Executive Summary

EXECUTIVE SUMMARY

INTRODUCTION

a. Purpose and Need

The Mammoth Mountain Ski Area (MMSA, the Project Applicant) has applied to the United States Department of Agriculture (USDA) Forest Service (Inyo National Forest) for approval to construct the Ski Back Trail. The purpose of the Ski Back Trail is to increase skiable terrain at the Canyon Lodge portal and to simultaneously create skier return capacity to The Village portal. Existing up-slope capacity exceeds down-slope capacity causing slope crowding and excessive demand on The Village Gondola and the Canyon Lodge and Main Lodge Transit systems at the end of the day. In addition, future development of The Village is expected to double the demand on the Village Gondola. Construction of the Ski Back Trail would allow for a better balance between up-slope and down-slope skier capacity thus improving circulation, resources allocation, and guest experience. The Ski Back Trail would be approximately 7,800 linear feet with an average width of 22 feet and would require grading a total of 6.16 acres of the MMSA.

The Proposed Action being analyzed by the Forest Service, as the Lead Agency for this project, is whether to grant approval for the use of National Forest System land within the existing permitted boundary of the MMSA Special Use Ski Permit area for the proposed Ski Back Trail and under what terms and conditions the Proposed Action would be authorized. The decision will be based on the National Forest plans and policies and considering the potential environmental impacts of the Proposed Action, other action alternatives and the no action alternative. Various action alternatives were considered including three alternatives that were evaluated in detail in this Final Environmental Assessment (Final EA). This Final EA has been prepared to comply with the National Environmental Policy Act of 1969 (NEPA - 42 U.S. Code 4321 *et seq*.).

b. Agency Use of EA and Permitting

This Final EA has been prepared to inform the public and to meet the needs of the Forest Service, as well as other permitting agencies in considering MMSA's application for the development of the Ski Back Trail, and subsequently, any other permits and approvals needed for the Proposed Action. A list of applicable permit requirements is provided in Section 1.7 of this document. This Final EA reflects comments and concerns made by agencies and the public during the scoping process. In addition, a public review period was provided to solicit written comments on the Draft EA.

Based on the comments received on the Draft EA, this Final EA will incorporate responses to comments and revisions as appropriate. Following publication of the Final EA, the decision of the Forest Service (as Lead Agency) on the Proposed Action will be documented in a Finding of No Significant Impact and a Decision Notice, including terms and conditions of approval. The decision will also determine whether or not an EIS should be prepared.

DESCRIPTION OF PROPOSED ACTION

Mammoth Mountain Ski Area lies to the west of the Town of Mammoth Lakes (Town) in the Inyo National Forest. The Town is a destination resort community located in southwestern Mono County, approximately 37 miles northwest of Bishop and approximately 30 miles east of Yosemite National Park on the eastern side of the Sierra Nevada mountain range. The Town lies approximately three miles west of U.S. Highway 395, along State Highway 203 (SR-203 or Minaret Road). The proposed Ski Back Trail is located within a relatively localized and narrow area between Minaret Road and an existing residential development (the Mammoth Slopes residential community). The proposed Ski Back Trail alignment extends in a west to east direction, paralleled by Minaret Road to the north and at a higher elevation than the proposed trail alignment, and the Mammoth Slopes residential development located to the south of and at a lower elevation than the proposed trail alignment.

The Ski Back Trail would extend from 8,620 feet in elevation, near the terminal of Chair 7, to The Village at approximately 8,080 feet in elevation. The 7,800 linear foot trail would have an overall drop of approximately 540 feet in elevation. The average width of the proposed Ski Back Trail would be 22 feet in order to accommodate snow grooming equipment. It is anticipated that the Ski Back Trail will be attractive to intermediate level and above downhill skiers. The trail will follow the natural slope and grade of the terrain and have a six to nine percent grade for the majority of the alignment. In order to maintain skiable pitch in the six steeper sections of the trail, slope retention would be necessary. Furthermore, the cut and fill on cross hill sections would be balanced. As proposed, four walls constructed of native rock would be a maximum of four feet high with the exception of one soil-nail wall that would be a maximum of 12.5 feet high at center. The final 300 feet of the proposed Ski Back Trail will also incorporate a raised causeway to maintain a one percent grade and eliminate the need for stairs at the Village and the proposed Ski Back Trail Connection Bridge.

