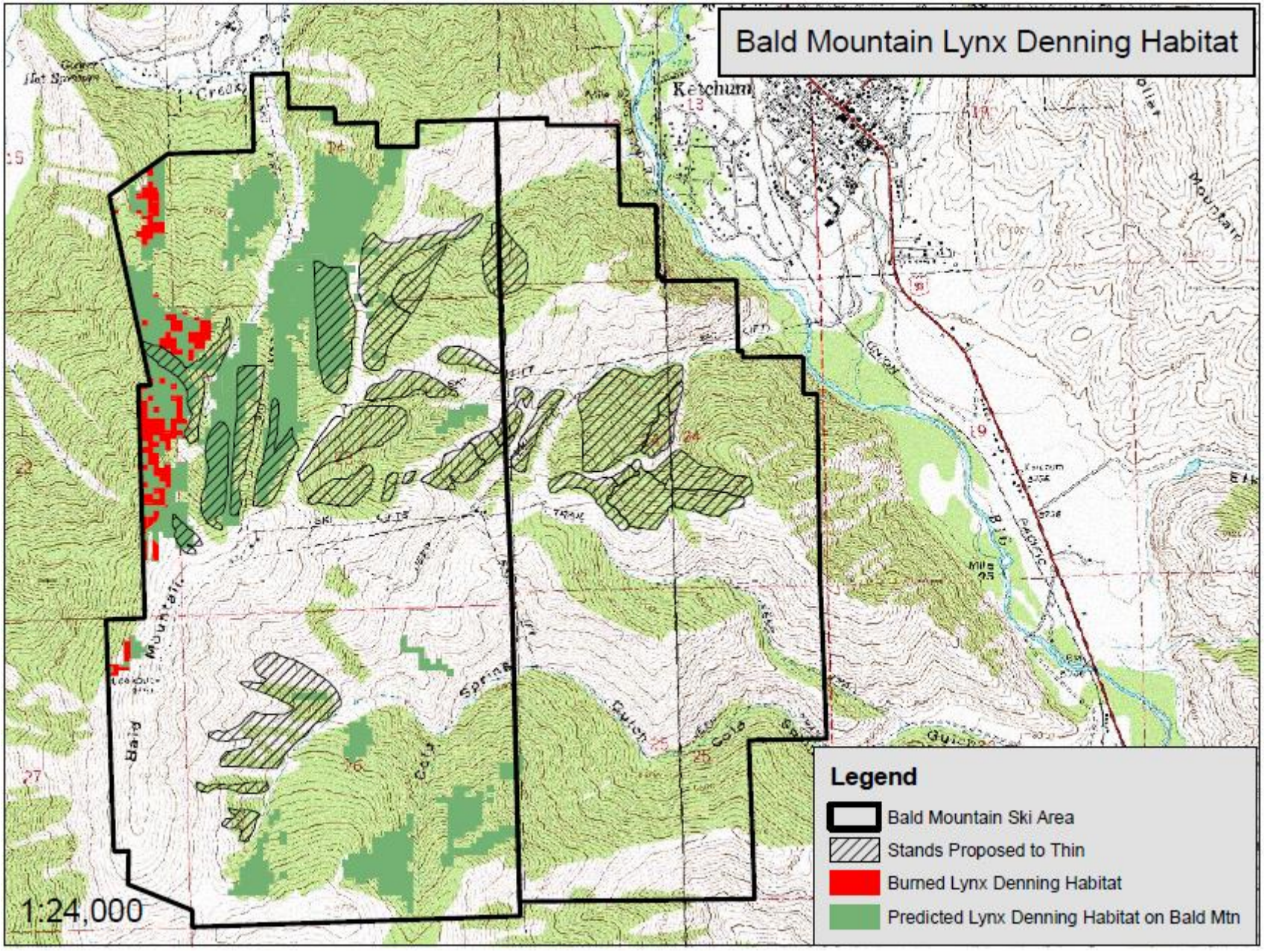
Determination of direct, indirect, and cumulative effects of action, as described, including mitigation on Canada Lynx and critical habitat (if designated):

