1.0 INTRODUCTION

This document describes the existing cultural resources within the proposed expansion area and identifies potential effects on this resource. Two alternatives are considered in this analysis, the Proposed Action (as described below and in the Master Development Plan [MSB 2004]) and No Action. Information contained in this report will be used in the Montana Snowbowl Environmental Impact Statement (EIS).

1.1 Background

The Montana Snowbowl Ski and Summer Resort (MSB) is an alpine ski and summer resort located on both private and federal land approximately 12 miles north of Missoula, Montana. The federal land is administered by the Lolo National Forest (LNF).

The existing ski area includes 1,138 acres of federal land administered by and under permit with the LNF and 80 acres of private land (owned by MSB) located at the base area (Appendix A, Figures 1-1 and 1-2). The base area is the location of the lodge and other administrative facilities at which skiers and other MSB users congregate and from which MSB is managed. The MSB currently operates a full winter (five to seven days per week) and limited summer schedule (Friday, Saturday, and Sunday). Existing facilities on LNF land include ski trails, lifts (both surface and chairlifts), small buildings, buried water and power lines, a snowmaking reservoir, hiking trails, mountain bike trails, and a folf (disc golf) course. Facilities on adjacent private land include ski trails, lifts, a rope tow, buildings, buried water and power lines, a snowmaking reservoir, hiking trails, a mountain bike trail, a potable water system, wastewater disposal systems, and parking areas.

The proposed expansion area is on LNF land called TV Mountain. TV Mountain is adjacent to and immediately west of the existing permit area. The west side of TV Mountain is the location of the original Snow Park Ski Area, which was the predecessor to the current MSB. Snow Park operated on LNF land during the 1950s and closed in 1960. The ski area was then moved to the Butler Creek drainage and re-opened in 1961 due to the availability of higher elevation terrain, better snow conditions, and greater vertical drop. In addition to the original Snow Park Ski Area, the proposed expansion area includes areas of past timber harvest, existing roads, and utilities. The summit of TV Mountain is a designated communications site (under permit with the LNF) with numerous television, radio, and microwave facilities and would be surrounded by the proposed expansion area.
The MSB has operated on the LNF under a Special Use Permit (SUP) since 1961. The MSB currently has a 40-year SUP (to expire in 2011). All of the existing SUP area on LNF land was assigned to Management Area (MA) 8 (ski areas) in the 1986 LNF Land and Resource Management Plan (United States Forest Service [USDA] 1986), referred to hereinafter as the Forest Plan. Approximately 706 acres of the proposed expansion area are currently assigned to MA 16 (timber production), and 399 acres are assigned to MA 25 (timber production within the constraint of achieving a visual quality standard of Partial Retention).

1.2 Proposed Action

The MSB is proposing to expand its alpine ski and summer resort to LNF land on TV Mountain in the general location of where the original Snow Park Ski Area was permitted and operated. This expansion proposal is summarized in a revised Master Development Plan (MSB 2004) that was received by the LNF on December 6, 2004.

The proposed expansion would increase the existing SUP area by 1,105 acres to 2,243 acres (Appendix A, Figure 1-1). New facilities on LNF land would include ski trails, lifts, buried lines (power, water, and wastewater), a snowmaking reservoir, hiking and mountain bike trails, two wastewater drainfields, a maintenance building, and a lodge.

A new SUP would be required for the Proposed Action. This SUP would authorize additional development, construction, and operation of resort facilities on Forest Service land (in this case, Forest Service land administered by the LNF). The SUP would be granted under the authority of the National Forest Ski Area Permit Act of 1986 (16 United States Code [USC] 497b). This Act authorizes the Forest Service to issue term ski area permits “for the use and occupancy of suitable Nordic and alpine skiing operations and purposes” (Section 3(b)). The Act also states that a permit shall encompass such acreage as the Forest Service “determines sufficient and appropriate to accommodate the permittee’s needs for ski operations and appropriate ancillary facilities” (Section 3(b)).