Construction of the Ski Back Trail is anticipated to begin in May extending through October. Construction is anticipated to occur from eight to 10 hours a day, five days a week. Trail construction would utilize down-slope grade cutting and slope retention techniques where necessary rather than fill, in order to minimize the disturbance of the natural terrain, existing bike trails, and visual impacts to the residents in the adjacent Mammoth Slopes neighborhood. Construction of the Ski Back Trail would require removal of vegetation of between 22 to 40 feet.

In addition, a total of four temporary access roads would be developed from Minaret Road to the proposed Ski Back Trail. The temporary access roads would be approximately 10 to 15 feet wide, accommodating one-way traffic and providing appropriate traffic safety measures at the access points to Minaret Road.

During use of the Ski Back Trail, snowmaking would occur as necessary. Snowmaking generally only occurs early in the ski season (November to December) and it is estimated that in an average year, a total of 60 hours of snowmaking activities could occur. On average, the proposed Ski Back Trail would be groomed once a day, although on heavily-trafficked days, an additional grooming pass may be required. Snowmaking and grooming would not take place between the hours of 8:00 P.M. and 7:00 A.M.

Table ES-1

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
RECREATION		
Construction of the Ski Back Trail would result in adverse effects to the Uptown and Downtown cross-country mountain bike trails. Mountain bikers traversing the Uptown and Downtown trails could also adversely affect the Ski Back Trail in the summer months.	**Mitigation Measure 3.2-1:** The project applicant shall restore the conditions of the Uptown and Downtown mountain bike trails, as established prior to any construction activities. Restoration shall include, but not be limited to, re-grading of the mountain bike trail alignment and the provision of adequate improvements including drainage and vegetation.	This mitigation measures requires the restoration of the mountain bike trails upon completion of construction of the Ski Back Trail. Therefore, this mitigation measure would have a beneficial impact on recreational facilities and would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure 3.2-2: The project applicant shall provide barriers consistent with the natural terrain during the summer along all sections in which the proposed Ski Back Trail intersects the mountain bike trails, in order to limit mountain bikers traversing the proposed Ski Back Trail.	This mitigation measure requires providing barriers along portions of the Ski Back Trail. The barriers would only be provided during the summer months and would only be visible along the mountain bike trails, thereby not impacting the views of the trail or from surrounding uses. As such, the barriers would not create a residual effect.
TRANSPORTATION		
The Proposed Action would not result in adverse construction or operational transportation effects.	No mitigation measures required.	Less than significant impact.
AIR QUALITY		
The Proposed Action would not result in adverse construction or operational air quality effects.	No mitigation measures required.	Less than significant impact.
NOISE		
The Proposed Action would not result in adverse construction noise impacts. However, mitigation measures are recommended in order to ensure no adverse construction noise effects to the nearby residential uses.	**Mitigation Measure 3.5-1:** During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.	This mitigation measure requires muffling of construction equipment. Implementation of this measure would result in a beneficial impact to noise and would not result in physical changes to the environment and as such, would not create a residual effect.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
	Mitigation Measure 3.5-2: The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.	This mitigation measure requires locating construction equipment away from sensitive receptors. This mitigation measure would be a beneficial impact on noise levels and requires shielding of the equipment to ensure there are no secondary aesthetic impacts.
	Mitigation Measure 3.5-3: The construction contractor shall locate equipment staging in areas that would create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.	This mitigation measure requires staging construction equipment away from sensitive receptors. This mitigation measure would be a beneficial impact on noise levels and requires shielding of the equipment to ensure there are no secondary aesthetic impacts.
Snow making could impact sensitive receptors (residential uses) located approximately 200 feet south of the Ski Back Trail Alignment.	**Mitigation Measure 3.5-4:** Snow-making activities shall be limited to daytime hours between 7:00 A.M. and 8:00 P.M. with no snow-making activities permitted between 8:00 P.M. and 7:00 A.M.	This mitigation measure requires compliance with the City's Noise Ordinance. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure 3.5-5: Maintain or establish vegetative screening between gun placements and residences.	This mitigation measure requires screening of the snow guns. This mitigation measure would be a beneficial impact on noise levels and requires shielding of the equipment to ensure there are no secondary aesthetic impacts.
	Mitigation Measure 3.5-6: All snow-making equipment shall be placed a minimum of 300 feet from the nearest residential unit. The placement of snow guns farther from the homes would increase the amount of time the grooming equipment would be in the project vicinity to place the snow. However, snow grooming would not take more than a few minutes depending on weather but could take up to no more than 10 minutes. Confirmation that due to the distance and intervening topography, the snow-making equipment does not exceed the City's Noise Ordinance shall be performed by a qualified Acoustical Engineer.	This mitigation measures requires that all snow-making equipment be placed a minimum of 300 feet from the nearest residential unit. Furthermore, confirmation that the snow-making equipment does not exceed the City's Noise Ordinance shall be performed by a qualified Acoustical Engineer. This mitigation measure would be a beneficial impact on noise levels and no residual impact is anticipated.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
BIOLOGICAL RESOURCES		
The Proposed Action would not result in adverse construction or operational effects to plant species, migratory movement, or critical habitat. In addition, while sensitive wildlife species are not anticipated to occur within the Ski Back Trail vicinity, a mitigation measure is included to ensure no adverse construction effects.	**Mitigation Measure 3.6-1:** The project applicant shall schedule construction, grading, and vegetation removal activities outside the nesting season (nesting season is typically February 15–August 31) to the extent feasible to avoid the taking of migratory bird species. If initial vegetation removal occurs during the nesting season, all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of vegetation clearing. If any active nests are detected, a buffer of at least 100 feet (300 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor or until construction, grading, and vegetation removal activities are completed (whichever comes first). The results of the monitoring shall be provided in writing by the biological monitor to the CDFG subsequent to the monitoring activities.	This mitigation measure requires limiting construction activities within the nesting season. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