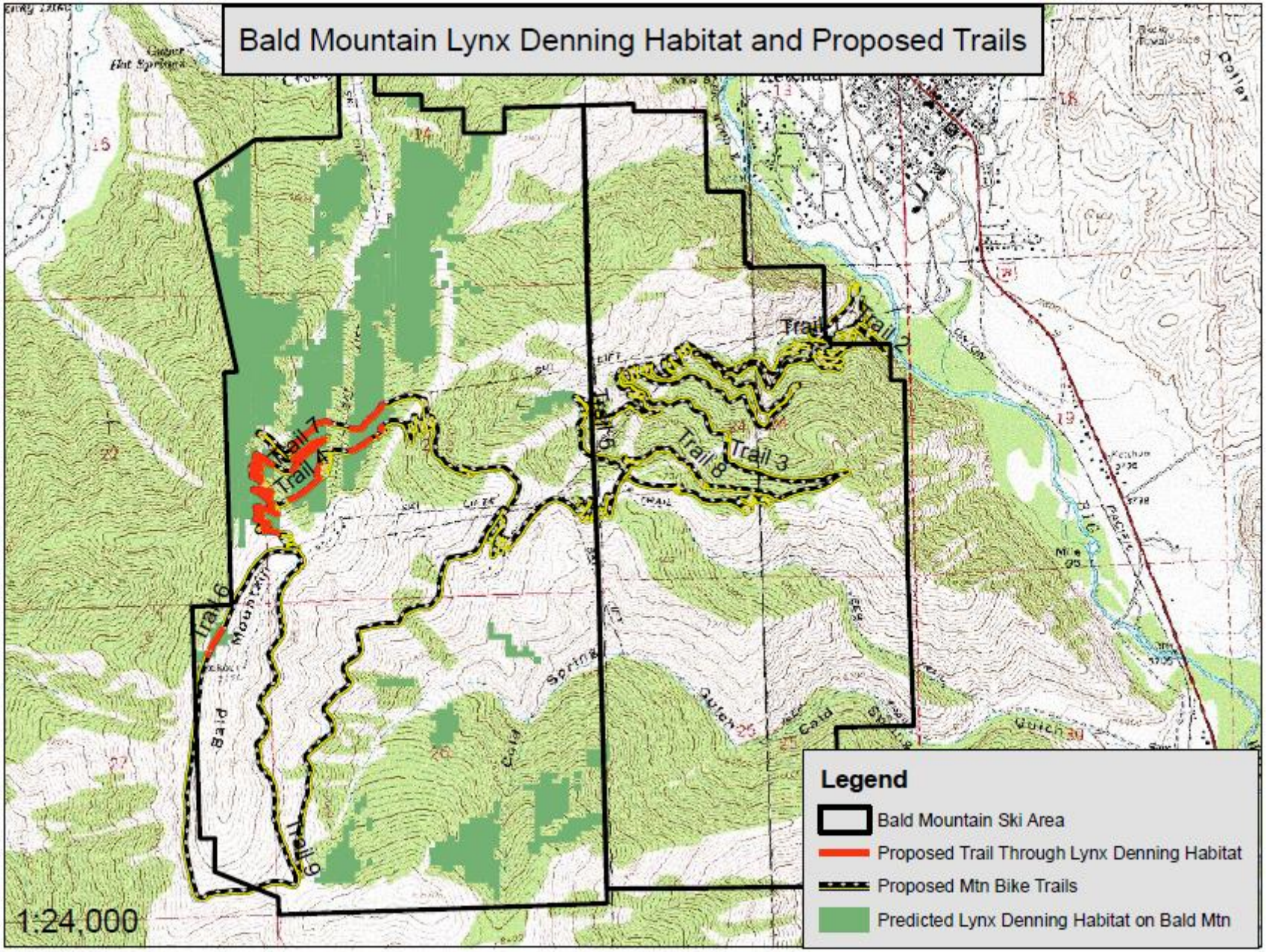
	No Effect	May Effect Not Likely to Adversely Affect	Likely to Adversely Affect
Canada Lynx		**NLAA**	

Prepared by: David Skinner ..... Date: 2/7/13


Bald Mountain Predicted Lynx Foraging Habitat
Ketchum
Legend
Bald Mountain Ski Area
Stands Proposed to Thin
Burned Lynx Foraging Habitat
Predicted Lynx Foraging Habitat on Bald Mtn
1:24,000


Bald Mountain Lynx Foraging Habitat and Proposed Trails
Trail 1
Trail 2
Trail 3
Trail 4
Trail 5
Trail 6
Trail 7
Trail 8
Trail 9
1:24,000
Legend
Bald Mountain Ski Area
Proposed Trail Through Lynx Foraging Habitat
Proposed Mtn Bike Trails
Predicted Lynx Foraging Habitat on Bald Mtn


Bald Mountain Lynx Denning Habitat
Ketchum
Legend
Bald Mountain Ski Area
Stands Proposed to Thin
Burned Lynx Denning Habitat
Predicted Lynx Denning Habitat on Bald Mtn
1:24,000


Bald Mountain Lynx Denning Habitat and Proposed Trails
Trail 1
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Trail 6
Trail 7
Trail 8
Trail 9
Legend
Bald Mountain Ski Area
Proposed Trail Through Lynx Denning Habitat
Proposed Mtn Bike Trails
Predicted Lynx Denning Habitat on Bald Mtn
1:24,000

Appendix 4
Canada Lynx
Population and Environmental Baseline Conditions[a]

Agency/Unit: Sawtooth National Forest, Ketchum Ranger District
Lynx Biological Assessment: **Wood River**
Baseline Assessment Year: 2002

Lynx Analysis Unit: Lower Warm Springs-Greenhorn-Deer
HUC #(s): 170402191205,170402190201,170402190202, 170402191301,170402191201,170402190902, 170402190901,170402191001,170402190802

Total Area of LAU[b] 89,158 (36,082) acres (hectares)
Foraging Acreage Within LAU: 30,965 (12,531) ac (ha) = 35%
Denning Acreage Within LAU: 11,137 (4,507) ac (ha) = 36%
Habitat Currently Unsuitable: 100 (40) ac (ha) = 0.3%

	Population and Environmental Baseline
Pathways **Indicators**	*Discussion of Baseline*
LAU Population Characteristics for Lynx and Prey	
Historical and Current Occurrence Information	No historical or current lynx occurrence information is available for this LAU. No Idaho CDC records of lynx occurrences exist for this LAU. Anecdotal evidence exists of a lynx being killed while crossing the highway near Bellevue. Canada lynx observations, road kills, and trapping incidents were fairly common during the late 1960's and early 1970's in the Hailey area (Lewis and Wenger 1998). The closest CDC record of a lynx sighting to this LAU is a 1991 sighting within four air miles to the north along Newman Creek near the confluence with Baker Creek (CDC Occurrence Number 230). Multiple CDC records exist for lynx observations north of the Wood River drainage in the Salmon River drainage. It is unknown if lynx currently occur within this LAU. No snow tracking or hair snare surveys have been conducted within this LAU.
Availability and Distribution of Primary Prey – Snowshoe Hare	Snowshoe hares have been observed in this LAU. No information or studies on the hare populations within this LAU is available. Snowshoe hares do not appear to be abundant within this LAU.