The Proposed Action would require an amendment to the Forest Plan. This amendment would change approximately 706 acres from MA 16 (timber production) and 399 acres from MA 25 (timber production) to MA 8 (ski areas). The total new SUP area would be 2,243 acres with this addition of 1,105 acres of LNF land in the proposed expansion. The current SUP allows MSB to operate on 1,138 acres of LNF land.

The improvements described in the Proposed Action in this analysis (Table 1-1) would not all be constructed during a single year, but would be constructed over an approximately 11-year timeframe.

1.2.1 Scope of this Analysis

The analysis of effects disclosed in this report includes any effects occurring from the entire project. Scope is defined in 40 Code of Federal Regulations (CFR) 1508.25 as the range of actions, alternatives, and effects, such as connected and cumulative actions and effects, considered in this report. In addition to the Proposed Action, which is described above, Connected Actions and past, present, and reasonably foreseeable actions are analyzed in this report.

Connected Actions. Connected Actions for this project include (1) all activities on private land that would be completed in conjunction with the proposed expansion described above, and (2)
some improvements in the existing SUP area that were approved under a 1996 decision by the LNF but have not yet been implemented (Table 1-1) (USDA 1996).

Other Connected Actions include new facilities/improvements planned on adjacent private land:

- Expanded parking (30 more spaces, or 75 more SAOT, created by moving the existing maintenance building)
- Continuous shuttle service on busy days
- Buried utility lines (power, water, and wastewater)
- Services building that would house bathrooms, ticket sales, and food sales
- Construction of a flow monitor on Butler Creek, maintenance of 30 gpm in Butler Creek at the flow monitor during snowmaking, and monitoring and annual reporting to the LNF.

For this analysis, the actual end result and effect of the Proposed Action cannot be accurately disclosed without including the additive improvements that would be implemented as Connected Actions (Table 1-1). Therefore, in this report the existing improvements are defined as all improvements that have already been constructed/completed in the existing SUP area. The components specific to the Proposed Action are discussed, but the cumulative totals related to the Proposed Action plus Connected Actions in the proposed new SUP area (and/or private land) are also identified.

**Past actions.** Past actions include those known management actions (regardless of land ownership) that could potentially have similar effects as identified as resulting from the Proposed Action and No Action alternatives. Past actions include the Snow Park Ski Area located on LNF land on the west side of TV Mountain, the construction of the existing MSB resort on LNF land and private land, and an SUP area expansion and improvements approved in 1996 by the LNF (USDA 1996). Other past actions are the 2003 closure of the Marshall Mountain Ski Area, timber harvest, and related road construction.

**Present actions.** Present actions include road maintenance and communications site operation on TV Mountain. Other present actions are vegetative and restoration treatments conducted within and adjacent to the LNF land by the Forest Service and private landowners.

**Reasonably foreseeable actions.** Reasonably foreseeable actions include road maintenance and vegetative or restoration treatments (such as weed control) anticipated to occur inside of and adjacent to the proposed expansion area during the next 11 years.

The Grant Creek Fuel Reduction Project was approved by the LNF in a 2007 Decision Notice (USDA 2007a). Although this project has already been approved, there are no implementation plans at this time or in the future (Paulsen 2010 personal communication). That project is therefore not included in the scope of this analysis.

