ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE BEAR CREEK WATER RIGHT APPLICATIONS 5648X07 (PARTIAL ASSIGNMENT); 5648 (CHANGE PETITION); AND 31523 (APPLICATION)

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1 INTRODUCTION

This document is an Addendum to the Environmental Impact Report (EIR) prepared for the Bear Creek Water Rights Applications 5648XO7 (Partial Assignment); 5648 (Change Petition); and 31523 (Application) (State Clearinghouse No. 2006012049) which was certified by Alpine County in July 2006 (Certified EIR). Alpine County filed a Notice of Determination (NOD) with the California Office of Planning and Research on February 5, 2007.

The State Water Resources Control Board (SWRCB) approved Lake Alpine Water Company and County of Alpine's water Right petitions and application(s) (Approved Project) in Decision 1648 (SWRCB 2009). Decision 1648 granted Alpine County and LAWC until December 31, 2020 to complete application of the water to full beneficial use. Decision 1648 is included as Appendix A.

Permit 21237 (A005648G) provides for the direct diversion and storage of water for the benefit of the Lake Alpine Water Company and County of Alpine (LAWC). Permit 21237 allows for the diversion of water from Bear Creek in Alpine County to be used for municipal and recreation purposes within the service area boundary of the LAWC. Permit 21237 authorizes the direct diversion of up to 0.78 cubic feet per second (cfs) (maximum of 175 acre-feet (AF)) and diversion to storage of up to 220 AF from Bear Creek in Bear Lake at Reba Dam from October 1 through July 31. Permit 21237 authorizes a maximum of 395 AF to be diverted by direct diversion and diversion to storage per water year (October 1 through September 30). LAWC's time to reach maximum total diversion (full beneficial use of Permit 21237) expired on December 31, 2020.

On October 7, 2020 LAWC and County of Alpine re-noticed the Project and filed a Petition for Extension of Time requesting a 50 year time extension to complete beneficial use of water. The 50-year time extension Petition is the only change to the Approved Project, herein referred to as the Modified Project.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, §§ 21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000 et seq.), this Addendum was prepared to analyze proposed modifications to the Project and the Certified EIR in response to the time extension Petition. The Petition seeks to extend the time needed to make full beneficial use of Permit 21237 as described and analyzed in the Certified EIR and SWRCB Decision 1648.

Where the Petition only seeks additional time to reach full beneficial use, it is appropriate to rely on the same CEQA document that analyzed the maximum diversion allowed under the Permit. No changes to the circumstances surrounding the Project alter the conclusions and assumptions of the EIR regarding the total amount of water to be diverted under the Project. This Addendum demonstrates that all the potential environmental impacts associated with the time extension requested in the pending Petition falls within the planning assumptions and impacts already evaluated in the Certified EIR.

2 CEQA AUTHORITY FOR ADDENDUM

CEQA establishes the type of environmental documentation required when changes to a project occur after an EIR is certified. Specifically, Section 15164(a) of the CEQA Guidelines states that:

> *The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.*

Section 15162 of the CEQA Guidelines requires a Subsequent EIR when a mitigated negative declaration (MND) has already been adopted or an EIR has been certified and one or more of the following circumstances exist:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Likewise, California Public Resources Code Section 21166 states that unless one or more of the following events occur, no subsequent or supplemental environmental impact report shall be required by the lead agency or by and responsible agency:

- Substantial changes are proposed in the project which will require major revisions of the environmental impact report;
- Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or
- New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

The purpose of this Addendum, therefore, is to provide the additional substantial evidence and CEQA analysis necessary to address the minor changes sought to the Approved Project and supplement the whole record for the Modified Project. This Addendum incorporates the Initial Study and the Certified EIR for the Bear Creek Water Rights Applications 5648XO7 (Partial Assignment); 5648 (Change Petition); and 31523 (Application) (Condor 2009) as well as Decision 1648 (SWRCB 2009). This Addendum also includes information from the submitted Change Petition package which is included as Appendix B (Wagner & Bonsignore 2020).

As demonstrated by the analysis herein, the Modified Project would not result in any new additional significant impacts, nor would it substantially increase the severity of previously anticipated significant impacts. Rather, all the impacts associated with the Modified Project are within the envelope of impacts addressed in the Certified EIR and do not constitute a new or substantially increased significant impact. Based on this determination, the Modified Project does not meet the requirements for preparation of a Subsequent or Supplemental EIR pursuant to Section 15162 of the CEQA Guidelines.

3 PROJECT DESCRIPTION

3.1 Introduction

The Bear Valley Master Plan (BVMP) established a plan for residential, commercial, and recreation development on 870 acres in the Bear Valley area on Highway 4 in Alpine County (County), as shown on the Map (Figure 1). Securing an additional guaranteed source of water was necessary to support the infrastructure of this development. Applications were filed with the State Water Resources Control Board (SWRCB), to secure rights to the water from the Bear Creek watershed. An Initial Study and Environmental Impact Report were prepared to evaluate the direct and reasonably foreseeable indirect environmental impacts resulting from the approval of additional water rights for the existing water system serving the Bear Valley Community. On May 19, 2006, Alpine County distributed to public agencies and the general public a Draft EIR (DEIR) under CEQA (Condor 2006). After a public review period in accordance with CEQA Guidelines section 15105 Alpine County considered and addressed all comments received in the DEIR. Alpine County adopted the EIR and approved the proposed project in July 2006.

3.2 Project Area and Vicinity

The community of Bear Valley is in Alpine County, California within the USFS-SNF, located on the west side of the central portion of the Sierra Nevada (Sierran range) Province. The County ranks 50th in size among the 58 California counties. Seven percent of the 465,030 acres located in the County are privately owned. There are approximately 1,190 full-time residents within the County. Topographically, elevation within the County varies from 4,800 feet to 11,400 feet above msl. The indicated average mean rainfall for the County is 20.88 inches and average mean snowfall is 89.6 inches. The average mean temperatures are as follows: winter high is 43.5 degrees F and low is 23 degrees F; summer high is 85.1 degrees F and low is 53.3 degrees F.

Bear Lake is a man-made reservoir impounded behind Reba Dam, a spillway and outlet works that discharge to Bear Creek. Below the dam, Bear Creek trends in a north/south-southwestern direction, flowing roughly through the center of the Bear Valley community. Bear Creek is a tributary of Bloods Creek; it intersects Bloods Creek approximately 1.5 miles south-southwest of the Project site and eventually drains (approximately 4.2 miles southwest) into the North Fork of the Stanislaus River in Calaveras County. A private landing strip is located in Bloods Meadow approximately 0.95 miles south of the Project site. Highway 4 is located approximately 0.9 miles south of the project site and Highway 207 is approximately 1.4 miles northeast.

3.3 Overview of Approved Project

The Approved Project was composed of the following State Water Resources Control Board Petitions and Applications:

A. Amended Petition for Partial Assignment of Application 5648X07 – This petition amends the original petition filed in 1996 in the following ways: 1) add the County of Alpine as

co-applicant; 2) delete snowmaking as a purpose of use; 3) increase the direct diversion annual limit from 139+ acre-feet per year (AFY) to 175 AFY and reduce the storage amount from 265 AFY to 220 AFY (the combined direct diversion and storage amount shall not exceed 395 AFY); 4) modify the season of diversion, for both direct diversion and diversion to storage, to October 1 through July 31 of the succeeding year, and 5) reduce the place of use. The applicants propose to directly divert from Bear Creek and to collect water in storage at Bear Lake (Reba Dam) for municipal and recreational purposes. The water will be diverted from the Bear Creek watershed at Bear Lake and transferred to the existing treatment facility via an existing 12-inch diameter concrete encased steel pipe with a length of 400 feet. The pipe capacity is 45 cubic feet per second (cfs). Municipal use is expected to increase from 3,618 people in 2004 to 6,156 people by 2014.

B. Petition to Change Application 5648 – This petition seeks to change Application 5648 in the following ways: 1) the place of use be changed to include the area being served by LAWC in Alpine County; 2) the purposes of use be modified to include municipal and recreational uses; and 3) approval of a point of diversion or re-diversion at Bear Lake within NW1/4 of SW1/4 of Section 7, T7N, R18E, MDB&M.
C. Application 31523 – Application to seek a right to collect water to storage behind the existing Reba Dam (constructed in 1965), which is a 70 foot high dam forming the 360-acre-foot (AF) capacity Bear Lake reservoir. The reservoir has a surface area of 15 acres. Water will be used for municipal and recreational purposes. Application 31523 is identical to the application accompanying the Partial Assignment for State-filed Application 5648X07.

3.4 Proposed Modifications to Approved Project

On March 17, 2009 the SWRCB issued Decision 1648, approving Petition for Partial Assignment of State Filed Application and Petition for Change (SWRCB 2009). In addition to approving their petitions and applications, Decision 1648 ordered that complete application of water to the authorized use shall be made by December 31, 2020. Decision 1648 is included as Appendix A.

On October 7, 2020 LAWC and County of Alpine filed a Petition for Extension of Time for Permit 21237 (Application 5648G) requesting a 50 year extension of time to complete beneficial use of water. This CEQA Addendum will incorporate the Petition for Extension of Time. The completed Petition package is included as Appendix B.

The modifications to the Approved Project are:

- A description of the approved Permit 21237
- A description of the Petition for Extension of Time
- A summary of SWRCB Decision 1648 approving the original Application(s)
- Background information and analysis on the need for the Time Extension Petition

3.4.1 Permits and Pending Petitions

Figure 1 shows the point of diversion, place of use, and general location of the project area associated with the water right Permit. The Permit and Petition for time extension are described in detail below.

Permit 21237 (Application 5648G)

Application 5648G was filed on July 30, 1927. The SWRCB issued Water Right Decision 1648 on March 17, 2009, approving Application 5648G. Following this decision, the SWRCB issued Permit 21237 on June 10, 2009 to Lake Alpine Water Company and the County of Alpine. The Permit is included in Appendix C.

Source:
Bear Creek tributary to Bloods Creek thence North Fork Stanislaus River thence Stanislaus River.

Authorized Point of Diversion:
North 1,940,509 feet and East 7,121,746 feet of section 7, T7N, R18E, MDB&M, being within the SW1/4 of NW1/4 of Section 7.

Authorized Diversion Rates:
0.78 cubic feet per second (cfs) by direct diversion, not to exceed 175 acre-feet per year. Diversions to storage not to exceed 220 acre-feet per year. Total amount of water taken from the source not to exceed 395 acre-feet per water year.

Authorized Diversion Seasons:
January 1 to December 31 of each year for direct diversions.
October 1 of each year to July 31 of the succeeding year for diversions to storage.

Authorized Purposes of Use:
Recreational and Municipal

Authorized Place of Use:
Includes all or portions of Sections 7 and 18 of T7N, R18E, MDB&M, Sections 12 and 13 of T7N, R17E, MDB&M, all within Alpine County.

Deadline for Completion of Application of Water to Proposed Uses: December 31, 2020.

Requested Changes

Permit 21237 (Application 5648G)

Change Petitions

Petitions for Extension of Time

Permittee filed petition for extensions of time on October 7, 2020. This petition seeks a 50-year extension of time of the current December 31, 2020 completion beneficial use deadline to December 31, 2070. The Petition is included as Appendix B.

3.4.2 SWRCB Decision 1648

Decision 1648 approved Petition for Partial Assignment of State Filed Application and Petition for Change (SWRCB 2009). In addition to granting LAWC's petition, the decision also made findings with respect to resolving protests that were filed, water availability, existing water rights, and environmental issues. Decision 1648 concluded that:

> "Partial assignment of SFA 5648 and change in point of diversion, place of use, and purpose of use for the portion of SFA 5648 assigned to the Applicants, will not cause injury to other legal users of water, nor will the petitioned changes initiate a new right. All protests have been resolved. Water is available to be put to beneficial use, and CEQA compliance is complete. Partial assignment of the right will not conflict with a. general or coordinated plan or with water quality objectives.
> Under the Applicants' petition for partial assignment of SFA 5648, unappropriated water is available for diversion to storage at Bear Lake from October 1 to July 31 of the succeeding year, and for direct diversion at Reba Dam from October 1 to July 31 of the succeeding year. The State Board finds that, subject to appropriate conditions, the petition for partial assignment of SF 5648 to divert water should be approved. As such, the State Water Board need not further act on Application 31523." (Decision 1648 Paragraph 9.0)

3.4.3 Analysis of Time Extension Petition

Water Code section 1398 allows for the holders of water right Permits to file Petitions with the SWRCB for extensions of time of those permits' deadlines for the completion of full use of the amounts of water that can be diverted under those permits. Petitions for extension of time are routine. On October 7, 2020 Wagner & Bonsignore Consulting Civil Engineers (WBE) submitted a Petition for Extension of Time for Water Right Permit 21237 (Application 5648G) to the SWRCB (see Appendix B). The Petition requested a 50 year extension of time to complete beneficial use of water. All infrastructure for the diversion and storage of water are constructed and are complete.

LAWC's ability to maximize full beneficial use of Permitted water supplies is dependent on build-out of the Bear Valley Village which has been slower than anticipated since the Permit was issued in 2009. LAWC has increased the number of residential and commercial lots since Permit issuance, but has not reached projected buildout and therefore requires and extension of time in which to develop additional residential and commercial lots and put water beneficial use.

LAWC has developed 475 of its total 947 residential lots. There are 15 existing commercial lots with an additional commercial building that is planned for development. Development of both residential and commercial lots is ongoing; however the full beneficial use of water is not expected to be realized prior to full development of all residential and commercial lots. Once build-out is reached, LAWC will put the full face-value of their water right to beneficial use to meet municipal demands.

3.5 Environmental Analysis

This section provides the substantial evidence and CEQA analysis to verify that: (1) the minor change to the Project described in the previous section and the resulting environmental impacts described below do not meet any of the criteria in Section 15162 of the CEQA Guidelines for preparing a subsequent EIR, and these changes do meet CEQA Guidelines Section 15164 for preparing an addendum to the Certified EIR; and (2) the analysis in the EIR and this Addendum are sufficient to provide the substantial evidence necessary to support Alpine County's decision to prepare this Addendum.

The Bear Creek Water Rights Applications 5648XO7 (Partial Assignment); 5648 (Change Petition); and 31523 (Application) EIR evaluated the direct and reasonably foreseeable indirect environmental impacts associated with approving additional water rights for the existing water system serving the Bear Valley community.

The Certified EIR evaluated the impacts associated with putting the remainder of the water that is stored in Bear Lake to beneficial use (approximately 220 AF of storage) and direct diversion of an additional 175 AFY from Bear Creek for a proposed total diversion of 395 AFY.

The Certified EIR analyzed the changes to the environment that would occur as a result of project implementation and contemplated the full range of effects to the physical environment. The changes to the Project resulting from the extension of time Petition for the water right Permit would not materially change the analysis in the EIR, and would not change the nature, severity, or significance conclusions of impacts, on the following resource areas that were found not to be significant in Chapter 4.0 of the EIR:

- Aesthetics
- Agriculture Resources
- Air Quality
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Recreation
- Transportation/Traffic

The Initial Study identified potentially significant effects associated with the project in five subject areas that required further evaluation in the EIR:

- Biological Resources
- Cultural Resources
- Hydrology/Water Quality
- Public Services
- Utilities Energy and Service Systems

Upon closer review in the EIR it was determined that the Project would have less than a significant impact in Biological Resources, Cultural Resources and Public Services. The changes to the Project from the extension of time Petition would not change the analysis or the conclusions from the EIR with respect to these resource areas.