Availability and Distribution of Alternate Prey – Red Squirrel, Grouse	Red squirrels and blue grouse have been observed within this LAU and appear to be relatively abundant. No information or studies on population numbers of either is available.
Habitat Access	
Migratory/Dispersal Barriers	The primary migratory/dispersal barriers within this LAU, other than natural openings, include Highway 75 and adjacent year-round use of private land to the east of this LAU. This includes the cities of Ketchum and Hailey and the ever-expanding urbanization on the private land surrounding these communities within the Wood River Valley. The Wood River Valley has a population of approximately 12,506 people based on the 2000 census. The population has grown 53% since 1980. Another migratory/dispersal barrier to lynx within this LAU is the private land and private homes on leased National Forest land found along Warm Springs Creek (and Forest road 227) between the city of Ketchum and Warfield Hot Springs. The LAU contains 2780 acres of private land inholdings. This road has been snow plowed for over ten years now.
Road Density	There are 89 miles of road within this LAU. This equates to a 0.6 miles of road per square mile of this LAU. Within predicted lynx habitat, there are 21 miles of road with a density of 0.4 miles of road per square mile. In the last 15 years, 6.5 miles of road were converted to motorized trail and 5 miles of road was obliterated.
Connectivity with Lynx Habitat in Adjacent LAUs	This LAU is bordered by three other LAU's on the north and west boundaries. The entire eastern and southern boundary of this LAU borders state, private, and BLM land where connectivity of forested, suitable lynx foraging habitat is generally poor to none. Highway 75 and ever-growing urbanization disconnects habitat to the east of this LAU. Connectivity of suitable habitat is good on the northern and western boundaries of this LAU. Suitable lynx foraging habitat is primarily in the form of forested stringers and adjacent shrub-steppe habitat. Natural fragmentation is high within the southern portion of this LAU and limits habitat connectivity within and between LAU's.
Habitat Elements	
Condition of Foraging Habitat	30,965 acres (or 35%) of the LAU was mapped to be potentially suitable lynx foraging habitat. There are about 293 acres of aspen and 712 acres of aspen/conifer mix within lynx habitat in this LAU. Riparian habitat containing woody deciduous species consists of 64 acres within lynx habitat within the LAU. These calculations are based on classification of LANDSAT data and likely underestimate the amount of this habitat. This LAU contains all or a portion of 4 sheep grazing allotments and 1 cattle allotment, which have suitable lynx foraging habitat scattered throughout them. Allotments cover 79,558 acres of the LAU with all but approximately 4,350 acres of predicted lynx habitat within an allotment. There are approximately 3,628 acres of trees under 5 inches DBH where presumably the higher quality snowshoe hare habitat occurs. This type of habitat is patchy and dispersed throughout the LAU. No condition surveys have been conducted, however, aspen in general is in decline on the north end of the Forest. Encroachment by conifers from lack of stand disturbance and livestock grazing are the major suspected causes of decline. Both lack of disturbance and livestock grazing continue to occur. Riparian condition is quite variable in this LAU, ranging from early to late seral. Riparian areas that are accessible to sheep tend to have less woody species and more bare ground than areas not accessible to sheep. Sheep grazing and locations of roads and trails along the riparian areas have the biggest impacts on riparian habitat conditions. The extent these impacts have affected prey availability is unknown.

Condition of Denning Habitat	11,137 acres (or 12.5%) of the LAU was mapped out to be potentially suitable lynx denning habitat. The condition of this habitat is mostly unknown. The foraging to denning ratio is 36% for this LAU. No information is available on acres of downed wood, an important component of lynx denning habitat. Firewood cutting is limited to roadsides and minimally affects the amount of downed wood within the LAU. Forested stands in this LAU are primarily stringers with the largest blocks on north facing slopes. Patch size of denning habitat ranges from ¼ acre to 1000 acres in size with larger patches found in the northern portion of the LAU. Drainages primarily run from the west to east. Upper elevations in the LAU (7,000- 9,500 feet in elevation) contain Douglas-fir, patches of sub-alpine fir, some lodgepole pine, and white-bark pine at the highest locations. Douglas fir is the primary tree species found in forested stands from the lowest elevations in the LAU up to mid-elevations (around 8,000 feet). Denning habitat exist directly adjacent to residential developments along Warm Springs road and directly adjacent to the Bald Mountain Ski Area.
Disturbance Regime	
Disturbance History – Amount and Degree Over Past 20 Years	Approximately 310 acres of clear-cutting of Douglas-fir in West Fork of Warm Springs and Barr Gulch has occurred since 1960. On Bald Mtn. Ski Area fuel reductions have taken place over the past 20 years, decreasing the fuel load in some areas from 300 to 20 tons per acre. This has resulted in decreased quality of lynx denning habitat. Currently 6,250 acres are open to fuelwood cutting in this LAU with most cutting occurring along roadsides. The acreage open to fuelwood cutting has steadily decreased over the last 20 years with implementation of INFISH guidelines. Fire has not been a major disturbance factor in this LAU within the past 20 years. Since 1953, 10 fires have burned within this LAU accounting for only 4 acres burned. Sheep grazing has affected lynx foraging habitat and has been the primary disturbance factor in this LAU for over 100 years. Additionally, residential development along Warm Springs Creek between Warfield Hot Springs and the city of Ketchum has caused disturbance of habitat. The Wood River Valley to the east has grown by 53% over the past 20 years. This has resulted in increased recreation pressure within this LAU with several miles of recreation trails constructed within the past decade. Current grazing and its effects are considerably less than historic grazing. This LAU contains the Deer Creek/Curran, Limekiln, Warm Springs, and Kelly Mountain Sheep Allotments as well as the Kelly Mountain Cattle Allotment. Allotments cover 79,558 acres or 89% of the LAU. Roads within the LAU were originally built to access various historic mines.
Winter Recreation Use	This LAU receives considerable winter recreation use. The Bald Mountain Ski Area is within this LAU and provides extensive groomed downhill skiing and snowboarding opportunities as well as mountain biking, hiking, jogging, and paragliding (see Project Descriptions for detailed description of facilities and recreation use on Bald Mountain). The permitted ski area contains about 700 acres of predicted lynx habitat. Snowmobiling within this LAU is limited due to seasonal restrictions in order to protect wintering elk. Some snowmobile use occurs in the Deer Creek and Greenhorn Gulch areas prior to closure for elk. Backcountry skiing is common but restricted to protect wintering elk. Four outfitters operate in this LAU in the winter providing paragliding, mountain lion hunting, and helicopter skiing. Though helicopter skiing is permitted in the LAU, very little heliskiing occurs. The Warm Springs Road is plowed from the city of Ketchum out to Warfield Hot Springs to access private homes. There are no groomed trails and/or designated oversnow routes in this LAU other than at the ski area. There is one summer home group in this LAU which may be accessed in the winter by snowmobiling, skiing or snowshoeing. One elk winter feeding site is located in this LAU in Warm Springs Creek and is accessed by snowmachine.

