MOUNTAIN HIGH
RESORT

Chapter III

III. EXISTING CONDITIONS AND ENVIRONMENTAL CONSEQUENCES

Chapter III describes the existing physical and biological components in and around the project area that may be affected by selection of any of the alternatives. Individual resource sections in this chapter contain a discussion of the environmental consequences related to each alternative including direct, indirect, and cumulative effects.

- Direct effects are caused by the action and occur at the same time and place.
- Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable (i.e. likely to occur within the lifetime of the project).
- Cumulative effects are the result of the incremental effects of any action when added to other past, present, and reasonably foreseeable future actions and can result from individually minor but collectively significant actions taking place over a period of time.

MHR's SUP – the project area – is the primary area of influence for direct, indirect, and cumulative physical and biological effects. However, this effects analysis is not limited to the boundaries of the SUP. When appropriate, it is expanded to include adjacent NFS lands.

A. VISUALS AND NOISE

Visual Resources

Scope of the Analysis

The geographic scope of this visual resources analysis encompasses a one-mile stretch along Highway 2, also known as the Angeles Crest Highway. The highway is a Forest Service Scenic Byway and a State Scenic Highway. The scenic highway designation is intended to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the state's scenic resources.

MHR is also surrounded by the Big Pines Historic District (BPHD), which portrays a characteristic feel for the past. The two entities (BPHD and MHR) work together to meet the needs of the recreating public while maintaining the historic setting of the area. The majority of this analysis is conducted from within the foreground view of the project area to determine effects to the visual quality of MHR as viewed from Highway 2 and the BPHD "Clubhouse" building.

Forest Service Direction

The ANF is governed by the 1987 Forest Plan, which states overall goals and objectives for the management of the forest. It also relates forest-wide standards and guidelines as well as specific direction for each management prescription. Forest-wide standards and guidelines for visual resources on the ANF emphasize that "sensitivity of the visual resource needs to be maintained

because of the growing influx of people. Visual quality will remain the same or slightly improved."[1]

The MHR SUP area lies within Management Prescription #5. Direction associated with visual resources for this prescription states that management activities should be designed and implemented to "provide a visually appealing landscape." [2]

Visual Management System

The goal of landscape management on all NFS lands is to manage for the highest possible visual quality, commensurate with other appropriate public uses, costs, and benefits. Since the mid-1970s, the Forest Service has operated under the guidance of the Visual Management System (VMS)[3] for inventorying, evaluating, and managing scenic resources.

The majority of this analysis relies on Visual Quality Objectives (VQOs) as described in the VMS. VQOs are based on the physical characteristics of the land and the sensitivity of the landscape setting as viewed by humans. They define the minimal threshold for alterations to the landscape. The levels range from *Preservation* (unaltered) to *Maximum Modification* (extremely altered).

The SUP encompassing the facilities at MHR East and West has been assigned two VQO classifications in the 1987 Forest Plan. The southern (up-mountain) and base area portions of both areas are within the *Retention* VQO; *Retention* provides for management activities that are not visually evident. Under *Retention*, activities may only repeat form, line, color, scale, and texture that are frequently found in the characteristic landscape.

The lower mountain and base areas of both ski areas are within the *Partial Retention* VQO assigned by the LRMP. *Partial Retention* management activities remain visually subordinate to the characteristic landscape. These activities repeat form, line, color, scale, or texture common to the characteristic landscape, but changes in their quantities or size, amount, intensity, direction, and pattern must remain visually subordinate to the characteristic landscape.

Scenery Management System

In 1995, the Forest Service developed a new system for visual resource management on national forests – the Scenery Management System (SMS). This system supersedes, and is meant to gradually phase out, the VMS. The manual, Landscape Aesthetics: A Handbook for Scenery Management[4] was released to aid in the transition to the new SMS. National direction has been given to incorporate the methods and philosophy of the SMS with each land and resource management plan revision or new planning project.[5] Ultimate incorporation of the SMS will occur once each forest's land and resource management plan is revised.

[1] USDA Forest Service 1978, ANF LRMP
[2] USDA Forest Service, 1997
[3] FSM 2380
[4] USDA Forest Service, 1995
[5] USDA Forest Service Washington Office memos: 8-22-94 and 3-10-97

Although the ANF is in the process of revising the LRMP, the SMS has yet to be formally implemented on the Forest. However, projects currently undergoing NEPA analysis on the Forest are required to meet requirements of both the current VMS and future SMS.

While the essence of the SMS is essentially the same as the VMS, the terminology has changed, and the system has been expanded to incorporate updated research findings. Conceptually, the SMS differs from the VMS by increasing the role of constituents throughout the inventory and planning process; it is integrated with the basic concepts of ecosystem management. The SMS pertains more specifically to the social/cultural dimension of ecosystems management, but it also has links to biological and physical attributes.

Under the new SMS, VQOs are replaced with Scenic Integrity Objectives (SIOs).[6] SIOs range from *Very High* (ecological change only) to *Very Low* (where activity dominates the characteristic landscape but is viewed as natural from the background distance). The scenic integrity indicates the degree of intactness and wholeness of the landscape character.

The corresponding SIO for the *Retention* and *Partial Retention* VQOs are *High* and *Moderate*, respectively. The existing facilities at MHR do not currently meet the guidelines of the VMS and/or the SMS.

Distance Zones

Distance zones are divisions of a particular landscape being viewed. They are used to describe the part of a characteristic landscape that is being inventoried or evaluated. Viewing distance is important in determining how change is perceived in a landscape.

- Foreground: The limit of this zone is based upon distances at which details can be perceived. Normally in foreground views, the individual boughs of trees form texture. It is usually limited to areas within one-half mile of the observer, but must be determined on a case-by-case basis, as should any distance zoning. Generally, detail of landforms and special landscape features (including human alteration) is more pronounced when viewed within the foreground zone.

- Middleground: Alterations in the middleground (one-half mile to four miles from the observer) become much less distinctive. Texture is normally characterized by the masses of trees in stands or uniform tree cover. Individual tree forms are typically discernable in very open or sparse stands.

- Background: As the perspective shifts to the background, distance has a modifying and diluting effect to both landscape texture and color. This zone extends from middleground (minimum of four miles between the observer and the area being viewed) to infinity. In very open or sparse timber stands, textures begin to be lost. Shape, however, may remain evident

[6] The evaluations of deviations in all SILs, excluding Very High, are based on views from identified viewing boundaries.

beyond ten miles, especially if it is inconsistent with other landscape forms. Beyond ten miles, alteration in landscape character becomes obscure.

Recreation Opportunity Spectrum

As stated in the Recreation Opportunity Spectrum (ROS) Book,[7] defining the interface between recreation and visual resources is important because there are many overlaps in inventory, analysis, and management application – most of which are complementary.

The dual VQOs of *Retention* and *Partial Retention* for the SUP are compatible with the ROS setting of *Rural*. Refer to the Recreation section of this chapter for more detailed information on the ROS and the *Rural* setting that defines the SUP.

Existing Conditions

The area encompassed by MHR's SUP has been allocated to winter sports use since 1941. Over the decades the landscape has been modified to accommodate the creation of ski trails, the installation of chairlifts, and the construction of resort facilities and infrastructure. MHR has developed into a concentrated, winter recreation area.

During the ski season, the resort operates 14 hours per day (from 8:00 a.m. until 10:00 p.m.). Approximately 85 percent of MHR West is lighted for night skiing seven days a week from 5:00 p.m. until 10:00 p.m. The lights make MHR a visible component of the night sky from all three distance zones; however.

The Jet Propulsion Laboratory (JPL) is a federally funded research and development facility managed by the California Institute of Technology for the National Aeronautics and Space Administration. It is located in the vicinity of MHR; as a result, there is an agreement between MHR and the JPL, with the support of the Forest Service, which dates back to November 6, 1979. As a part of this agreement, JPL notifies MHR of the daily "code" with respect to activity at the lab. When the code is high, MHR is required to have all of their lighting turned off by 10:30 p.m.

Depending on the location of the viewer, MHR's facilities and trails appear in the foreground (as viewed from Highway 2 along the length of the resort), middleground (as viewed from points east and west on Highway 2), and background views (as seen from Pearblossom, a small town nearby). However, this analysis focuses primarily on the effects to the scenic integrity of the area as viewed from the foreground. The proposed changes are considered with respect to the overall recreation theme of the resort and the historic setting of the BPHD.

Drivers traveling west on Highway 2 can see the parking lot, base area facilities, and the lifts and trails associated with MHR East. As they continue further west, drivers may see vehicles parked along both sides of the highway as a result of overtaxed parking facilities at MHR and dispersed snowplayers visiting the high country.

[7] USDA Forest Service, 1986, pg. II-13

Continuing along Highway 2, drivers may see glimpses of the upper parking lot at MHR West, across from the BPHD Clubhouse. Once past the entrance road to MHR West, drivers come to the lower parking lot, which is on the same grade with Highway 2. An electric transformer and associated power lines for the resort are located along the northern edge of this parking lot and are visible from the highway. While passing the Big Pines Meadow, drivers can see the restroom facility in the MHR West base area, one of many aging, modular buildings in the MHR West base area.

The MHR West facilities are comprised of multiple trailer-like buildings and appear as a conglomerate of mismatched buildings as viewed from within the western portion of the SUP area or if viewed from above coming down the road from Ski Sunrise. These buildings were installed in the early 1970s as a temporary solution to meet the needs of the resort. However, they have been there for nearly 30 years and continue to detract from the visual quality, the recreation experience, and the overall feel of the resort.

In summary, MHR is currently not in compliance with the VQOs of *Retention* and *Partial Retention* assigned to its management area. Some of the existing facilities do not blend with the BPHD and detract from the scenic highway designation of Highway 2.

Noise

Los Angeles County Code categorizes MHR as a Noise Zone III (Commercial). MHR is located approximately 1.3 miles west of the town of Wrightwood. Because the resort's facilities are removed from the town, daily operations (i.e. snowmaking, PA systems, etc.) cannot be heard from town. Existing resort operations at MHR can be heard from nearby facilities; these sounds include traffic, snowmaking, music, and construction.

ENVIRONMENTAL CONSEQUENCES FOR VISUALS AND NOISE

Introduction and Visual Analysis

In this resource section, both alternatives are analyzed for their potential effects to visual resources and noise. Alternative B entails building construction, parking lot construction, lift installation, and terrain modifications. Each of these project elements would require varying degrees of vegetation clearing and terrain grading. While these figures were utilized in analyzing the effects to visual resources, they were also instrumental in assessing effects to the cultural setting and feel of the BPHD.

Figures III-1, III-7 and III-8 are visual simulations of the proposed parking expansion and the proposed Day Lodge at MHR West. Figures III-2 and 3 depict a cross section of existing and proposed conditions in relation to the Big Pines Restrooms. Figures III-4 and III-5 are illustrative figures of the vegetation at MHR west under existing and proposed conditions. Figure III-6 details proposed project elements at MHR West under Alternative B with a tree survey data overlay.

Figure III-1 – MHR West Upper Lot

This visual simulation depicts the view from the north side of Highway 2, approaching both the BPHD and MHR West from the East. It was selected for its view of the Big Pine Restrooms and potential to see the proposed parking expansion along the eastern edge of the existing upper lot at MHR West.

In the existing conditions photo, the Big Pines Restrooms and a portion of the stone wall that characterize the BPHD are visible. Mature vegetation lines the road side and continues up the slope behind the restroom building.

In the simulation of proposed conditions under Alternative B, the Big Pines Restrooms and the stone wall remains intact. There would be no loss of vegetation along the road side. Vegetation removal associated with the proposed parking lot expansion would create an opening above the restroom facility. However, this slope would be reclaimed and landscaped to reduce the effects to the visual quality of the area.

Figure III-2 and III-3

These figures show both the existing and proposed parking along the eastern edge of the upper lot at MHR West. The intent is to demonstrate the change in slope and vegetation as experienced from the Big Pines Restrooms.

Figure III-4 – Illustrative (Alternative A)

This figure shows the existing parking lot configuration, buildings, and vegetation at MHR West.

Figure III-5 – Illustrative (Alternative B)

This figure shows the proposed parking expansion, road relocations, buildings, and vegetation after implementation of Alternative B. Emphasis is placed on the areas to be revegetated for visual screening purposes.

Figure III-6 –Alternative B with individual tree locations

This figure shows the proposed parking expansion, terrain modifications, and buildings, at MHR West overlaid with the tree survey data gathered in the summer of 2002. The survey incorporated all of the areas of proposed disturbance. It details the number of trees to be removed and as well as some of the areas proposed for revegetation.

Figure III-7 – Proposed Day Lodge

This figure depicts the proposed Day Lodge as viewed across Highway 2 from the western edge of the existing lower parking lot at MHR West. The viewpoint was selected because of the scenic highway designation of Highway 2 and the proximity to the BPHD buildings.

The existing conditions photo shows the wide expanse of the Big Pines Meadow, with mature vegetation in both the middleground and background views. The entrance to the lower parking lot is also evident.

In the photo simulation of proposed conditions, portions of the Day Lodge are visible through the screening of large trees. Although several trees are removed for construction of the Day Lodge, many of the large trees along the proposed Bullwheel access road remain; four trees are removed for the relocation of the Bullwheel access road. Neither the access road nor the proposed maintenance facility would be visible from this viewpoint. The Big Pines Meadow and the existing entrance road remain intact.

Figure III-8 – Proposed Day Lodge

This figure offers a view of the proposed Day Lodge and the terrain modifications at MHR West as viewed from a location adjacent to the Big Pines "Clubhouse." This view is valuable because of the proximity to the "Clubhouse" and the potential to view all three proposed projects.

In the existing conditions photo, the entrance road to MHR West, with all of its signage and banners, is visible. The existing lower parking lot with its electric transformer and overhead power lines dominate the foreground. Alternative B proposes the Day Lodge and terrain modifications.

Further details of the proposed project elements and their potential to affect the visual quality of the area are described by alternative below.

Alternative A – No Action

Visuals

With selection of the No Action Alternative, there would be no change in visual quality of MHR or its facilities. The resort would continue to look like the developed winter recreation site, with ski lifts and trails as well as resort infrastructure and facilities.

Existing modular base area buildings at MHR West would remain, and parking at MHR East and West would continue to overflow along Highway 2. Motorists traveling on Highway 2 would continue to have direct views of the MHR West lower parking lot, the electrical transformer, and its associated power lines.

Alternative A would result in continued inconsistency with the prescribed VQOs and SIOs. The area would continue to be in need of rehabilitation. Facilities would continue to lack the design character to blend with the BPHD.

Noise

The No Action Alternative would result in no changes to current noise levels at MHR. Although existing operations are audible from surrounding areas, they are and would continue to be in compliance with LA County code.

Alternative B

Visual Resources at MHR West

Buildings

With implementation of Alternative B, improvements would be made to the base area facilities at MHR West via the construction of a new Day Lodge.

The new Day Lodge would respond to the cultural and aesthetic traditions of the Big Pines historic region and its rustic architectural theme although out of scale with the buildings of that era. Construction of the Day Lodge would incorporate the use of materials and colors that blend with the natural forest setting, including browns, grays, and greens. The building may also display some forest product at the exterior, such as large logs and stone, to provide an additional link to the surrounding historic setting.

Similarly, landscaping would tie the building to the natural setting. The use of pitched roofs with dormers, roof overhangs, and wood decks is typically associated with the architectural style MHR is striving to attain with the proposed Day Lodge.

While the final design of the building is beyond the scope of this NEPA analysis, it is important to note that Forest Service specialists have been involved in the architectural concept of the Day Lodge. One objective has been to maintain the setting and feel of the historic district by placing structures within the setting and paying attention to the scale of the project elements. Subsequent to NEPA approval and in accordance with Forest Service directives, MHR would coordinate final approval of the building design with the Forest Service prior to initiating construction. This would also entail consultation with the SHPO for concurrence on the determination.

Under Alternative B, the proposed location of the Day Lodge would enable construction of the Bullwheel access road behind the Day Lodge. As a result, approximately 15 large trees, which currently serve to screen the view of the facilities from the Highway and serve as wildlife habitat, would remain in place and continue to help screen the base area facilities from passersby. Construction of the proposed Day Lodge at MHR West would be consistent with a VQO of *Partial Retention*.

The proposed maintenance facility would not be visible from anywhere but within the SUP area. Even from within the base area at MHR West, the maintenance building would be removed from the public facilities and should not affect the visual quality of the project area.

Parking

The parking expansion would require approximately 2.6 acres of ground disturbance. Construction on the eastern edge of the upper lot would retain most of the large screening trees along the north and all of the trees along the western edge of this existing lot. As a result of the parking expansion, there would be a minor change to the general landscape character of the area as observed by passersby on Highway 2 (refer to Figure III-1).

Under Alternative B, the lower parking lot at MHR West remains unchanged. As a result, the existing electric transformer and its associated overhead power lines would continue to detract from the overall visual quality of the area.

Lifts and Terrain

The bottom terminal of the Snowflake Lift would be relocated approximately 160 feet downhill to make it more easily accessible to guests from the MHR West base area facilities. Adjacent to this lift, a "baby double" lift would be constructed to aid in the transition from utilizing surface lifts to using chairlifts. Additionally, two 150 foot long surface lifts would be installed within the proposed teaching terrain adjacent to the new Day Lodge. These modifications and additions would only be visible from within the SUP area or from above (on the road down from Ski Sunrise). This construction would be consistent with the overall theme of developed winter recreation.

The terrain modifications proposed on the lower portions of the ski terrain would be accomplished with selective tree removal and grading. This design would retain some of the visual breaks provided by the larger tree islands on the mountain, would create a larger opening in the vegetative pattern, and would facilitate the movement of skiers back to the bottom of base area lifts rather than through the proposed teaching area.

Visual Resources at MHR East

Buildings

At MHR East, the proposed learning center, along with the surface lift and terrain modifications would combine to create a dedicated area for beginner skiers. Although these project elements would be visible from Highway 2, they would be consistent with management direction for developed winter recreation.

The proposed dry storage facility in the new parking area at MHR East would be constructed along the northern edge of the lot. It would be a small facility that would not detract from the overall visual quality of the area.

Parking

The location of the proposed parking lot at MHR East was selected for its placement away from Highway 2. It is above and behind a natural berm and vegetation on the north side of the highway. This location was selected in direct response to visual issues. The size of the lot would require separate entrance and exit roads, likely one on the east end and one on the west end of the parking lot. As a result of careful planning, there would be limited effects to the visual quality of the area associated with the construction and use of this lot.