Two resource areas warranted additional discussion in this Addendum: Hydrology and Water Quality, concerning the impacts of the Project on downstream structures and people resulting from flooding; and Utilities, Energy and Service Systems, relating to the effects the Project may have with respect to wastewater, are analyzed below.

3.5.1 Hydrology and Water Quality

The Certified EIR found that while there is a potentially significant risk of flooding resulting from dam failure, increasing the amount of permitted storage allowed behind Reba Dam would not increase the risk of flooding or dam failure. The operation of the dam during spring runoff is that the lake fills to its spillway level before discharging downstream. In years when the dam fills, the lake will not be filled for a longer period resulting from the Project because the additional increased diversions proposed by the Project would offset storage. New diversions would remove water from storage and tend to decrease the most vulnerable times when the dam is filled. While the Project will not increase the risk of dam failure, it nonetheless requires the use of the dam and therefore results in the recognized significant impact of dam failure. This potential impact was also identified in the Bear Valley Master Plan EIR (Weatherby Associates Inc. 1978). Risks of dam failure in California are mitigated by a State of California program of dam approval and inspection. The Certified EIR concluded that the "potentially significant risks of dam failure and flooding identified remain unchanged by the project. Impacts are partially mitigated but not eliminated by compliance with the current Division of Safety of Dams (DSOD) dam safety inspection programs. Therefore exposure of people or structures to significant risk of loss, injury or death involving flooding as a result of failure of a dam is a significant environmental impact of the Project." (Certified EIR, section 4.4.1; Condor 2006)

Additionally, the SWRCB addressed this impact in their findings in Decision 1648. The SWRCB stated that: "This impact is partially mitigated by maintaining compliance with the existing operating permit through the California Division of Safety of Dams. The unavoidable impact was addressed in the lead agency's Statement of Findings and Overriding Considerations. The lead agency found the impact was acceptable in light of the project's benefits, based on the fact that:

(a) no change in operation of the dam resulting from the Project threatens to increase the present risk; (b) the risk of dam failure is low; (c) the dam is routinely inspected; and (d) dam failure was previously identified as a significant but acceptable potential impact in the 1978 EIR. For these same reasons, and because of the economic and social benefits the Project will provide, the State Water Board finds that there are overriding considerations for approving the project." (Section 7.2.1; SWRCB 2009)

The proposed Modified Project involves an extension of time to the water right Permit that would allow LAWC to put the face value of their Permit to beneficial use which was contemplated in the EIR. While the requested extension is intended to allow LAWC to divert a greater amount of surface water than they have done to date, there would be no change to the maximum permitted amount. Use of the full permitted amount at build out was already evaluated in the Certified EIR. Thus, there would be no new impact to water resources.

3.5.2 Utilities, Energy and Service Systems

The Certified EIR found with respect to Utilities, Energy and Service Systems that "with the availability of new water supplies for the continued development of the Master Plan, the waste treatment provider may not be able to determine at some time in the future that it has adequate capacity to serve the project's projected demand." (Certified EIR Section 4.4.2). The Certified EIR further stated though that the requirements from Orders in place by California Regional Water Quality Control Board—Central Valley Region (CVRWQCB) will allow for a permit process that allows for increase in wastewater treatment capacity. "Potentially significant impacts from increased demand on public services as a result of the project can be fully mitigated by permitted waste discharges through CVRWQCB. With this mitigation, the potential impact of the Project on Utilities is reduced to a level that is less than significant." (Certified EIR Section 4.4.2; Condor 2006)

Additionally, the SWRCB addressed this impact in their findings in Decision 1648. The SWRCB stated that, "The CEQA document identified a potential significant impact in the increased future demand for additional wastewater treatment and discharge capacity. The Project wil result in the availability of new water supplies for the continued development of the BVMP. The wastewater treatment provider may not have adequate capacity to serve the projected future demand. If discharges increase, this impact will be mitigated to a level of insignificance by requiring the revision/update of the Waste Discharge Requirements (WDRs), as already legally required, through the Regional Water Quality Control Board." (Section 7.2; SWRCB 2009)

The proposed Modified Project would similarly have the same impact on Utilities. Any increased demands on public services would be fully mitigated by permitted waste discharged through CVRWQCB. Any potentially significant impacts would be reduced to a level that is less than significant.

3.6 Conclusion

Based on the above, the Modified Project, which includes a 50-year time extension of the water right Permit would result in none of the conditions described in Section 15162 of the CEQA Guidelines that would trigger the need to prepare a subsequent EIR or negative declaration. Most importantly, the proposed time extension evaluated in this Addendum:

- Would not result in any new significant environmental effects;
- Would not substantially increase the severity of previously identified effects;
- Would not result in mitigation measures or alternatives previously found to be infeasible becoming feasible; and
- Would not result in availability/implementation of mitigation measures or alternatives which are considerably different from those analyzed in the previous document that would substantially reduce one or more significant effects on the environment.

Thus, a new or substantially greater significant impact would not result from the proposed modifications. These conclusions confirm that a subsequent EIR is not required, and this addendum to the Certified EIR is the appropriate CEQA document under CEQA Guidelines Section 15164 to evaluate the minor technical changes and potential environmental impacts thereof.

4 REFERENCES

4.1 Document Preparers

This Addendum was prepared by Wagner & Bonsignore, Consulting Civil Engineers for use by County of Alpine, California. The following persons were involved in preparation of the of the Addendum:

Wagner & Bonsignore, Consulting Civil Engineers
Robert Wagner, President
Diane Wagner, Water Resources Specialist
David Wong, Graphics

4.2 Acronyms/Abbreviations

AF	acre-feet
AFY	acre-feet per year
Approved Project	Approval of the water Right Permits and Petitions.
BVMP	Bear Valley Master Plan
Certified EIR	Bear Creek Water Rights Applications 5648XO7 (Partial Assignment); 5648 (Change Petition); and 31523 (Application) Final Environmental Impact Report
CEQA	California Environmental Quality Act
cfs	cubic feet per second
County	Alpine County, California
CVRWQCB	California Regional Water Quality Control Board—Central Valley Region
DEIR	Draft Environmental Impact Report
DSOD	California Division of Safety of Dams
EIR	Environmental Impact Report
LAWC	Lake Alpine Water Company
MND	Mitigated Negative Declaration
Modified Project	Approved Project with 50-year time extension Petition
POD	Point of Diversion
SWRCB	State Water Resources Control Board
WBE	Wagner & Bonsignore Consulting Civil Engineers
WDR	Waste Discharge Requirement

4.3 Documents Cited

Condor 2006. Bear Creek Water Rights Applications 5648XO7 (Partial Assignment); 5648 (Change Petition); and 31523 (Application) Final Environmental Impact Report, State Clearinghouse No. 2006012049. July.

State Water Resources Control Board (SWRCB) 2009 Decision 1648. Decision Approving Petital for Partial Assignment of State Filed Application and Petition for Change. March 17, 2009.

Wagner & Bonsignore Consulting Civil Engineers 2020. Water Right Permit 21237 (Application 5648G)- Lake Alpine Water Company and County of Alpine Petition for Extension of Time. Transmittal letter dated October 7, 2020.

Weatherby and Associates Inc. 1978. Bear Valley Master Plan, Draft EIR(June) and Final EIR (December). Written by Justin F. Barber and Eugene Weatherby. No State Number indicated on document.

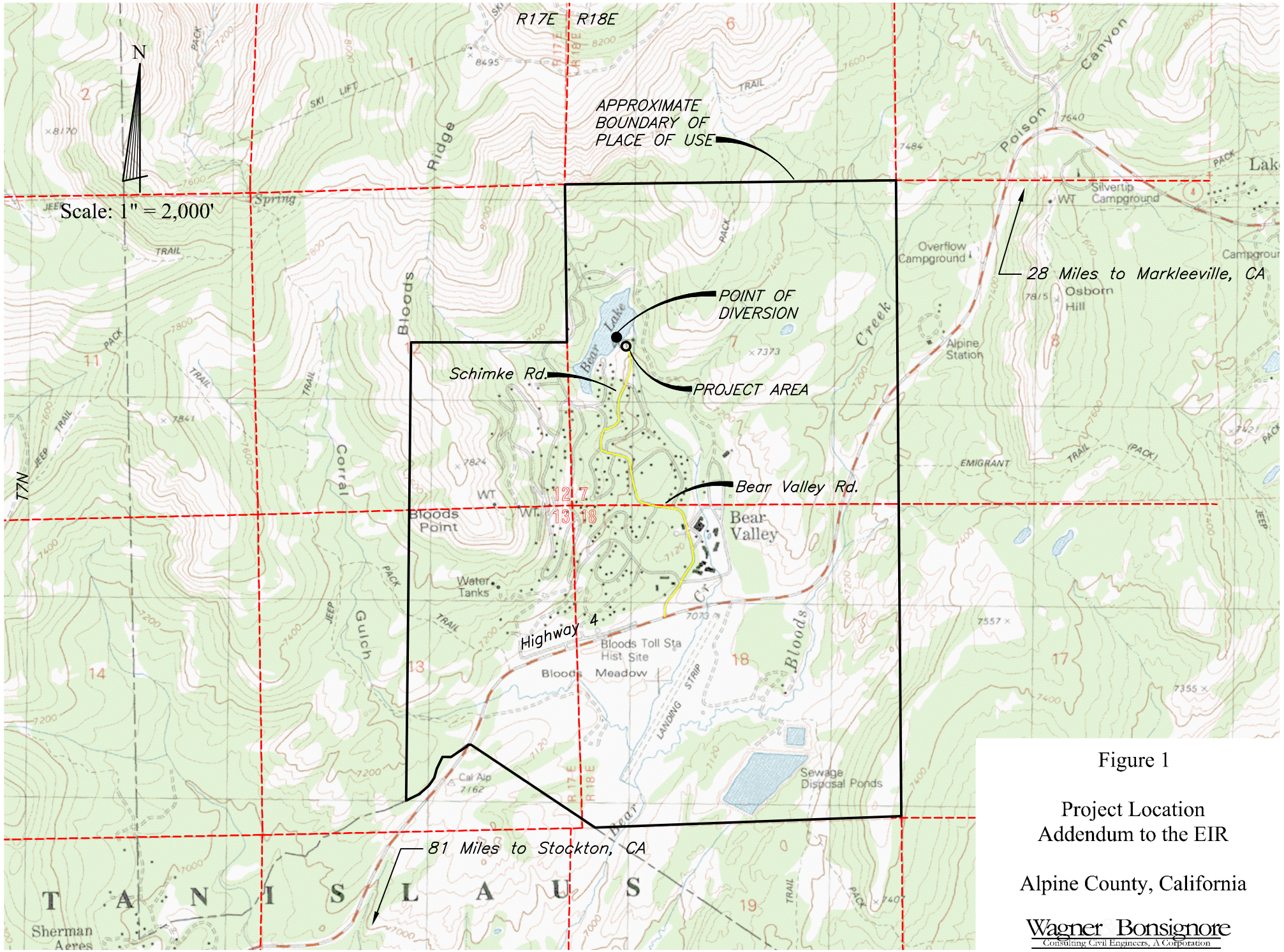

Figure 1

Project Location
Addendum to the EIR

Alpine County, California

Wagner Bonsignore
Consulting Civil Engineers, A Corporation

Base map per USGS 7.5 Minute Quad maps for Tamarack.

Q:\Drawings\Lake Alpine WC\Petition for Change\dwg\Property Location Map-navd83 updated.dwg

May 2022

APPENDIX A

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

DECISION 1648

In the Matter of Lake Alpine Water Company and the County of Alpine's Petition for Partial Assignment of State Filed Application (SFA) 5648 under Application 5648(07), Petition for Changes to SFA 5648, and Application 31523

LAKE ALPINE WATER COMPANY AND THE COUNTY OF ALPINE
Petitioners and Applicants

SOURCE: Bear Creek tributary to Bloods Creek thence the North Fork of the Stanislaus River
COUNTY: Alpine

DECISION APPROVING PETITION FOR PARTIAL ASSIGNMENT OF STATE FILED APPLICATION AND PETITION FOR CHANGE

BY THE BOARD:

1.0 INTRODUCTION

In this decision, the State Water Resources Control Board (State Water Board) conditionally approves Lake Alpine Water Company and the County of Alpine's (jointly referred to herein as "Applicants") petition for partial assignment of State Filed Application (SFA) 5648. The portion of SFA 5648 requested by the Applicants is identified as Application 5648(07). The State Water Board also approves the Applicants' petition to change the place and purpose of use and the point of diversion for Application 5648(07).

On July 30, 1927, the Department of Finance filed SFA 5648 for irrigation and domestic use on 310,000 acres within an area roughly comprising Amador County, Calaveras County, Stanislaus County, and Eastern San Joaquin County. An SFA is held by the State Water Board, which may release from priority or assign any portion of the SFA when "the release or assignment is for the purpose of development not in conflict with such general or coordinated plan or with water quality objectives established pursuant to law." (Wat. Code, § 10504.) The State Water Board may not release from priority or assign an SFA if the county in which the water originates would be deprived of water necessary for its development. (Wat. Code, §§ 10505, 10505.5.)

The Applicants submitted their petitions and application on October 24, 2003. The State Water Board issued a public hearing notice on May 21, 2008, and held a public hearing on July 14, 2008 as required by Water Code section 10504.1. At the hearing, Applicants presented testimony and exhibits, and one supporting policy statement was provided on behalf of interested parties (Oakdale Irrigation District, South San Joaquin Irrigation District, Tri-Dam Project, and Tri-Dam Power Authority). The Applicants also submitted a closing brief. The evidence and closing brief have been duly considered and the State Water Board conditionally approves the petitions and finds as follows:

2.0 BACKGROUND

2.1 Project Description

The Applicants seek to obtain water rights for the water system for the community of Bear Valley, Alpine County, within the Stanislaus National Forest. (See Applicants-F, Attachment A, Plate 1 - Project Location Map.)[1] Lake Alpine Water Company (LAWC) owns and operates the community water system that supplies municipal and recreational water to the Bear Valley resort community.[2] The point of diversion is Bear Lake (Reba Dam). Bear Lake is located at the headwaters of Bear Creek, which flows tributary to Bloods Creek thence to the North Fork of the Stanislaus River. Bear Lake (Reba Dam) was completed in 1965 and has an as-built maximum capacity of 360 acre-feet (af). (See Applicants-F, Attachment A, Plate 2, – Project Boundary Map.)

In 1978, the County of Alpine (County) certified the Bear Valley Master Plan (BVMP) Environmental Impact Report (EIR), which was prepared for modifications and enlargements to the existing master plan for Bear Valley. A mitigation measure in the EIR required the County to develop a guaranteed water supply to serve planned growth under the BVMP. To implement that mitigation measure, the County's proposed project includes the Applicants' water right application and petitions.

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[1] Exhibits introduced at hearing will be referred to throughout this decision, as here, by party name and exhibit letter.

[2] During the 1960s, LAWC initially secured appropriative water rights with the 1961 filing of water right Application 20312 (Permit 13903) and with the 1963 filing of water right Application 21485 (Permit 14541). In 1978 and 1980, the State Water Board issued water right licenses 10840 and 11007 pursuant to permits 13903 and 14541. The maximum allowable annual use of water by direct diversion and storage authorized under water rights licenses 10840 and 11007 is limited to 182 afa.