Summer Recreation Use	There are 118 miles of trail with a density of 0.85 miles square mile within the LAU. Within predicted lynx habitat, 43 miles with a density of approximately 0.90 miles square mile occurs. Uses include a mix of motorized and non-motorized. This LAU receives considerable summer and fall recreation use. The proximity to the city of Ketchum is responsible for very heavy trail use within the LAU by hikers, joggers, and mountain bikers, particularly on Bald Mountain and Adams Gulch. Greenhorn and Deer Creek both receive considerable use by hikers, mountain bikers, 4-wheelers, motorcyclers, horse riders, campers, and hunters. There are 3 developed trailheads (Adam's Gulch, Greenhorn, North Fork Deer Creek)) in the LAU. There are no developed campgrounds, however dispersed camping is very common, particularly in Deer Creek and Warm Springs Creek. Use of the road and trail system has greatly increased over the past 20 years as the human population of the area has grown. Most use of the roads and trails occurs from May – December though the timing varies year-to-year based on the timing and amount of snowfall. Big game hunting is popular within this LAU during the fall. This LAU contains one summer home/recreational residence group. Special uses include Eight outfitters operate in this LAU in the summer and fall providing fishing, hunting, hiking, mountain biking, llama trekking, horseback riding, and paragliding opportunities.

Overall Ecological Integrity of LAU[c]	Baseline[d] Yes / No	
Overall, does the LAU meet the minimum objectives identified within the LCAS?	Yes	Livestock grazing impacts continue to occur throughout the LAU. Recreation pressure is heavy at all times of the year. This LAU contains a major developed ski resort, which continues to cause habitat and disturbance impacts. Though these disturbances and impacts are occurring it is not known if they are displacing lynx or precluding lynx from occurring. Given these impacts, the objectives of the LCAS are being met.
	Baseline[e] 1, 2, 3, or 4	
Does the LAU have the potential for long-term conservation of the species?	4	Quality of lynx habitat within this LAU is quite variable from highly naturally fragmented in the southern portion to moderately contiguous in the northern portion. Potential denning and foraging habitat is fairly well distributed in the north. However it is unknown whether the current population of snowshoe hares and red squirrels would be enough to support the survival and reproduction efforts of lynx in this LAU. Given what is known about habitat and human disturbance in this LAU it is unknown whether conditions are adequate to help conserve lynx.

KEY:

[a] Lynx matrix checklist endorsed by Sawtooth National Forest Level 1 Team, June, 2001. Amended September 20, 2002.

[b] To describe the LAU acreages:
(1) Total area = acreage of HUCs within the LAU. Summation of suitable, unsuitable, and temporarily unavailable.
(2) Foraging acreage within LAU = all currently suitable foraging and denning habitat within the LAU;
(3) Denning habitat = subset of total currently suitable foraging;
(4) Habitat currently unsuitable = acreage that is temporarily unavailable. This number is separate from #2.

[c] These parameters should summarize the overall condition or environmental baseline of the LAU. This will define the baseline and be used for the effects determinations (projects will be rated on their effects to this baseline and will establish determinations).

[d] YES – Adhering to the LCAS standards and guidelines.
NO – Not adhering to the LCAS standards and guidelines; or the additive or cumulative effects of a significant part or all of the indicators.

[e] 1 = The LAU does not currently provide the conditions necessary to maintain lynx and/or their prey, nor does it have the potential to produce these conditions within the long-term (20 years).
2 = The LAU is not currently providing conditions necessary to maintain lynx and/or their prey but has the potential to in the long-term (20 years).
3 = The LAU is currently providing conditions necessary to maintain lynx and/or their prey.
4 = Unknown whether the LAU is currently providing conditions necessary to maintain lynx and/or their prey.