Summary

Alternative B would result in continued inconsistencies with the prescribed VQOs and SIOs. Some of the existing facilities would continue to not blend with the desired visual condition for the area; however, there would some because of the character of the proposed Day Lodge at MHR West. The proposed alterations would achieve a Modified look on the landscape.

Noise

Under Alternative B, there would be construction activity at MHR; this would temporarily create more noise than under the existing conditions on a short-term basis. LA County code states that construction noise in an area designated as Noise Level III cannot exceed 85 dbA but may occur 24 hours-a-day, seven days a week, 365 days a year.[8] Despite this allowance by the county, construction of any approved facilities or terrain improvements would be confined to daytime hours. MHR is not anticipated to exceed LA County code stipulations for noise during construction periods. In the long term, noise levels would be consistent with the existing condition.

Cumulative Effects to Visuals and Noise

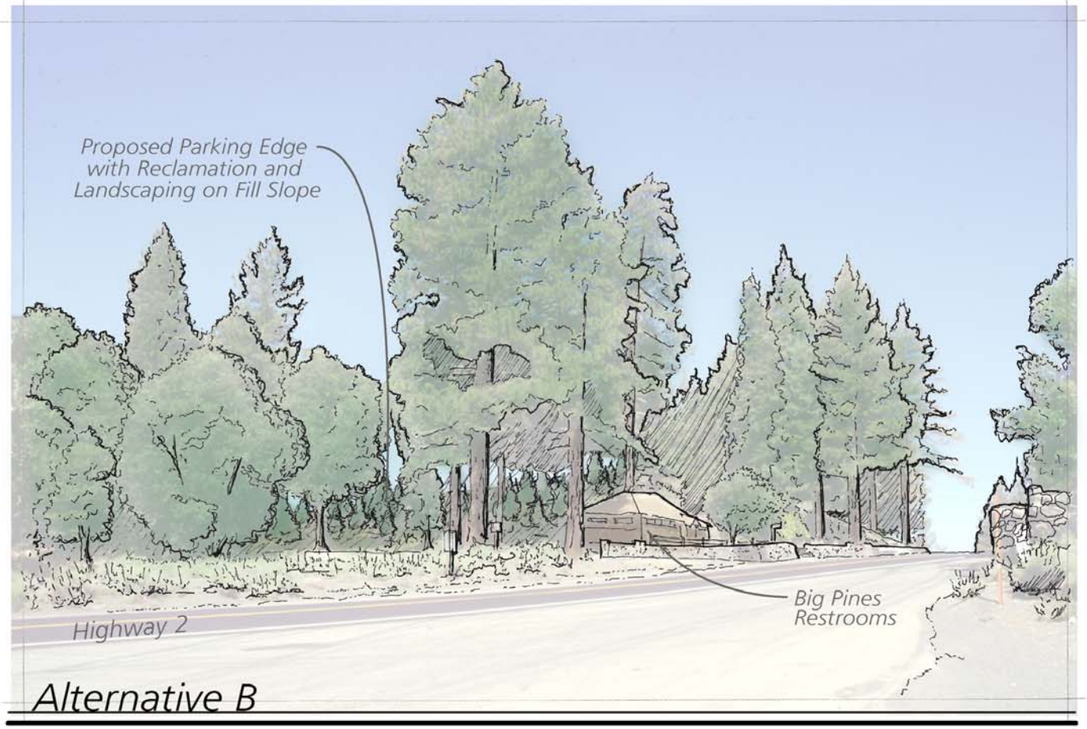
Historic development of MHR has involved clearing of trails, grading, construction of aerial lifts, roads, buildings, and parking facilities. Changes to the natural topography are visible along Highway 2 and from the Big Pines Highway. While MHR's past activities have undoubtedly changed the character of the natural landscape over the past 50 years, they have been conducted in accordance with Forest Service direction as well as stipulations of its SUP.

While some small, isolated projects (asphalt repair, guard rail installation and repair, etc.) are in the initial stages of development for Highway 2, there are no plans to increase volume or capacity along the Highway.

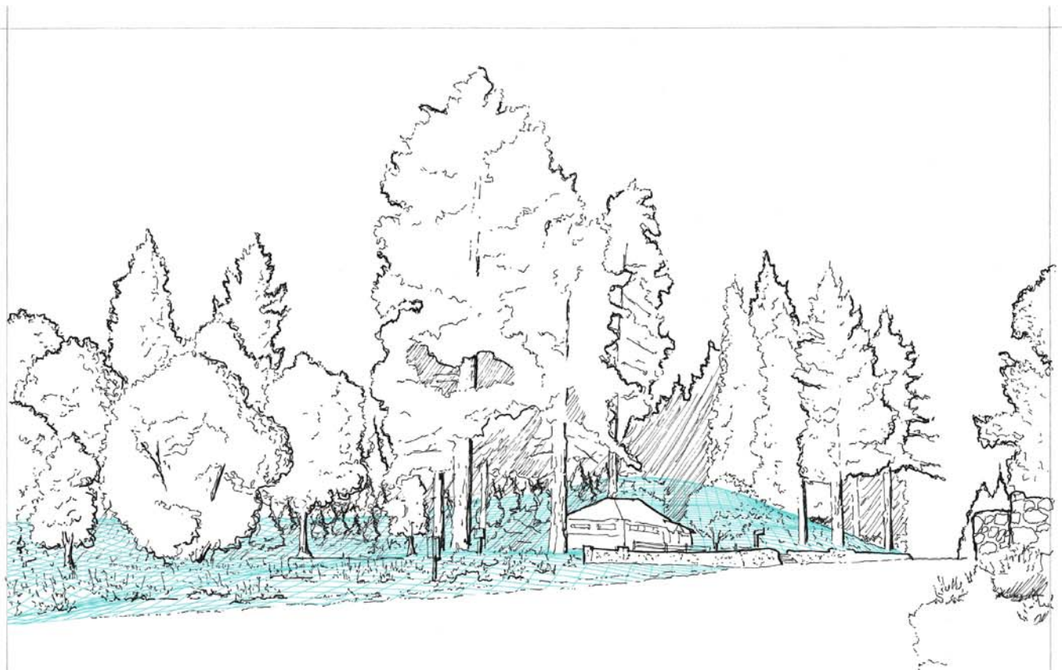
No other past, present, or reasonably foreseeable future actions have been identified in the vicinity of the project area having potential to affect visual resources or noise levels with respect to residents of Wrightwood, guests of MHR, or wildlife in the area.

[8] Los Angeles County Code, Title 12, Chapter 12.08 Noise Control, Part 4 Specific Noise Restrictions, Section 440 Construction Noise

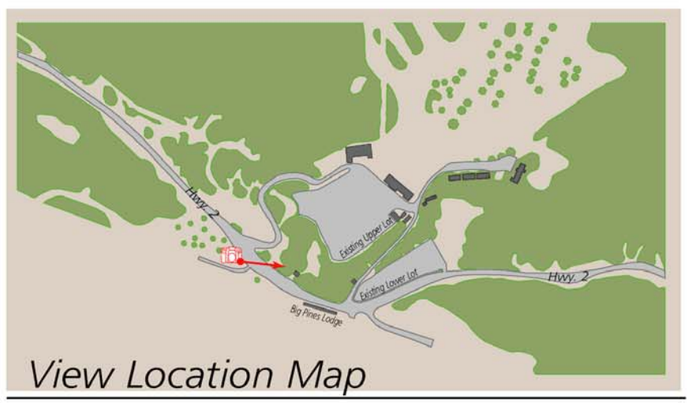
Existing Conditions



Alternative B



Post Construction Grade Represented with 3-D Grid



View Location Map

Visual Simulation of Proposed Parking Lot Expansion at MHR West

Figure III-1

February 2004

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Prepared By:

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BELLEVUE, WA
BURLINGTON, VT
FRISCO, CO
GREENWICH, CT
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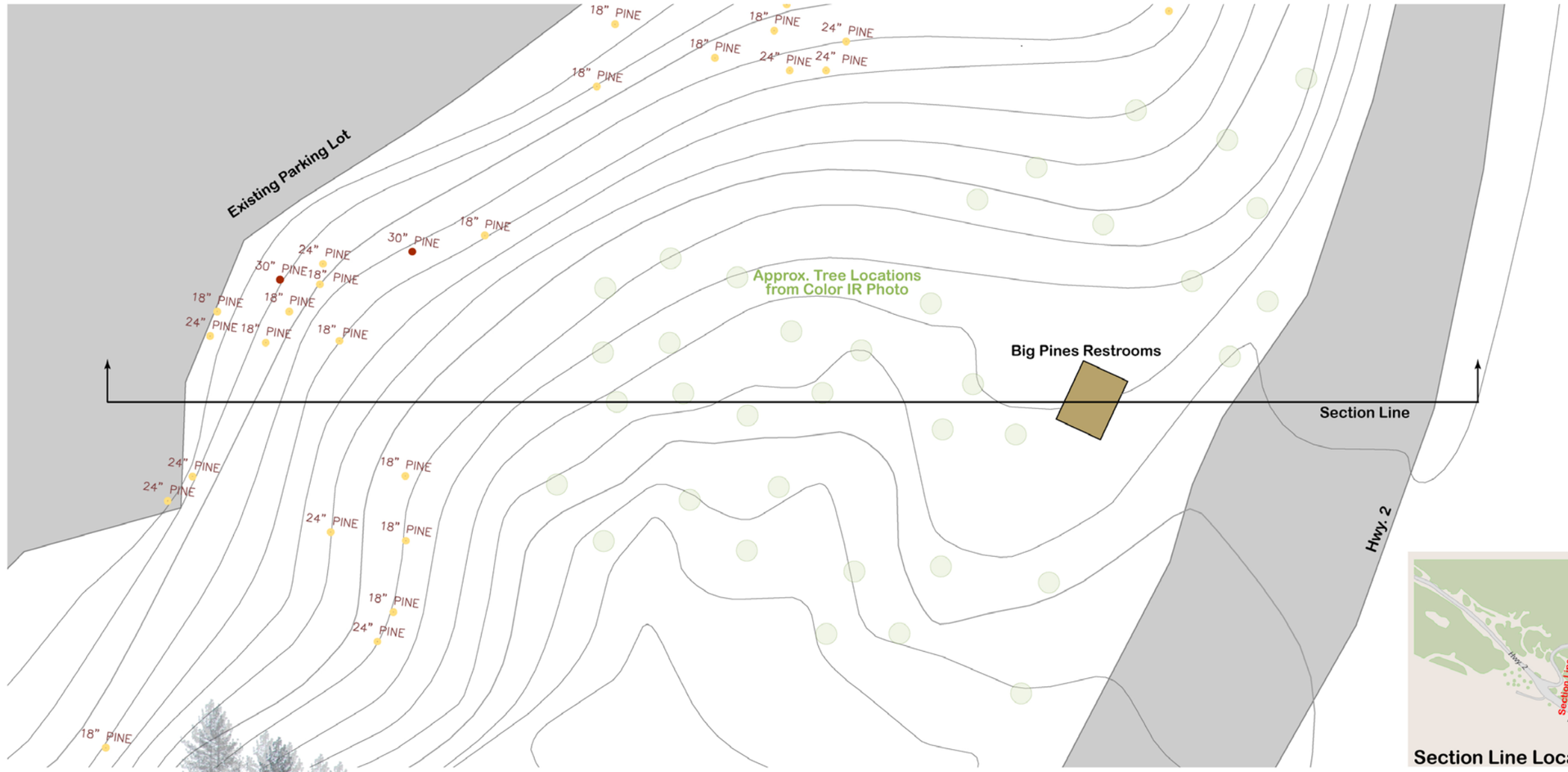
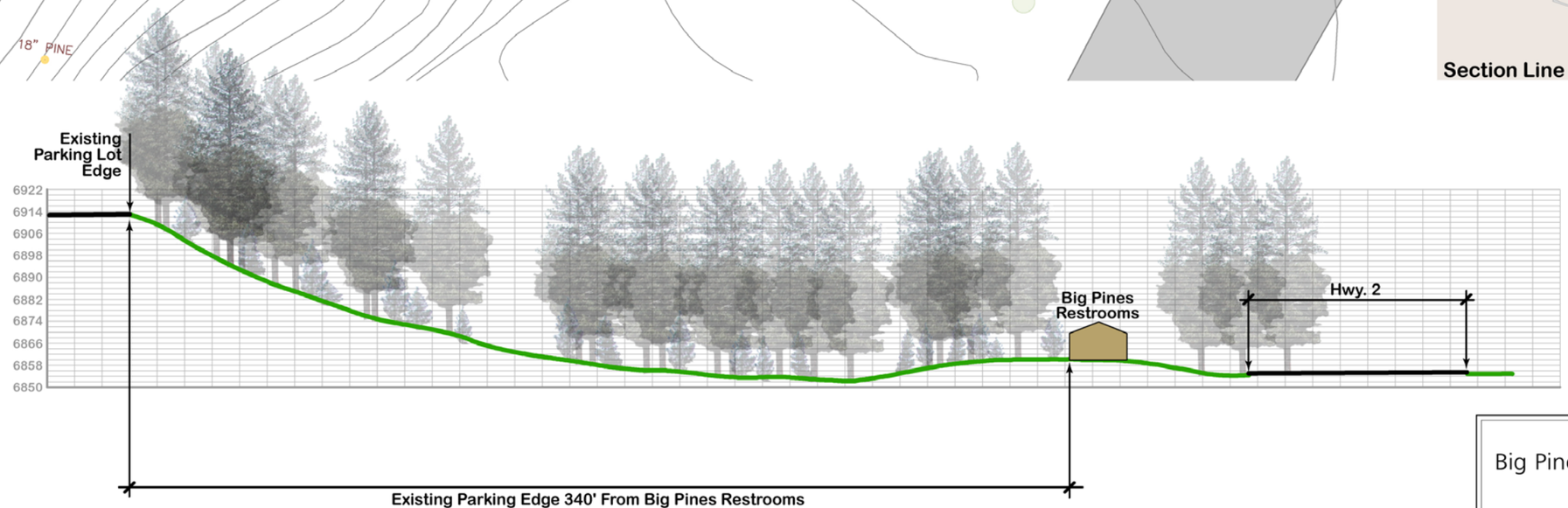
PARK CITY, UT
JAPAN
TOKYO





Alternative A
Big Pines Restrooms Cross Section
Figure III-2
February 2004
1"=50'-0"

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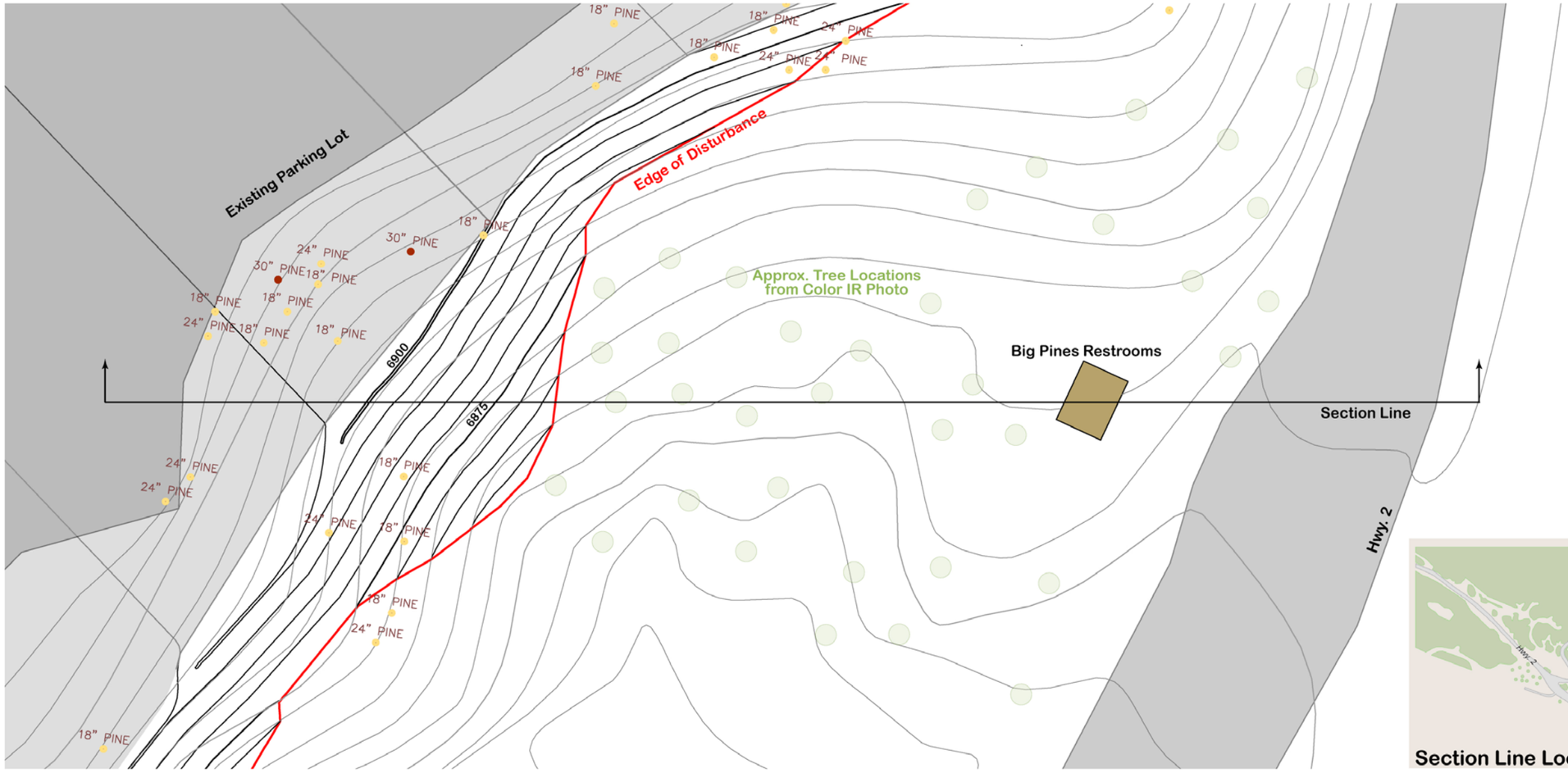