Table 1-1 summarizes all existing improvements at MSB completed as of winter 2009–2010, the Connected Actions, and the Proposed Action.
Table 1-1. Existing Conditions and Proposed Action

<table>
<thead>
<tr>
<th>Proposed/Planned Ski Area Improvements</th>
<th>Existing Conditions</th>
<th>Connected Actions</th>
<th>Proposed Action</th>
<th>Potential Cumulative Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall ski area capacity (SAOT)</td>
<td>1,408 skiers</td>
<td>0 skiers</td>
<td>937 skiers</td>
<td>2,345 skiers</td>
</tr>
<tr>
<td>SUP area size</td>
<td>1,138 acres</td>
<td>No change</td>
<td>1,105 acres</td>
<td>2,243 acres</td>
</tr>
<tr>
<td>Ski trail capacity (SAOT)</td>
<td>1,500 skiers</td>
<td>193 skiers</td>
<td>1,373 skiers</td>
<td>3,066 skiers</td>
</tr>
<tr>
<td>Lift capacity (SAOT)</td>
<td>1,408 skiers</td>
<td>0 skiers</td>
<td>937 skiers</td>
<td>2,345 skiers</td>
</tr>
<tr>
<td>Base area capacity (SAOT)</td>
<td>1,629 skiers</td>
<td>771 skiers</td>
<td>0 skiers</td>
<td>2,400 skiers</td>
</tr>
<tr>
<td>Parking capacity (SAOT) (onsite + offsite lots)</td>
<td>2,775 skiers</td>
<td>75 skiers</td>
<td>0 skiers</td>
<td>2,850 skiers</td>
</tr>
<tr>
<td>Shuttle bus riders per day (from bottom of Grant Creek Road)</td>
<td>80 skiers</td>
<td>120</td>
<td>0 skiers</td>
<td>200 skiers</td>
</tr>
<tr>
<td>Ski trails: acreage</td>
<td>255 acres</td>
<td>20 acres</td>
<td>166 acres</td>
<td>441 acres</td>
</tr>
<tr>
<td>Ski trails: number</td>
<td>52 trails</td>
<td>8 trails</td>
<td>20 trails</td>
<td>80 trails</td>
</tr>
<tr>
<td>Ski trail capacity (SAOT): beginner/intermediate</td>
<td>1,050 skiers</td>
<td>190 skiers</td>
<td>1,250 skiers</td>
<td>2,490 skiers</td>
</tr>
<tr>
<td>Ski trail acreage: beginner/intermediate</td>
<td>105 acres</td>
<td>19 acres</td>
<td>125 acres</td>
<td>249 acres</td>
</tr>
<tr>
<td>Ski trail capacity (SAOT): advanced/expert</td>
<td>450 skiers</td>
<td>3 skiers</td>
<td>123 skiers</td>
<td>576 skiers</td>
</tr>
<tr>
<td>Ski trail acreage: advanced/expert</td>
<td>150 acres</td>
<td>1 acre</td>
<td>41 acres</td>
<td>192</td>
</tr>
<tr>
<td>Lifts: number</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Tree removal for new ski trails and lifts only</td>
<td>No change</td>
<td>14 acres</td>
<td>153 acres</td>
<td>167 acres</td>
</tr>
<tr>
<td>Tree removal for new bike trails only</td>
<td>No change</td>
<td>No change</td>
<td>5 acres</td>
<td>5 acres</td>
</tr>
<tr>
<td>Tree removal for new wastewater drainfields only</td>
<td>No change</td>
<td>No change</td>
<td>10 acres</td>
<td>10 acres</td>
</tr>
<tr>
<td>Total tree removal</td>
<td>No change</td>
<td>14 acres</td>
<td>168 acres</td>
<td>182 acres</td>
</tr>
<tr>
<td>Classified “old growth” tree removal</td>
<td>No change</td>
<td>No addition</td>
<td>39 acres</td>
<td>39 acres</td>
</tr>
<tr>
<td>Grading for transition leveling and construction</td>
<td>No change</td>
<td>No addition</td>
<td>39 acres</td>
<td>39 acres</td>
</tr>
<tr>
<td>Wastewater drainfields</td>
<td>Leave under main parking lot and base area</td>
<td>No change</td>
<td>Move to TV Mountain (10 acres)</td>
<td>Move to TV Mountain (10 acres)</td>
</tr>
<tr>
<td>Snowmaking reservoirs</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Maximum water withdrawal rate</td>
<td>115 gpm</td>
<td>115 gpm</td>
<td>115 gpm</td>
<td>115 gpm</td>
</tr>
<tr>
<td>Maximum seasonal water withdrawal volume for snowmaking only</td>
<td>28 acre-feet</td>
<td>No change</td>
<td>15 acre-feet</td>
<td>43 acre-feet</td>
</tr>
</tbody>
</table>
Table 1-1. Existing Conditions and Proposed Action