Prepared by: David Skinner Date: 11/12/02

APPENDIX 6
FLRMP Compliance

ACS Priority and WARS Subwatersheds

Subbasin Name	Subwatershed Name	ACS Priority Designation	WARS Designation	MPC
Big Wood	Cold Spring - Clear	No	Active, Low	4.3 Concentrated Recreation
Big Wood	Warfield-West FK Warm Springs	Yes	Active, Low	4.2 Roaded Recreation

Sawtooth Forest Land and Resource Management Plan
Applicable Standards and Guidelines

	Revised Plan Forest-wide Direction
TEST01	The Forest shall consult with the NOAA Fisheries and U.S. Fish and Wildlife Service (USFWS) as needed, and appropriate, to comply with consultation requirements under the Endangered Species Act and Magnuson-Stevens Act.
TEST04	Management actions that have adverse effects on Proposed or Candidate species or their habitats, shall not be allowed if the effects of those actions would contribute to listing of the species as Threatened or Endangered under the ESA.
TEST06	Management actions shall be designed to avoid or minimize adverse effects to listed species and their habitats. For listed fish species, use Appendix B for determining compliance with this standard.
TEST08	Avoid management actions within occupied TEPC plant species habitat that would adversely affect the long-term persistence of those species.
TEST09	In revegetation and seeding projects in occupied TEPC plant habitat, a Forest botanist shall be consulted to ensure appropriate species are used.
TEST10	Management actions that may contribute to establishment or spread of non-native invasive weed species within occupied TEPC plant habitat shall include measures to avoid weed establishment and spread.
TEST11	New facilities for storage of fuels and other toxicants shall be located outside of occupied TEPC plant habitat.
TEST12	Mitigate, through avoidance or minimization, management actions within known nest or denning sites of TEPC species if those actions would disrupt reproductive success during the nesting or denning period. During project planning, determine sites, periods, and appropriate mitigation measures to avoid or minimize effects.
TEST13	Mitigate, through avoidance or minimization, management actions within known winter roosting sites of TEPC species if those actions would adversely affect the survival of wintering or roosting populations. During project planning, determine sites, periods, and appropriate mitigation measures to avoid or minimize effects.

TEST14	Vegetative management activities within lynx foraging habitat in LAUs shall not degrade, nor retard attainment of desired habitat for the lynx and its prey except: a) Within 200 feet of Forest Service administrative sites, dwellings, and/or associated outbuildings as needed to reduce risk of loss from wildfire. b) Research studies and genetic tests (i.e., performance tests, long-term field tests and realized gain trials) necessary to evaluate genetically improved reforestation stock. c) Within the wildland urban interface in order to develop or maintain fuel profiles that are necessary to reduce the risk of wildfire. d) Where outweighed by demonstrable short- or long-term benefits to lynx and its prey habitat conditions. This standard does not apply to activities that are not vegetation management proposals that may affect vegetation, such as removal of vegetation for ski runs, mineral extraction, etc.
TEST15	Unless a broad-scale assessment has been completed that substantiates different historical levels of unsuitable habitat, limit disturbance within each LAU as follows: If more than 30 percent of lynx habitat within a LAU is currently in unsuitable condition, no additional habitat may be changed to unsuitable habitat as a result of vegetative management projects. Fire use, or fire hazard reduction and associated vegetation management activities within the wildland urban interface watersheds, that develop or maintain fuel profiles needed to reduce the risk of wildfire threats to the wildland urban interface areas, are NOT bound by this standard.
TEGU01	Discretionary actions should avoid take of listed species, and actions where the Forest's discretion is limited should minimize adverse effects that could lead to a take.
TEGU02	For proposed actions that may affect potential habitat of TEPC species, identify potential habitat and determine species presence within or near the project area. Document the rationale for not identifying potential habitat and determining species presence for TEPC species in the project record**.**
TEGU03	Management actions in occupied Proposed or Candidate species habitat should be modified or relocated if the effects of the actions would contribute to a trend toward ESA listing for these species.
TEGU06	Coordinate with Forest resource specialists to consider TEPC habitat needs when designing and implementing management activities that may affect TEPC species and their habitats.
SWST01	Management actions shall be designed in a manner that maintains or restores water quality to fully support beneficial uses and native and desired non-native fish species and their habitat, except as allowed under SWRA Standard #4 below. Use the MATRIX located in Appendix B to assist in determining compliance with this standard.

SWST04	Management actions will neither degrade nor retard attainment of properly functioning soil, water, riparian, and aquatic desired conditions, except: a) Where outweighed by demonstrable short- or long-term benefits to watershed resource conditions; or b) Where the Forest Service has limited authority (e.g., access roads, hydropower, etc.). In these cases, the Forest Service shall work with permittee(s) to minimize the degradation of watershed resource conditions. Use the MATRIX located in Appendix B to assist in determining compliance with this standard.
SWST07	Within legal authorities, ensure the new proposed management activities within watersheds containing 303(d) listed water bodies improve or maintain overall progress toward beneficial use attainment for pollutants that led to the listing.
SWST10	Trees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions. Felled trees or snags left in RCAs shall be left intact unless resource protection (e.g., the risk of insect infestation is unacceptable) or public safety requires bucking them into smaller pieces.
SWST11	Do not authorize storage of fuels and other toxicants or refueling within RCAs unless there are no other alternatives. Storage of fuels and other toxicants or refueling sites within RCAs shall be approved by the responsible official and have an approved spill containment plan commensurate with the amount of fuel.
SWST12	Site-specific analysis or field verification of broad-scale landslide-prone models shall be conducted in representative areas that are identified as landslide prone during site/project-scale analysis involving proposed management actions that may alter soil-hydrologic processes. Based on the analysis findings, design management actions to avoid the potential for triggering landslides. Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas*, located in Appendix B to help determine compliance with this standard.
SWGU01	Federal, state, county, tribal, and regulatory agency priorities should be considered early in the process of subbasin review, fine- and site/project-scale analyses, and restoration priorities to help ensure priorities complement each other where possible, or at least minimize conflicts.
SWGU03	Where proposed management actions may alter soil-hydrologic processes, representative sample of landslides and landslide-prone areas should be field-verified to identify and interpret controlling and contributing factors of slope stability. Integrate the resulting information with supporting data to provide a final stability assessment and identification of appropriate land management actions in landslide and landslide-prone areas. Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas*, located in Appendix B.