2.2 The Applicants' Filings

In 2003, the Applicants submitted an amended petition for partial assignment of SFA 5648 with accompanying Application 5648(07).[3] The Applicants' amended filings seek a combined total diversion amount not to exceed 395 acre-feet-per-annum (afa) (175 afa by direct diversion and 220 afa by storage), during the diversion season of October 1 through July 31, for municipal and recreational purposes within the Bear Valley service area. (Applicants-F.) The Applicants also filed a petition to change the place and purpose of use of SFA 5648, and to add a point of diversion to SFA 5648, because SFA 5648 does not include the Applicants' proposed purposes of use, place of use, or point of diversion.

In the event that Applicants' petitions were denied, the Applicants also filed Application 31523, under claim of area-of-origin preference, in order to qualify for an exemption from the Declaration of Fully Appropriated Stream Listing.[4] Application 31523 is otherwise identical to the Applicants' application accompanying the petition for partial assignment of SFA 5648.

3.0 PROTESTS TO APPLICATION, PETITION FOR CHANGE AND PETITION FOR ASSIGNMENT OF SFA 5648

In response to two State Water Board notices, dated June 20, 1997 and December 10, 2004, the State Water Board received ten protests to the subject application, petition for change, and petition for assignment of the SFA. The following table identifies each protestant, the general nature of their protest, and the protest's disposition.

[3] The petition it amended was filed on April 19, 1996. The initial petition and accompanying water right application requested the additional appropriation of water from Bear Creek tributary to Bloods Creek thence the North Fork Stanislaus River, at a maximum rate of 0.78 cfs (139 afa) by direct diversion (October 1 – August 31) and 256 af by storage at Bear Lake (October 1 – August 31) for municipal, recreational, and snowmaking purposes.

[4] State Water Board Orders WR 89-25 and 98-08 provide for the acceptance of new applications that propose appropriations entitled to the benefit of area-of-origin principles. (See, e.g., Wat. Code, §§ 11460 et seq., 10500 et seq.)

PROTEST SUMMARY

Protestant	General Nature of Protest	Disposition
1. U.S. Bureau of Reclamation 2. Department of Water Resources	Injury to Prior Rights	Conditionally withdrawn based on inclusion of Standard Terms 80 and 90.
3. Stockton East Water District	Injury to Prior Rights	Unconditionally withdrawn.
4. Oakdale Irrigation District 5. South San Joaquin Irrigation District 6. Calaveras County Water District 7. Northern California Power Agency	Injury to Prior Rights	Conditionally withdrawn based on inclusion of specific language in the permit.
8. Department of Fish and Game	Adverse Environmental Impact	Unconditionally withdrawn.
9. Central Sierra Environmental Resources Center	Adverse Environmental Impact	Not accepted based on protestant's failure to provide support for protest
10. Delta Water Users Association	Injury to Prior Rights	Protest dismissed due to protestant's failure to respond to State Water Board to show cause why the protest should not be dismissed (protest abandoned).

3.1 Protest by Oakdale Irrigation District and South San Joaquin Irrigation District

Oakdale Irrigation District and South San Joaquin Irrigation District conditionally withdrew their protests based on the Applicants' acceptance of the following condition, to be included in any permit issued pursuant to Applicants' filings, which is derived from the executed agreement between the Applicants and the South San Joaquin Irrigation District and Oakdale Irrigation District, dated March 20, 2007:

> *The rights acquired under this permit shall be junior to the rights acquired under the permits issued to South San Joaquin Irrigation District (SSJID) and Oakdale Irrigation District (OID) pursuant to Applications 1081, 3091, 10872, 10978; iss ued to OID pursuant to Applications 8892, 9666; issued to SSJID pursuant to Application 2524; and claimed by SSJID and OID pursuant to Statement of Water Diversion and Use 4683. Inclusion in the permit of this provision of the referenced agreement shall not be construed as approval or disapproval of other provisions of the agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.*

(SWRCB-1, A005648(07) Correspondence File, September 19, 2007 letter to Ernest Mona from Steven Emrick; September 27, 2007 letter to Ernest Mona from Jesse Barton; October 18, 2007 email to Steve Emrick from Ernest Mona.)

3.2 Protest By Calaveras County Water District and Northern California Power Agency[5]

Calaveras County Water District and Northern California Power Agency conditionally withdrew their protests to the Applicants' filings based on the Applicants' acceptance of the following protest dismissal term to be included in any permit issued pursuant to Applicants' filings:

> *Calaveras County Water District and Northern California Power Agency filed protests to Water Right Application 5648(07) and Petition for Partial Assignment of State Filed Water Right Application 5648 and associated change petitions. In resolution of those protests, Permittees entered into the following agreements with Calaveras County Water District and Northern California Power Agency entitled: Agreement Resolving Protests of Calaveras County Water District by Calaveras County Water District, County of Alpine, Lake Alpine Water Company (May 2007) and Agreement Resolving Protests of Northern California Power Agency by Northern California Power Agency, County of Alpine, Lake Alpine Water Company (May 2007). In accepting this permit, Permittees acknowledge the terms of those agreements.*

(SWRCB-1 A005648(07), Correspondence File, November 28, 2007 letter to Jennifer Harder, Dawn McIntosh, Michael Dean and Jesse Barton from Ernest Mona; February 27, 2008 letter to Ernest Mona from Jennifer Harder; March 3, 2008 email to Ernest Mona from Jennifer Harder.)

4.0 WATER AVAILABILITY

4.1 Watershed Description

The source of water for the Applicants' project is the Bear Creek watershed area (Bear Valley) in Alpine County. The Bear Creek watershed area is generally tree-covered, steep and rocky, and ranges in elevation from about 7,200 feet above mean sea level (msl) to about 8,400 feet above msl. Bear Lake has a drainage area of 520 acres. (Applicants-C, p. 24; Applicants-F, p. 2.)

Bear Creek is tributary to Bloods Creek, thence the North Fork Stanislaus River (NFSR), thence the Stanislaus River. The Bloods Creek watershed is comprised of 7,240 acres and is unimpaired (with the exception of Bear Lake) upstream of its confluence with the NFSR. The NFSR watershed at Avery, CA (located approximately 8 miles upstream of the NFSR confluence with the Stanislaus River) is composed of 110,419 acres and is unimpaired downstream of its confluence with Bloods Creek. Downstream of the NFSR confluence with the Stanislaus River, the Stanislaus River watershed is composed of 577,506 acres and is impaired

[5] Northern California Power Agency is a public agency created under the California Joint Exercise of Power Act. It generates and transmits electric power for its member entities.

at the New Melones Reservoir and at Goodwin Dam (Tulloch Reservoir). Goodwin Dam's drainage watershed is composed of 623,663 acres.

Bear Lake (Reba Dam) is located approximately 58 miles upstream from New Melones Dam and approximately 68 miles upstream from Goodwin Dam. The area of the Bear Creek watershed upstream of Reba Dam (520 acres) is only about 0.09 percent of the Stanislaus River's watershed area above New Melones Reservoir and Tullock Reservoir (623,663 acres). Roughly 14 percent (90,329 acres) of the Stanislaus River watershed above New Melones and Tullock, including Bear Creek and other tributaries, lies within Alpine County. (Applicants-F, pp. 2-3.)

4.2 Hydrology

Because precipitation records at Bear Valley are not readily available, the Applicants provided an evaluation of available precipitation records maintained at Calaveras Big Trees State Park, elevation 4,700 ft above msl. (*Id.*, Appendix B, Table B-5.) These records indicate that for the period of record 1948-2008, the average annual precipitation at Big Trees is about 54 inches, with 85 percent of recorded precipitation occurring during the period November through May. During the period June through October, the records indicate that precipitation gradually diminishes to an amount that produces limited runoff. (*Ibid.*) These records can be used to indicate the pattern of expected precipitation in Bear Valley. As noted above, Bear Valley is located at an elevation almost 3,000 ft above the Big Trees station. Precipitation could be expected to be substantially greater at Bear Valley due to its elevation high in the Sierra Nevada. (*Ibid.*)

Seasonal runoff occurs during October to July, but is most abundant during the snowmelt period of May and June. Runoff due to rainfall or snowmelt is rapid with limited retention. The Bear Creek watershed's seasonal average runoff, at Reba Dam (Bear Lake) and during the requested diversion period of October to July, is estimated to be 1,720 af. (Applicants-F, Attachment A, Plate 1 and Table 5.) In comparison, the reported average seasonal runoff of the Stanislaus River watershed at Goodwin Dam (Tulloch Reservoir) and during the same period is 1,154,276 af. (*Ibid.)* Thus, the Applicants' requested appropriation of 395 afa represents only 23 percent of the average seasonal runoff of Bear Creek's watershed and 0.03 percent of the Stanislaus River watershed's recorded average runoff during the requested season of diversion.

4.3 Effect of Board Decisions and Orders related to Water Availability

Applicants seek to divert water from Bear Creek tributary to the Stanislaus River. State Water Board Order WR 89-25 declared the Stanislaus River to be fully appropriated from the confluence of the San Joaquin River upstream from April 1 to November 30, based on the 1929 Stanislaus River Decree and State Water Board Decision 1422 (issued in 1973). However, State Water Board Order WR 98-08 allows state filed applications to be processed on fully appropriated stream systems. In addition, State Water Board Orders WR 89-25 and WR 98-08 provide for the acceptance of new applications that propose appropriations entitled to the benefit of area-of-origin principles. (See generally, Wat. Code, §§ 11460 et seq., 10500 et seq.)

4.4 Existing Water Rights

The record includes tables that provide summary lists of recorded water rights within the Bloods Creek watershed upstream of Bloods Creek's confluence with the NFSR, and on the Stanislaus River System represented by the parties who protested the Applicants' filings. (Applicants-F, Attachment A, Tables 1 and 2.) The water right filings with priorities senior to SFA 5648 which are located downstream of the Applicants' filings on the NFSR and Stanislaus River include Application 1081 jointly held by Oakdale Irrigation District and South San Joaquin Irrigation District, Application 2524 held by South San Joaquin Irrigation District, Application 3091 held by Oakdale Irrigation District and Statement of Water Diversion and Use 998 held by Utica Power Authority. (*Ibid.*)

4.5 Water Availability

Downstream of the Applicants' project, the total annual demand of storage rights senior to SFA 5648 during the Applicants' season of diversion of October 1 to July 31 equals about 142,949 afa. (*Ibid.*) The total runoff of the Stanislaus River at New Melones Reservoir, on average and during the season October 1 to July 31, has been reported to be about 1.2 million afa. The Applicants' total requested amount of annual diversion under Application 5648(07) equals only 395 afa (220 afa by storage and 175 afa by direct diversion), or less than one-tenth of one percent of the total average runoff reported at New Melones Reservoir. Therefore, there is sufficient water available within the Stanislaus River System, during the season of October 1 to July 31, to meet the demand of rights senior to Application 5648(07), as well as the Applicants' annual demand of 395 afa sought under Application 5648(07).

The estimated annual runoff of the Bloods Creek watershed above its confluence with the NFSR is 23,949 afa. (Applicants-F, Attachment A, Plate 1.) The Applicants' requested annual demand of 395 afa represents only 1.65 percent of Bloods Creek estimated annual runoff. Frequency analysis of water availability provided by the Applicants indicates that the full amount of the Applicants' requested amount of 395 afa would be physically available 99.8 percent of all years evaluated. (Applicants-F, pp, 4-5 and Attachment A, Figures 6-10.) This evaluation supports LAWC's reported water use under existing water right License 11007. This reported water use indicates that Bear Lake has filled and spilled every year dating back to at least 1980. (*Id.*, Attachment B, Appendix C.) Thus, there is water physically available for appropriation under Application 5648(07) at the Applicants' point of diversion. The water available for Bear Creek's fishery resources is discussed in section 6.0 below.

5.0 STATE FILED APPLICATION 5648(07) CAN BE ASSIGNED TO THE APPLICANTS

5.1 State Filed Application (SFA) 5648

SFA 5648 was filed in 1927 to appropriate water for irrigation and domestic uses from various locations on three different major river systems and their tributaries, to wit, the Mokelumne, the Calaveras, and the Stanislaus. The application included a total maximum rate of direct diversion of 3,041 cfs and a maximum amount that could be diverted to storage in any one year of 274,850 af. The place of use is 310,000 acres within Township 1S, Ranges 10E to 12E inclusive and Townships 1N to 6N inclusive, Ranges 9E to 15E inclusive, within Amador County, Calaveras County, Stanislaus County, and Eastern San Joaquin County. Alpine County is not designated as a place of use under SFA 5648. The proposed place of use is located approximately 11 miles outside the delineated northeast boundary corner of SFA 5648's place of use. (Applicants-F, Attachment A, Plate 1.)

Although there have been numerous requests by many parties in different locations in the Mokelumne and Calaveras watersheds over the years for partial assignments and/or requests for releases of the 1927 priority of SFA 5648, on the Stanislaus River system (the only system related to the Applicants' filings), only 60,000 afa on the Middle Fork Stanislaus were assigned to Oakdale and South San Joaquin Irrigation Districts in 1953 for use in their Tri-Dam Project, and that portion of SFA 5648 is no longer available. (SWRCB-1, A005648, Correspondence File.) The State Water Board records show that on the Stanislaus River system, no other petitions for partial assignment and/or requests for release of the 1927 priority of SFA 5648 have been filed, other than the Applicants' Application 5648(07). (SWRCB-1, Application 5648,

Correspondence Files.) Upon the basis of the foregoing, the portion of original SFA 5648 which would appropriate water from the North Fork Stanislaus, plus its tributary Highland Creek and on the main-stem Stanislaus itself, amounts collectively to 1,575 cfs by direct diversion and 95,000 afa by storage. This amount is still unassigned and is therefore available for assignment. Those still-available amounts under SFA 5648 are in excess of the Applicants' combined total diversion request of 395 afa (175 afa by direct diversion at 0.78 cfs and 220 afa by storage) during the diversion season of October 1 through July 31 of each year.

5.2 The Petition for Assignment is not in Conflict with the California Water Plan or with Water Quality Objectives

Although the Department of Water Resources has published numerous updates, the 1957 California Water Plan is the basic State Water Plan. The plan states in part:

> [A]s the time approaches for construction in any given area further studies will be made to determine the most feasible solution in the light of conditions then obtaining. That solution may depart considerably from the Plan now conceived.

The objectives of the original State Water Plan for the watershed are to develop fully and distribute local water supplies for all beneficial purposes, including irrigation, municipal, industrial, fish and wildlife, recreation, and power generation; to protect urban and agricultural areas from damaging floods; to convey and distribute the imported water supplies necessary to satisfy fully the ultimate water requirements for all beneficial purposes; and to protect the quality of water by adequate drainage and removal of unsuitable waters. (Cal. Dept. of Wat. Resources, Bulletin No. 3: The California Water Plan (May, 1957) p. 119.)

The most recent update to the State Water Plan was published in 2005. (Cal. Dept. of Wat. Resources, Bulletin 160-05 (Dec. 2005); Applicants-P.) Review of the relevant portions of the bulletin does not disclose plans for use of water from SFA 5648. (*Ibid*; cf. Cal. Dept. of Wat. Resources, Bulletin No. 3: The California Water Plan (May, 1957) pp. 119-130.)