<table>
<thead>
<tr>
<th>Proposed/Planned Ski Area Improvements</th>
<th>Existing Conditions</th>
<th>Connected Actions</th>
<th>Proposed Action</th>
<th>Potential Cumulative Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum total seasonal water withdrawal volume for snowmaking and reservoirs</td>
<td>28 acre-feet</td>
<td>No change</td>
<td>20 acre-feet</td>
<td>48 acre-feet</td>
</tr>
<tr>
<td>Trenching for power, wastewater, and water lines</td>
<td>No change</td>
<td>No change</td>
<td>16,000 feet</td>
<td>16,000 feet</td>
</tr>
<tr>
<td>Buildings</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

2.0 METHODS

Information about the proposed project was obtained from the MDP (MSB 2004) and from conversations with the ski area owner and general manager. Similar projects at Bridger Bowl, 49 Degrees North, Lookout Pass, and Discovery ski areas were reviewed. Guidance was obtained from the Forest Plan, from applicable laws and regulations, and from direct communication with a former LNF archaeologist and the current archaeologist.

A literature review was assembled which was used by the LNF in Section 106 consultation. The LNF consulted with the Confederated Salish and Kootenai Tribes, the Nez Perce Tribe and Montana State Historic Preservation Office (SHPO). The LNF, the Nez Perce Tribe and the Montana SHPO agree that on-site field survey is necessary; this field survey will be conducted before a final EIS and Record of Decision are issued.

3.0 AFFECTED ENVIRONMENT (EXISTING CONDITIONS)

3.1 Standards Applicable to Cultural Resources

Federal statutory, regulatory, and guidance and policy applicable to Cultural Resource Management on public lands under the administration of LNF include the following:

- The National Historic Preservation Act of 1966 (NHPA as amended 1992)
- The American Indian Religious Freedom Act of 1978
- The Archaeological Resources Protection Act of 1979
- The American Indian Graves Protection and Repatriation Act of 1990
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Executive Order 13007, Indian Sacred Sites
- Executive Order 13084, Consultation and Coordination with Indian Tribal Governments
- Executive Order 13287, Preserve America
- Executive Order 13007, Indian Sacred Sites.

Lolo National Forest Plan

For this analysis, the inclusion of cultural resources is consistent with the prescriptions of regulations from the Advisory Council on Historic Preservation, set out in 36 CFR 800.8, which provides for incorporation of cultural resources considerations within the NEPA process and
documentation, in order to complete compliance with Section 106 of the NHPA and regulations from the Advisory Council to implement that section of the NHPA.

The Forest Plan (USDA 1986) states:

Cultural resources will be considered during the planning process for all proposed Forest undertakings. Inventories will be conducted prior to ground-disturbing activities as an integral part of project planning. All sites located will be evaluated for possible nomination to the National Register of Historic Places [NRHP] in consultation with the State Historic Preservation Office. Those properties determined eligible for National Register listing will be managed in a manner consistent with the standards specified by the State Historic Preservation Office, the Advisory Council on Historic Preservation, as well as applicable USDA regulations.

These standards also address LNF consultations with Indian tribes on a regular basis.

The Forest will coordinate, on a yearly schedule, with representatives from the Confederated Salish and Kootenai Tribes to discuss the types and locations of proposed Forest undertakings. This is a requirement specified within the American Indian Religious Freedom Act to ensure that areas on NFS lands which are important to contemporary Native Americans for religious reasons are not inadvertently impacted.