SWGU04	General Field Verification Procedures for Landslide and Landslide-Prone Areas: Six major groups of known characteristics should be investigated to supply information adequate to characterize unstable conditions. These are: a) Landform b) Overburden c) Geological Processes on the Hillslope d) Bedrock Lithology and Structure e) Hydrology f) Vegetation. Refer to the *Implementation Guide for Management on Landslide and Landslide Prone Areas*, located in Appendix B.
SWGU05	After completion of ground-disturbing activities in a watershed, the minimum ground cover should be sufficient to prevent erosion from exceeding the range of soil erosion rates that are characteristic of the local soil type, landform, climate, and vegetation of the area**,** or the soil-loss tolerance.
SWGU07	Projects in watersheds with 303(d) listed water bodies should be supported by the appropriate scale and level of analysis sufficient to permit an understanding of the implications of the project within the larger watershed context.
SWGU08	Proposed actions analyzed under NEPA should adhere to the State Nonpoint Source Management Plan to best achieve consistency with both Sections 313 and 319 of the Federal Water Pollution Control Act.
SWGU11	Transport hazardous materials on the Forest in accordance with 49 CFR 171 in order to reduce the risk of spills of toxic materials and fuels during transport through RCAs.
SWGU12	During site/project-scale analyses, habitat should be determined for sensitive aquatic species within or near the project area. Surveys to determine presence should be conducted for those species with suitable habitat. Document the rationale for not conducting surveys for other species in the project record.
WIST01	Maintain at least 20 percent of the acres within each forested PVG found in a watershed (5th field HUC) in large tree size class (medium tree size class for PVG 10, persistent lodgepole pine). Where analysis of available datasets indicates that the large tree size class (medium tree size class in PVG 10) for a potential vegetation group in a watershed (5th field HUC), is less than 20 percent of the total PVG acres, management actions shall not decrease the current area occupied by the large tree size class, except when: a) Fine or site/project scale analysis indicates the quality or quantity of large tree size class for a PVG within the 5th field HUC would not contribute to habitat distribution or connective corridors for TEPCS and MIS species in the short or long term, *and* b) Management actions that cause a reduction in the area occupied by the large tree size class would not degrade or retard attainment of desired vegetation conditions in the short or long-term as described in Appendix A, including snags and coarse woody debris.

WIST02	Design and implement projects within occupied habitats of Sensitive species to help prevent them from becoming listed. Use Forest Service-approved portions of Conservation Strategies and Agreements, as appropriate, in the management of Sensitive species habitat to keep management actions from contributing to a trend toward listing for these species.
WIST03	Mitigate management actions within known nesting or denning sites of MIS or Sensitive species if those actions would disrupt the reproductive success of those sites during the nesting or denning period. Sites, periods, and mitigation measures shall be determined during project planning.
WIST04	Mitigate management actions within known winter roosting sites or hibernacula (bats) of Sensitive species if those actions would measurably reduce the survival of wintering or roosting populations. Sites, periods, and mitigation measures will be determined during project planning.
WIST05	In goshawk territories with known active nest stands, identify alternate and replacement nest stands during project-level planning when it is determined that the proposed activity is likely to degrade nest stand habitat.
WIST06	Mitigate human-caused disturbances within winter/spring ranges if disturbances cause displacement of wildlife while they are occupying those ranges.
WIGU01	Vegetation management should consider the following habitat conditions or features: a) The amount, quality, and distribution of habitats, b) Fragmentation within habitats, c) Juxtaposition and connectivity to other habitats, d) The influence of road-related degradation, and e) Ecosystem processes that develop and modify habitat.
WIGU05	During site/project-scale analysis, habitat should be determined for MIS or Sensitive wildlife species within or near the project area. Surveys to determine presence should be conducted for those species with suitable habitat. Document the rationale for not conducting surveys for MIS or Sensitive species in the project record**.**
WIGU06	Management actions in occupied Sensitive species habitat should be modified or relocated if the effects of the actions would contribute to a trend toward ESA listing for these species.
WIGU07	Use appropriate research to help define active, alternate, and replacement nest stands for goshawks, and configuration of Post-Fledging Areas.
WIGU09	Even-aged regeneration cuts should be considered to provide big-game hiding cover when the vegetation conditions in the unit meet the definition of hiding cover in the Glossary.
WIGU11	Management actions should neither degrade or retard attainment of winter range desired conditions except where outweighed by demonstrable short- or long-term benefits to winter range or where the Forest Service has limited authority.
WIGU12	Calving and fawning areas should be protected from project-related disturbance during big game calving or fawning. Calving/fawning areas and periods should be determined during site/project-level planning.