Although there is no conflict with the plan, it is important that the petition seeks to appropriate water for a purpose and place of use that is consistent with the general purpose for which SFA 5648 was initially filed. Fundamentally, SFA 5648 was filed to assure a priority claim on the right to divert and use water from the Mokelumne, Calaveras, and Stanislaus Rivers to supply the future needs of Amador, Calaveras, Stanislaus, and Eastern San Joaquin Counties. In

general, the State Water Board should look favorably upon petitions for release of priority or assignment of state filed applications so long as the petitioner seeks to appropriate water for purposes of use and places of use consistent with the state filed application. Although Alpine County is not within the place of use for SFA 5648, it is upstream of the place of use at the top of the watershed, and as Bear Lake is at the headwaters of the stream, Alpine County is the county of origin of the water.

Furthermore, the assignment would not conflict with plans or objectives for water use within the area designated by SFA 5648. Evidence was presented that the project will not conflict with water quality standards or waste discharge requirements (Applicants-H, pp. 6, 21-22). Due to the location and small size of the project, no impact of the project would be expected above New Melones Reservoir. (Applicants- F, p. 6, par. 28, and Attachment A, Figure 1.) Below New Melones, the Bureau of Reclamation and the Department of Water Resources operate the Central Valley Project (CVP) and State Water Project (SWP) to meet water quality objectives in the Sacramento-San Joaquin Delta. (State Water Board Decision 1485 (1978); State Water Board Order WR 95-6; D-1641, Order WR 2000-02.)

Thus, the State Water Board finds that approval of Applicants' petition for partial assignment of SFA 5648 is not in conflict with a general or coordinated plan, or established water quality objectives.

5.3 Approval of Changes in Points of Diversion, Place of Use, and Purpose of Use Required by Petition for Assignment of SFA 5648

Applicant's petition proposes to divert water to storage at Bear Lake - at the headwaters of Bear Creek - a point far upstream in the Stanislaus River System from those specified in SFA 5648. To change a point of diversion, place of use, or purpose of use from that specified in an application, an applicant must file a change petition with the State Water Board (Wat. Code, §§ 1701-1705), as Applicants have done. The change will allow Applicants to divert water further upstream on the same stream system. A point of diversion can be changed so long as the change neither initiates a new right nor injures other lawful users of water. (Cal. Code Regs., tit. 23, § 791; *Johnson Ranch Water District v. State Water Resources Control Board* (1965) 235 Cal.App.2d 863.)

Because no water has been diverted up to this point under the portion of SFA 5648 to be assigned, the potential for injury from the change is similar to that from assignment of the right

itself. No evidence was presented at the hearing showing injury to other lawful users of water, and Applicants have resolved all ten protests of the proposed diversion. (Applicants-F, p. 5, 6; R.T. p. 14, lines 8-13.) The changes proposed do not increase the quantity of water to be diverted as specified in the State filing, and the source remains the same.

Thus, the State Water Board finds that the changes from the points of diversion to those in the petition for assignment will not initiate a new right or injure other lawful users of water.

5.4 The Water Requested is Subject to County of Origin Protection for the Benefit of Use in Alpine County

Water Code section 10505 provides that:

> *No priority . . . shall be released or assignment made of any application that will, in the judgment of the board, deprive the county in which the water covered by the application originates of any such water necessary for the development of the county.*

The water that Applicants seek to appropriate to storage in Bear Lake originates in Alpine County. The California Attorney General has opined that "county of origin" is defined as the county in which the water "falls in the form of precipitation;" or in other words, the water that falls within the county's watershed. (25 Ops. Cal. Atty. Gen. 8, 17 (1955).) Mr. Robert Wagner testified that the water covered by SFA 5648 *in toto* originates in Alpine, Calaveras, and Tuolumne counties. The water originating in Alpine County alone is estimated to be 184,000 afa, of which the Applicants' request of 395 af is 0.2 percent. (Applicants-F, p. 3, par. 12.)

6.0 ENVIRONMENTAL AND PUBLIC INTEREST ISSUES AFFECTING THE APPLICANTS' PROJECT

6.1 Environmental Issues

On January 14, 2005, the Department of Fish and Game protested this project based on the belief that appropriation of the proposed quantity of water would result in reduced stream flow, thus potentially impacting both aquatic and riparian resources during periods of low flow in Bear Creek. Downstream of the point of diversion, Bear Creek, Bloods Creek and the North Fork Stanislaus River support populations of rainbow trout (*Oncoryhynchus mykiss*), brown trout (*Salmo Truttto*), brook trout (*Salvelinus fontinalis*), and potentially mountain yellow-legged frog (*Rana muscosa*). (Applicants-J, Attachment 2.)

Tom Taylor, Senior Consultant and Aquatic Ecologist for the environmental firm of Entrix, Inc. (Entrix) testified that Entrix was asked to review the Applicants' project for its potential to impact instream fishery resources. (Applicants-J.) Mr. Taylor testified that the fishery in the project area is a recreational fishery composed of brook, brown and rainbow trout, and that no listed or sensitive aquatic species of animals are known to occur in the area. The streams tributary to Bear Lake and Bear Creek are snowmelt-driven headwater streams, only sustaining surface flow for part of the year. These streams are not capable of supporting year-round fishery resources. Year-round flow that can support a fishery is found in and downstream of Bloods Creek. (*Ibid.*)

Further, Bear Creek is a seasonal stream under unimpaired conditions. Under Application 5648(07), the total amount to be taken from the source would not exceed 395 afa, or only 1.65 percent of the Bloods Creek watershed's estimated annual runoff of 23,949 afa. The evidence presented before the Board showed that the effect of the Applicants' project on Bear Creek and Bloods Creek would be inconsequential to the recreational fishery found in this watershed. (*Ibid.*)

On July 5, 2005, representatives of the Applicants and DFG attended a field visit to review the project facilities to develop a resolution to the DFG protest. The Applicants presented a site-specific analysis of data as requested by DFG to show that diversions from Bear Creek would not impact Bloods Creek in any significant way. (Applicants-J, Attachment 1.) Bear Creek ceases to flow at the point of diversion after snow melt under unimpaired conditions. The Applicants demonstrated that under the impaired conditions of the proposed project, Bear Creek will cease flow on average four days sooner. Based on DFG's unconditional withdrawal of its protest after site inspection, the State Water Board finds that this is not a meaningful impact under the circumstances of this project. (*Ibid.*, SWRCB-1, A005648(07), Correspondence File, August 19, 2005 memo to Victoria Whitney from Sandra Morey.)
Finally, as John Kramer, Division Manager for Condor Earth Technologies, testified, the project is located in an area surrounded by public lands with no opportunity to induce growth beyond the pre-planned limits of the BVMP. (Applicants-H.)

6.2 Public Interest Issues

Charles J. Toeniskoetter, board member and officer of the Lake Alpine Water Company, testified the BVMP calls for additional housing and retail businesses to make Bear Valley and

Alpine County a viable and economically successful area. (R.T., p. 25.) Mr. Toeniskoetter also testified that upgraded recreational facilities, both summer and winter, are needed to carry out a very large portion of the BVMP. In order to accomplish this, the 395 afa of additional water rights are required. (R.T., p. 26 lines 12-16.) Mr. Toeniskoetter estimated that Bear Valley's development would add $3 to $4 million of surplus funds a year to the county's current $12 to $15 million discretionary or general fund budget. (R.T., p.27 lines 3-8.)

Terry Woodrow, Chair of the Alpine County Board of Supervisors, testified Alpine County is 96 percent public land and has a tourism-based economy. (R.T., p. 32 line 4-5.) The Applicants' project will support the economic base of local businesses, the viability of Bear Valley and the Bear Valley ski area, and will create tax revenues. (R.T., p. 32 line 11 -13.)

6.2.1 Impact on Prior Rights

Applicants-F, Table 2 indicates five rights senior to SFA 5648 below the Applicants' point of diversion. The evidence presented in Applicants-F, Plate 1, shows that the 395 afa proposed appropriation is such a small amount compared to what is normally available downstream that it will have a minimal effect on downstream hydrology. Bear Creek is normally dry after the snow melt in June or early July and remains dry until late October. (Applicants-F.) It is believed there is a lack of hydraulic connection between the Applicants' point of diversion and downstream prior right holders during the period of July through October; therefore, the project would have no impact on downstream diversions during these months. (Applicants-F.) During the other months there is water available to flow past the point of diversion and contribute to the water available for the five downstream senior rights in all but the driest years. (Applicants-F, fig. 8-10.) As noted in Section 4.5 of this Decision, Bear Lake has reportedly spilled every year dating back to at least 1980. In approximately 80% of the years, annual spill would be about 436 af if the maximum total authorized diversion at Reba Dam under all rights (577 af) were taken. (Applicants-F, fig. 6.) In very dry years, Applicants may be required to make releases through the dam to allow water to reach senior appropriators if their rights are not satisfied.

Based on the lack of negative impacts on prior right holders or downstream reaches, and the positive economic impact this project will have on Bear Valley and Alpine County, the State Water Board finds approval of the project to be in the public interest.

6.3 Water Conservation

In regard to water conservation measures in Bear Valley, the 1978 BVMP requires installation of minimum flow fixtures in all new homes. In addition, LAWC has installed a filtration plant, radio-controlled metering devices on all water connections, and has replaced a leaking 300,000 gallon tank. (R.T., p. 29-30.) These combined measures are expected to result in a 10 percent to 20 percent reduction in water use. (Applicants-C, p. 31.) Standard Permit Term 29B, Water Conservation Program, will be added to the permit. To assist the Applicants in the development of their water conservation program, the permit will further require them to adopt the best management practices identified in the latest California Urban Water Conservation Council's Memorandum of Understanding regarding urban water conservation in California.

7.0 COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

7.1 Adequacy of the CEQA Document

In accordance with California Code of Regulations, title 14 (CEQA Guidelines), section 15082, the Applicants filed with the Office of Planning and Research and State Clearing House (OPR) a Notice of Preparation of an Environmental Impact Report (EIR) on January 12, 2006. CEQA Guidelines section 15231 requires a responsible agency that was consulted by the lead agency in preparing the EIR to conclusively presume that an EIR is adequate unless (1) the EIR is finally adjudicated in a legal proceeding to be inadequate, or (2) a subsequent EIR is necessary pursuant to section 15162. No circumstances exist to require a subsequent EIR, and no legal challenges were filed within the statutory period. Therefore, the State Water Board is required to presume that the EIR is adequate.

7.2 CEQA Findings

If the CEQA document identifies significant environmental effects, then for each effect a responsible agency must make one of the following findings: (1) changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR; (2) such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding, and such changes have been adopted by such other agency or can and should be adopted by such other agency; or (3) specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR. (CEQA Guidelines, § 15091, subd. (a).) A responsible agency's role in considering alternatives and

mitigation measures is limited to only the direct or indirect environmental effects of those parts of the project it decides to carry out, finance, or approve. (CEQA Guidelines, § 15096, subd. (g)(1).)

The CEQA document identified a potential significant impact in the increased future demand for additional wastewater treatment and discharge capacity. The Project will result in the availability of new water supplies for the continued development of the BVMP. The wastewater treatment provider may not have adequate capacity to serve the projected future demand. If discharges increase, this impact will be mitigated to a level of insignificance by requiring the revision/update of the Waste Discharge Requirements (WDRs), as already legally required, through the Regional Water Quality Control Board.

7.2.1 Significant Unmitigable Impact

The CEQA document identified a significant unmitigable impact of property damage and loss of life that could result from possible dam failure due to the project. (Applicants-C, p.33, Table 3.)

This impact is partially mitigated by maintaining compliance with the existing operating permit through the California Division of Safety of Dams. The unavoidable impact was addressed in the lead agency's Statement of Findings and Overriding Considerations. The lead agency found the impact was acceptable in light of the project's benefits, based on the fact that: (a) no change in operation of the dam resulting from the Project threatens to increase the present risk; (b) the risk of dam failure is low; (c) the dam is routinely inspected; and (d) dam failure was previously identified as a significant but acceptable potential impact in the 1978 EIR. For these same reasons, and because of the economic and social benefits the Project will provide (see section 6.2, *supra*), the State Water Board finds that there are overriding considerations for approving the project.

In Resolution No. R2006-43, the Board of Supervisors of Alpine County certified the Final EIR, issued CEQA findings of fact, made a statement of overriding considerations, and approved certain mitigation measures on September 5, 2006. (Applicants-C, D) The Applicants filed a Notice of Determination with the County Clerk on January 31, 2007. (Applicants-E.) No one filed a legal challenge to the document within the 30-day statute of limitations for CEQA challenges. (CEQA Guidelines, § 11512, subd. (c).)

8.0 PERIOD OF TIME TO MAKE BENEFICIAL USE OF WATER

The amended petition for partial assignment of SFA 5648, with accompanying Application 5648(07) filed by the Applicants in 2003, stated the projected maximum beneficial municipal use would occur in the year 2014, and identified that as the year of completion. (SWRCB-1, A005648(07) Correspondence File). Additionally, the project description in the EIR also dated full use at 2014. (Applicants-A, § 1.2, p. 2; § 3.4, p. 11.)

During the hearing the Applicants' consultant testified that the Applicants would need 25 years to develop full beneficial use of the water. (R.T., p. 15-17.) In their closing brief, the Applicants requested that any permit issued allow for 25 years to put the water to full beneficial use. (Applicants' Closing Brief, p. 6.)

From 2003, when the Applicants filed, until the noticed completion year of 2014 would have resulted in Applicants having eleven years to complete application of the water to full beneficial use. However, six years have passed since the application was filed in 2003. If the Applicants were granted until 2014 to complete use, as the application requested and as was noticed, they would have only five years to complete use. The State Water Board believes, however, that the notice made clear that Applicants were requesting eleven years to complete full beneficial use. As such, the State Water Board can properly grant Applicants until 2020 to complete application of the water to full beneficial use without the necessity of re-noticing the project. Authorizing a completion of use date beyond 2020, as requested by the Applicants, would require re-noticing of the project, which Applicants have chosen not to do. Therefore, the State Water Board will retain the maximum time possible under the notice, eleven years.

9.0 CONCLUSION

Partial assignment of SFA 5648 and change in point of diversion, place of use, and purpose of use for the portion of SFA 5648 assigned to the Applicants, will not cause injury to other legal users of water, nor will the petitioned changes initiate a new right. All protests have been resolved. Water is available to be put to beneficial use, and CEQA compliance is complete. Partial assignment of the right will not conflict with a general or coordinated plan or with water quality objectives.

Under the Applicants' petition for partial assignment of SFA 5648, unappropriated water is available for diversion to storage at Bear Lake from October 1 to July 31 of the succeeding year, and for direct diversion at Reba Dam from October 1 to July 31 of the succeeding year. The State Water Board finds that, subject to appropriate conditions, the petition for partial assignment of SFA 5648 to divert water should be approved. As such, the State Water Board need not further act on Application 31523.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT

1. The Applicants' petition for partial assignment of state filed Application 5648 is approved subject to conditions included in this Decision.

2. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 0.78 cubic feet per second by direct diversion (not to exceed 175 acre-feet per year) to be diverted from October 1 of each year to July 31 of the succeeding year, and 220 acre-feet per annum by storage to be collected from October 1 of each year to July 31 of the succeeding year. The total amount of water to be taken from the source shall not exceed 395 acre-feet per water year of October 1 to September 30.