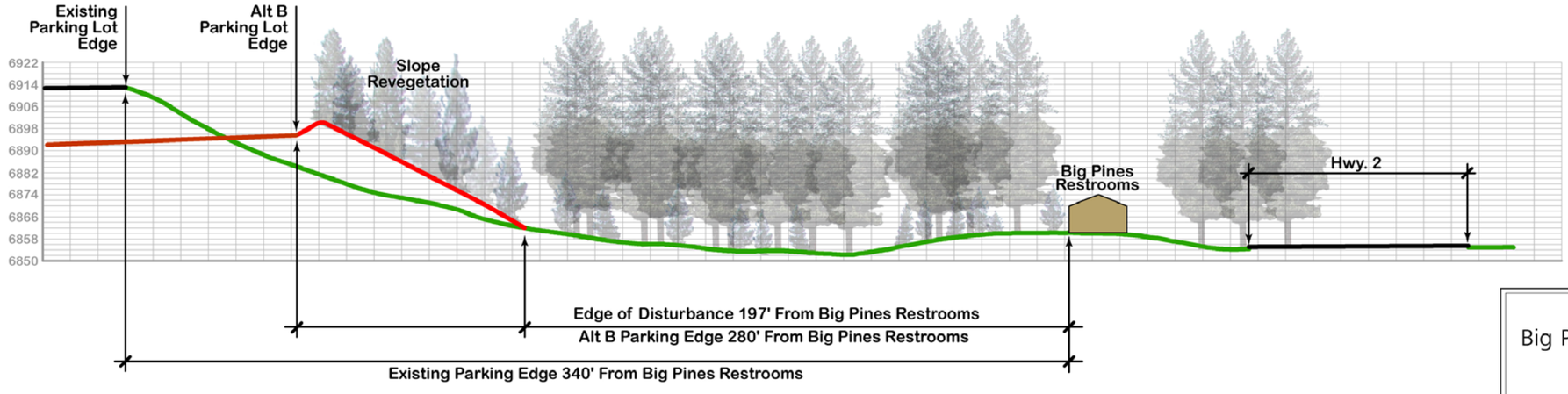

Alternative B
Big Pines Restrooms Cross Section
Figure III-3
February 2004
1"=50'-0"

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Prepared By: SE Group

Alternative A Illustrative of Parking at MHR West

Figure III-4

February 2004

1" = 100'-0"

Existing Vegetation

Existing Lodge

Existing Vegetation

Existing Upper Parking Lot

Existing Lower Parking Lot

Big Pines Restrooms

Existing Vegetation

Highway 2

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Alternative B Illustrative of Proposed Parking at MHR West

Figure III-5

February 2004

1" = 100'-0"

Existing Vegetation

Revegetation Area

1:1 Fill Slope

6900

6875

Proposed Exit Road

Proposed Parking Lot Edge

5%

Existing Exit Road

Revegetation Area

Existing Parking Lot Edge

Screening Vegetation Area

Existing Entry Road

Revegetation Area

Existing Lodge

Proposed Lodge

Screening Revegetation Area

Screening Vegetation Area

Buildings to be Removed

Existing Lower Parking Lot

Highway 2

Big Pines Restrooms

Existing Vegetation

Highway 2

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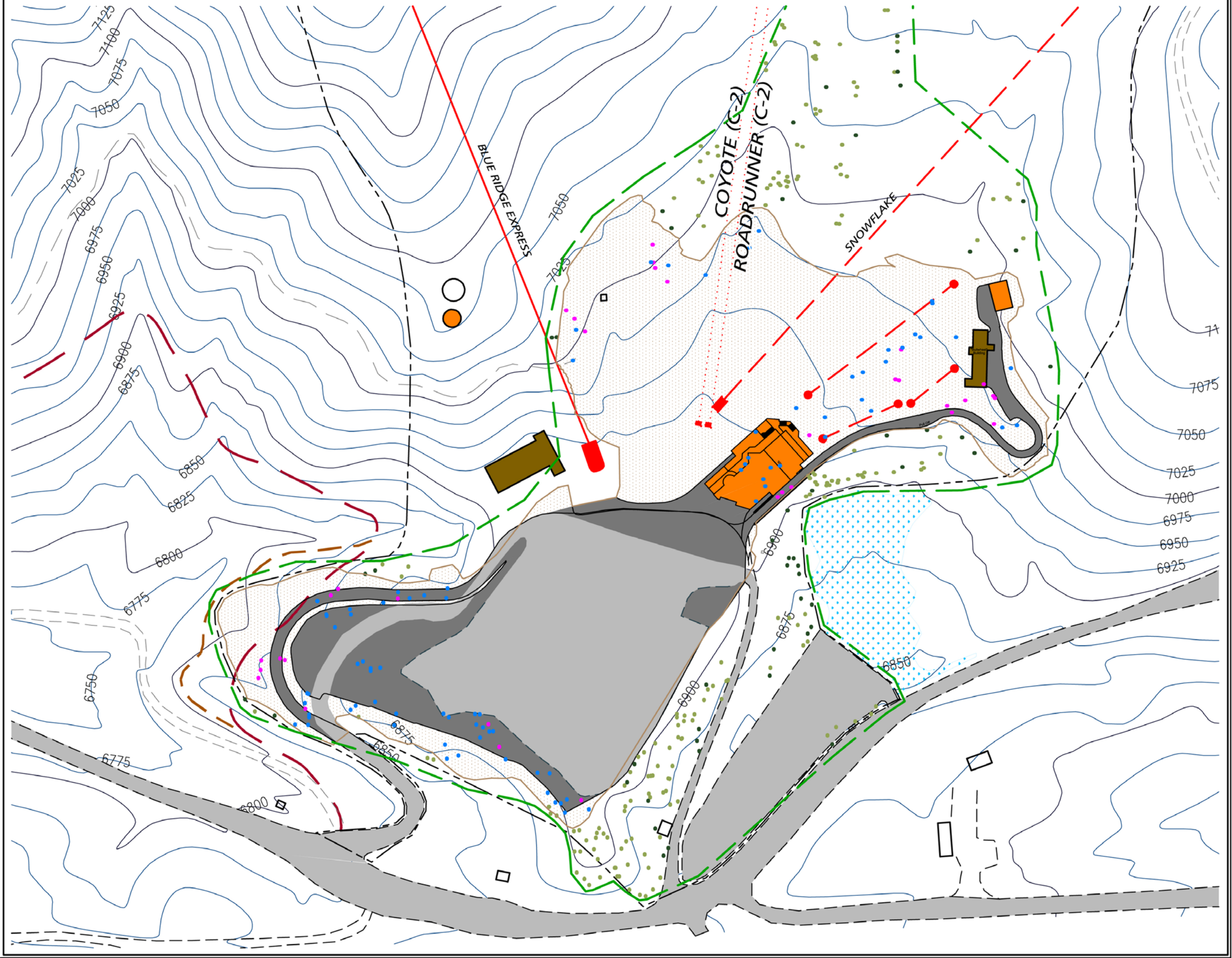

MOUNTAIN HIGH
RESORT

Alternative B
with Individual Tree Locations

MHR West

Legend

- *18-24" Trees that remain*
- *18-24" Trees to be removed (85 trees)*
- *24"+ Trees that remain*
- *24"+ Trees to be removed(32 trees)*
- *Extent of Tree Survey*
- *Disturbance Boundary*
- *Proposed Grading w/ Revegetation*
- *Existing Lift*
- *Existing Lift with Proposed Modification*
- *Proposed Lift*
- *Blue RidgeTrail Realignment*
- *SUP Boundary*
- *Existing Building*
- *Proposed Building Envelope*
- *Proposed Parking and Roads*
- *Meadow*

Figure III-6

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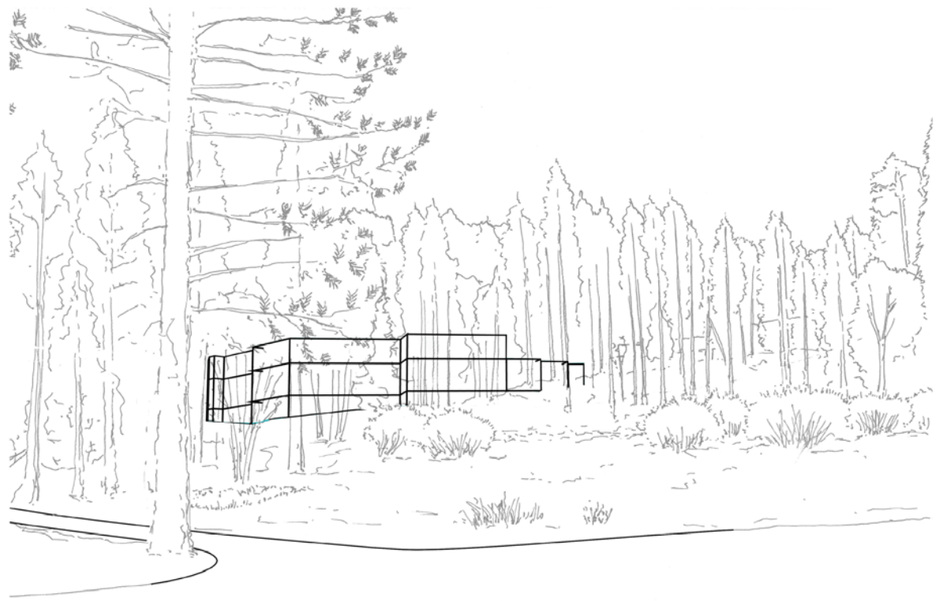
Date: February 2004
Contour Interval: 25'

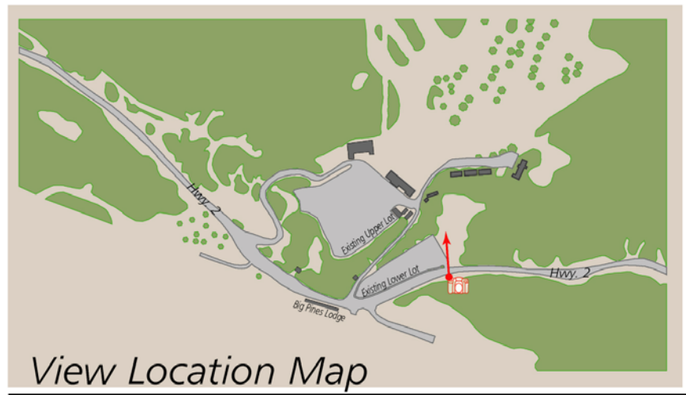
0 50 100 200

Existing Conditions

Alternative B



Building Envelope Represented with 3-D Wireframe



View Location Map

Visual Simulation of Proposed Day Lodge at MHR West
Figure III-7
February 2004

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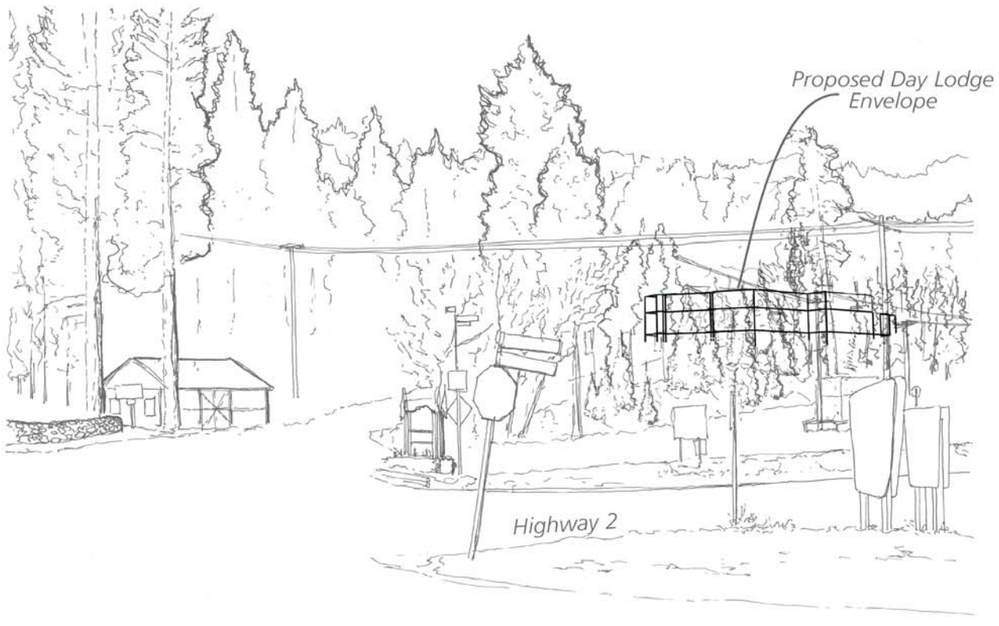
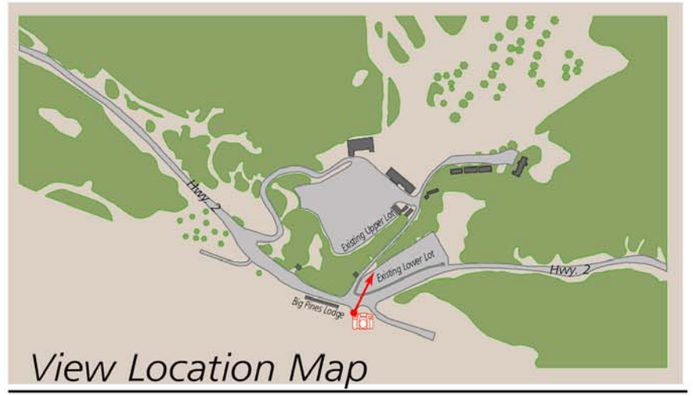
Existing Conditions

Alternative B



Post Construction Represented with 3-D Wireframe



View Location Map

Visual Simulation of Proposed Day Lodge at MHR West
Figure III-8
February 2004

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B. CULTURAL AND HERITAGE RESOURCES

This section presents a summary of the cultural resource investigations conducted during 2001 and 2002; these include conducting a record search at the South Central Coastal Information Center and the ANF, archival research, historic building recordation and evaluation, and contacting Native American representatives and local historical societies. Based on this research, a technical cultural resources report was prepared in 2002 and revised in 2003 to account for project modifications that occurred during the NEPA process.[9] The final report is contained in the project file.

Letters requesting information about the project area were sent to local historical societies; these include the Los Angeles City Historical Society, the Wrightwood Historical Society, and the Big Pines Historical Society in July 2001. One response letter was received from the Wrightwood Historical Society, which stated that the Society was unaware of any historic sites in the project area. Additional letters requesting information on the potential for the project to affect Native American archaeological or cultural sites were sent to three Native American representatives. These representatives were recommended by the California Native American Heritage Commission based on the project area. No responses to these inquiries were received.

The majority of the information regarding previous studies and cultural resources at MHR is maintained in the archives at the ANF. A record search was conducted on July 31, 2001. According to a survey report conducted for MHR and the Forest Service in 1989, which included a comprehensive assimilation of previous archaeological surveys within the MHR area, no prehistoric sites have been identified within the proposed project area. The entire project area had been previously surveyed for archaeological resources; as a result, the Forest Service archaeologist determined that a pedestrian survey of the project area would not be warranted.

Big Pines Historic District

Most of MHR West and a small portion of MHR East are located within the boundaries of the Big Pines Historic District (BPHD). The Big Pines "Clubhouse," a two-story National Park Rustic-style building that once served as a focal point of the historic park, is located on the north side of Highway 2 directly opposite MHR West. Established in 1922, Big Pines County Park consisted of 760 acres of county land containing recreational facilities, lodges, employee residences, campgrounds, picnic areas and trails. In 1925 the Forest Service granted a special use permit for an additional 3,500 acres. This extended the Park westward to Jackson Lake and South to Prairie Fork in the San Gabriel River's East Fork headwaters. By 1930, Big Pines covered 4,200 acres divided into two districts; one was the original "Arch" area, which contained most of the commercial services, community buildings, and ski slopes. The other district contained the Jackson Lake area to the west, which offered additional camping areas and recreation around the lake.

[9] Jones and Stokes 2003

Between 1923 and 1933 the Los Angeles County Department of Parks and Recreation spent four million dollars developing Big Pines Park.[10] Activities centered around the "Arch" area near the "Clubhouse" and lodge, where there was a swimming pool, stables, amphitheater, campgrounds and cabins, sledding, and ski facilities. Although popular in Europe, Alpine skiing was just beginning to gain momentum in Southern California in the 1930s. However, with the introduction of the Ski Club at Big Pines Park, the popularity of the sport blossomed, and the Big Pines Ski Club became one of the major skiing organizations in the west.[11] Big Pines Park featured the best ski slopes and jumping facilities available for its day; the area was touted as a potential site for the 1932 Winter Olympics, but it was never officially considered by the Olympic Committee because of unreliable snow conditions.

Due to the Depression and other economic factors, the area was relinquished to the Forest Service in 1941. After World War II, the surrounding community began to take an interest in public recreation again. The Blue Ridge Ski Resort was established near Big Pines. Eventually three new resorts – Holiday Hill, Mountain High, and Ski Sunrise were constructed within or adjacent to the former Big Pines County Park.

Several complexes of original buildings and structures located near MHR West, including the Park headquarters complex, the Zoo/Ski Club complex, the staff residence and service complexes, the Camp McClellan residence complex, and the Big Pines water reservoir help make the BPHD eligible for listing in the NRHP. One organizational camp (Camp Comiche) and a historic archaeological site associated with the development of Big Pines Park are also located directly opposite the Angeles Crest Highway from MHR East and are eligible for listing in the NRHP. Several other buildings, including Forest Service fire station buildings, a historic Forest Service storage garage, and the remains of the historic park amphitheater are part of the setting and feel of the area but do not factor into the NRHP-eligibility of the area.

In 1995, BPHD was found eligible by the Forest Service for listing in the NRHP under Criterion A, for its leading role in the development of modern public recreation in the Los Angeles area, and under Criterion C, for its creative and distinctive style of architecture and designed landscaping.[12] Six recreational cabins (contained in three buildings) associated with the development of the original Blue Ridge Ski Area remain at MHR West; however, they were evaluated for this project and recommended not eligible for inclusion in the NRHP.