WIGU13	To address big game vulnerability to mortality, components of habitat security should be identified and managed during project planning and implementation. Management requirements or mitigation measures needed to maintain these components should be determined during site/project-level planning. Consider components such as big game wallows and licks, public access, wildlife travel routes, created openings, meadows, forested stringers, and winter/spring ranges.
WIGU14	To address big game stress and exposure during critical wintering periods, thermal cover components on winter/spring ranges should be identified and managed during project planning and implementation. Management requirements or mitigation measures needed to maintain these components should be determined during site/project-level planning. As a general guideline, at least 15 percent thermal cover should be retained on big game winter ranges where this cover presently exists. Cover should be maintained in at least 30-acre patch sizes where available. Thermal and hiding cover may or may not occur on the same acres.
VEST01	The activity area shall be used to assess snag and coarse wood conditions for vegetative management actions.
VEST02	Vegetation management actions associated with developed recreation shall be designed to meet recreation objectives, not vegetative desired conditions described in Appendix A.
VEGU01	During site/project-scale analysis, tradeoffs in the achievement of one or more of the vegetative components described in Appendix A may need to be considered. Current conditions of the vegetation may necessitate the need to move one component away from the desired condition in order to move another one toward the desired condition. In these situations, decisions should be based not only on which vegetative component is important to emphasize at any point in time to meet resource objectives, but also how to effectively move all components toward their desired condition over the long term.
VEGU02	Prior to developing vegetative management project proposals whose purpose is to maintain or restore live vegetative components described in Appendix A, a vegetative assessment at the watershed scale (5th field HUC) using available forest level datasets (e.g., LANDSAT) should be completed to describe current vegetative conditions and identify opportunities for treatment. A scale other than watershed may be used where it is determined that a different reference area is more appropriate for identifying opportunities for a specific type of treatment.
VEGU03	When coarse woody debris (CWD) in the larger size classes (>15” diameter) is not available for retention in an activity area, smaller size classes (< 6”diameter) may or may not be utilized to meet desired tonnage levels described in Appendix A. Decisions on the amount of CWD in smaller classes that are retained, whether the larger size classes are available or not, should be based on the level of fire hazard risk that can be reasonably assumed in light of management objectives. Risk as it relates to both the activity area and adjacent areas should be considered.
BTST01	Management actions that occur within occupied sensitive plant species habitat must incorporate measures to ensure habitat is maintained where it is within desired conditions, or restored where degraded.

BTST03	Design and implement projects to meet the Forest Service approved portions of Conservation Strategies and Agreements for Sensitive species.
BTST05	In revegetation and seeding projects in occupied sensitive plant habitat, a Forest botanist shall be consulted to ensure appropriate species are used.
BTGU01	For site/project-scale analysis, suitable habitat should be determined for Sensitive species within or near the project area. Conduct surveys for those species with suitable habitat to determine presence. Document the rationale for not conducting surveys for other species in the project record**.**
BTGU03	When available and not cost-prohibitive, seeds and plants used for seedings and plantings in revegetation projects should originate from genetically local sources of native species. When project objectives justify the use of non-native plant materials, documentation explaining why non-natives are preferred should be part of the project planning process.
BTGU05	Coordinate with Forest botanists to consider sensitive species habitat needs when designing and implementing management activities that may affect these species or their habitats.
NPST02	All seed used on National Forest System lands will be certified to be free of seeds from noxious weeds listed on the current *All States Noxious Weeds List*.
NPST03	To prevent invasion/expansion of noxious weeds, the following provisions will be included in all special use authorizations, timber sale contracts, service contracts, or operating plans where land-disturbing activities are associated with the authorized land use (additional direction may be found in timber sale and service contract provisions and in Forest Service handbooks): a) Re-vegetate areas, as designated by the Forest Service, where the soil has been exposed by ground-disturbing activity. Implement other measures, as designated by the Forest Service, to supplement the influence of re-vegetation in preventing the invasion or expansion of noxious weeds. Potential areas would include: construction and development sites, underground utility corridors, skid trails, landings, firebreaks, slides, slumps, temporary roads, cut and fill slopes, and traveled ways of specified roads. b) Earth-disturbing equipment used on National Forest System lands--such as cats, graders, and front-loaders--shall be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestations. This also applies to fire suppression earth-disturbing equipment contracted after a WFSA/WFIP has been completed.
NPST04	Contractors, with the exception of fire suppression prior to completion of WFSA/WFIP, shall be required to clean earth-disturbing, construction, and road maintenance equipment, of all sizes, to remove all plant parts, dirt, and material that may carry noxious weed seeds, prior to entry onto the Forest, or movement from one Forest project area to another.
NPST09	The Forest shall comply with the intent and direction established in the above provisions or clauses in a manner similar to that required of contractors or permittees.