3. The total quantity of water collected to storage under the permit issued pursuant to this Decision and License 11007 (Application 21485) shall not exceed 460 acre-feet per year.

4. The capacity of the reservoir covered by the permit issued pursuant to this Decision shall not exceed 360 acre-feet.

5. The Applicants' Petition for Change of SFA 5648 to include a new Point of Diversion, Place of Use, and Purposes of Use is approved. These changes only apply to the portion of SFA 5648 assigned to the Applicants.

6. The Point of Diversion is at Reba Dam within the SW ¼ of NW ¼ of Section 7, T7N, R18E, MDB&M.

7. The place of use is within the service area boundary of Lake Alpine Water Company, within Sections 7 and 18, T7N, R18E; and within the SE ¼ of Section 12 and the E ½ of Section 13 within Alpine County, T7N, R17E, MDB&M, as shown on the map filed with the State Water Resources Control Board, dated September 2004. Although this map states the depicted place of use boundary is "approximate," this Decision approves the boundary exactly as depicted, and no expansion of the place of use beyond the depicted boundary is authorized without further approval by the State Water Board.

8. The purposes of use for the water appropriated under the partial assignment are municipal and recreation.

9. The Applicants' Application A031523 is denied and cancelled.

10. The permit issued pursuant to this Decision will be subject to standard permits terms 10, 11, 12, 13, 14, 15, 29B, 63, 80, 90 and 119 and the following additional conditions.

11. The Applicants must adopt into their Water Conservation Program (WCP), required under standard term 29B, the best management practices (BMPs) identified in the California Urban Water Conservation Council's Memorandum of Understanding (MOU) regarding urban water conservation in California in. The WCP will include the BMPs in effect at the time the plan is developed. Future updates to the MOU will not necessarily require changes to the WCP.

12. Complete application of the water to the authorized use shall be made by December 31, 2020.

13. Prior to issuance of a permit, the Applicants shall submit a project map that meets the requirements of California Code of Regulations, Title 23, Chapter 2, Article 7.

14. The State Water Board shall have continuing authority to revoke all or any portion of the permit issued pursuant to this Decision and the partial assignment of Application 5648(07) if the Applicants fail to diligently place water to beneficial use in accordance with condition 12. All or any portion of the revoked assignment shall return to the State Water Board and be available for the release or assignment to the Applicants or others consistent with the requirements of Water Code sections 10500, et seq.

15. The permit issued pursuant to this Decision shall include the following condition that is derived from the executed agreement between the Applicants and the South San Joaquin Irrigation District and Oakdale Irrigation District, dated March 20, 2007, and filed with the State Water Resources Control Board:

    The rights acquired under this permit shall be junior to the rights acquired under the permits issued to South San Joaquin Irrigation District (SSJID) and Oakdale Irrigation District (OID) pursuant to Applications 1081, 3091, 10872, 10978, issued to OID pursuant to Applications, 8892, 9666, issued to SSJID pursuant to Application 2524, and claimed by SSJID and OID pursuant to Statement of Water Diversion and Use 4683.

    Inclusion in this permit of certain provisions of the referenced agreement shall not be construed as approval or disapproval of other provisions of the agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

16. The permit issued pursuant to this Decision shall include the following condition:

    Calaveras County Water District and Northern California Power Agency filed protests to Water Right Application 5648(07) and Petition for Partial Assignment of State Filed Water Right Application 5648 and associated change petitions. In resolution of those protests, Permittees entered into agreements with Calaveras County Water District and Northern California Power Agency entitled "Agreement Resolving Protests of Calaveras County Water District by Calaveras County Water District, County of Alpine, Lake Alpine Water Company" (May 2007) and "Agreement Resolving Protests of Northern California Power Agency by

Northern California Power Agency, County of Alpine, Lake Alpine Water Company" (May 2007). In accepting this permit, Permittees acknowledge the terms of those agreements.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Resources Control Board held on March 17, 2009.

AYE:	Chair Charles R. Hoppin Vice Chair Frances Spivy-Weber Arthur G. Baggett, Jr. Tam M. Doduc
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

APPENDIX B

Wagner & Bonsignore
Consulting Civil Engineers, A Corporation

Nicholas F. Bonsignore, P.E.
Robert C. Wagner, P.E.
Paula J. Whealen

David H. Peterson, C.E.G., C.H.G.
Leah Orloff, Ph.D, P.E.
David P. Lounsbury, P.E.
Vincent Maples, P.E.
Patrick W. Ervin, P.E.
Martin Berber, P.E.
Ryan E. Stolfus

James C. Hanson, P.E.
Henry S. Matsunaga

October 7, 2020

Mr. Scott McFarland
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Re: Water Right Permit 21237 (Application 5648G) - Lake Alpine Water Company and County of Alpine

Dear Mr. McFarland:

Enclosed is a Petition for Extension of Time for Water Right Permit 21237 (Application 5648G).

Also enclosed are the required filing fees, a $1,154 check payable to State Water Resources Control Board and a $850 check payable to the Department of Fish and Wildlife.

Please contact our office if you have any questions regarding the enclosed documents.

Very truly yours,

WAGNER & BONSIGNORE
CONSULTING CIVIL ENGINEERS

Ryan Stolfus

Encls. √
Cc: Kimi Johnson, via email (w/ encls.)
Kevin Thomas, CDFW – Region 2, via email (w/ encls.)

2151 River Plaza Drive • Suite 100 • Sacramento, CA 95833-4133
Ph: 916-441-6850 or 916-448-2821 • Fax: 916-779-3120

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

9697

Lake Alpine Water Company, Inc.
PO Box 5013
Bear Valley, CA 95223
209-753-2409

BANK OF STOCKTON
90-103/1211

8/16/2020

PAY TO THE ORDER OF Caifornia Dept of Fish and Wildlife $ **850.00

Eight Hundred Fifty and 00/100********** DOLLARS

A TAMPER RESISTANT TONER AREA A

Caifornia Dept of Fish and Wildlife

MEMO application for extension

⑈009697⑈ ⑆121101037⑆ 2114437001⑈

9697

Caifornia Dept of Fish and Wildlife 8/16/2020
4080 · Taxes Other Than Income Taxes: 850.00

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

9696

Lake Alpine Water Company, Inc.
PO Box 5013
Bear Valley, CA 95223
209-753-2409

BANK OF STOCKTON
90-103/1211

8/16/2020

PAY TO THE ORDER OF State Water Resources Control Board $ **1,154.00

One Thousand One Hundred Fifty-Four and 00/100********** DOLLARS

A TAMPER RESISTANT TONER AREA A

State Water Resources Control Board
Division of Water Rights

MEMO application for extension

⑈009696⑈ ⑆121101037⑆ 2114437001⑈

9696

State Water Resources Control Board 8/16/2020
4080 · Taxes Other Than Income Taxes: 1,154.00

Please indicate County where your project is located here:

Alpine

MAIL FORM AND ATTACHMENTS TO:
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
http://www.waterboards.ca.gov/waterrights

PETITION FOR EXTENSION OF TIME

Cal. Code Regs., tit. 23, § 842

Application 5648G Permit 21237

Separate petitions are required for each water right. Incomplete forms may not be accepted. Complete this form if the time previously allowed in your permit within which to complete construction work and/or use of water has either expired or will expire and you require additional time. Provide attachments if necessary.

Water Code section 1396 requires an applicant to exercise due diligence in developing a water supply for beneficial use. The State Water Resources Control Board (State Water Board) will review the facts presented to determine whether: (a) due diligence has been exercised, (b) failure to comply with previous time requirements has been occasioned by obstacles which could not reasonably be avoided, and (c) that satisfactory progress will be made if an extension of time is granted. (Cal. Code Regs., tit. 23, § 844.) If an extension of time is not granted, the State Water Board may initiate formal action to either: (a) issue a license for the amount of water heretofore placed to beneficial use under the terms of the permit, or (b) revoke the permit.

If this is your first extension of time, answer the questions below for the permitted construction and water use development period. If previous extensions have been approved, answer these questions for the most recently approved extension period (for example, if a ten-year extension was previously granted, list the activities completed during the ten-year period).

I (we) request a 50 year extension of time to complete construction work and/or beneficial use of water.

Construction

Estimate the date construction work will begin, list the actions taken toward commencing or completing construction, and list the reasons why construction of the project was not completed.

Insert the attachment number here, if applicable: 1

Complete Use of Water

List reasons why use of water was not completed within time previously allowed.

Insert the attachment number here, if applicable: 1

Quantities Diverted

For direct diversion projects, list the cubic feet per second (cfs) or gallons per day (gpd) diverted during the maximum month of use, and the acre-feet per annum (afa) and identify the year this occurred. For storage projects, identify the maximum amount collected to storage and withdrawn for beneficial use in afa and identify the year this occurred.

	Year	Maximum Diversion Rate (cfs or gpd)	Maximum Annual Amount (afa)
Direct Diversion	2019	0.78	17.25
Storage	N/A		0*
Beneficial Use			17.25

Insert the attachment number here, if applicable:

* Water Right License 11007 (A021485) also authorizes storage in the lake and all storage amounts have been reported under that right.

Information on Beneficial Uses

Number of Acres Irrigated	N/A
Number of Houses or People Served	475 residences
Per Capita Residential Water Use During the Maximum 30-day Period (gpd)	86 gpd
Extent of Past Use of Water for Any Other Purpose (identify gpd, cfs or afa)	

Insert the attachment number here, if applicable:

Approximate Amount Spent on Project $ 415,367

Water Conservation – If water conservation is required by your permit, provide the information below.

Water Conservation Measures In Effect

List the water conservation measures that are in effect within the place of use.

All connections are metered.
Leak detection in distribution system for repairs.
Homeowner association ban on non-native landscape irrigation.

Insert the attachment number here, if applicable: 1

Water Conservation Measures Planned

List the water conservation measures that are feasible within the place of use and the date the measures will be implemented. Identify the quantities estimated to be conserved when the measures are implemented.

Insert the attachment number here, if applicable: 1

All Right Holders Must Sign This Form: I (we) declare under penalty of perjury that the above is true and correct to the best of my (our) knowledge and belief. Dated 8-4-20 at BEAR VALLEY, CALIF.

Right Holder or Authorized Agent Signature

Right Holder or Authorized Agent Signature

NOTE: All petitions must be accompanied by:

(1) the form Environmental Information for Petitions, available at: http://www.waterboards.ca.gov/waterrights/publications_forms/forms/docs/pet_info.pdf

(2) Division of Water Rights fee, per the Water Rights Fee Schedule, available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/fees/

(3) Department of Fish and Wildlife fee of $850 (Pub. Resources Code, § 10005)

PERMIT 21237 (APPLICATION 5648G)
LAKE ALPINE WATER COMPANY AND COUNTY OF ALPINE
PETITION FOR EXTENSION OF TIME

ATTACHMENT 1

Construction and Complete Use of Water:

Permit 21237 (A005648G) provides for the direct diversion and storage of water for the benefit of the Lake Alpine Water Company and County of Alpine (LAWC). Permit 21237 allows for the diversion of water from Bear Creek in Alpine County to be used for municipal and recreation purposes within the service area boundary of the LAWC. Permit 21237 authorizes the direct diversion of up to 0.78 cubic feet per second (maximum of 175 acre-feet) and diversion to storage of up to 220 acre-feet from Bear Creek in Bear Lake at Reba Dam from October 1 through July 31. Permit 21237 authorizes a maximum of 395 acre-feet to be diverted by direct diversion and diversion to storage per water year (October 1 through September 30).

All diversion and storage facilities have been constructed. No further development of diversion or storage facilities is required.

LAWC has developed 475 of its total 947 residential lots. There are 15 existing commercial lots with an additional commercial building that is planned for development (See attached Bear Valley Village, Final Environmental Impact Report dated May 29, 2009, **Exhibit A**). Development of both residential and commercial lots is ongoing; however, the full beneficial use of water is not expected to be realized prior to full development of all residential and commercial lots.

LAWC has increased the number of residential and commercial lots since Permit issuance, but it has not reached projected build-out and therefore requires an extension of time in which to develop additional residential and commercial lots and put water to full beneficial use. Slower than anticipated development of the residential and commercial lands within the service area occurred.

Water Conservation Measures in Effect and Planned:

The LAWC water system is metered and it bills based on metered water use. LAWC currently works with residents to conserve water by aggressive leak detection investigations both before and after the metered point of use, limiting landscaping requirements and no outside irrigation is allowed and ongoing efforts to upgrade toilets and other fixtures to low flow devices. Efforts are further detailed in the following documents that are attached as Exhibits to this Petition for Extension of Time.

Exhibit A	Bear Valley Village, Final Environmental Impact Report – May 29, 2009
Exhibit B	Alpine County Zoning Ordinance Change for the Bear Valley Village Development – January 2, 2013
Exhibit C	Bear Valley Master Plan – February 9, 1979

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
http://www.waterboards.ca.gov/waterrights

ENVIRONMENTAL INFORMATION FOR PETITIONS

This form is required for all petitions.

Before the State Water Resources Control Board (State Water Board) can approve a petition, the State Water Board must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared, a determination must be made of who is responsible for its preparation. As the petitioner, you are responsible for all costs associated with the environmental evaluation and preparation of the required CEQA documents. Please answer the following questions to the best of your ability and submit any studies that have been conducted regarding the environmental evaluation of your project. If you need more space to completely answer the questions, please number and attach additional sheets.

DESCRIPTION OF PROPOSED CHANGES OR WORK REMAINING TO BE COMPLETED

For a petition for change, provide a description of the proposed changes to your project including, but not limited to, type of construction activity, structures existing or to be built, area to be graded or excavated, increase in water diversion and use (up to the amount authorized by the permit), changes in land use, and project operational changes, including changes in how the water will be used. For a petition for extension of time, provide a description of what work has been completed and what remains to be done. Include in your description any of the above elements that will occur during the requested extension period.

Insert the attachment number here, if applicable: 1

Coordination with Regional Water Quality Control Board

For change petitions only, you must request consultation with the Regional Water Quality Control Board regarding the potential effects of your proposed change on water quality and other instream beneficial uses. (Cal. Code Regs., tit. 23, § 794.) In order to determine the appropriate office for consultation, see: http://www.waterboards.ca.gov/waterboards_map.shtml. Provide the date you submitted your request for consultation here, then provide the following information.

Date of Request

Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation? ◯ Yes ◉ No

Will a waste discharge permit be required for the project? ◯ Yes ◉ No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Local Permits

For temporary transfers only, you must contact the board of supervisors for the county(ies) both for where you currently store or use water and where you propose to transfer the water. (Wat. Code § 1726.) Provide the date you submitted your request for consultation here.

Date of Contact

For change petitions only, you should contact your local planning or public works department and provide the information below.