ENVIRONMENTAL CONSEQUENCES FOR CULTURAL RESOURCES

Criteria for Significance of Impacts

Under federal law, significant impacts can occur when prehistoric or historic archaeological sites, structures, or objects listed in, or eligible for listing in the NRHP, are subjected to the following effects:

[10] Robinson 1991
[11] Ibid
[12] Jones and Stokes 1995

- physical destruction or alteration of all or part of the property;
- isolation of the property from or alteration of the property's setting when that character contributes to the property's qualification for the NRHP;
- introduction of visual, audible, or atmospheric elements that are out of character with property or alter its setting;
- neglect of a property resulting in its deterioration or destruction; and
- transfer, lease, or sale of the property.

Alternative A

Under the No Action alternative, there would be no change to existing conditions at MHR. Several visual elements that currently detract from the setting and feel of the BPHD would remain in place. These include the aging modular buildings in the MHR West base area, the electric power transformer in the lower parking lot at MHR West, and the overhead power lines associated with this transformer. Although unattractive, these features are minor modern intrusions that do not compromise the district's ability to convey its historical significance. Their continued presence and visibility on the cultural landscape represents a less than significant impact. No other impacts to historic properties would result from this alternative.

Alternative B

Direct Effects

Alternative B would have no direct effects (e.g., demolition, modification, removal) on (NRHP-eligible) historic properties. The only historic structures proposed for removal are the three cabins at MHR West. Neither the cabins nor the Forest Service garage are eligible for inclusion in the NRHP, and their removal may actually benefit the historic integrity of the BPHD.

As part of the project, it is possible that the Forest Service may require that the garage be relocated to another nearby area for purposes of continued use. Because it is an isolated element of little historical significance within the BPHD, the garage would not be relocated in the vicinity of NRHP-eligible buildings.

Indirect Effects

Because the project area is located within the boundaries of a large historic district and in proximity to several of its contributing features, expansion and redevelopment plans associated with the proposed project have the potential to indirectly affect these features as well as the historic integrity of the overall district. The project was evaluated for its potential to introduce visual elements to the district that are out of character with its contributing features, or that may compromise the historic setting of the alpine park. As a result of design revisions incorporated throughout NEPA process, the proposed project elements under Alternative B were determined to be unlikely to result in any indirect effects on the BPHD.

Parking

During the Big Pines Park era, visitors parked in camping areas and along the Angeles Crest Highway, and when winter traffic was at a peak, the lack of sufficient parking was evident even in the 1920s. Addition of parking lot facilities at Blue Ridge Ski Area (now MHR West) began in the 1950s, and these facilities have been expanded several times. At present, visitor parking at MHR West consists of an upper and lower parking lot. These lots are located directly across State Highway 2 from the BPHD "Clubhouse." Alternative B proposes to expand the upper parking lot along its eastern edge by approximately 2.6 acres.

Figure III-1 depicts a visual simulation of the existing conditions and the proposed parking expansion as viewed from the north side of Highway 2 as one approaches the Big Pines Restrooms from the east. In the simulation there is a reduction in vegetation to the south of the restroom building as a result of the proposed parking expansion. This project element would have no direct effect on any NRHP-eligible properties nor would alter the setting and feel of the area.

Buildings

Alternative B proposes the removal of the aging modular buildings at MHR West and the construction of a Day Lodge, which would accommodate all the services and functions of the existing buildings. Removal of extant ski resort buildings that are modern or are not historically significant would not impact the historic district. The removal of these structures may actually improve the historic setting of the district. The architectural design of the new Day Lodge at MHR West would be sympathetic with the Park Rustic style and would utilize natural building materials. The building may also display some forest product at the exterior, such as large logs and stone, to provide an additional link to the surrounding historic setting. Similarly, landscaping would aim to tie the building to the natural setting. The use of pitched roofs with dormers, roof overhangs, and wood decks is also typically associated with the Park Rustic style.

Figure III-6 depicts the proposed Day Lodge from two distinct viewpoints on either side of the existing lower parking lot at MHR West. The location of the Day Lodge was selected because it allowed the retention of the large screening trees as viewed from the west. It is important to note that Forest Service specialists have been involved in the architectural concept of the Day Lodge. One objective of the proposal has been to maintain the setting and feel of the historic district through vegetative screening and scale of proposed project elements. Final design plans would be submitted to the Forest Service for review and consultation with the SHPO prior to the start of construction. SHPO concurrence and final Forest Service approval would be required before the start of construction.

Lifts

Alternative B proposes modification to the existing Snowflake Lift and the installation of several new lifts at MHR East and West. Ski slopes and their associated equipment, are not out of character with the historic theme of BPHD, and the improvement of extant ski slopes and replacement and/or addition of lifts are not anticipated to cause a significant impact to the district.

The enhancements at MHR East would be outside of the BPHD and would not directly affect its setting or feel. None of the proposed lift enhancements at MHR West would be visible from Highway 2 or within the lower elevations of the BPHD. As a result, these project elements would have no effect on the setting and feel of the BPHD.

Terrain

Alternative B proposes some terrain modification at MHR West to improve skier circulation and better separate beginner skier terrain where students are learning to ski from other more experienced skiers on the mountain. Implementation of this project element would require some vegetation clearing. Figure III-5 shows a visual simulation of the proposed clearing necessary to achieve the goals this project element. The clearing would be within the scope and scale of the existing ski area and would be within the character and theme of the BPHD.

General Effects to Cultural Resources

While it is not anticipated that the project will affect any archaeological sites, it is possible that buried cultural materials may be discovered during ground disturbing activities associated with project construction. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work must be discontinued in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Forest Service and the SHPO.

C. BIG PINES MEADOW

The Big Pines Meadow is a 1.9-acre meadow on the western edge of the MHR West base area, along Highway 2. Maintaining the health of the meadow is important to the ANF, as it is one of the last remaining high-altitude, forested meadows of its kind on the Forest.

The meadow is fed by subsurface flows that emerge as springs within it. These flows saturate the meadow and are then conveyed by several narrow stream channels that run through the upper portion of the meadow and merge toward the lower third of the meadow. The flows are captured by a culvert at the northwestern edge of the meadow, which conveys it under Highway 2.

Montane meadows, such as the Big Pines Meadow, are characterized by two distinct physical conditions: they have shallow water tables, usually within two feet of the soil surface; and the surface soil material is fine-textured and richly organic. Due to an abundance of steep terrain, montane meadows are rare in the San Gabriel Mountains.

Four working wells for MHR's snowmaking operation are in the vicinity of the Big Pines Meadow. Two wells are located within the lower parking lot; one is directly above the

southeastern corner of the meadow, and one is north of the Bullwheel Saloon. An abandoned well is located in the willow riparian area on the southwest corner of the meadow. The water level in this area is approximately 50 feet below the surface. MHR pumps water from these wells during up to the snowmaking reservoir near the top of the Blue Ridge Express.

The meadow and wells are within the Mescal Creek watershed. Mescal Creek, along with nearby Swarthout Creek, is within the San Andreas Earthquake Fault Rift Zone; this explains the presence of meadows, sag ponds, slump lakes, and sufficient amounts of groundwater.

Located immediately adjacent to Highway 2, the meadow is very accessible, and it receives heavy use from snowplayers during the winter. It also appears to be retreating in a westerly direction due to the encroachment of the existing lower parking lot. Intense activities in and proximate to the meadow have, over time, led to the introduction of non-meadow flora, which has effectively changed the composition of the meadow.[13]

ENVIRONMENTAL CONSEQUENCES FOR THE BIG PINES MEADOW

Alternative A

Alternative A would represent no change to the Big Pines Meadow. The lower parking lot would remain in its current location, and the meadow would likely continue to experience a slow rate of retreat.

Alternative B

There are no proposed changes to the existing lower parking lot at MHR East or to the Big Pines Meadow under Alternative B. As a result, Alternative B would represent no change to the existing condition of the meadow. The lower parking lot would remain in its current location, and, as described above, the meadow would likely continue to experience a slow rate of retreat.

Effects to the meadow from ongoing dispersed snowplay activities are beyond the scope of MHR's proposal and therefore not discussed further in this analysis.

Cumulative Effects to the Big Pines Meadow

The lower parking lot at MHR West has historically encroached on the natural edge of the Big Pines Meadow, which is partially responsible for the meadow's retreat.

Dispersed snowplayers have historically utilized the meadow area during the winter and spring. Forest Service specialists are not certain of the effects of snowplay on the meadow; however, it has been recommended that the meadow be signed and closed to snowplay, to allow for its rehabilitation.[14]

[13] USDA Forest Service, Pacific Southwest Research Station Service, General Technical Report PSW-GTR-172 – *Southern California Mountains and Foothills Assessment*, p. 50, No Date.
[14] Jim O'Hare, Soil Scientist, July 13, 2000

MHR's removal of water from the wells in the vicinity of the meadow may have had and may continue to have an effect on the subsurface hydrology that supports the meadow. However, none of the projects proposed under either action alternative would affect the current use of the wells or the condition of the meadow and its subsurface hydrology.

D. VEGETATION RESOURCES

A mature mixed-conifer forest is the dominant plant community surrounding MHR. This community is dominated by white fir (*Abies concolor*), Jeffrey pine (*Pinus Jeffreyi*), sugar pine (*P. lambertiana*), and Coulter pine (*P. coulteri*). The understory is dominated by Utah serviceberry (*Amalanchier utahensis*), mountain whitethorn (*Ceanothus cordulatus*), California sagebrush (*Artemisia californica*), and birch-leaved mountain mahogany (*Cerocarpus betuloides* var. *betuloides*).

The mixed-conifer forest within and adjacent to the SUP boundary of MHR is found primarily adjacent to lift alignments, ski runs, and resort facilities. The areas were disturbed by previous activities associated with the original construction of the resort, and by ongoing recreational use. They lack the extensive undercover species found outside the boundary of MHR. Approximately 1,004 conifer and hardwood trees are located within the proposed project construction area.

Along ski runs, under existing lifts, and around existing buildings and roads, the dominant species are grasses and other forbs, including western wallflower (*Erysimum capitatum* ssp. *capitatum*), one-sided blue grass (*Poa secunda*), ryegrass (*Lolium multiflorum*), and brome grasses (*Bromus hordaeceus*, *B. rubens*, and *B. carinatus*) interspersed with individual or small groups of pine species, white fir and black oak. These areas have been disturbed by previous grading, original construction of the resort, and ongoing ski activities. Refer to Appendix B for a list of plant species observed within the MHR SUP boundary.

There is a 1.9-acre meadow in MHR-West adjacent to the southern boundary of the lower parking lot alongside the Angeles Crest Highway. The meadow is fed by subsurface flows that surface as springs within the meadow. These flows saturate the meadow and are then conveyed by several narrow stream channels that run through the upper portion of the meadow and merge toward the lower third of the meadow. The flows are captured by a culvert at the northwestern boundary of the meadow at the Angeles Crest Highway. More than 90% of the vegetation within the meadow is composed of obligate or facultative wetland species. Representative plants found within the meadow include Lemmon's willow (*Salix lemmonii*), corn lily (*Veratrum californicum* var. *californicum*), common large monkey flower (*Mimulus guttatus*), and smooth scouring rush (*Equisetum laevigatum*), all of which are wetland species.

There are no permanent streams, but surface water flows into the meadow. In addition, surface flows drain into a culvert under an existing road and into an unnamed drainage that is located east of the existing parking lot within MHR-West, then parallels the Angeles Crest Highway. This drainage does not meet the 3 mandatory criteria for a wetland, but would be considered other waters of the United States by the U.S. Army Corps of Engineers.

The small patch of willows on the north side and adjacent to Angeles Crest highway and south of the proposed parking for MHR-East has no bed and bank or channel and does not meet the three mandatory criteria for a wetland. The area is not considered a wetland or other waters of the United States by the U.S. Army Corps of Engineers.

There are 18 acorn woodpecker (*Melanerpes formicivorus*) granary trees at MHR-West. Fourteen of these trees are located within or adjacent to the proposed parking lot expansion, and four are located along the alignment of the proposed access road behind the existing Bullwheel Saloon.

Threatened, Endangered, and Sensitive Plants with Potential to Occur

Based on the range and habitat requirements of special-status plants that could occur in the Angeles National Forest, records in the CNDDB determined that 10 special-status plants have the potential to occur in the vicinity of the project area. Appendix C includes a complete list of all plant species observed in the vicinity of MHR.

No special-status plants were observed during the previous surveys at MHR conducted by Jones & Stokes in 1998, 1999, and 2000. The surveys were conducted for approval of summer maintenance activities and covered a majority of MHR within the proposed SUP boundary. Special-status plants were not observed during the 2001 surveys. Based on the site surveys, special-status plants are not expected to occur in the proposed project area because:

- surveys for the ten species were conducted during the blooming periods, and none were observed;
- the California Natural Diversity Database (CNDDB) did not list any recorded occurrences on-site;
- there is no suitable habitat; or
- the project area has been disturbed by grading and the invasion of more ruderal species.

ENVIRONMENTAL CONSEQUENCES FOR VEGETATION RESOURCES

Alternative A

Alternative A, the No Action Alternative, would not cause any effects to vegetation communities and/or special-status plant species. No vegetation would be removed, and the current conditions on the resort would remain the same.

Alternative B

Effects to Overall Vegetation

The project elements under Alternative B would take place within the proposed SUP boundary. In addition, construction would take place during the usual seasonal and summer maintenance period. Approximately 8.5 acres of vegetation including Jeffrey pine (*Pinus jeffreyi*), white fir (*Abies concolor*), and black oak (*Quercus kellogii*), would be affected. Trees proposed for

removal constitute small timber stands within the existing disturbed ski trails and around the perimeter of the existing MHR West parking lot. These stands lack a multilayered structure – in other words, they lack native midstory and understory species, including hardwood trees – and are fragmented with a reduced canopy cover. Tree surveys conducted on site show that approximately 51 trees with a diameter at breast height (dbh) of 18-24 inches would be removed, as well as 11 trees with a dbh of 24 inches or greater. For the other proposed project elements at MHR West (terrain modifications, construction of the Day Lodge, the Bullwheel access road, and the maintenance facility), tree surveys show that approximately 34 trees with a diameter at breast height (dbh) of 18-24 inches would be removed, as well as 21 trees with a dbh of 24 inches or greater.

No granary trees would be affected by the Bullwheel access road, the Day Lodge, the maintenance facility, or the terrain modifications at MHR West. The proposed parking expansion would result in the removal of fewer than ten granary trees. Refer to Table II-2 and Figure III-6 for a more detailed description of trees to be removed. Approximately six acres associated with parking lot construction would be reclaimed and revegetated, and many of the other disturbed areas would be landscaped; refer to Appendix A for more detail.

These areas were disturbed by construction of the original resort, ongoing spring and summer maintenance, and ongoing recreational activities, and are dominated by nonnative plant species. Construction of parking lots and buildings and grading to improve ski runs therefore would result in the removal of some native (including whitethorn, sagebrush, yerba santa, and willows as well as the tree species described below) and some non-native vegetation.

Effects on Threatened, Endangered, and Sensitive Plants with Potential to Occur

No threatened, endangered, or sensitive plant species were detected during surveys conducted in 1998, 1999, 2000, and 2001. Soils and habitat at the project sites were extensively disturbed during the original construction of the resort, resulting in the current lack of suitable habitat. Therefore, this alternative would have no direct or indirect effects on any special-status plants. The planting of native tree species around the enlarged MHR West parking lot (detailed in Appendix A) would reduce the effects of the removal of any native trees.

Cumulative Effects to Vegetation

Cumulative effects are not anticipated to be substantial. The Forest Service proposes to conduct prescribed burns on Table Mountain, maintain the Big Pines bunkhouse, and reconstruct the Big Pines restroom building. Except for the prescribed burn, which would have a temporary impact on vegetation, these activities would not result in the removal of vegetation. As previously mentioned, CalTrans is expected to conduct routine maintenance operations on Highway 2, including repair and replacement of guardrails and repair of asphalt. Maintenance activities would not result in vegetation removal and therefore would not affect special-status plant species.

E. WILDLIFE RESOURCES

MHR and surrounding areas support a wide variety of wildlife. Common wildlife species observed in MHR include western fence lizard (*Sceloporus occidentalis*), Steller's jay (*Cyanocitta stelleri*), common flicker (*Colaptes auratus*), western bluebird (*Siala mexicana*), violet-green tree swallow (*Tachycineta thalassina*), and California ground squirrel (*Spermophilus beecheyi*). Mule deer (*Odocoileus hemionus californicus*) occur in the area, but there was no sign of deer during the surveys. Appendix D includes a complete list of all wildlife species observed in the vicinity of MHR.

Threatened, Endangered, and Sensitive Wildlife Species with Potential to Occur

Based on the literature review of special-status wildlife that could occur in the Angeles National Forest, it was determined that seven special-status wildlife species including the California spotted owl have the potential to occur in the vicinity of the project area. The names, legal statuses, distributions, and habitat requirements of the special-status wildlife species reviewed are described in Appendix C. Only species with suitable habitat present and high potential to occur are discussed. The California spotted owl is discussed because protocol-level surveys were conducted.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*), which is federally listed as endangered, is a neotropical migrant that nests in the western United States. Willow flycatchers are obligate riparian species that use willow, cottonwood, and other riparian habitats for nesting. Nest habitat requirements include willow or other riparian vegetation in clumps and canopy cover near the ground. Canopy cover in nesting habitat can range from 40 percent to closed canopy. Nests of willow flycatchers are always near surface water; therefore, proximity to water during the nesting season is an important habitat component.

Riparian willows associated with streams in MHR provide suitable habitat, based on the habitat elements described for the southwestern willow flycatcher. According to the USFWS/USFS habitat criteria, they are streams with a gradient of four percent or less and at an elevation below 8,000 feet (U.S. Fish and Wildlife Service and U.S. Forest Service 2000). The unnamed tributary to Sheep Creek that originates near MHR East and flows east along SR 2 is modeled habitat for southwestern willow flycatcher. Willow stands along Sheep Creek and the associated stream floodplain were confirmed to be suitable habitat for southwestern willow flycatcher because they meet the USFWS/USFS habitat criteria:

- Surface water is present between May 15 and June 30 during most years.
- Woody riparian vegetation (willow) is present and covers more than 20 percent of the area for at least 0.5 acre of the floodplain. (The area has canopy cover over 50 percent in densely clumped willows over an area of at least 50 acres.)
- There are dense clumps or stands of woody vegetation. Willow clumps observed were well over the minimum 5-meter by 10-meter size requirement of the criteria.