NPST10	Projects that may contribute to the spread or establishment of noxious weeds shall include measures to reduce the potential for spread and establishment of noxious weed infestations.
NPGU03	Identify areas with extensive noxious weed infestations where precautionary actions are necessary when planning and implementing management activities. In areas of extensive weed infestations, designated wash sites should be established as part of project planning. Wash sites should be located: (1) where they are easily accessible and useable, (2) on gravelly or well-drained soils, (3) where wash water runoff will not carry seeds away from site, (4) where wash water runoff will not directly enter streams, and (5) where they may be used repeatedly for several projects or activities within the area.
NPGU04	Where feasible and practical, weed-free locations should be selected for incident camps, staging, cargo loading, drop points, helibases, and parking areas.
TRST02	Openings created by even-aged timber harvest shall be separated by stands not defined as an opening. The size of stands between created openings may vary to address site-specific resource concerns, but the minimum stand size may never be less than 5 acres. Where openings that exceed 40 acres are proposed to meet management objectives, a 60-day public notice and review by the Regional Forester shall be required
TRST03	An opening created by timber harvesting will, as a minimum, no longer be considered an opening when a new forest stand is established in that opening. Regenerated areas, whether planted or developed through natural regeneration, are established when they are certified.
TRST04	Lands within Riparian Conservation Areas (RCAs), determined after field review, will be identified as not suited for timber production. Wood products harvested within RCAs will not contribute to the Allowable Sale Quantity (ASQ).
TRST05	Field-verified high-risk landslide-prone sites are identified as not suited for timber production. Wood products harvested from high-risk landslide-prone sites will not contribute to the ASQ.
TRST06	Off-road vehicle travel for purposes of fuelwood harvest, Christmas trees, and other miscellaneous forest products must comply with Travel Map restrictions unless specifically exempted by permit.
TRST07	No fuelwood harvest is allowed within 300 feet of perennial streams and 150 feet of intermittent streams unless management actions are designed in a manner that will not degrade riparian and related aquatic resources. Fuelwood harvest allowed within 300 feet of perennial streams and 150 feet of intermittent streams will be described in the annual fuelwood map and instructions.
TRST08	Salvage harvest in RCAs is allowed only where the wood products salvaged will not degrade or retard attainment of riparian, aquatic, hydrological, botanical, and terrestrial wildlife habitat desired conditions.

TRGU01	Provide long-term protection of conifer plantations by any one, or a combination of the following, or similar, actions within and adjacent to plantations: a) Release and weeding to control competing vegetation, b) Thinning to control stand density, c) Brush disposal to reduce fuel loading, d) Prescribed fire (underburning) to reduce fuel loading, fuel ladders, and understory vegetation, e) Animal damage control. These and other activities should be integrated with other resource management objectives to provide protection against undesirable effects of fire, insects, and disease.
FRGU06	New roads and landings should be located out of RCAs wherever possible. When new roads or landings must be located in RCAs, they should be developed such that degrading effects to RCAs are mitigated.
REST02	When new recreation facilities and trails must be located in RCAs, they shall be developed such that degrading effects to RCAs are mitigated. Where reasonable and practical location alternatives exist, new recreation facilities and trails should be located outside of RCAs.
REST03	Access will be managed in accordance with the existing travel management maps and amendments, or as authorized by permit, contract, or special-use authorization.
REST04	On all lands outside of designated travel ways, motorized use shall be prohibited unless otherwise authorized.
REST05	In emergency situations, road, trail, and area access restrictions for up to one year may be implemented without public participation if needed to protect resources and/or to provide for public safety.
REGU24	Protection measures for National Forest System trails should be included in all timber sale contracts, annual operating plans for grazing, mining, and special use authorizations, and prescribed fire implementation documents.
SCST01	All projects shall be designed to meet the adopted Visual Quality Objectives (VQOs) as identified in Management Area direction and represented on the Forest VQO map.
SCGU01	Definitions of VQOs are those used in the Visual Management System, Agricultural Handbook Number 462. VQO abbreviations are given in the table, below. See glossary definitions for more explanation of VQOs and distance zones used below. **Table III-2. Visual Quality Objective and Distance Zone Abbreviations** **Visual Quality Objectives Distance Zones** P Preservation fg Foreground R Retention mg Middleground PR Partial Retention bg Background M Modification MM Maximum Modification

SCGU02	Duration of visual impacts from ground disturbing and vegetation removal activities to allow for herbaceous vegetative recovery of ground cover may extend to three years in fgR, fgPR, mgR, and mgPR. Consider timely initiation of reseeding in areas where natural recovery is questionable.
SCGU03	To meet fgR, visibility of stumps should be mitigated. There should be a general lack of visible ground disturbance.
SCGU04	Slash and harvest residues remaining after project completion should appear to be naturally occurring downed material in fgR and mostly naturally occurring downed material in fgPR. Techniques to mitigate visibility of slash include lopping to low heights, burning, physically removing material excess to other resource needs, and dispersing concentrations.
SCGU05	Most timber changes in mgR should be textural, with some small, simulated natural openings where openings already occur, or a limited number of small natural-appearing openings that are developed normally over two or more harvest entries.
SCGU06	Ridgeline silhouettes in mgR, mgPR, and bgR should not have unnatural-appearing breaks along them.
HPST01	Review undertakings that may affect cultural resources to identify potential impacts. Compliance with Sections 106 and 110 of the NHPA shall be completed before responsible agency official signs the decision document.
TRST01	Affected tribes shall be consulted prior to or during initial scoping of site-specific project proposals in order to identify tribal interests.
TRST03	Consult with potentially affected tribes during mid-, fine- and site/project scale analyses to coordinate recovery and restoration efforts. Where possible, assessments should be compatible with resources and places identified by other intergovernmental entities.
TRST04	During project planning, affected tribes shall be consulted regarding opportunities for restoration, enhancement, and maintenance of native plant communities that are of interest to tribes when proposed activities may affect those plant communities.
TRST05	Decisions for environmental documents shall demonstrate how tribal interests raised during consultation or scoping were considered.
TRGU02	Consider opportunities for protection or enhancement of culturally significant plants that are known to occupy the project area and the Tribes have identified during project scoping or consultation.
WRGU06	Boundaries of IRAs should be reviewed and adjusted as appropriate during project-level planning for proposed development projects within or adjacent to such areas. Consider potential additions, as well as subtracting developments, when making reviews and adjustments.