Coordination with other Native American groups could occur if there was reason to believe traditional or contemporary religious areas, important to these groups, were present on the Forest.

There are no MA standards related to cultural resources that would apply to the proposed expansion.

3.2 Area of Analysis

The analysis area or APE is the proposed expansion area. This area would be directly affected by construction, maintenance, and recreational use of the project elements.

3.3 Affected Environment

Cultural resources consist of any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP. These resources include artifacts, records, and remains that are related to and located within such properties. They also include any properties of traditional religious and cultural importance to an Indian tribe that meet the NRHP criteria.

The current cultural context adopted by the LNF and this study of prehistoric cultural properties is based on previous investigations and that knowledge shared by tribes with cultural interests in the area. The prehistory of the area is characterized by roughly 10,000 years of hunter-gatherer occupations, which are evidenced by various types of archaeological properties, including habitation sites, lithic processing sites, rock cairns, vision questing locations, burials, game drives or traps, and culturally modified trees. These sites are the result of seasonal subsistence patterns and other land uses such as procurement of lithic tool-making materials and spiritual
activities. Major occupational properties are generally limited to the major river drainages such as the Clark Fork and St. Regis rivers. In addition to the major river drainages, prehistoric peoples frequented higher elevation areas, usually in the summer months. These high-elevation areas provided them with a variety of both plant and animal subsistence resources (USDA 2010).

The historic context of the overall area is characterized by extensive mining, logging activities, homesteading properties, and early Forest Service administration sites. Mining in western Montana grew steadily from about the middle of the 19th century and came to dominate larger areas of the region by the late 19th century and early 20th century. Logging to support both local and distant timber demands grew as an industry during this same period. Homesteading also added to historic populations in the area, and large ranching and farming operations grew.

The LNF reported that four cultural resource inventories to support LNF projects have been undertaken in the vicinity of the proposed expansion area: the O’Keefe Timber Sale, Point Six Snow Cat Road, Northside Timber Sale, and the La Valle Timber Sale. Five cultural properties and one isolated artifact find within (24MO703) or in the vicinity of (24MO473, 24MO474, 24MO128, 24MO115 and isolated find) the proposed expansion APE were identified in these inventories. They are described below and summarized in Table 3-1.

Table 3-1. Cultural Properties in the Area of Potential Effect and Vicinity

<table>
<thead>
<tr>
<th>Property Number</th>
<th>Description</th>
<th>Inside APE</th>
<th>NRHP Status</th>
<th>LNF</th>
</tr>
</thead>
<tbody>
<tr>
<td>24MO115</td>
<td>Stone Cairns</td>
<td>No</td>
<td>Ineligible</td>
<td></td>
</tr>
<tr>
<td>24MO128</td>
<td>Historic Cabin</td>
<td>No</td>
<td>No determination</td>
<td></td>
</tr>
<tr>
<td>24MO473</td>
<td>Historic Lookout</td>
<td>No</td>
<td>Eligible</td>
<td></td>
</tr>
<tr>
<td>24MO474</td>
<td>Historic Road Segments</td>
<td>No</td>
<td>Ineligible</td>
<td></td>
</tr>
<tr>
<td>24MO703</td>
<td>Historic Mine</td>
<td>Yes</td>
<td>Not significant (see below)</td>
<td></td>
</tr>
<tr>
<td>Isolated Find</td>
<td>Single chert flake</td>
<td>No</td>
<td>Ineligible</td>
<td></td>
</tr>
</tbody>
</table>

The O’Keefe Timber Sale included an area of approximately 1,763 acres, 600 acres of which were in designated cutting units. The cultural resource inventory for this sale included portions of lands in T15N, R20W, Sections 16, 31, 32, and 33. The LNF report does not identify the total area inventoried. Properties 24MO473, 24MO474, and 24MO128 were identified in this inventory (USDA 1992a). None of these properties were located within the APE for the proposed expansion.