The Proposed Action would install temporary and permanent erosion control including revegetation of the trail surface with native grasses and a mix of native shrubs and wildflowers in the disturbed areas, in which weed control measures would be required to control the colonization of disturbed ground by non-native, weedy, plant species.	**Mitigation Measure 3.6-2:** The project applicant shall implement the following measures during ground disturbing activities: 1) All equipment used in ground disturbing activities will be cleaned free of soil and plant parts prior to beginning work on the project to prevent introduction or translocation of weed species. Ensure equipment is free of mud and plant parts by completing a thorough visual inspection of tires, tracks, and underbody. 2) Minimize the amount of ground disturbance through careful equipment operation. 3) Monitor project area for new noxious weed species for up to three years following project implementation, and remove any newly established noxious weed populations. Consult with Forest botany personnel as needed to identify weed species.	This mitigation measure requires the implementation of weed control measures, including equipment cleaning, careful equipment operation, monitoring for new noxious weed species for up to three years following the project, and revegetation of the project area with native species. Implementation of this mitigation measure would not result in physical changes to the environment and would not create a residual effect.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
	4) Revegetate project area with native species. Consult with Forest botany staff on appropriate species mix.	
CULTURAL RESOURCES		
The Proposed Action includes excavation into undisturbed sediments below the ground surface of the project site, which has the potential to encounter previously undiscovered archaeological, Native American, or paleontological resources.	**Mitigation Measure 3.7-1:** A qualified archaeological monitor shall be present during the ground-disturbing construction activities. Due to the potential for subsurface cultural deposits, a culturally affiliated Native American monitor with experience in cultural resources also shall monitor these ground-disturbing activities. In the event that the lead agency determines that it will not include a Native American monitor in the archaeological monitoring process, this decision shall be sent in writing to an updated list of all Native American individuals and organizations identified by the NAHC as having affiliation with the project area. These individuals and organizations shall be provided with a comment period of not less than four weeks on this decision. If this course of action is taken, affiliated Native American groups shall also be notified if sensitive deposits or cultural materials are encountered. No monitor is required for construction-related activities in the lower glacial deposits. If cultural resources are identified, the archaeologist shall be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment. Treatment will include the Town's goals of preservation where practicable and public interpretation of historic and archaeological resources. The archaeologist shall prepare a final report about the monitoring to be filed with the project applicant, Mono County, and the CHRIS-EIC, as required by the State Historic Preservation Officer (SHPO). The report shall include documentation and interpretation of resources recovered, if any. Interpretation will include evaluation of eligibility of the resources with respect to the National Register and California Register. The report shall also include all specialists' reports as appendices. The lead	This mitigation measure requires monitoring during earthwork activities. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
	agency shall designate repositories in the event that significant resources are recovered.	
	Mitigation Measure 3.7-2: If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains.	This mitigation measure requires notification if human remains are encountered. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
AESTHETICS		
The Proposed Action would not result in adverse construction or operational aesthetic effects.	No mitigation measures required.	Less than significant impact.
GEOLOGY: The following recommendations were contained in the geotechnical study and are incorporated as mitigation measures for the project.		
The Proposed Action would not result in adverse construction or operational impacts in regards to geological issues. However, mitigation measures are recommended in order to ensure that adverse geological effects do not occur.	**Mitigation Measure Geo-1:** The project applicant shall conduct additional geotechnical studies prior to construction to observe all site grading including the backcuts for the proposed retaining walls to identify field conditions that differ from those anticipated by the investigation, and to identify field conditions not observed in proximity of the retaining wall areas.	This mitigation measure requires additional geotechnical studies prior to construction for all site grading to identify differing field conditions and field conditions not observed in proximity of the retaining wall areas. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
	Mitigation Measure Geo-2: Prior to issuance of a grading permit, a qualified geotechnical engineer shall be retained by the project applicant to be present on the project site during site grading. When appropriate, the geotechnical engineer shall provide structure-specific geologic and geotechnical recommendations which shall be documented in a report to be appended to the project's previous geotechnical reports. Such observations are considered essential to identify field conditions that differ from those anticipated by the investigation, to adjust design to actual field conditions, and to determine that the grading is accomplished in general accordance with the recommendations of the geotechnical report prepared for the project. Earthwork and grading recommendations which include guidelines for site preparation fill compaction, slopework, temporary excavations, and trench backfill are provided in Appendix F of this Final EA.	This mitigation measure requires a qualified engineer to be present on the project site during site grading, and to provide structure-specific geologic and geotechnical recommendations when appropriate. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure Geo-3: During construction, embedded structural walls or cantilevered retaining walls shall be designed for the lateral earth pressures exerted on them. The magnitude of these pressures depends on the amount of deformation that the wall can yield under load. If a wall can yield enough to mobilize the full shear strength of the soil, it can be designed for "active" pressure. If a wall cannot yield under the applied load, the shear strength of the soil cannot be mobilized and the earth pressure will be higher. Such walls shall be designed for "at rest" conditions. If a structure moves toward the soils, the resulting resistance developed by the soil is the "passive" resistance.	This mitigation measure requires that embedded structural walls or cantilevered retaining walls be designed for the lateral earth pressures. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure Geo-4: Prior to backfill operations, the backfill soils shall be tested by a qualified geotechnical engineer to select backfill that shall have an expansion index (EI) of no greater than 50 and a sand equivalent (SE) greater than 15.	This mitigation measure requires that backfill soils be tested by a qualified technical engineer. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.