California Spotted Owl

The California spotted owl (*Strix occidentalis occidentalis*) has been designated as a USDA Forest Service Region 5 Regional Forester's Sensitive Species, a federal species of concern, and a state species of special concern. USFWS found merit in a petition to list the California spotted owl as endangered (65 *Federal Register* 198, October 12, 2000) and the species is under review for potential listing as an endangered species. The owl may be listed by USFWS within 2–3 years, or earlier if ordered by a federal court.

California spotted owls occur in a variety of forest habitat types, from canyon riparian and big-cone Douglas-fir/canyon live oak to montane conifer forests. Spotted owls typically inhabit dense, mature stands with high canopy cover and multilayered canopy. Nest stands typically have well developed hardwood understory and a conifer overstory. The nesting territories of individual pairs are large—more than 300 acres, and often larger in high-elevation conifers (Verner et al. 1992). Spotted owls are nocturnal predators that feed largely on mammals, especially mice, wood rats, chipmunks, and squirrels.

The Angeles National Forest maintains a database of all California spotted owl surveys and observations as well as a map of suitable habitat for the species. The San Bernardino and San Gabriel Mountains have a relatively high density of known spotted owls, with more than 200 pair (Stephenson and Calcarone 1999). Suitable habitat in the San Gabriel Mountains has been identified in Flume Canyon, Buford Canyon, and Government Canyon east of the resort, unnamed canyons west of the resort in the vicinity of All Nations Camp, and numerous canyons on the south side of Blue Ridge.

The California spotted owl inhabits deep, north-facing canyons in the MHR vicinity. Spotted owl surveys were conducted by USFS staff from 1988 through 1994 in the MHR vicinity. To the east of MHR, a single male California spotted owl was documented from 1988 through 1990 in Government Canyon. A single male California spotted owl was documented in Buford Canyon in 1989 and 1990. No surveys have been conducted in Government or Buford Canyons since 1990.

West of MHR, approximately 0.6 mile from Big Pines, a nesting pair of California spotted owls was documented from 1988 through 1991. Production of at least 1 young was documented in 1990. A single male occupied the territory in 1994. Surveys for California spotted owl have not been conducted at this site since 1994. No surveys for the California spotted owl have been conducted in the vicinity of the resort since 1994.

USFS spotted owl survey data for California suggest that owls occurred in the MHR vicinity from 1988 through 1994 in canyons with suitable habitat. No surveys have been conducted since 1994. Examination of 1989 aerial photographs of the area and Jones & Stokes biologists' observations from June 2001 suggest that suitable habitat still exists for California spotted owl in Government and Buford Canyons and west of MHR (e.g., All Nations Camp and vicinity), but not within the SUP boundary. Within and adjacent to the SUP boundary, the forested areas are not dense, mature stands with high canopy cover and multiple layers and do not have well developed hardwood understory and a conifer overstory.

Jones & Stokes conducted protocol-level surveys for the California spotted owl within 0.25 mile of proposed construction at the MHR. The surveys were conducted in accordance with "Protocol for Surveying for Spotted Owls in Proposed Management Activity Areas and Habitat Conservation Areas March 12, 1991 (Revised February 1993)" (attachment 1 in appendix A). The surveys were conducted May 5, 2002–June 25, 2002. The Jones & Stokes Mountain High Ski Area California Spotted Owl Survey Results May–June 2002 is available for review in the project file.

The 1-year survey of the project area was determined to be complete, as 6 consecutive visits were conducted with no responses or visual observations of California spotted owls. Based on the results of the survey, it is determined that California spotted owls are not present in areas within a 0.5-mile radius of the proposed development under the MHR MDP.

Myotis Bats

Because they have similar habitat and foraging characteristics, Myotis bats, including the long-eared myotis bat, fringed myotis bat, long-legged myotis bat, and western small-footed myotis bat, are considered and discussed together. Myotis bats, which are a state species of special concern and a USDA Forest Service Region 5 Regional Forester's Sensitive Species, are small, agile nocturnal predators of flying insects. Foraging habitat includes conifer forests, riparian areas, and areas over meadows and streams.

Roosts for these species are in a variety of habitats, including trees within mixed conifer forests, areas beneath bark, in hollow logs, large trees, and snags, and caves, mines, and rock crevasses. Young are reared in the roosts. One young per female bat is born in the spring and raised to maturity by midsummer. All Myotis species may be present in the MHR area because there is abundant suitable habitat. These species have been documented at several locations in the San Gabriel Mountains (Stephenson and Calcarone 1999). Roost sites for these species have not been exhaustively surveyed in the Angeles National Forest (Stephenson and Calcarone 1999). Suitable roost sites exist in the vicinity of MHR. Snags and large trees in MHR may provide suitable roost habitat (cavities and loose bark) for these species.

San Bernardino Mountain Kingsnake

The San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*) is a USDA Forest Service Region 5 Regional Forester's Sensitive Species and a state species of special concern. The kingsnake is found in open stands of pine at elevations between 4,500 feet and 6,500 feet and is known to occur in the San Gabriel Mountains. Riparian habitats are also used. Rock outcrops and large, downed logs are often a component of habitat for this species. Suitable habitat conditions exist and the species may occur in the area.

ENVIRONMENTAL CONSEQUENCES FOR WILDLIFE RESOURCES

Alternative A

Alternative A, the No Action Alternative, would have no affect on general wildlife or threatened, endangered, and sensitive wildlife species. No wildlife would be displaced due to the removal of vegetation or habitat, and the current conditions within the resort would remain the same.

Alternative B

Construction of the proposed project elements would take place during the usual spring and summer maintenance period. Similar maintenance and construction activities have been occurring at the resort for numerous years, and it is unlikely that construction would have a significant effect on wildlife. Any direct effects on wildlife from construction would be temporary.

The proposed improvement activities would not substantially alter wildlife communities. Loss of habitat would be in the form of tree removal. Because the trees proposed for removal within the proposed SUP boundary do not provide a contiguous corridor to habitats outside the boundary, their removal would not result in the loss of access through adjacent habitats or a loss of wildlife corridors. Although the loss of trees may cause common wildlife to alter foraging behavior, their displacement would be limited and temporary. Construction activities are local in scope; because of the large territory size and suitable undisturbed habitat outside the SUP boundary, displacement would likely affect only individuals, not overall populations.

Project implementation would result in the removal of fewer than ten granary trees. The trees are utilized by the acorn woodpecker (*Melanerpes formicivorus*), and Alternative B would result in a loss of habitat for this species. However, substantial forested habitat outside of the SUP also provides habitat for this species. Granary trees would be felled outside of the acorn woodpecker nesting season.

Alternative B would have no significant effect on wildlife or threatened, endangered, or sensitive wildlife species. The proposed activities would primarily affect only previously disturbed areas. The tree stands within and adjacent to the SUP boundary do not provide suitable habitat for special-status species. The loss of trees may cause wildlife to alter foraging behavior; however, displacement would be limited and temporary. Resort activities are local in scope and would likely affect only individuals, not overall populations, because suitable habitat for these species remains in the SUP boundary and outside the resort area. Construction would take place during the usual seasonal spring and summer maintenance period.[15] Similar maintenance and construction activities have been occurring at the resort for many years, and it is unlikely that construction would have a substantial effect on wildlife.

Threatened, Endangered, and Sensitive Wildlife Species with Potential to Occur

Southwestern Willow Flycatcher

A hydrologic assessment was conducted to determine effects to willow flycatcher habitat as a result of increasing impermeable surface space with the proposed additional parking at MHR West. The study states that the current estimate of peak rainfall runoff for MHR is approximately 608 cubic feet per second (cfs). As a result of implementation of Alternative B, the peak rainfall runoff from a 10-year storm in a 24-hour period would increase to as much as 621 cfs. The post-implementation peak flow would not cause any detrimental impacts to the

[15] One exception to the spring construction season is for the willow flycatcher, described below.

stream channel or surrounding vegetation. Therefore, it would not affect willow flycatcher habitat in the area.

The small patch of willows in the location of the proposed parking lot for MHR East does not meet the USFWS/USFS habitat criteria. As a result, there would be no direct effects to willow flycatchers from implementation of this proposal.

While none of the proposed projects at MHR East would occur within willow flycatcher habitat, construction of the proposed employee parking lot south of the Angeles Crest Highway, across from MHR East, could indirectly affect birds during the nesting season. Disturbance of nearby birds would include construction noise and human and vehicle activity. Direct loss of habitat would not occur during construction. The parking lot would be built after the flycatcher-nesting season, which occurs from May through August, to avoid these potential effects on the species.

During the usual winter operations, the birds would have migrated and there would be no direct or indirect effect on this species.

California Spotted Owl

Construction activities within MHR's proposed SUP boundary would result in the removal of native trees. The loss of these trees would not affect this species because the native tree stands do not provide suitable nesting habitat. This species may forage on or near the project boundary. However, based on the Jones & Stokes protocol-level survey conducted May–June 2002, California spotted owls are not present within a 0.5-mile radius of the proposed development under the MHR MDP. Regardless, construction activities would take place during the usual seasonal spring and summer maintenance period, and construction activities would occur within daylight hours, reducing potential effects during the prime nighttime foraging hours for this species.

The resort's winter operations would be almost identical to those conducted in the past, and they would not have significant effects on any spotted owls. The absence of human activity during the night, when owls are most active, would reduce the potential for negative effects on the foraging behavior of spotted owls.

The proposal would not affect the California spotted owl, nor would it result in a trend toward federal listing of the California spotted owl.

Myotis Bats

The proposed actions within the MHR proposed SUP boundary would result in the direct loss of native trees. Potential foraging and roosting habitat would be lost as a result of tree removal. However, because this species has suitable habitat remaining within and outside the SUP boundary, and because MHR activities are local in scope, the proposal would likely affect only individuals, not overall populations of bats. There would be no direct and indirect effects after construction and during the usual winter operations. The proposal has been designed to enhance existing facilities to accommodate the existing peak user levels and not to increase user levels

during winter operations. The absence of human activity during the night, when bats are most active, would reduce the potential negative effects on these species' foraging behavior.

The proposal may affect individuals, but it is not likely to result in a trend toward federal listing for the Myotis species of bats.

San Bernardino Mountain Kingsnake

Construction activities within MHR's proposed SUP boundary would result in the removal of native trees and non-native plant species, which in turn could result in the direct loss of foraging habitat for this species. The loss of foraging habitat would *not* present a significant effect to this species. Construction would take place during the usual seasonal spring and summer maintenance period. Similar maintenance and construction activities have been approved by the USFS and have taken place in previous spring and summer months. If this species is present, it has coexisted with spring and summer maintenance activities in the past. Construction activities are local in scope and would most likely only affect individuals, not overall populations, because of suitable undisturbed habitat outside the SUP boundary.

There would be no direct and indirect effects after construction and during the usual winter operations. The proposal has been designed to enhance existing facilities to accommodate the existing peak user levels and not to increase user levels during winter operations. Special-status wildlife species would have migrated, would be dormant, and would not be nesting or breeding. In addition, the usual winter recreational activities have been ongoing for numerous years, and kingsnakes that may be present and active during the winter months have coexisted with these activities.

The proposal may affect individuals, but is not likely to result in a trend toward federal listing for the San Bernardino mountain kingsnake.

General Wildlife

Although the proposed construction and improved operations of MHR are not expected to affect wildlife, all efforts would be made to remove only those trees that are necessary for the proposed lift, trail, and parking lot construction. Incorporation of best management practices, including erosion prevention measures and barriers to silt migration into local streams, would help avoid harm to distant downstream aquatic species.

Cumulative Effects to Wildlife

The Forest Service proposes to conduct prescribed burns on Table Mountain, maintain the Big Pines bunkhouse, and reconstruct the Big Pines restroom. The prescribed burn would have a temporary impact on wildlife with the potential for displacement and mortality of individuals. The continued operation of Ski Sunrise in the vicinity of MHR would not act to cumulatively affect wildlife because no improvements to facilities involving vegetation or habitat removal are expected. As previously mentioned, CalTrans is expected to conduct routine maintenance operations on the Highway 2 including repair and replacement of guardrails and repair of asphalt.

F. PARKING AND RESORT ACCESS

Resort Access

MHR is located 33 miles from San Bernardino, 47 miles from Riverside, and 75 miles from Los Angeles. It is principally accessed via Interstate 15 and state highways 138 and 2. Highway 2, also known as the Angeles Crest Highway, is a 55-mile long Forest Service Scenic Byway and State Scenic Highway that winds along the spine of the San Gabriel Mountains from I-210 in La Canada to Mountain Top Junction at SH-138.

Particularly on weekends, holidays, and days with heavy snow accumulation, traffic to the resort can be slow from as far away as Ontario, CA. Once skiers get to Wrightwood, however, the road is often congested with vehicles belonging to skiers and dispersed snowplayers. There are also pedestrians along either side of the road, who are trying to access both MHR and NFS lands from their parked cars on the highway.

MHR East

Guests access both MHR East and West directly from Highway 2. The MHR East parking lot has only one entrance/exit (located at its eastern side) that is used by both passenger vehicles and the resort's shuttle buses. Two-way traffic congestion at the entry/exit creates poor vehicular circulation. Emergency vehicle access to the base area buildings (most importantly the ski patrol/first aid room) is adequate although it may be congested and difficult during peak ingress and egress times.

MHR West

At MHR West, guests turn onto the entrance road from a five-way intersection of Highway 2.[16] This situation is confusing for guests entering the resort, and it is aggravated by limited sight distances due to the curve of the road. MHR West's upper parking lot has an exit road that is separate from the entrance road, which facilitates vehicular circulation. However, on busy days, guests arriving at MHR West's full parking lots often park on the shoulder of the access road or perform U-turns on Highway 2 and drive back to the east. As previously mentioned, when both lots are full, guests also park on the shoulder of Highway 2.

Parking

On-site guest parking is currently available at three parking lots in the base areas. These lots provide a total of approximately 13.9 acres of parking surface, which accommodates approximately 2,321 vehicles and 6,267 people.[17] Parking capacity at MHR is therefore inadequate to accommodate existing visitation. As stated in Chapter 2, although the resort's CCC is 6,500, this number is often exceeded on weekends and holidays. Peak visitation reaches 6,990 during the day and 1,640 at night.

[16] The five-way intersection includes Highway 2 (east- and westbound traffic), Big Pines Highway, Table Mountain Road, and MHR West's entrance road.

[17] 13.9 acres x 167 vehicles/acre = 2,321 vehicles x 2.7 people/vehicle = 6,267 people. These numbers were derived from actual parking counts conducted by MHR management and include employees. Approximately 180 additional guests arrive by bus and are parked on 0.3 acre designated for bus parking.

There is often an overlap between day and evening guests at MHR West. The flexible ticketing system implemented by MHR allows guests to come ski for short periods of time throughout the day and night. This can cause the number of guests at the resort to swell by an additional 750 people during the late afternoon period (up to 300 vehicles). Additionally, on peak days, MHR employees may require as many as 250 parking spaces, exacerbating the already overtaxed guest parking situation.

Dispersed snowplayers, who are not utilizing MHR's facilities, cause operational problems for MHR management as they attempt to utilize resort parking lots.[18] Snowplayers who park in MHR's facilities put additional stress on the resort's already over-burdened parking facilities and may contribute to skiers parking along the shoulder of Highway 2. Parking is allowed along Highway 2 as far east as Wrightwood, with the exception of areas with tight curves and along the BPHD Clubhouse. Pedestrian safety and congestion issues on the shoulder are exacerbated by skiers and dispersed snowplayers who drive to the mountains when heavy snow falls and park in MHR's lots or along Highway 2.

Pedestrian Circulation

Pedestrian circulation between parking lots and base area facilities is essentially through the parking lots or, in the case of the lower lot at MHR West, via a walking path to the base area facilities. The path is relatively steep for guests carrying ski gear to and from the base area, it creates a safe but awkward access route, especially during crowded periods.

Shuttle Service

Although the majority of MHR's visitation occurs at MHR West, a large portion of the resort's parking is located at MHR East. Because MHR's skiing terrain does not connect its East and West facilities, MHR initiated a shuttle service between the MHR East and West base areas. The resort operates four, 40-passenger buses to transport guests between MHR East and MHR West. The resort offers continuous shuttle service from 8:00 am until 10:00 pm daily. With reasonably uncongested highway conditions, the travel time between base areas is about five minutes; however, during crowded periods, round trips can take as long as 30 minutes.

MHR provides drop-off areas at both MHR East and West; however, neither drop-off area is well segregated from the parking lots. This leads to decreased efficiency and poor circulation. MHR shuttle buses add to the congestion in these areas. The drop-off areas are too small for efficient use by both passenger vehicles and resort shuttle buses.

ENVIRONMENTAL CONSEQUENCES FOR PARKING AND RESORT ACCESS

Alternative A

Available parking does not accommodate MHR's existing visitation, particularly on peak days. Under the No Action alternative, vehicle and pedestrian circulation problems associated with

[18] MHR personnel screen people entering their parking lots and turn away obvious non-skiers; these snowplayers then park on the highway.

inadequate facilities and structures would continue. As a result, guests would continue to park on the shoulders of the MHR West access road and along Highway 2. Emergency vehicles would continue to be hindered as a result of the crowded conditions in the base area as well. Resort shuttle buses would continue to operate between MHR East and West, and guest drop-off areas would remain congested and difficult to access.

Through periodic monitoring of the current condition and as a portion of this analysis, the Forest Service and MHR are concerned that this situation would continue to present an ongoing public safety hazard with respect to potential pedestrian/vehicle conflicts along Highway 2.

Alternative B

Parking

MHR West

At MHR West, the eastern edge of the upper lot would be expanded by approximately 2.6 acres to provide a total of 7.5 acres of parking. When combined with the 1.8 acres of existing parking within the lower lot, a total of 9.3 acres of parking at MHR West would accommodate 1,553 vehicles (approximately 4,193 people).

MHR East

Under Alternative B, approximately 2.7 acres of new parking would be created across the highway from MHR East. Development of this parking lot would accommodate approximately 419 vehicles (1,131 people). This would be in addition to the existing lot at MHR East, which can accommodate approximately 1,116 vehicles (3,013 people). With MHR employees parking in the proposed parking lot at MHR East, rather than in guest spaces adjacent to the slopes and guest facilities at both base areas, additional space would be available to accommodate resort guests.