Person Contacted: Date of Contact:

Department: Phone Number:

County Zoning Designation:

Are any county permits required for your project? If yes, indicate type below. ◯ Yes ◯ No

☐ Grading Permit ☐ Use Permit ☐ Watercourse ☐ Obstruction Permit

☐ Change of Zoning ☐ General Plan Change ☐ Other (explain below)

If applicable, have you obtained any of the permits listed above? If yes, provide copies. ◯ Yes ◯ No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Federal and State Permits

Check any additional agencies that may require permits or other approvals for your project:

☐ Regional Water Quality Control Board ☐ Department of Fish and Game

☐ Dept of Water Resources, Division of Safety of Dams ☐ California Coastal Commission

☐ State Reclamation Board ☐ U.S. Army Corps of Engineers ☐ U.S. Forest Service

☐ Bureau of Land Management ☐ Federal Energy Regulatory Commission

☐ Natural Resources Conservation Service

Have you obtained any of the permits listed above? If yes, provide copies. ○ Yes ○ No

For each agency from which a permit is required, provide the following information:

Agency	Permit Type	Person(s) Contacted	Contact Date	Phone Number

If necessary, provide additional information below:

Insert the attachment number here, if applicable: ☐

Construction or Grading Activity

Does the project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank or riparian habitat of any stream or lake? ○ Yes ◉ No

If necessary, provide additional information below:

Insert the attachment number here, if applicable: ☐

Archeology

Has an archeological report been prepared for this project? If yes, provide a copy. (●) Yes ( ) No

Will another public agency be preparing an archeological report? ( ) Yes (●) No

Do you know of any archeological or historic sites in the area? If yes, explain below. ( ) Yes (●) No

If necessary, provide additional information below:

See SWRCB Files for Permit 21237.

Insert the attachment number here, if applicable: [ ]

Photographs

For all petitions other than time extensions, attach complete sets of color photographs, clearly dated and labeled, showing the vegetation that exists at the following three locations:

- [ ] Along the stream channel immediately downstream from each point of diversion
- [ ] Along the stream channel immediately upstream from each point of diversion
- [ ] At the place where water subject to this water right will be used

Maps

For all petitions other than time extensions, attach maps labeled in accordance with the regulations showing all applicable features, both present and proposed, including but not limited to: point of diversion, point of rediversion, distribution of storage reservoirs, point of discharge of treated wastewater, place of use, and location of instream flow dedication reach. (Cal. Code Regs., tit. 23, §§ 715 et seq., 794.)

Pursuant to California Code of Regulations, title 23, section 794, petitions for change submitted without maps may not be accepted.

All Water Right Holders Must Sign This Form:
I (we) hereby certify that the statements I (we) have furnished above and in the attachments are complete to the best of my (our) ability and that the facts, statements, and information presented are true and correct to the best of my (our) knowledge. Dated 8-4-20 at BEAR VALLEY, CA.

Water Right Holder or Authorized Agent Signature

Water Right Holder or Authorized Agent Signature

NOTE:

- **Petitions for Change may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game. (Cal. Code Regs., tit. 23, § 794.)**
- **Petitions for Temporary Transfer may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game and the board of supervisors for the county(ies) where you currently store or use water and the county(ies) where you propose to transfer the water. (Wat. Code § 1726.)**

PERMIT 21237 (APPLICATION 5648G)
LAKE ALPINE WATER COMPANY AND COUNTY OF ALPINE

PETITION FOR EXTENSION OF TIME
ENVIRONMENTAL INFORMATION FORM

ATTACHMENT 1

All infrastructure for the diversion and storage facilities are constructed and complete and no further development of the diversion or storage facilities is required. The attached May 29, 2009 Bear Valley Village, Final Environmental Impact Report **(Exhibit A)** identifies the existing and proposed development of the project. Full project development is anticipated within this requested 50-year extension.

Decision 1648 granted Permit 21237 and gave until December 31, 2020 to complete application of the water authorized. The environmental studies completed (Environmental Impact Report), hydrologic studies, protest resolution evaluations and all other materials the Permitttee developed to process and approve the Permit 21237 remain current and are on file with the State Water Board. We have also included several other pertinent documents for the project that were not part of the original file for Permit 21237 or were developed subsequent to Permit 21237 being issued. They are attached as **Exhibits A-C**. These studies and reports continue to support the processing and approval of this requested Petition for Extension of Time through the year 2070.

LAWC has developed 475 of its total 947 residential lots. There are 15 existing commercial lots with an additional commercial building that is planned for development. New construction is ongoing. LAWC has increased the number of residential and commercial lots since Permit issuance, but it has not reached projected build-out and therefore requires an extension of time in which to develop additional residential and commercial lots and put water to full beneficial use.

Alpine County will be the lead agency for the California Environmental Quality Act and will be preparing the appropriate environmental document for this Petition. LAWC intends to work with SWRCB staff to prepare the environmental document to ensure that the SWRCB can rely on the document to approve the requested petition for change.

Attachments included to support this Petition for Extension of Time include the following:

Exhibit A	Bear Valley Village, Final Environmental Impact Report – May 29, 2009
Exhibit B	Alpine County Zoning Ordinance Change for the Bear Valley Village Development – January 2, 2013
Exhibit C	Bear Valley Master Plan – February 9, 1979

Exhibit A

Bear Valley Village

Final Environmental Impact Report
SCH No. 2007032009

Volume I

Submitted to:

Alpine County
Planning Department
17300 State Route 89
Markleeville, CA 96120
Contact: Brian Peters, Director of Planning
(530) 694-1878

Submitted by:

SWCA Environmental Consultants
3840 Rosin Court, Suite 130
Sacramento, California 95834
Contact: Scott Goebl, Project Manager
(916) 565-0356

May 29, 2009

PREFACE

This Final Environmental Impact Report (EIR) was prepared for the Bear Valley Village Project. This FEIR consists of two volumes: Volume I, containing the Draft EIR as revised, and Volume II, containing the responses to comments, the mitigation monitoring and reporting program, and technical appendices that were not available when the Draft EIR was prepared. Appendices that were provided in the Draft EIR are not included in the Final EIR distribution. These appendices are available for review at the Alpine County Planning Department in Markleeville, CA.

The text of the Draft EIR was revised to respond to comments and provide corrections and clarifications. All substantive changes are called out in ~~strikeout text~~ for deletions and <u>double-underline</u> text for insertions. Corrections made to grammar, errors in numbers (e.g., see page "#"), and similar items have not been shown. The only changes noted in the text are those that provide additional relevant information, rather than corrections to clerical or syntactical errors.

A Draft EIR was completed and released on September 22, 2008, and the public comment period closed on November 7, 2008. One public meeting was held in Bear Valley on October 18, 2008, to present the conclusions of the Draft EIR. No verbal comments were accepted.

Drafts of the EIR were distributed through the State Clearinghouse to interested state agencies and were also mailed to several local agencies. The Draft EIR was made available for review on Alpine County's website and at several libraries in Alpine County and neighboring Calaveras County. This Final EIR has been provided to the State Clearinghouse and all government agencies who commented on the Draft EIR. The Board of Supervisors will consider and certify the Final EIR while determining whether to approve or deny the project.

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CHAPTER ES
EXECUTIVE SUMMARY

PURPOSE AND SCOPE OF EIR

Alpine County is the lead agency responsible for preparation of this Environmental Impact Report (EIR). The EIR discusses the environmental effects of approving a General Plan Amendment and a zoning change to allow development of a new pedestrian village and related infrastructure in the town of Bear Valley, California, to be named Bear Valley Village (the Village). In addition, the Bear Valley Mountain Resort ski area (ski area) is proposing construction of a new high-speed chair lift (Village Lift) from Bear Valley Village to the ski area and several new or modified ski runs returning to Bear Valley from the ski area. The County is proposing a new snowmobile parking area and loading areas (maps are provided in Chapter 2 [Project Description]).

Project development will require subsequent discretionary approvals by the County for each phase of development. These approvals would include tentative maps (TMs) for subdividing the land within the project area and conditional use permits (CUPs) for each building and phase, and for the Village Lift. In addition, the proposed ski area improvements and activities on County owned land would require County authorization, and public use skiing in the Bear Valley Residents, Inc. (BVRI) common areas would require County and BVRI authorization or revisions to BVRI's Covenants, Conditions, and Restrictions (CC&Rs).

The purpose of this EIR is to provide decision makers, public agencies, and the general public with information on the significant environmental effects of the project components and to identify feasible alternatives and mitigation measures to avoid or reduce those effects. Each subsequent project or phase would be subject to discretionary approvals by the County. It is the County's intent to rely upon this EIR, to the extent appropriate and allowable under CEQA, for environmental review of subsequent projects and phases.

PROJECT OBJECTIVES

The project objectives are to:

- Provide Bear Valley with ski-in/ski-out access to the Bear Valley Mountain Resort, both to improve the recreational experience of residents and visitors and to reduce traffic within Bear Valley and to the ski resort via State Route (SR) 4;
- Create a pedestrian-oriented Village that will serve as a gathering place and focal point for existing residents and visitors;
- Improve existing Bear Valley traffic patterns by providing all-weather parking and enhanced vehicular access to the Village for Bear Valley residents and guests as well as the project's residents and guests;
- Develop an infill project that is consistent with the planning guidelines, principles, uses, and densities of the existing 1978 Bear Valley Master Plan (BVMP) and relevant goals, policies, and guidelines contained in the Alpine County General Plan;

- Establish design guidelines consistent with both the natural surroundings and sustainable development concepts in alignment with the U.S. Green Building Council's Leadership in Energy and Environmental Design standards;
- Situate the majority of buildings and improvements in areas already disturbed by existing development as a means of limiting impacts on the environment.

PROJECT CHARACTERISTICS

Bear Valley Village

Bear Valley Village I, LLC, and Bear Valley Village II, LLC (the project applicant) owns approximately 14 acres in the town of Bear Valley. The acreage owned by the applicant is commonly known as Village Center-1 (VC-1) and Village Center-2 (VC-2), referring to the parcels' BVMP land use designations. The Bear Valley Lodge, Lodge pool, and Commercial Center are currently located on VC-1. VC-2 contains parking lots and vacant land. The County owns Parking Lots B and C.

The applicant's proposed Bear Valley Village project would include a village of 14 separate buildings containing approximately 64,000 square feet (sf) of retail and amenity (e.g., nursery/daycare facilities, ski club, lockers) space and 486 privately owned residential units. The residential units would range in size from one to four bedrooms, providing 663,201 sf of residential space. Fifty-one of the three-bedroom units would include lock-off units where a section of the unit could be locked off and rented or used by others, totaling a maximum of 537 separate units. The applicant is also proposing a 50-person employee housing facility at County-owned Parking Lot C ~~B~~.

The current BVMP provides for up to 562 two-bedroom residential units and an undefined amount of commercial and retail uses for the applicant-owned VC-1 and VC-2 parcels. Rather than defining a unit as a two-bedroom residence, the applicant is proposing to define the residential portion of the project in terms of Equivalent Dwelling Units (EDUs), where one EDU is equivalent to 1,350 sf of residential space. Using this definition, the project would include 491 privately owned EDUs (663,201 sf ÷ 1,350 sf/EDU = 491 EDUs).

The residential units would be located above structured parking, and in many cases, above an additional floor of commercial and amenity space. No living or commercial space would be located at ground level.

The project would be arranged in three village areas. The "Village Center" would be a centrally located pedestrian-oriented village with a central public plaza and pedestrian walkways. The "North Village" would be north of the Village Center. The "South Village" would be located on County Parking Lots B and C, and would include a central plaza for the South Village residents and the employee housing facility. A pedestrian bridge would connect the South Village to the pedestrian area of the Village Center. This bridge would span Bear Valley Road and No Name Road, allowing foot traffic access away from vehicles and a snow-free passage during winter conditions.

The proposal includes the removal of the existing Bear Valley Lodge and Commercial Center located at the southeast corner of Bear Valley Road and No Name Road. Important character features from the Lodge such as the fireplace stones would be

reused in the new Village. The Bear Valley Lodge and Commercial Center currently house 16,889 sf of retail, restaurant, and amenity space. The project would therefore result in a net increase of 47,111 sf (64,000 sf - 16,889 sf = 47,111 sf).

An outdoor amphitheater is proposed next to the base terminal of the Village Lift. This venue is intended as an outdoor gathering place for concerts and/or other artistic performances in the summer months.

A swimming pool and meeting facility are planned for the Village Center, replacing the existing Bear Valley Lodge pool. This facility is intended to serve as an indoor public gathering place, accommodating demands for meeting venues, weddings, and other local community functions.

Each building in the Village would be governed by a homeowners association, which in turn contracts with a property manager to perform maintenance and enforce the rules and regulations of the association. Each building association would in turn be part of a Master Association that oversees the management and maintenance of the Village as a whole. The applicant intends to establish a transfer tax that would be paid upon the sale of each property (in perpetuity) to create a permanent funding source for the maintenance of Village improvements.

The project includes 20-foot snow storage setbacks between the proposed buildings and County roads throughout a majority of the development. These 20-foot setbacks are consistent and continuous with other snow storage setbacks within Bear Valley.

Village Chair Lift and Ski Runs

The ski area is currently in the process of requesting modification of its U.S. Forest Service (USFS) Special Use Permit (SUP) to allow several ski area improvements, including the Village Lift and several new or modified ski runs returning to Bear Valley from the ski area (other proposed ski area improvements are described in Section 4.2.2 [Bear Valley Ski Area]).

The Village Lift would be a 1.5-mile-long high-speed chair lift constructed through the existing ski lift easement from the Village to Koala Rocks at the ski area. The Village Lift is intended to allow for ski-in and ski-out access to the ski area from the homes and Village core in the winter. Skier access from Bear Valley Road to the Village Lift would be via a groomed trail that would cross a bridge spanning Bear Creek to the base terminal location. In the future, the Village Lift might be used for summer mountain bike, hiking, and sight-seeing access, but neither the applicant nor the ski area owners are currently proposing summer use of the Village Lift for these purposes.

The Village Lift is not expected to entirely replace the shuttle bus. The Village Lift would access the top of the mountain, requiring passengers to ski or snowboard down to the Day Lodge at the ski area. For those persons needing equipment or beginner lessons, highway travel to the ski area would still be necessary. The ski area is expected to continue providing shuttle bus service.

The ski area is proposing several new or modified ski runs returning to Bear Valley from the ski area to maximize the utility of the Village Lift. The new runs are proposed to include novice, intermediate, and advanced trails that would allow skiers (and

snowboarders) of most ability levels to ski to Bear Valley or the lower lift terminal from the ski area. The new trails would also access Bear Valley roads from various locations along the western, northern, and eastern boundaries of the town, thus providing ski-in/ski-out access to much of the town.

Employee Housing

To accommodate the need for seasonal employee housing for the Village project, an employee housing facility is proposed for the South Village. This facility would be a separate three-story building adjacent to the South Village parking structure. It would accommodate about 50 employees and include pedestrian access to the South Village.

Phasing

The project would be constructed in several phases. Table ES-1 shows the estimated construction and occupancy schedule for Phases 1 through 4 (subject to market demand).

Table ES-1. Phasing and Project Schedule

Phase	Building	Village	Start of Construction	Occupancy Date
Phase 1	11 and Village Lift	North Village	Snowmelt/Spring 2010	Fall 2011
Phase 2	12	North Village	Snowmelt/Spring 2011	Fall 2012
Phase 3	8, 9, 10	Village Center	Snowmelt/Spring 2013	Fall 2014
Phase 4	6, 7	Village Center	Snowmelt/Spring 2015	Fall 2016

Source: Bear Valley Village I and II, LLC, 2007

The schedule for future phases (Buildings 1–5 and 13) would be determined by market conditions. The Bear Valley Lodge and Commercial Center would be removed at the completion of Phase 3 or the commencement of Phase 4.