Table ES-1 (Continued)

Summary of Mitigation Measures and Residual Effects

Issue	Mitigation Measure	Residual Effect
	Mitigation Measure Geo-5: Prior to construction, the project applicant shall ensure that compaction equipment for the backfill of the site retaining walls shall be relatively light to avoid potentially damaging the retaining walls. Furthermore, all retaining wall structures shall be provided with appropriate drainage and waterproofing.	This mitigation measure requires the project applicant to ensure that compaction equipment for the backfill is relatively light to avoid potentially damaging the retaining walls. All retaining wall structures shall have appropriate drainage and waterproofing. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure Geo-6: During construction, a qualified geotechnical engineer shall monitor foundation excavations and the actual extent of the removal of earth shall be determined based on the field evaluation of exposed conditions during grading.	This mitigation measure requires a qualified geotechnical engineer to monitor foundation excavations. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.
	Mitigation Measure Geo-7: During construction and operation, positive site drainage shall direct runoff away from foundations and shall not be allowed to pond. Drainage shall consist of continuous drains installed along the base of the wall outletting to a storm drain system or the surface if grade allows and shall not flow uncontrolled down any descending slopes.	This mitigation measure requires that runoff is controlled and drained to a storm drain system or the surface, and not allowed to pond or flow uncontrolled. Implementation of this measure would not result in physical changes to the environment and as such, would not create a residual effect.

Source: PCR Services Corporation, 2007.