Summary

Total resort parking at MHR would be approximately 19.2 acres, accommodating 2,976 vehicles or 8,035 people. Although MHR's CCC would remain at 6,500 guests under this proposal, this total represents a "comfortable" day. By design, it is assumed that a resort will periodically exceed its CCC by 20 percent or more. As a result parking in excess of 6,500 guests would result in a properly balanced facility, which would provide adequate parking to accommodate peak days as well as account for employees and the flexible ticketing system, which often results in overlap at the resort. By accommodating existing demand for parking with more adequate parking facilities at MHR, congestion and parking on the shoulder of Highway 2 would be relieved and pedestrian vehicle conflicts would be reduced.

Vehicular and Pedestrian Circulation

Vehicles would continue to circulate in a one-way direction at MHR West, with designated entrance and exit roads. This would further improve vehicle circulation while reducing safety risks to pedestrians. The new access road leading to the Bullwheel Saloon would allow resort shuttles to access the new learning center.

At MHR East, the new lot would be of a sufficient size to necessitate the construction of separate entry and exit roads. This would enhance the flow of traffic through the lot by avoiding the confusion associated with one two-direction access point. It is uncertain at this time if CalTrans would require additional highway development (i.e. acceleration and deceleration lanes, as well as turn lanes) in conjunction with the new lot.

Pedestrian circulation would be further enhanced by the addition of a designated drop-off zone (with separate bus and private vehicle drop-off areas) at MHR West. This would be possible with the removal of the existing modular buildings and the relocation of these services to the proposed Day Lodge. Emergency access to the first aid/ski patrol facilities at MHR West would also improve over existing conditions due to well-planned vehicular circulation and an improved base area drop-off.

Shuttle Service

MHR proposes to utilize its existing shuttle service between the two base areas to transport guests from the proposed parking area on the north side of Highway 2 at MHR East. However, the potential exists for pedestrian and vehicle conflicts as many guests would invariably be inclined to walk across Highway 2. Similar situations at various resorts in North America have demonstrated that a certain percentage of guests cannot be enticed to ride shuttles and will walk to the base area facilities.

With careful monitoring of the situation by MHR, installing appropriate signage for both pedestrians and motorists, and a MHR-operated shuttle from the parking lot to the base area, these conflicts should be manageable.

Snowplay Parking

Alternative B does not specifically address the problems associated with inadequate parking for snowplayers. Operational problems due to snowplayers are anticipated to continue under this scenario. However, the situation would be partially remedied in an indirect way with expanded parking facilities to specifically accommodate MHR's skiing clientele. As a result, this may translate to fewer total vehicles parking on Highway 2.

Cumulative Effects to Parking and Resort Access

Correspondence with CalTrans in 2002 confirmed that although some small, isolated projects (asphalt repair, guardrail installation and repair, etc.) are in the initial stages of development, no specific projects are currently planned to address traffic congestion or flow problems along Highway 2 between MHR and Wrightwood.

G. RECREATION

MHR and the Forest Service are committed to fostering improved recreation opportunities within the SUP while at the same time respecting recreational uses of adjacent NFS lands. This commitment is complementary to management direction (Forest goals, policies, and objectives) found in the LRMP pertaining to recreation,[19] particularly:

- Operate and maintain recreation developments to assure they are neat and sanitary to enhance the visitor's outdoor recreation experience.

- Manage developed sites… to prevent site deterioration from overuse, maintain healthy vegetation, and rehabilitate sites needing improvement to satisfactory condition.

Recreational Opportunity Spectrum

The Forest Service Recreation Opportunity Spectrum (ROS) is a classification system that categorizes NFS land by its setting and defines classes of probable outdoor recreation activities and experience opportunities that are likely to be provided. In short, the land and water of NFS lands are inventoried and mapped by ROS class to identify which areas currently provide what kinds of opportunities. This is accomplished by inventorying three "settings" of an area: (1) physical – size, remoteness, and evidence of human activity, (2) social – number and type of human encounters, opportunity for solitude, and (3) managerial – the amount and type of restrictions placed on people's actions. Inventorying these settings helps identify the quality and quantity of recreation opportunities, inconsistencies, and the current mix of opportunities.

The ROS ranges from *Primitive* to *Urban*. Based on the three settings, the ROS map accompanying the LRMP designates the portion of the ANF encompassing MHR as *Rural*. In the *Rural* class settings, the sights and sounds of human activity are readily evident, though less pronounced and less concentrated than in the *Urban* class. Levels of use vary, but do not reach those concentrations of the *Urban* class except at specialized and developed sites, such as MHR.

While the characteristic landscape is often dominated by human-caused geometric patterns, there is also a dominant sense of open, green space. The principals adopted by the ROS system to assess the visual attractiveness of the *Rural* settings dictate that human-caused visual patterns will dominate the landscape.

Winter Recreation

The Blue Ridge ski area (now known as MHR West) originally opened in 1937. Holiday Hill (MHR East) was started in 1948 as a separate ski area. Over the past few decades, each area has had several owners and investors that have contributed to their successes. In 1980 Holiday Hill and MHR West were combined to form Mountain High Ski Area. The current owners, Mountain High Holdings, purchased the resort in 1997 and have contributed more than seven million dollars to upgrades and enhancements.

[19] USDA Forest Service, Angeles National Forest Land and Resource Management Plan, 1987. pg. 4-4

MHR is comprised of 46 trails on 220 acres of skiable terrain. Approximately 95 percent of this area has snowmaking coverage. The terrain distribution is approximately 25 percent beginner, 35 percent intermediate, and 50 percent advanced. There are five terrain parks and one halfpipe for a variety of terrain. MHR has a total of 13 lifts including three four-person chairlifts, two three-person chairlifts, five two-person chairlifts, and three surface lifts. The vertical drop is approximately 1,600 feet.

The resort is divided into two base areas, each accessing distinct areas of the mountains. MHR East offers longer and more advanced skiing terrain, while MHR West provides more wide open runs and beginner areas. Both base areas offer ticket sales, restaurants, restrooms, rentals, retail, and ski school.

MHR East

MHR East offers ticket sales, food service, retail, and rentals. Gusts can also participate in ski school lessons at MHR East. This portion of the resort offers primarily intermediate and expert terrain.

MHR East has a marked deficiency in beginner terrain. The terrain that is available is not located proximate to base area facilities. Guests currently have to walk approximately 650 feet to reach the base of the Easy Rider Chairlift, which services the only green terrain at MHR East. These beginner-level guests are inherently unaccustomed to maneuvering with ski/snowboard equipment, creating a less-than-ideal situation for first-timers and beginners.

MHR West

MHR West also offers ticket sales, food service, retail, and rentals. This portion of the resort offers skiing opportunities for beginners and intermediate skiers. MHR West is more widely utilized because its terrain is more accessible to wider range of skiers and has more extensive snowmaking coverage. As a result, its skier service facilities, which are aging and undersized, are often overtaxed.

MHR West has a focus on freestyle skiers and snowboarders, with 11 designated trails, one jib park, and one halfpipe. This is another reason more people are drawn to this portion of the mountain, and it also results in more people utilizing undersized facilities.

The Children's Academy is a designated ski school meeting area that facilitates the experience for first time and beginner skiers. However, teaching terrain at MHR West is not easily accessible. The existing Snowflake Chairlift is not appropriately located for beginner and novice skiers, who must walk to it from the base area. The terrain that is accessible from the Snowflake Chairlift is not well suited for beginners.

The nature of terrain grades and topography in the MHR West base area tend to cause skier congestion on busy days and during afternoon egress. Safety concerns arise as intermediate and advanced skiers descending from more challenging terrain mix with slower skiers within the beginning and teaching terrain near the MHR West base area.

MHR has a Comfortable Carrying Capacity (CCC) of 6,500 (approximately 3,090 at MHR East and 3,410 at MHR West). Although the existing terrain can accommodate 6,900 skiers-at-one-time (SAOT), the existing lift capacity is capable of accommodating only 6,500 SAOT. By design, this is often exceeded on weekends and holidays. As a result of crowding and congestion in the resort's facilities (lift lines, beginner terrain, parking, restrooms, food service), MHR has limited daily ticket sales to prevent overcrowding on- and off-slope for the past three seasons.

On busy weekends, parking demand exceeds capacity, resulting in vehicles spilling over onto both sides of Highway 2, sometimes as far as Wrightwood. Guests parking on Highway 2 sometimes walk up to three miles (in full ski gear) to reach MHR East. Lift line waits can approach 15 minutes, and restroom lines can exceed 30 minutes. Food service has become overtaxed; sometimes guests wait up to 20 minutes to get their food, then stand while eating because all seats are occupied. Movement within buildings becomes difficult as attendance levels peak, this has occasionally resulted in MHR staff limiting guest entry into buildings. It is logical to conclude that some guests may give up and leave the resort out of frustration.

Non-Skiing Winter Activities

Snowplay is a dispersed winter recreation activity on NFS lands adjacent to MHR; as a result, many people come to recreate in the Wrightwood vicinity during the winter. With limited parking options, dispersed recreationists attempt to park in MHR's parking lots, which are specifically designated for skiing guests. When the snowplayers are turned away or the lots are full, they (and skiers who could not find parking in the lots) frequently park along Highway 2, thereby increasing traffic congestion and the potential for pedestrian/vehicle conflicts. This situation causes logistical problems for the resort, the Forest Service, and the Highway Patrol.

Summer Recreation

Blue Ridge Trail

The Blue Ridge Trail (BRT) is an approximately 1.6-mile segment of multiple-use trail traversing Sawmill Canyon between the East Blue Ridge Road and Highway 2. The BRT departs the Blue Ridge Road just east of the Blue Ridge Campground near the base terminal of the Discovery Chairlift, and ends at Highway 2 near the MHR West exit road. The BRT is open to hikers, bikers, and equestrians and is commonly used to access the Pacific Crest Trail.

Pacific Crest Trail

The Pacific Crest Trail (PCT), dedicated by Congress in 1993, is a 2,650-mile passage spanning three western states (California, Oregon and Washington) between the Mexican and Canadian borders. It passes through 25 national forests and seven national parks. The PCT has five distinct sections, each with its own unique climate, geology, flora, and fauna. These sections are Southern California, Central California, Northern California, Oregon, and Washington.

The PCT is open to hikers and equestrians only. It is closed to all forms of motorized/ mechanical recreation (including bicycles). It traverses Blue Ridge, across the upper portions of both MHR East and West. Protecting the integrity of the PCT is important to both the Forest Service and MHR.

ENVIRONMENTAL CONSEQUENCES FOR RECREATION

Alternative A – No Action

Selection of Alternative A would result in continued difficult access to beginner-level terrain; guests would continue to have to walk, with equipment in hand, to beginner slopes. There would be no central facility for these first time or beginner guests to warm up in or take a break.

With selection of the No Action Alternative, first time and beginner skiers would continue to have difficult access to less-than-ideal terrain. Additionally, circulation problems would continue to trouble MHR West. Due to the topography of the terrain, faster, more advanced skiers would continue to be funneled through the beginner teaching terrain near the base area as they try to access the out-of-base lifts.

Restrooms, food service facilities, and other skier services would continue to be overtaxed at MHR West, contributing to a less than satisfactory guest experience. Additionally, skiers and snowplayers would likely continue to compete for parking along Highway 2 on busy days.

Dispersed summer recreational opportunities would remain unchanged – with hiking, biking, and equestrian activities occurring in the Wrightwood area. Existing ski area operations and facilities would remain consistent with the ROS setting of *Rural*.

Alternative B

Alternative B proposes terrain enhancements, new lifts, and additional skier service facilities.

MHR West

Most of MHR West's guest amenities, including restaurants; bar/lounge; restrooms; ski school offices; rentals/repair; retail shops; ticket sales; and public lockers, would be located in the proposed new Day Lodge. This building would provide roughly 1,300 indoor and outdoor food service seats, which would accommodate approximately 6,500 guests over the course of a day and night (five turnovers) than the existing facilities at MHR West.

The proposed regrading of Easy Street Trail and portions of Catch Ya Later, Sunnyside, Creekside, and Woodworth Gulch, as well as the milling area at the base of chairlifts 1; 3; and 4, would improve skier circulation and safety at the MHR West base area. Because it would improve circulation and skiability of the terrain, proposed vegetation removal and terrain regrading would effectively route faster intermediate and advanced skiers to the base area without impacting the beginner/teaching area at MHR West. This regarding would enable the creation of a dedicated, beginner teaching area in front of the Bullwheel Saloon. This would be separated from the downhill skier traffic, making a safer environment for all guests.

The bottom terminal of the Snowflake Chairlift would be relocated approximately 160 feet downhill of its current location increasing its proximity to skier service facilities. Two beginner surface lifts, (surface conveyors) were recently installed on the existing teaching terrain at MHR West on an interim basis. With selection of Alternative B, these lifts would be realigned to

better complement the newly created beginner/teaching area. One lift, roughly 200 feet in length, would be aligned parallel to the existing cabins on the northern edge of the teaching terrain. The second lift, roughly 225 feet in length, would be located slightly east, and uphill of the cabins.

A proposed baby double chairlift, approximately 425 feet in length, would be installed adjacent to the existing Snowflake Chairlift. The bottom terminal would be located immediately west of the proposed Day Lodge for easy beginner access, serving terrain that is appropriate for beginner level skiers and boarders. The proposed lift upgrades at the MHR West base area would provide a logical teaching progression for first-time skiers who would start at the teaching flats and eventually work their way up to the lifts that serve more advanced terrain.

MHR East

The learning center proposed at MHR East would provide: easily accessible restrooms, ski school ticketing, limited ski and snowboard rentals, and a place for first-time skiers to rest and warm up that is proximate to beginner terrain. This learning center would improve the level of guest service at MHR East.

In 2000, MHR installed a short handle tow at MHR East. This lift is aligned adjacent to the MHR East base facilities. It accommodates beginners and has improved access to the Easy Rider Chairlift, thus creating a logical teaching progression. Under this proposal, MHR would install a different type of surface lift, commonly known as a magic carpet to make utilization of the lift even easier for first-time beginners.

Terrain served by the proposed surface lift at MHR East would be graded to an average slope gradient of approximately eight percent; this would enhance its appropriateness for beginner-level skiers. By providing appropriate and accessible terrain, with commensurate services for first-time beginners, MHR East would greatly improve its level of guest service and better balance the level of utilization between MHR East and West.

Summer Recreation

During the public scoping process, concerns were raised over how MHR's parking lot reconfiguration might affect hikers on the BRT and PCT in the short term. The ID Team determined that although this issue did not necessarily warrant formulation of a new alternative, Alternative B needed to specifically address potential effects to the BRT resulting from MHR's proposed parking lot construction.

Alternative B was revised to include provisions for temporarily relocating the BRT prior to constructing the MHR West parking lot expansion. This provision would ensure that hiking/biking activities are not interrupted during MHR's construction phase. While this approximate 800-foot relocation of the BRT at MHR West would temporarily (i.e., approximately two days) displace recreationists, their experience would not be permanently altered, and access to the PCT would remain uninterrupted.

Summary

Alternative B would be consistent with the ROS of *Rural*. Overall, improved guest services and terrain enhancements at MHR would substantially enhance the quality of the recreation experience by accommodating guests both on and off the slopes.

H. SOILS AND GEOLOGY

The following information is tiered to two geotechnical reports completed for various elements of the project proposal: the 2000 Preliminary Geologic Hazards Report[20] addresses the location of the proposed Day Lodge. The 2001 Preliminary Geologic Hazards and Feasibility Report for Proposed Site Improvements[21] evaluates potential geologic hazards relative to the four other facilities in this proposal. The complete technical reports are available for review in the project file.

Regional Geology

MHR is located along the northern margin of the Transverse Ranges geomorphic province, just south of the Mojave Desert. The Transverse Ranges consist of a complex collection of mountain ranges and intervening valleys with predominant east-west structural trends. The San Gabriel and San Bernardino Mountains are part of this province. The San Gabriel Mountains are the predominant physiographic feature of this area and are transected or bordered by a multitude of active and potential faults.[22] Major faults include the San Andreas, San Jacinto, Sierra Madre, and San Gabriel.

Typical lithographic units within this portion of the San Gabriel Mountains consist of pre-Tertiary crystalline rocks and metamorphic rocks. The pre-Tertiary crystalline bedrock is predominantly of plutonic origin with limited exposures of metamorphic rock. The Pelona schist is the predominant metamorphic rock within the region.

Local Geology

The project site is located within the northeastern portion of the San Gabriel Mountains, just west of Cajon Pass. Cajon Pass marks the general boundary between the San Gabriel Mountains to the west and the San Bernardino Mountains to the east. Local geomorphic features include Blue Ridge, Table Mountain, and Swarthout Valley. MHR is located along the northern margin of Blue Ridge near the western terminus of Swarthout Valley. Pelona schist is the prevalent rock type south of the San Andreas fault and underlies Blue Ridge. North of the San Andreas fault is Table Mountain, which is underlain by igneous and metamorphic rocks.

Soils

Soils in the project area are generally described as Quaternary Older Alluvium, derived from granitic-type rocks and Pelona schist. Bahemotoch-like soils exist in the area. The soils consist of typical alluvial deposits associated with rapid depositional stream and debris flow

[20] Earth Systems Southern California 2000

[21] Kleinfelder, Inc. 2001

[22] For the purposes of this document, an active fault is defined as a fault that has had displacement within the Holocene epoch, or last 11,000 years. A potentially active fault is a fault that does not have evidence of movement within the last 11,000 years but has moved within the last 1.6 million years.

environments and vary in depth from 10 to 20 inches on ridges and slopes. The infiltration rate on undisturbed or revegetated areas is higher than on areas compacted and disturbed.

Faults

Investigations indicate that the MHR East and West base areas are located within, or immediately adjacent to, a currently designated State of California Alquist-Priolo (A-P) Earthquake Fault Zone.[23] The *2000 Preliminary Geological Hazards Report* acknowledged the presence of identified faults in the immediate vicinity of the existing MHR West guest service buildings.