Circulation

Automobile Circulation

The project would include ~~two~~ one change~~s~~ to the roadway system in Bear Valley: realignment and reconstruction of No Name Road~~ and extension of Creekside Drive to create a second entrance into Bear Valley from State Route (SR) 4~~. No Name Road would be moved south of its current location to allow room for construction of the Village Center~~. No Name Road~~, and would not be passable to automobiles for a minimum of three years.

The applicant had initially proposed an extension of Creekside Drive to create a second entrance into Bear Valley from State Route (SR) 4. However, the County received several comments on the Draft EIR (including comments from Caltrans and some Bear Valley residents) suggesting elimination of the Creekside Drive extension. In response to these comments, a traffic analysis was prepared to evaluate Bear Valley intersection level of service (LOS) impacts that would result from the project without the Creekside Drive extension. This analysis concluded that adequate LOS can be provided at all Bear Valley intersections without the Creekside Drive second access to SR 4 if certain turn lane improvements are provided at the Bear Valley Road/SR 4 intersection (Appendix L).

Based on this analysis, the County and the applicant have agreed that a single access point from SR 4 at Bear Valley Road is the preferred strategy. The applicant is no longer proposing the Creekside Drive extension. Instead, the applicant is proposing to construct the turn lane improvements at the Bear Valley Road/SR 4 intersection that would allow this intersection to operate at acceptable LOS. These improvements are described in Chapter 2 (Project Description). ~~The Creekside Drive extension would be completed prior to development of a net increase of 200 new units in the Village (during Phase 4).~~

Automobile Parking

All parking for the specific uses of each building would be supplied by under-building and off-street parking. To regulate parking, membership to the proposed members' club facility located in the Village Center would initially be available only to new Bear Valley Village condominium owners and existing Bear Valley homeowners and residents.

The South Village parking structure would replace the existing open surface parking on County Parking Lots B and C with covered, structured parking. Condominium units would be built above this parking structure. The applicant's proposed number of dwelling units within VC-1 and VC-2 is fewer than the number allowed in the BVMP. Therefore, the applicant is proposing to transfer about 148 units of the approved unit density from VC-1 and VC-2 to Parking Lots B and C to allow for the proposed multi-family residential housing.

This structure is intended to provide parking for non-Village residents and Bear Valley homeowners, additional day visitors, non-Village resident club members, employees, and owners of the residential units located above the structure. The applicant intends to construct the parking structure in one summer building season so winter parking would be uninterrupted for existing Bear Valley residents.

Pedestrian Circulation

Pedestrian access to retail and amenity spaces would be provided primarily by covered arcades in addition to localized areas where snow would be plowed or actively melted to ensure pedestrian safety. A pedestrian bridge is planned to connect the South Village parking structure and condominiums to the Village Center, allowing foot traffic access over Bear Valley Road and away from vehicles.

Snowmobile Parking and Circulation

The applicant currently allows the public to use a paved parking lot at the southwest corner of its VC-2 parcel (the Lodge Lot) for snowmobile parking. The land is made available by the applicant for these uses by a license agreement with the County on a year-by-year basis. The Lodge Lot is Bear Valley's most heavily used snowmobile parking area. ~~Construction of the Village would eliminate the Lodge Lot parking area.~~ The project would convert the Lodge Lot parking area to Village uses. The applicant expects to discontinue the license agreement for the 2009/2010 winter season for snowmobile parking and loading.

The applicant is proposing a ~~one-way~~ skier access trail through the southwest corner of its VC-2 property leading to the Village Lift. This skier access trail would be located where snowmobiles are currently allowed to pass through VC-2. To maintain snowmobile access through the portion of VC-2 that serves as the Lodge parking lot between Bear Valley Road and the open space area, the applicant is considering accommodating a snowmobile-only lane along its northern property boundary, but separate from the skier access trail leading to the Village Lift. Bear Valley Village and Alpine County would sign an agreement allowing the use of this lane for snowmobile access to the open space area west of VC-2.

Because the ~~Village would eliminate the~~ Lodge Lot snowmobile parking area would no longer be available, the County is proposing an alternative parking location on the west side of Bear Valley Road just north of the winter road closure and east of the Sundowner Condominiums.

~~The County is also proposing to widen the west side of Bear Valley Road by about 25 feet (within the road easement just south of the road closure) to provide capacity for a snowmobile loading area. This would replace some of the snowmobile loading capacity eliminated from the Lodge Lot. Parking would be prohibited in this area.~~In response to public comments on the Draft EIR about the need for a loading area near the Bear Valley Road winter closure, the County and applicant have refined their proposals to ensure that a loading area would be available for subdivision residents near the Bear Valley Road winter closure. As shown in Figure 2-9 (Proposed Loading Area), the applicant is proposing to construct four automobile spaces on its property for short-term loading on the west side of Building 6. The County is proposing to construct up to two additional loading spaces within the Bear Valley Road easement immediately adjacent to the spaces proposed by the applicant, for a total of five or six loading spaces. Parking would be prohibited in these loading spaces. Permits would be issued to limit use of the loading spaces to subdivision residents, but would not be restricted to snowmobile users. Signage would indicate that use of the loading spaces is restricted to permit holders. The applicant has also modified the proposed driveway configuration on the west side of Building 6 to provide a one-way traffic loop to access the loading spaces.

Due to limited space, no trailers would be allowed at the Bear Valley Road loading area. To accommodate snowmobile trailers, the County is proposing to construct a snowmobile trailer loading area in County Open Space E on the west side of Creekside Drive north of VC-2 just north of the current winter road closure (Figure 2-8). The County would move the winter road closure further north to allow automobile access to the loading area. The snowmobile trailer loading area would allow snowmobilers direct access to the snowmobile trail through Open Space E. The design and layout of the

trailer loading area has not been defined, but the size of the loading area would be about 0.1 acre and would be located to avoid the ephemeral drainages (i.e., creeks) in this area. Several trees would be removed for site preparation. A portion of the trailer loading area would be located within the Village Lift alignment.

Considerations for Emergency Vehicles

The project has been designed to accommodate emergency access vehicles throughout the pedestrian-only areas and around the individual buildings. The pedestrian plaza and walkway areas would be designed to accommodate either an approved standpipe for fire flow or a drive-through system for fire and life safety vehicles built to accommodate emergency vehicle weight and maneuverability requirements.

Utilities

The project would include construction of all required utility infrastructure, including sewer and water lines, and underground lines for all "dry utilities" (e.g., electricity and telephone). The project would be served by the Lake Alpine Water Company (LAWC) and Bear Valley Water District (BVWD) for water and sewer. The applicant is also proposing an on-site propane storage and delivery system to serve the project.

Construction Staging and Access

Bear Valley Village

Construction staging areas would be established during project development. Fenced staging areas for the Village portion of the project would be located on disturbed sites and would be used for vehicles, equipment, materials, fuels, lubricants, and solvent storage. All construction staging areas for the Village portion of the project would be located on applicant-owned land.

The applicant is considering a temporary concrete batch plant in the town of Bear Valley to produce the concrete needed to construct the project. The batch plant would be located within the applicant's development boundary on ground that has already been disturbed by grading or development.

Village Lift

For Village Lift construction, several staging areas would be used to store construction equipment, lift materials, raw materials, trees, and slash. At the ski area, the RV parking lot, Koala Rocks, and Tuck's Traverse would be used for storage. An additional storage area would be required where the lift alignment crosses the Pacific Gas and Electric (PG&E) utility road just north of the town boundary. Staging areas within the Village portion of the project area would also be used.

During the winter construction season, construction vehicle and equipment travel routes would be built only with compacted snow to minimize ground impacts and disturbances.

General summer construction access would also be required from several locations along the lift line.

Several lift tower foundations may require the foundation cages and concrete to be flown into the site. If this becomes necessary, foundation cages, concrete, and lift towers would be installed using a helicopter based out of the staging areas.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

The following environmental impact and mitigation summary table (Table ES-2) provides an overview of the environmental effects of the project and the mitigation measures recommended to eliminate or reduce the impacts. The residual impact after mitigation is also identified. Detailed discussions of each of the identified impacts and mitigation measures, including pertinent support data, can be found in the specific topic sections in Chapter 3 of this ~~Draft~~ EIR.

This ~~Draft~~ EIR has identified impacts associated with the following resources as significant:

- ~~Land Use~~
- Population, Housing, and Employment
- Public Services
- Utilities and Service Systems
- Hydrology and Water Quality
- Biological Resources
- Cultural Resources
- Aesthetics
- Transportation and Circulation
- Snowmobile Circulation
- Air Quality
- Noise
- Soils

This report identifies significant and unavoidable impacts related to contribution to exceedance of waste discharge requirement limits for copper at the Bear Valley Water District's wastewater treatment facility, transportation and circulation (increased traffic volume on SR 4 and temporary closure of No Name Road), noise (construction noise, increased traffic noise, and exterior noise levels near snowmobile parking areas), and the project's contribution to climate change caused by generation of greenhouse gases.

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.1 Land Use				
LU-1	With adoption of the proposed BVMP amendment, the proposed land uses would be consistent with BVMP land use designations and zoning.	Less than significant	None.	Less than significant
LU-2	The project would create physical land use conflicts related to exterior noise levels generated by snowmobiles near existing and proposed residential land uses.	Significant	None.	Significant and unavoidable
3.2 Population, Housing, and Employment				
PHE-1	The project would add 491 EDUs to Bear Valley, which is consistent with planned housing growth identified in the BVMP.	Less than significant	None.	Less than significant
PHE-2	The project would increase Bear Valley's permanent population by about six people, which is within the planned population growth identified in the BVMP.	Less than significant	None.	Less than significant
PHE-3	The project could generate demand for non-construction employee housing in excess of available supply.	Significant	**Mitigation Measure PHE-3:** Develop an Employee Housing Implementation Plan.	Less than significant
PHE-4	The project could generate demand for construction employee housing in excess of available supply.	Significant	**Mitigation Measure PHE-4:** Develop an Employee Housing Implementation Plan.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.3 Public Services				
PS-1	The project would require two new sheriff deputies and would substantially increase demands for fire protection and emergency medical services.~~The project would not substantially increase demand for sheriff services, but would substantially increase demands for fire protection and emergency medical services.~~	Significant	**Mitigation Measure PS-1a:** Provide funding for new firefighting equipment required to serve the project. **Mitigation Measure PS-1b:** Provide funding for new emergency medical equipment required to serve the project.	Less than significant
PS-2	The project could interfere with existing oversnow emergency response procedures.	Significant	**Mitigation Measure PS-2a:** Allow emergency service providers to travel through the project area with emergency oversnow vehicles. **Mitigation Measure PS-2b:** Allow emergency medical service personnel to park their emergency snowmobile(s) within the project area near the health clinic while on official business. **Mitigation Measure PS-2c:** Notify the Bear Valley community about removal of the Lodge Lot and direct the public to the new loading areas and Parking Lot ~~B~~C.	Less than significant
PS-3	New elementary school students generated by the project could cause displacement of the existing high school classroom, requiring construction of a new high school facility.	Significant	**Mitigation Measure PS-3:** Assess developer fees to help pay for additional facilities, or provide other methods for mitigating the impact in a manner acceptable to ACUSD.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.4 Utilities and Service Systems				
U-1	The project would create a water demand that can be met by existing infrastructure ~~but cannot be met by existing~~and water supply entitlements.	~~Significant~~Less than significant	~~**Mitigation Measure U-1:** Provide proof of available water supply prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase~~None.	Less than significant
U-2	BVWD may not have adequate wastewater disposal capacity to serve the project.	Significant	**Mitigation Measure U-2a:** Provide proof of available sanitary sewer pipeline capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase **Mitigation Measure U-2b:** Construct additional sanitary sewer system improvements if needed to serve the project. **Mitigation Measure U-2c:** Provide proof of available wastewater disposal facility capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase. **Mitigation Measure U-2d:** Fair-share funding for BVWD wastewater disposal facility improvements.	Less than significant
U-3	The project could contribute to exceedance of WDRs for copper.	Significant	**Mitigation Measure U-3:** Minimize the use of copper water supply and wastewater pipes and fixtures.	Significant and unavoidable
U-4	The project would generate up to 1,006 tons of solid waste per year but would not exceed the Rock Creek Landfill capacity.	Less than significant	None.	Less than significant
U-5	Propane storage tanks in the project area would have a minor risk of explosion, resulting in minimal hazards to the public.	Less than significant	None.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.5 Hydrology and Water Quality				
HWQ-1	Construction activities could discharge pollutants into downstream drainages, resulting in adverse effects on surface water quality.	Significant	**Mitigation Measure HWQ-1:** Implement BMPs to control construction-related stormwater runoff, erosion, and sedimentation.	Less than significant
HWQ-2	Stormwater runoff from the project area could convey urban pollutants and contaminants to downstream drainages, resulting in adverse effects on surface water quality.	Significant	**Mitigation Measure HWQ-2:** Implement Water Quality Control Measures	Less than significant
HWQ-3	Development in the project area would increase impervious surfaces, resulting in an increase in stormwater runoff.	Less than significant	None.	Less than significant
HWQ-4	The project would create minimal risks of property loss, injury, or death involving flooding as a result of the failure of Reba Dam.	Less than significant	None.	Less than significant
3.6 Biological Resources				
BR-1	Project implementation would result in the loss of approximately 2<u>4.9</u>~~6.6~~ acres of conifer forest and chaparral and a minor amount of montane meadow associated with the Village, Village Lift alignment, <u>snowmobile parking area</u> and <u>SR 4 improvements</u> ~~road extension~~, and less than 40 acres of conifer and shrub habitats associated with the ski runs <u>and trailer loading area</u>.	Less than significant	None.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
BR-2	Development of the project area would result in the filling of less than 1 acre of waters of the U.S. and waters of the State.	Significant	**Mitigation Measure BR-2a:** Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the Village, the Village Lift, and SR 4 improvements~~Creekside Drive Extension~~ in compliance with the Clean Water Act and Alpine County General Plan to achieve no net loss. **Mitigation Measure BR-2b:** Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the proposed ski runs to achieve no net loss. **Mitigation Measure BR-2c:** Comply with terms of a Streambed Alteration Agreement and implement best management practices during construction. **Mitigation Measure BR-2d:** Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the County snowmobile parking and trailer loading areas.	Less than significant
BR-3	Construction of the , snowmobile trailer loading area~~Creekside Drive Extension,~~ and the ski run improvements could adversely affect two special status plants (three-bracted onion and sub-alpine cryptantha).	Significant	~~**Mitigation Measure BR-3a:** Avoid direct take of special status plant species during construction activities for the Creekside Drive extension.~~ ~~**Mitigation Measure BR-3b**~~**3a:** Avoid direct take of special status plant species during construction activities for the ski runs. and snowmobile trailer loading area.~~[modify to include trailer loading area and remove Creekside drive]~~	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
			Mitigation Measure BR-~~3c~~3b: Implement a restoration plan for the loss of special status plants.	
BR-4	Development of the project area could result in minor impacts to the Pacific fisher and American marten.	Less than significant	None.	Less than significant
BR-5	Development in the Village would result in the minor loss of foraging habitat for the willow flycatcher.	Less than significant	None.	Less than significant
BR-6	Development of the project area would result in the loss of habitat and potential take of nesting raptors and nesting migratory and resident birds.	Significant	**Mitigation Measure BR-6:** Avoid impacts to raptor and other protected bird nest sites during construction activities.	Less than significant
BR-7	Development of the project area could result in the loss of roosting habitat and potential take of the pallid bat.	Significant	**Mitigation Measure BR-7:** Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.	Less than significant
BR-8	Development of the project area could result in increased vehicle collisions and loss of summer range habitat for mule deer.	Less than significant	None.	Less than significant
BR-9	Construction of new and modified ski runs could result in direct and indirect impacts to special status wildlife.	Significant	**Mitigation Measure BR-9a:** Avoid impacts to raptor and other protected bird nest sites during construction activities. **Mitigation Measure BR-9b:** Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.7 Cultural Resources				
CR-1	Ground disturbance could affect known prehistoric cultural resources.	Significant	**Mitigation Measure CR-1:** Implement construction monitoring by a qualified archaeologist for the protection of known cultural resources~~, including human remains~~.	Less than significant
CR-2	Ground disturbance could affect undocumented cultural resources, including human remains.	Significant	**Mitigation Measure CR-2a:** Conduct a pre-construction survey for cultural resources and ensure adequate recordation, protection, or recovery of any significant resources. **Mitigation Measure CR-2b:** Implement inadvertent discovery measures for the protection of cultural resources, including human remains.	Less than significant
CR-3	Implementation of the project would minimally affect one existing previously disturbed cultural resource.	Less than significant	**Mitigation Measure CR-3:** Incorporate bedrock mortar into relocated fireplace or place in interpretive exhibit.	Less than significant
CR-4	Ground disturbance could affect undocumented paleontological resources.	Significant	**Mitigation Measure CR-4:** Implement inadvertent discovery measures for the protection of paleontological resources.	Less than significant
3.8 Aesthetics				
A-1	The project would not be visually prominent from SR 4 and therefore would not affect scenic vistas from the highway.	Less than significant	None.	Less than significant
A-2	The project would not adversely affect scenic vistas from public viewpoints in Bear Valley or from the ski area.	Less than significant	None.	Less than significant
A-3	The project would change the visual character of the project area, but would not substantially degrade the visual character or quality of the project area or the town of Bear Valley.	Less than significant	None.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
A-4	The project would introduce a substantial amount of new nighttime lighting to Bear Valley, and could adversely affect the visual character of the community at night.	Significant	**Mitigation Measure A-4:** Implement a~~n outdoor~~ lighting plan for every development phase.	Less than significant
3.9 Transportation and Circulation				
TC-1	Bear Valley intersections would continue to operate at acceptable levels of service.	Less than significant	None.	Less than significant
TC-2	SR 4 would operate at unacceptable LOS levels between Moran Road East and Moran Road West and between Big Meadows and Moran Road East.	Significant	**Mitigation Measure TC-2:** Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.	Significant and unavoidable
TC-3	Increased traffic volumes at the Bear Valley Road/SR 4 intersection would meet guidelines warranting a right-turn lane on SR 4 and extending the existing left-turn lane.	~~Significant~~Less than significant	~~**Mitigation Measure TC-3:** Construct a westbound right-turn lane on SR 4 at the Bear Valley Road/SR 4 intersection.~~	Less than significant
TC-~~6~~4	Increased traffic volumes would not result in an unsafe pedestrian or bicycle environment along Bear Valley Road.	Less than significant	None.	Less than significant
TC-~~7~~5	Increased demand for in-town parking generated by the Village Lift could reduce parking availability within Bear Valley for existing users.	Significant	**Mitigation Measure TC-~~7~~5:** Prepare a Parking Management Plan for Bear Valley.	Less than significant
TC-~~6~~8	The project would be inconsistent with three Regional Transportation Plan objectives.	Significant	**Mitigation Measure TC-~~8a~~6a:** Provide bicycle storage facilities within Bear Valley Village. **Mitigation Measure TC-~~8b~~6b:** Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.~~Reduce SR 4 Traffic Congestion in Arnold and Murphys.~~	Significant and unavoidable