The Point Six Snow Cat Road cultural resource inventory, completed in 1988, was performed to support improvements to a primitive road. Improvements included the flattening of 550 feet of an existing ridge with an overall width of 30 to 50 feet. The road was proposed to service a then-new weather radar site on top of Point Six Mountain. One cultural property (24MO115) was identified in that inventory. This property was not located within the APE for the proposed expansion. This property was classified by LNF and ineligible for the NRHP. LNF did consult with the Confederated Salish and Kootenai Tribes on this property in 1988, and it was not identified at the time as a traditional cultural property.

The Northside Timber Sale inventory was conducted in 1993 to support a proposed sale encompassing 23 timber harvest units, totaling 1,900 acres. Four separate inventories were
Conducted in June 1993 for this sale. The topography of the area determined inventory coverage, and the report notes that ridge tops and drainage bottoms were the focus of the pedestrian inventory. The inventory recorded one new cultural property, a relatively small mining adit (24MO703), and a single, isolated artifact find. Property 24MO703 was located within the APE for the proposed expansion but outside the footprint of any proposed improvements. The isolated artifact find was not located within the APE.

Property 24MO703 was recorded in 1993 as consisting of a single hard rock mine test adit, measured as approximately 5 feet wide by 6 feet high by 40 feet deep and cut into solid bedrock. A single spoil rock pile, approximately 20 feet by 20 feet, was present. No cultural materials of any kind were identified at the property, and there are no buildings, structures, or their remains on the property. The LNF recorded it as having no significance (USDA 1993). The LNF did not provide any record, however, of consultations with the Montana SHPO for any consensus determination of NRHP eligibility or ineligibility for this property. Inventory of the area around this find identified no additional cultural resources (USDA 1993).

The LaValle Timber Sale cultural resource inventory was conducted in 1991 to support a proposed timber harvest area encompassing 213 acres, located in T14N, R19W, Sections 4 and 5, and T15N, R19W, Sections 28, 32, and 33. A single cultural property (24MO115) was recorded, and this property was not located within the APE for the proposed expansion.

4.0 ENVIRONMENTAL CONSEQUENCES (DIRECT, INDIRECT AND CUMULATIVE IMPACTS)

4.1 Alternative A - The No Action Alternative

The No Action alternative would maintain the existing condition at MSB as discussed above. Under this alternative, no cultural disturbances would occur for timber removal, ski trail and lift construction, or other facilities. No direct, indirect, or cumulative effects to cultural resources are anticipated with the No Action alternative.

4.2 Alternative B - The Proposed Action

The effects of implementing Alternative B on cultural resources is unknown until on-site surveys, planned for spring/summer 2011, are completed. Section 106 consultation and determinations of direct, indirect and cumulative effects will be identified and discussed in the final EIS. Any irreversible significant effects to cultural resources would be considered and addressed before the Record of Decision is issued.

5.0 ALTERNATIVES

No alternatives were identified based on cultural resources.
6.0 MITIGATION MEASURES AND MONITORING

Mitigation and monitoring needs will be reevaluated after onsite surveys are completed by the LNF (anticipated spring-summer 2011).

7.0 COMMENT REVIEW

No comments were received during scoping that identified cultural resource concerns.

8.0 FOREST PLAN CONSISTENCY AND MANAGEMENT AREA CHANGE

Section 106 consultation and determinations of direct, indirect and cumulative effects will be identified and discussed in the final EIS. A determination of Forest Plan consistency will be included in that document.

Section 106 consultation and determinations of direct, indirect and cumulative effects will be identified and discussed in the final EIS. A determination of effects due to MA designation change will be included in that document.

9.0 SOURCES OF INFORMATION


Paulsen, Tami. 2010. Lolo National Forest. Personal communication with Stephanie Lauer of PBS&J.


Figure 1-1. Montana Snowbowl Vicinity Map
Figure 1-2. Base Area Map Montana Snowbowl