The closest known active, or potentially active, faults to the site are the San Andreas and related faults located immediately north of the base areas.[24] The main trace of the San Andreas Fault is located at the intersection of Highway 2 and Big Pines Highway. A subsidiary fault to the San Andreas Fault was identified just north of the existing lodge. This fault zone was characterized by offset and disturbed Quaternary soils found in analysis trenches south of the parking lot at MHR West. In addition, there are abundant active or potentially active faults located in southern California that are capable of generating earthquakes that could affect the Wrightwood area. These include the Sierra Nevada and White Wolf faults located in the north and northwest of Antelope Valley, the abundant coastal region faults located to the southwest of the San Andreas Fault, and several parallel northwest trending faults located east of Antelope Valley in the Barstow area.

The potential for active fault rupture is considered to be moderate to high in the vicinity of the MHR East and West base areas and along Highway 2. In the event of future fault movement along the main trace of the San Andreas Fault, it is anticipated that secondary or subsidiary movement on active faults could occur. Should such a seismic event occur, displacements of up to five feet are anticipated.

Seismic Shaking

Should a major seismic event originating on the local segment of the San Andreas Fault occur, Maximum Modified Mercalli scale intensities[25] of approximately VIII-X (eight to ten) and peak horizontal ground accelerations in excess of 1.0 g[26] are anticipated with intense ground shaking lasting at least 60 seconds. Aftershocks with magnitudes up to VII (seven) are expected.
It is estimated that major earthquakes have occurred along the Mojave segment of the San Andreas Fault between intervals that range from approximately 50 to 300 years. The average recurrence interval is estimated to be 132 years. As the last major earthquake on the strike-slip

[23] The A-P Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Zoning Act's main purpose is to prevent construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface rupture and is not directed toward other earthquake hazards.
[24] Much of the state is considered within the San Andreas rift zone.
[25] Composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, the Modified Mercalli scale is designated by Roman numerals and does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects.
[26] g = acceleration due to gravity (9.81 m/s^2)

San Andreas Fault in this area occurred in 1857, the occurrence of an earthquake in this area within the next 25 years is considered likely. Based upon studies by the Working Group on California Earthquake Probabilities (primary source omitted), the probability of a major earthquake on the Mojave Segment of the San Andreas Fault is estimated to be 26 percent through 2024.

Secondary Seismic Hazards

At the present time, three water storage reservoirs are located up-mountain at MHR East and West – 25 million and 14 million gallons, respectively, for snowmaking and 250,000 gallons for domestic water above the Snowflake Chairlift in the Forest Service "Rock Reservoir."

The potential for liquefaction[27] to occur in the project area is considered low due to the relatively deep groundwater table; all of the reservoirs are primarily below ground level. The base areas are relatively gently sloping with consistent geologic material (alluvium) and have a low potential for liquefaction; the potential for ground deformation is also considered to be low.

ENVIRONMENTAL CONSEQUENCES FOR SOILS AND GEOLOGY

Alternative A – No Action

Under the No Action Alternative, guest service buildings would remain in their current locations, which are not located in compliance with the A-P Zoning Act. Should a geologic even occur in the vicinity of MHR, guest safety would be a concern. The primary geologic hazard relative to structures that are located within identified A-P zones is severe ground shaking from earthquakes originating on nearby faults. In the event of a failure of any or all of these reservoirs as a result of seismic activity, intense, short-term flooding would likely occur in either or both base areas, as well as west along Highway 2 down the valley to Wrightwood.

Alternative B

Geologic hazards associated with earthquakes for Alternative B are the same as for Alternative A. However, this alternative was developed to lessen the consequences to safety and structural damage should a geologic event occur in the vicinity of the project area. LA County does not require that subsurface geological investigations be undertaken for proposed facilities such as parking and ski lifts; therefore, the following discussion focuses on five proposed structures: two maintenance facilities, a water tank, the MHR East learning center, and the MHR West Day Lodge. Although the hazards are similar among all the alternatives, the consequences vary greatly. Under alternatives B and C, proposed guest services buildings have been relocated outside of the A-P Zone, thus reducing the potential risks to human safety and structural damage.

A-P Zone

As previously mentioned, MHR is located immediately adjacent to a currently delineated State of California A-P Earthquake Fault Zone for this section of the San Andreas Fault. In Los Angeles

[27] Liquefaction is the loss of soil strength due to sudden shock, causing the soil to become a fluid mass. In general, groundwater levels must be within 50 feet of the surface, and the soils must be within the saturated zone for liquefaction to manifest.

County, general requirements are in place for structures in excess of 1,000 square feet that are within the defined A-P Zone. Geologic studies must be performed to determine the presence or absence of active faults.
Structures that are considered "habitable"[28] are also required to have pre-development geologic studies performed to verify the absence of active faults under or adjacent to the planned building location.

In compliance with the A-P Zoning Act, two separate geologic investigations were completed for the structures included in Alternative B. The first investigation, completed in August 2000, was a preliminary geologic hazards report specific to the proposed Day Lodge. This included a geologic reconnaissance of the site area, review of selected geological literature, subsurface exploration by trenching, a seismic hazards analysis, and a written report. The second investigation was a preliminary geologic hazards and feasibility report prepared for the proposed storage facility and Learning Center at MHR East and for the proposed water tank and maintenance shop at MHR West. This included a brief reconnaissance of each site, review of selected geological literature, and a written report. No subsurface trenching or exploration was performed for the latter investigation. The purpose of these reports was to provide a summary of potential geologic hazards that may affect the proposed facilities at MHR.

Fault Rupture

The San Andreas Fault is considered to be active; at least two great earthquake events within the last 200 years (1812 and 1857) have occurred in the immediate area. Secondary fault traces are known to exist adjacent to the main trace of the fault.

During the on-site investigations for the 2000 Preliminary Geologic Hazards Report, several trace faults were identified approximately 700 feet southwest of the main fault trace in the vicinity of the existing MHR West guest service buildings. It is likely that these more southerly faults continue to the southeast and exist at depths near the northern base of the mountains. An additional fault offsetting Quaternery sediments, with a northeast trend, may be geomorphically expressed to the southwest by aligned drainages and ridgeline saddles. This fault travels just to the south of the proposed maintenance facility, which is south of the Bullwheel Saloon. The potential for future fault rupture in the vicinity of MHR is considered to be high.[29]

Day Lodge

In a preliminary conceptual plan, the proposed Day Lodge was located at the location of the existing modular MHR West base buildings. However, because the 2000 Preliminary Geologic Hazards Report revealed secondary fault traces in this area, locating a new structure in this area would have violated the A-P Zoning Act. After an evaluation of the recommendations in the 2000 Preliminary Geologic Hazards Report, the proposed Day Lodge was relocated to an appropriate site in the MHR West base area, which is in full compliance with the A-P Zoning Act.

[28] This is defined as 2,000+ person hours of occupation per year.
[29] Spykerman, Mark S., Preliminary Geologic Hazards and Feasibility Report for Proposed Site Improvements, July 2001.

Proposed Learning Center at MHR East

While no trenching was conducted for the proposed Learning Center, the 2001 Preliminary Geologic Hazards and Feasibility Report, indicates that the specified location may have relatively high potentials for fault rupture and other seismic-related hazards, flooding, and adverse soil conditions. The site, as currently planned, is located approximately 300 feet southwest of the buried main trace of the San Andreas Fault and is near the projected trend of the southerly parallel trending fault zone that is thought to exist along the base of the northeast facing hillsides. Therefore, the potential for subsidiary fault traces and surface fault rupture in this area is considered to be moderate to high. As the site is underlain by undocumented fill and younger alluvial soils, liquefaction and other soil-related issues are of concern.

Other soil-related issues could include poor bearing characteristics of shallow soils, moderate to high settlement potentials, expansive soils, and corrosive soils. Because this proposed building is located in the immediate vicinity of the San Andreas Fault and potential subsidiary faults, and fits the definition of a habitable structure, the site will require further trenching to identify potential fault hazards. Due to the flat and open nature of the proposed site, as well as the relatively small size of the proposed building, it is likely that a suitable site can be found in the immediate vicinity of the currently proposed location.

MHR East Storage Facility

As proposed, the facility would be located approximately 300 feet northeast of the main trace of the San Andreas Fault and is within the currently designated A-P zone. This facility has a relatively moderate potential for fault rupture and other seismic-related hazards, flooding, and adverse soil conditions. Because the facility is larger than 1,000 square feet, it falls within the LA County policy guidelines, which require trenching. However, it is intended for storage only, with no offices or maintenance bays where personnel would be working on a continuous basis. Because the facility would not exceed the occupancy rate as defined by the State, the need for trenching may be waived. Should Forest Service approval be granted for this facility, MHR will coordinate with the LA County geologist for a site inspection prior to the commencement of construction.

Under Alternative B, the proposed parking lot at MHR East is located in the vicinity of the mouth of a well-defined intermittent drainage course. The difference between the two alternatives is an additional 0.5 acres of parking surface proposed under Alternative B. Hazards from seasonal flooding and possible debris flows are considered high. Location of the proposed storage facility would depend on final design of the proposed parking lot. It is anticipated that the final location of the storage facility within the parking lot will take into account the hazards of seasonal floods and debris flows.

Water Storage Tank

The proposed water storage tank is located along the crest of a north-trending ridgeline. Bedrock underlying the site consists of Pelona schist. Artificial fill composes the northerly portion of the pad. No faults are thought to exist under the building site. The site is not located within a currently designated A-P zone or where potential fault rupture is considered a threat. However,

it is recommended that a final detailed site-specific geologic, geotechnical, and engineering study be performed prior to construction at the site.

MHR West Maintenance Facility

The maintenance facility is proposed on an existing east-facing hillside. While the site is not located within a currently designated A-P zone, it may have moderate potential for fault rupture and other seismic-related hazards, slope stability issues, and adverse soil conditions. The site, as currently detailed, is estimated to be within 150 feet of the projected trace of a northeast-trending fault identified during the 2000 Preliminary Geologic Hazards Report. Because the fault is considered to be part of the San Andreas Fault system and offsets Quaternery sediments; it poses a viable threat to the structural integrity of the proposed maintenance facility.

While this site technically lies outside the currently delineated A-P zone, new geologic information strongly suggests that the fault zone extends much further to the south than previously expected. Because the potential for subsidiary fault traces and surface fault rupture in this area is considered to be moderate, and the proposed facility is over 1,000 square feet, fault trenching for this facility will likely be required by LA County. Other issues that should be further addressed relate to hillside stability, potential adverse conditions relative to cut slopes or retaining wall backcuts, and seasonal flooding from hillside runoff. Site-specific geologic, geotechnical, and engineering studies should be performed to determine the exact building location.

Summary of Potential Geologic Effects

All proposed structures would be designed in accordance with building code standards for Seismic Zone 4 as described in the current Los Angeles County Building Code. Construction should allow for all plumbing and utility services to be connected with flexible connections and/or provided with convenient shutoffs. All sites should be designed to accommodate seasonal sheet flooding and erosion.

Soils

Alternative B would require a total of approximately 32 acres of ground disturbance for all proposed project elements. Approximately 10.1 acres of ground disturbance are proposed in the MHR West base area. This would include terrain re-grading projects for Easy Street, Catch Ya Later, Sunnyside, Creekside, and Woodworth Gulch, as well as for the Snowflake Chairlift extension, construction of two surface lifts, and construction of the construction of the Day Lodge. It would also include construction of the Bullwheel access road and the maintenance facility.

Ground disturbance for the parking expansion and proposed entry/exit roads at MHR West is approximately 10.2 acres. Approximately 2.0 acres would be landscaped and revegetated. The portion to be revegetated is considered a temporary disturbance to soils.

While construction of the proposed parking lot at MHR East would require approximately 8.7 acres of disturbance, roughly 3.8 of these acres would be revegetated. Approximately two acres of ground disturbance would be associated with project elements in the MHR East base area.

This includes grading terrain to achieve an average slope gradient of eight percent for the proposed beginner area at MHR East. It also accounts for installation of the surface lift, where the handle tow currently sits, and construction of the learning center.

Table II-2 provides ground disturbance numbers associated with each project element proposed under Alternative B.

All areas proposed for grading have been designed to blend with the surrounding existing grades. Revegetation efforts pertaining to construction of all ground-disturbing projects would take place as soon as is practical, following soil disturbance. Along with the use of native seed mixes for revegetation, trees proposed for removal on-mountain would be transplanted in disturbed areas to the extent practical. Selected trees scheduled for removal would be transplanted using a clamshell-type extractor. Licensed arborists would be contracted to ensure maximum survival opportunity; transplanted trees would be augmented with selected indigenous nursery trees and shrubs. Refer to Appendix A for a more detailed description of the landscaping and revegetation plan.

Cumulative Effects to Soils and Geology

Previous activities that have resulted in disturbances to soils and geological resources with MHR's SUP area include vegetative clearing and grading of trails, parking, and base area facilities; access road construction; trenching for utility and snowmaking lines; and lift and building construction. No other past, present, or reasonably foreseeable future projects in the vicinity of MHR were identified as having potential to increase hazards associated with soils and geology.

I. AIR QUALITY

Scope of the Analysis

The air quality analysis for this EA focuses on the MHR SUP area (NFS lands) and the adjacent private lands. MHR is a Class II Airshed that falls under the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). This district was recently apportioned from the South Coast Air Pollution Control District (SCAPCD), which includes Los Angeles County. The SCAPCD is a non-attainment area for National Ambient Air Quality Standards (NAAQS) for particulate matter less than 10 microns (PM_{10}).

Since the separation of districts, the AVAQMD has seen a vast reduction in emissions and a strong improvement in air quality. It was essential to surrounding community members to not be associated with the SCAPCD, which is also in extreme non-attainment of the NAAQS for ozone.

Forest Plan Direction

Forest Service direction regarding air quality related values is found in the ANF LRMP. No specific air quality related standards or guidelines have been promulgated for Management

Prescription 5; however, general Forest Plan direction is to "continue to work toward the improvement of long-term air quality."[30]

Current Condition

Air Quality Standards

NAAQS were established by the Clean Air Act (CAA) of 1963 and have been subsequently amended several times since.[31] Primary air quality standards were established under the act to protect public health; secondary standards were established to protect public welfare from any known or anticipated adverse effects associated with the presence of ambient air pollutants. The CAA and its implementing regulations also establish air pollution emission standards for a variety of stationary sources.

The US Environmental Protection Agency (EPA) retains oversight authority but has delegated enforcement of the CAA to the states. In California, the Air Resources Board of the California Environmental Protection Agency acts as the lead agency. The state is required to develop and administer air pollution prevention and control programs; state standards must be either the same as, or more stringent than, federal CAA standards.

Ambient air quality standards have been established for six criteria air pollutants. These are sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), lead (Pb), nitrogen dioxide (NO_2), and particulate matter (TSP, PM_{10} and $PM_{2.5}$). Recent amendments to the regulations implementing the CAA expanded requirements to include particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), in addition to the previous regulatory standard applying to particulates that are 10 microns in diameter or smaller (PM_{10}).[32] Ambient air quality standards are shown below.

[30] ANF LRMP 1987, p. 4-2
[31] As amended, at 42 USC 7401 to 7671(q), 2000
[32] Federal Register, July 18, 1997

Table III-1
Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standard	State Standard
SO_2	Annual 24-hour	0.030ppm - 80μ/m^3 0.14ppm - 365μ/m^3	-- 0.04ppm - 105μ/m^3
$PM_{2.5}$	Annual 24-hour	15μ/m^3 65μ/m^3	* *
PM_{10}	Annual 24-hour	-- 150μ/m^3	30μ/m^3 50μ/m^3
O_3	1-hour	0.12ppm - 235μ/m^3	0.09ppm - 180μ/m^3
CO	8-hour 1-hour	9ppm - 10mg/m^3 35ppm - 40mg/m^3	* 20ppm - 23mg/m^3
NO_2	Annual	0.053ppm - 100μ/m^3	--
Pb	Quarterly	--	1.5μ/m^3

Source: CARB, 1999
μg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppm = parts per million
* Standard is the same as federal standard.
¯ No standard exists.

In its amended form, the CAA designates two different air quality areas that receive different levels of protection. Class I areas generally include national parks, federally-designated wilderness areas that are in excess of 5,000 acres and that were created prior to 1977, national monuments, national seashores, and other areas of special national or regional value. Class I designation warrants the highest level of protection afforded to an area. Class II designation typically applies to non-Class I areas.

Prevention of Significant Deterioration

In addition to the NAAQS discussed above, the EPA has promulgated regulations to protect and enhance air quality. The Prevention of Significant Deterioration (PSD) regulations[33] are intended to help maintain good air quality in areas that attain the national standards and to provide special protections for national parks, federally designated wildernesses areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historical value.

These regulations stipulate that new sources must not cause a decline in ambient air quality and must use the best available control technology to limit emissions. PSD permits are required for "major emitting facilities" that emit, or have the potential to emit, 100 tons or more per year of any air pollutant.[34]

EPA regulations specifically list the sources that are considered "major emitting facilities;" this list does *not* include ski areas.[35] However, the regulations note that the term "major emitting facilities" also includes "any other source with the potential to emit two hundred and fifty tons

[33] 42 USC 7470-7479, 1997
[34] 42 USC 7475(a), 7479(1), 1997
[35] 42 USC 7479(1), 1997

per year or more of any air pollutant."[36] A PSD permit is not required for MHR because ski areas are not classified as stationary sources and MHR does not have the potential to emit over 250 tons of any regulated air pollutant.

The CAA limits the maximum incremental increase in concentrations over baseline concentrations of particulate matter and sulfur dioxide. The maximum increase of allowable emissions, in micrograms per cubic meter, is shown in Table III-3.

Table III-2
Maximum Allowable Increases in
Concentrations Over Baseline

	Class I Airsheds	Class II Airsheds
PM_{10}		
Annual geometric mean	5 $\mu g/m^3$	19 $\mu g/m^3$
24 hours	10 $\mu g/m^3$	37 $\mu g/m^3$
SO_2		
Annual arithmetic mean	2 $\mu g/m^3$	20 $\mu g/m^3$
24 hours	5 $\mu g/m^3$	91 $\mu g/m^3$
3 hours	25 $\mu g/m^3$	512 $\mu g/m^3$
Total Suspended Particulate		
Annual geometric mean	5	19
24 Hours	10	37

Source: USDA Forest Service Air Resource Management Plan

Conformity

In an effort to eliminate or minimize the severity and number of violations of the NAAQS, and to achieve expeditious attainment of these standards, the EPA promulgated the Conformity Rule in 1993. Conformity regulations apply to federal actions and environmental analyses in non-attainment areas completed after March 15, 1994. Emissions associated with Alternative B are expected to be below the conformity threshold limits; however, a conformity analysis will be performed prior to the release of a decision on this proposal and a final determination will be made as to whether the proposal is in conformity with the SIP.

Air Pollution Control Measures

On February 15, 2001, the AVAQMD filed a Petition for a Stipulated Order of Abatement with regard to MHR's alleged violations of district rules and regulations in its business of operating public ski areas and resorts. Six Notices of Violations were cited referencing an inspection in the fall of 1999; these included operation of six co-generation engines and 12 compressor engines. The district stipulated that if MHR were to close, there would be no corresponding benefit in the reduction of air contaminants because skiers would then be required to travel greater distances to other ski areas, thereby increasing emissions from mobile sources.

It was determined that MHR would be required to reduce excess emissions from it operations to the maximum extent feasible until full compliance is reached. Since that time, MHR has paid

[36] 42 USC 7479(1), 1997

excess emissions fees and made some modifications of permit conditions to correct some of the violations.

Additional projects identified in the petition include the statement that MHR "shall replace or convert to alternative fuel its fleet of four (4) shuttle buses used to convey its patrons between East and West resort." In September of 2002, MHR requested a modification of the stipulated order of abatement because they were unable to comply with the requirement to replace or convert to alternative fuel its fleet of buses. Their existing buses could not be re-powered with alternative fuels due to the age of the engines.

MHR's aging diesel buses currently emit 46.2 grams of NOx per mile. Diesel engines manufactured between 1991 and 1993 have an emission rate of 25.5 grams of NOx per mile. As a result, the AVAQMD and MHR agreed on September 18 to modify the stipulated order of abatement to state that MHR "shall replace its fleet of four (4) shuttle buses used to convey its patrons between East and West resorts by rental, lease, or purchase of replacement buses powered by diesel engines manufactured between 1991 and 1995 or after 1998."

MHR currently has operating permits for both the East and West portions of the resort. These permits stipulate that there is a 25-ton maximum potential to emit for all criteria pollutants. As a condition of maintaining operational status, MHR must not emit more than this limit. MHR is in compliance with the AVAQMD requirements.

ENVIRONMENTAL CONSEQUENCES TO AIR QUALITY

Alternative 1 – No Action

Under the No Action Alternative, no additional lift or building construction would occur. MHR would remain in its current operational state and no changes to air quality would be anticipated.

Any changes in emission regimes would be independent of MHR's currently proposed improvements. Changes in area source emissions would be attributable to potential changes in visitation patterns at MHR and to development within the area.

No additional sources of fugitive dust from new construction or traffic on dirt roads would be anticipated because no new facilities would be built and no additional up-mountain maintenance traffic would be expected. Fugitive dust from traffic on paved roads would be anticipated to increase in proportion with long-term increases in resort visitation.

MHR has committed to replace its fleet of four shuttle buses with more modern and more efficient diesel powered buses. MHR is limited in the amount of time that snowmaking operations dependent on diesel generators occurs; this is to reduce emissions associated with internal combustion engines for the compressed air.

Alternative B

Implementation of Alternative B would constitute a federal action within a non-attainment area; therefore, it would be required to conform to the approved air quality State Implementation Plan (SIP).

Increased visitation is not proposed under Alternative B. The alternatives are intended to better accommodate existing visitation levels with improved facilities. As a result, emission levels of criteria pollutants from mobile sources are not expected to increase with implementation of either action alternative. Alternative B would result in an improvement to traffic/circulation patterns and effectively reduce congestion and delays. The proposed parking expansion would also decrease the amount of time that cars are idling while drivers look and wait for parking spaces; thereby reducing emissions from mobile sources in the area.

Under Alternative B, more guests would be parking at MHR East; therefore, more guests would utilize the inter-resort shuttle service. In their need to comply with stipulations set forth by the AVAQMD, MHR would need to accommodate this increase in bus utilization by making their existing transportation system more efficient. This would be accomplished in part by the replacement of the existing fleet with more modern diesel powered buses, but it would also require additional measures of efficiency (i.e., waiting for a full bus before leaving the parking area).

With respect to point source emissions, more energy efficient utilities would be incorporated into the design of new buildings. The proposed Day Lodge would be constructed with modern heating systems and kitchen equipment, which would also reduce emissions from these sources and conserve energy. There would be no substantive changes to the snowmaking system as a result of implementing Alternative B; therefore, emissions from these sources are not anticipated to change. Terrain modifications at MHR West may necessitate the removal and reinstallation of some snowmaking infrastructure.

There would likely be short-term effects to air quality during the construction phase of either alternative. An increase in heavy equipment emissions and fugitive dust from construction activities would likely occur temporarily. MHR would utilize Best Management Practices (BMPs) set forth by the Forest Service in its construction design and implementation. For example, should construction occur under dry conditions, all exposed soil, including roadways, parking lots, and building areas, would be sufficiently watered to prevent excessive amounts of dust. In the absence of natural precipitation, watering of these areas would occur at least daily with complete coverage.

Cumulative Effects

The project elements of this proposal in conjunction with current operations at MHR would not have a significant cumulative effect on air quality. No increase in total emissions of pollutants is expected to result from Alternative B as a result of a more efficient transportation system and modern utilities at proposed facilities. Mobile source emissions would be similar to existing conditions or slightly reduced as cars are able to circulate more freely through the area and more

readily find space to park. There would be no additional point sources as a result of either alternative.

This proposal was determined not to have a significant impact on air quality resources as defined by the AVAQMD guidelines in that it: 1) does not generate total emissions exceeding accepted thresholds, 2) conforms with applicable plans, 3) does not generate a violation of any ambient air quality standards, and 4) does not expose sensitive receptors to substantial pollutant concentrations.[37] Alternative B would be considered to conform to the present SIP; no further air quality analysis is required to meet this requirement of the Clean Air Act (CAA).

J. INFRASTRUCTURE AND UTILITIES

Domestic Water

The resort's primary domestic water source is a Forest Service well located 300 feet east of the Easy Rider Chairlift's bottom terminal. Water from this well is pumped to the Forest Service Rock Reservoir above the MHR West base area. The water is then gravity fed from the reservoir, back through the supply pipeline, to spur lines, which feed all base area buildings at MHR West. This is a shared system operated by the Big Pines Camping and Water Service Association with a variety of users. During periods of high use the aging system frequently has distribution problems.

MHR wells 1-5 are also located in the MHR East base area. Although MHR owns these wells, the Forest Service maintains the water rights to them.[38] Water from these wells is pumped to a storage tank at the top of the Easy Rider Chairlift (water tank #3). From here, the water can be utilized in one of three ways. This water is the sole source of domestic water at MHR East; it is gravity fed to a pumphouse at the base of the Easy Rider Chairlift and then pumped through the supply line to the MHR East base area facilities.

The water from wells 1-5 is also used for snowmaking. From water tank #3, water is gravity fed to the maintenance/snowmaking/administration building where high-pressure pumps feed the East Reservoir. Back-flow prevention valves have been installed to prevent snowmaking water from entering the domestic water supply network. The Forest Service water system that supplies MHR West can be supplemented (if necessary) by MHR wells #1 through #5. As a point of reference, there is a collapsed water storage tank under the Blue Ridge Express Lift at MHR West that is no longer utilized for water storage purposes.

Domestic water for the Grand View Bistro, an on-mountain restaurant located atop MHR East, is drawn from a buried tank located adjacent to the building. A spur from the East Reservoir snowmaking water supply line supplies the tank. Water from the buried tank is treated for domestic use in the Grand View Bistro.

[37] AVAQMD, CEQA and Federal Conformity Guidelines, May 2002
[38] This agreement is detailed in Appendix E of the SUP.

Fire suppression at the MHR East base area is supported by a fire hydrant located adjacent to the facility maintenance shop. The hydrant is fed from water tank #3. None of the buildings in the MHR East base area are currently equipped with fire suppression sprinklers. The pumphouse below the East Reservoir can be used to supply water from the reservoir for fire suppression purposes at the Grand View Bistro.

At MHR West, a fire hydrant is located at the base of the Blue Ridge Chairlift. This hydrant is fed from the snowmaking storage tanks (Twin Tanks) above the generation building. The Bullwheel Saloon is equipped with fire suppression sprinklers, which are fed from the Twin Tanks. No other buildings in the MHR West base area are currently equipped with fire suppression sprinklers; therefore, they would be accommodated by the fire hydrant.

Wastewater

MHR East

Wastewater generated at the MHR East base area is discharged to three septic tanks located at the northeast corner of the base lodge. The three tanks have volumes of 1,250 gallons; 2,250 gallons; and 3,000 gallons, for a total storage capacity of 6,500 gallons. The three septic tanks discharge to an 8,400 square foot leach-field located on the north side of Highway 2.

The MHR East base area wastewater system has a design capacity of 20,000 gallons per day (gpd). Present wastewater flows at MHR East average 15,000-18,500 gpd.

Wastewater generated at the Grand View Bistro is discharged to a 3,000-gallon septic tank, which drains to a 1,500-square foot leach-field located approximately 430 feet southwest of the building.

MHR West

Wastewater generated at the MHR West base area is discharged to four septic tanks: a 3,000-gallon tank at the Bullwheel Saloon, a 4,000-gallon tank at the ski school/ administration cabins, and two 5,000 gallon tanks adjacent to the restrooms facility. The four tanks have a total storage volume of 17,000 gallons. The septic tanks discharge to an extended aeration, package sewage treatment (secondary treatment) plant located on the north side of Highway 2. Treated effluent is discharged to a leach-field, which is directly west of the treatment plant. The design of the leach-field includes a 100 percent expansion area. The treatment plant and leach-field is capable of functioning as a septic tank/ leach-field system in the event of aeration system failure.

The MHR West wastewater system has an average design capacity of 15,000 gpd and an existing maximum design capacity of 27,000 gpd. As described above, this capacity can be doubled in volume. Wastewater flows at MHR West currently average 15,000 gpd.

Summary

Average peak visitation at MHR is approximately 8,630 (including day and night skiers).[39] Using an industry norm of five gallons of water per skier per day, MHR's wastewater treatment system must be able to accommodate 43,150 gpd. With combined capacities of 47,000 gpd (20,000 and 27,000 at East and West, respectively), the resort is able to accommodate peak visitation.

Power

Power is supplied to MHR via a 12 kilovolt (kV) Southern California Edison (SCE) main line that connects Wrightwood with Lancaster. Because the SCE line has limited load capacity, MHR supplements SCE power with its own generation plant. MHR's generation plant is located in the MHR West base area and consists of six, 480 volt diesel generators; two 1,600 kilowatt (kW) generators; and four 1,200 kW generators, which provide a total of 6,400 kW of power. MHR's existing power supply is adequate to meet current electrical demands of the resort.

MHR East

Power is supplied to MHR East via the main SCE power line from Wrightwood. Up-mountain power is fed by a 12 kV SCE spur that travels up the Goldrush trail, terminating at a junction near the Grand View Bistro. From the junction, one 12 kV line continues to Frost Peak, and a second 12 kV line feeds the Grand View Bistro and a transformer. The transformer subsequently feeds power to the Discovery Chairlift's top and bottom terminals and the snowmaking pumphouse below the East reservoir. A series of temporary generators are set up at MHR East each year to assist with the additional power demands associated with snowmaking. These run throughout the snowmaking season and are retired each spring.

The MHR East 12 kV switchgear in the base area is connected to the main SCE power line from Wrightwood. From the switchgear, one 12 kV line feeds the maintenance/snowmaking/administration building (where voltage is reduced to 480 volts by a transformer), and a second 12 kV line feeds a transformer at the base of the Mountain High Express Chairlift. Electrical lines from the maintenance/snowmaking/ administration building feed the base terminal of Competition Chairlift, the facility maintenance shop, and the rental/retail shop. The transformer at the base of the Mountain High Express Chairlift feeds the lift drive terminal, the base lodge, the MHR domestic water pumphouse at the base of Easy Rider Chairlift, and the Forest Service domestic water pumphouse.

MHR West

The generation plant provides power (via underground cable) to the bases of chairs 3 and 4, the base lodge and restroom building, and the security/compressor building.

The SCE Blue Ridge Transformer (located in the lower parking lot) also provides power to MHR West. The transformer has a direct 240/120-volt feed to the Bullwheel Saloon; from here a MHR power line feeds the ski school/administration cabins. A second 12 kV line connects the

[39] This number was derived from daily skier visitation numbers for the past six seasons at MHR.

transformer with a utility pole at the security/compressor building. From the utility pole, the main 12 kV line travels underground to the base of Exhibition Chairlift. A spur from the utility pole feeds an SCE transformer that services the security/compressor building. A SCE transformer located near the base terminal of the Exhibition Chairlift provides power for chairs 1, 2, 5, and 6. From the base of this lift, a MHR 12 kV buried cable feeds the West reservoir pumphouse.

Fuel Storage

MHR uses propane gas for cooking appliances and to heat base area and on-mountain buildings. Propane gas is stored in 1,000-gallon tanks located at strategic sites in the base areas and adjacent to the Grand View Bistro. The gas is piped from the storage tanks to each building. The following is an inventory of propane tanks at MHR.

- Two propane tanks are located in front of the facility maintenance shop at MHR East.
- One propane tank is located on the west side of the base lodge at MHR East.
- One propane tank is located on the north side of the Grand View Bistro.
- Two propane tanks are located behind the ski school/administration cabins at MHR West.
- Two propane tanks are located behind the security/compressor building at MHR West.

During the summer of 1998, MHR installed new, above ground diesel and gasoline storage tanks at the following locations:

- A 3,000-gallon diesel tank on the slope side of the Bullwheel Saloon used for grooming vehicle fueling at MHR West.
- A 12,000-gallon diesel tank on the east side of the generation plant, used to fuel MHR's electric generators.
- A combination tank that holds 1,000 gallons of gasoline and 2,000 gallons of diesel on the south side of the facility maintenance shop for fueling the resort's rolling stock, buses, and construction vehicles; it is also used for grooming vehicle fueling at MHR East.
- A 12,000-gallon diesel tank in the compressor pit at MHR East, used to fuel MHR's snowmaking air compressors.

These fuel storage tanks were installed in full compliance with applicable local, state, and federal environmental regulations.

Communications

Primary communication between base area facilities and up-mountain facilities is provided via an in-house telephone system. The hub for this system is in the Bullwheel Saloon. The PBX system has a 100-pair line coming in from the Continental Telephone Company; 200 pairs radiate to the resort's other base area and on-mountain locales. The main communication link between MHR East and MHR West is damaged, and it is estimated that about 50 percent of the pairs are inoperable. Overall, the system does not meet the resort's growing communications needs, and therefore will require upgrading or replacement soon; however, this action is not part of this proposal.

ENVIRONMENTAL CONSEQUENCES FOR INFRASTRUCTURE AND UTILITIES

Alternative A – No Action

Under Alternative A, no new facilities would be constructed and visitation would likely remain constant. As a result, domestic water needs for potable water, snowmaking, and fire suppression would continue to be met with the existing water system. Wastewater treatment would continue under present conditions with sufficient total capacity to accommodate existing use levels, even on peak days.

There would be no increase in the amount of power utilized by the resort or in the amount of fuel utilized by the resort. As a result there would be no need to increase the amount of fuel storage. Existing conditions would persist.

Alternative B

Alternative B is intended to better accommodate peak levels of visitation. The same number of guests would utilize more efficient facilities. As a result, there would be no anticipated increase in demand domestic water and wastewater associated with the implementation of this alternative. New lifts and facilities would create an increase in demand for electric power, but fuel storage and communications needs would remain the same.

Domestic Water

The two existing water sources have sufficient capacity to supply the resort with its domestic water needs. Domestic water at MHR West would continue to come from the Rock Reservoir, and wells 1-5 would continue to supply domestic water needs at MHR East. As stated previously, demand for domestic water would not necessarily increase beyond current levels. It is possible that utilization of domestic water may slightly decrease as a direct result of the incorporation of more efficient water fixtures in the proposed Day Lodge.

This alternative proposes to upgrade and modernize the collapsed water storage tank under the Blue Ridge Express Lift to increase snowmaking storage capacity at MHR West and to serve as storage for fire suppression requirements for the proposed Day Lodge. The existing water line from the old water storage tank to the base area facilities at MHR West would be replaced with a four or six-inch water line to the proposed Day Lodge to connect with the automatic fire suppression sprinkler system. The capacity of the reconstructed water tank would be based on final design of the Day Lodge, and would range from 180,000 to 540,000 gallons, as per the 1997 Uniform Fire Code Fire-Flow Requirements for Buildings.[40] Approximately 650 feet of pipe would be installed during the terrain modifications and construction of both the new Day Lodge and maintenance facility.

Wastewater

The proposed Day Lodge and maintenance facility would connect with the existing wastewater treatment system. Although both systems are able to be upgraded, neither would be as part of this alternative. As stated previously, the existing system has the capacity to accommodate peak

[40] 1997 Uniform Fire Code standards for building sizes and types are available for review in the project file.

day visitation to the resort. It is possible that the amount of wastewater may slightly decrease as a direct result of the incorporation of low flow toilets in the proposed Day Lodge.

The new line connecting the Day Lodge to the existing system at MHR West would require less than 100 feet of piping to make this connection. The ground disturbance associated with this project element would be accounted for under construction of the new facilities and the proposed terrain modifications at MHR West.

Power

Power lines distributing electricity to the proposed Day Lodge, maintenance facility, and new lifts would be installed during the construction of these facilities. Ground disturbance for these project elements would be accounted for under construction of the facilities themselves. Power is already routed to the bottom terminal of the Snowflake Chairlift and would be relocated during the realignment of this lift closer to the base area feed. Sufficient capacity exists to manage these increased demands on the system.

MHR East

The electrical lines from the maintenance/ snowmaking/administration building feed the existing handle tow and would continue to power the base terminal of the proposed surface lift. The transformer at the base of Mountain High Express Chairlift, which feeds the Easy Rider Chairlift, would also provide power to the proposed learning center; ground disturbance for this project element would be accounted for under construction of the learning center.

Fuel Storage

The four 1,000 gallon propane tanks stored behind the cabins and generation plant would be adequate to meet anticipated food service and miscellaneous heating needs. However, these tanks would likely be relocated to the proposed maintenance shop to better accommodate the new MHR West base area configuration.