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
TC-~~9~~7	Construction activities would affect traffic circulation and reduce public parking.	Significant	**Mitigation Measure TC-~~9~~7:** Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.	Less than significant
TC-~~10~~8	Construction activities within County roadways and temporary closure of No Name Road could reduce emergency access and response times.	Significant	**Mitigation Measure TC-~~10~~8:** Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.	Significant and unavoidable
TC-~~11~~9	The project and other reasonably foreseeable projects would not cause Bear Valley Road/SR 4 ~~and future Creekside Drive/SR 4~~ turning movements to operate at an unacceptable LOS in 2027.	Less than s~~S~~ignificant	~~**Mitigation Measure TC-11a:** Construct a westbound right-turn lane on SR 4 at the Bear Valley Road/SR 4 intersection.~~ ~~**Mitigation Measure TC-11b:** Construct a separate left-turn lane for the southbound Bear Valley Road approach to SR 4.~~ ~~**Mitigation Measure TC-11c:** Provide fair-share funding for a Traffic Control Officer program at the intersection of Creekside Drive and SR 4 during the winter months.~~	Less than significant~~Significant and unavoidable~~
TC-~~12~~10	Increased traffic volumes at the Bear Valley Road/SR 4 intersection as a result of the project and other reasonably foreseeable projects would meet guidelines warranting a right-turn lane on SR 4 in 2027 and extending the existing left-turn lane.	Less than s~~S~~ignificant	None.	Less than significant
TC-~~14~~11	The project and other reasonably foreseeable projects would cause SR 4 to operate at unacceptable LOS levels in 2027.	Significant	**Mitigation Measure TC-~~14~~11:** ~~Reduce SR 4 Traffic Congestion in Arnold and Murphys.~~ Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.	Significant and unavoidable

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
TC-12	The County's Parking Management Plan would ensure adequate public parking will be available in Bear Valley to serve reasonably foreseeable future development.	Less than significant	None.	Less than significant
3.10 Snowmobile Circulation				
SNO-1	The project would increase Bear Valley snowmobile ownership by about 7 percent, but would not substantially increase snowmobile traffic or parking demand within town, conflicts with skiers/pedestrians, or incidents of trespass or disturbance.	Less than significant	None.	Less than significant
SNO-2	Discontinuation of a snowmobile route between Bear Valley Road near the road closure and the east and northeast sides of town would increase snowmobile VMT, increase snowmobile traffic noise levels along Creekside Drive and the northern portion of Bear Valley Road, increase incidents of trespass and noise complaints, and reduce snowmobile safety, resulting in a significant impact.	Significant	**Mitigation Measure SNO-2a:** Re-establish the 2006/2007 snowmobile trail between Bear Valley Road and Creekside Drive through Open Space Parcel E. **Mitigation Measure SNO-2b:** Allow snowmobile access through the Lodge Lot to access the groomed snowmobile route to be re-established through Open Space Parcel E.	Less than significant
SNO-3	A new snowmobile parking area on the west side of Bear Valley Road just north of the road closure would compensate for the loss of Lodge Lot parking capacity and would adequately replace the Lodge Lot's function as the parking area closest to the town center.	Less than significant	None.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
SNO-4	The employee housing facility would block snowmobile access from Quaking Aspen Road and could eliminate part of the short-term snowmobile storage area used by the Transportation Center.	Significant	**Mitigation Measure SNO-4:** Improve snowmobile access and implement measures to ensure the employee housing facility does not reduce the amount of available snowmobile parking~~replace snowmobile parking capacity~~.	Less than significant
SNO-5	Conflicts between snowmobiles and skiers/pedestrians are not expected to increase substantially.	Less than significant	None.	Less than significant
3.11 Air Quality				
AQ-1	The proposed project would not conflict with the regional air quality management plans.	Less than significant	None.	Less than significant
AQ-2	The project would result in short-term construction-related dust and vehicle emissions that could contribute to existing or projected air quality violations.	Significant	**Mitigation Measure AQ-2a:** Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas. **Mitigation Measure AQ-2b:** Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.	Less than significant
AQ-3	Project operations would increase ROG, NOx, and PM10 emissions.	Significant	**Mitigation Measure AQ-3:** Ensure the number of wood-burning fireplaces does not exceed the maximum number allowed by the GBUAPCD.	Less than significant
AQ-4	Project traffic would increase CO concentrations at intersections, but would not expose sensitive receptors to substantial CO concentrations.	Less than significant	None.	Less than significant

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
AQ-5	The project would not create objectionable odors that would affect a substantial number of people.	Less than significant	None.	Less than significant
AQ-6	Implementation of the proposed project would contribute to a cumulative air quality impact in the project area.	Significant	**Mitigation Measure AQ-6a:** Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas. **Mitigation Measure AQ-6b:** Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.	Less than significant
3.12 Noise				
N-1	Project construction would result in temporary noise impacts that could affect adjacent and project residences.	Significant	**Mitigation Measure N-1a:** Limit construction to the hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and 5 p.m. Saturday. **Mitigation Measure N-1b:** Locate portable but temporarily fixed construction equipment (such as temporary batch plants, compressors, and generators) and construction staging and parking areas as far from from existing residences as possible. **Mitigation Measure N-1c:** Post signs at the construction site that include permitted construction days and hours, expected timeframe for construction, a day and evening contact number for the job site, and a County contact number for complaints about construction noise.	Significant and unavoidable

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
			Mitigation Measure N-1d: Implement "quiet" pile-driving technology and notify neighbors about the estimated duration of the pile-driving activity. **Mitigation Measure N-1e:** Implement noise muffling technology to further reduce the impacts of construction related noise.	
N-2	Pile-driving for building foundations could cause cosmetic or structural damage to buildings within 50 feet of the activity.	Significant	**Mitigation Measure N-2:** Conduct crack survey before pile-driving activities that could cause damage to nearby structures.	Less than significant
N-3	Project traffic would increase traffic noise levels in the project vicinity, and would substantially increase noise levels along the north/south segment of Creekside Drive south of~~between Quaking Aspen Road and~~ No Name Road at peak times.	Significant	None.	Significant and unavoidable
N-4	Changes to snowmobile circulation and parking areas would increase noise levels at some sensitive receptors in the project vicinity, and locating new residential uses near the Transportation Center snowmobile parking area would expose project residents and employees to excessive noise levels.	Significant	**Mitigation Measure N-4:** Re-establish the 2006/2007 snowmobile trail through Open Space Parcel E and allow snowmobile access through the Lodge Lot to the trail.	Significant and unavoidable
N-5	Project traffic, in combination with cumulative project traffic, would substantially increase traffic noise levels along the north/south segment of Creekside Drive south of~~between Quaking Aspen Road and~~ No Name Road in 2027.	Significant	None.	Significant and unavoidable

Table ES-2. Summary of Impacts and Mitigation Measures

Impacts		Significance	Mitigation Measures	Residual Significance
3.13 Recreation				
REC-1	The project would increase use of the Bear Lake beach facilities, but would not cause deterioration of the facilities.	Less than significant	None.	Less than significant
REC-2	The project's increased water demand would increase drawdown of Bear Lake but would not substantially impair recreational use of the lake.	Less than significant	None.	Less than significant
3.14 Soils				
Soils-1	The project could expose people or structures to hazards related to liquefaction.	Significant	**Mitigation Measure Soils-1a**: Perform subsurface geotechnical investigations. **Mitigation Measure Soils-1b:** Implement proper engineering techniques to protect structures from liquefaction hazards.	Less than significant
4.0 Cumulative Impacts				
See Chapter 4.0 for the analysis of cumulative impacts.				
5.0 Climate Change				
CC-1	Project construction would generate about 6,500 metric tons/year of CO2e over 11 years (average of about 600 metric tons/year of CO2e), and project operation would generate about 7,400 metric tons/year of CO2e.	Significant	**Mitigation Measure CC-1:** Prepare and implement a GHG Reduction Plan.	Significant and unavoidable

SCOPING PROCESS

Alpine County distributed a Notice of Preparation in March 2007 to federal, state, and local agencies and other interested parties to solicit comments on the project and scope of the EIR (Appendix A). A public scoping meeting was held on March 24, 2007, in Bear Valley to present the project to the public and solicit additional feedback. Concerns raised by agencies and the public during the scoping period were considered during preparation of the Draft EIR and are summarized below. A detailed summary of the scoping comments as well as the disposition of the scoping comments are provided in Appendix B. A copy of the County's Initial Study is provided in Appendix A.

The following environmental effects were identified as concerns by the agencies and the public:

- Housing: Increased demand on employee housing from new seasonal and construction jobs.
- Parking: Effects on parking supply for residents and the visiting public.
- Transportation and Circulation: Effects of increased traffic on local roads and intersections as well as SR 4.
- Snowmobile Circulation and Parking: Effects on snowmobile circulation routes and parking capacity.
- Noise: Effects of construction, snowmobile, and traffic noise.
- Air Quality: Increased pollutants from wood smoke and snowmobiles.
- Utilities and Service Systems: Effects on infrastructure capacity, water supply, and wastewater disposal.
- Public Services: Demand on emergency service providers and effects on emergency oversnow vehicle access.
- Hydrology and Water Quality: Effects of increased runoff from the project; effects of construction and urban runoff on water quality; effects of building adjacent to Bear Creek.
- Biological Resources: Effects on special status plants and wildlife; effects on migrating wildlife; effects on riparian habitat and tree removal.
- Aesthetics: Effects on the visual character of Bear Valley.
- Recreation: Effects on recreational use of Bear Lake; effects from using the Village Lift for mountain bike access.
- Cultural Resources: Effects of demolishing Bear Valley Lodge.

AREAS OF KNOWN CONTROVERSY

One area of known controversy involves the future location of a snowmobile route that runs from Bear Valley Road near the winter road closure to the eastern and northeastern part of town. A snowmobile route connecting these areas is an important winter transportation link for the community. The applicant has allowed snowmobilers to travel through the southwest corner of its VC-2 property (the Lodge Lot) to access the open space area west and north of VC-2 and the eastern snowmobile route out of Bear Valley to USFS land. In winter 2006/2007, the applicant ceased to make available the use of its land for the trail, and the County groomed a new trail through Open Space Parcel E. This trail route met with controversy from some nearby homeowners and others. The

County then formed a committee (Bear Valley Snowmobile Committee) to evaluate potential trail routes that provide the necessary connections and to recommend a preferred route (or routes) to the Board of Supervisors.

The applicant entered a ~~2007/2008~~ winter season license agreement with the County allowing this access to continue for the 2007/2008 and 2008/2009 seasons while the County and the Bear Valley residential owners develop a snowmobile trail plan to replace the current trail through the applicant's property. The applicant is considering accommodating a snowmobile-only lane along its northern property boundary, but is not proposing a groomed trail through its property between the Lodge Lot and the east side of town.

In early 2008, the Bear Valley Snowmobile Committee met several times to evaluate potential future trail routes. These meetings culminated in a public meeting held in Bear Valley in June 2008 to present the Committee's preferred alternative, which is to re-establish the trail through Open Space Parcel E subject to certain conditions intended to reduce noise impacts and regulate use of the trail. In July 2008, the Committee's recommended alternative was accepted by the Board of Supervisors.

Another area of known controversy involves the project's impacts on existing parking availability for existing Bear Valley users. Section 3.9 (Transportation and Circulation) of the EIR concludes that sufficient parking will be available to serve the project and existing uses on most days. However, new day-skier demand generated by the Village Lift could reduce parking availability within Bear Valley for existing users on peak days. The EIR recommends a mitigation measure requiring the applicant to prepare a Parking Management Plan to establish methods to control parking within Bear Valley to ensure the Village Lift does not reduce existing parking availability for existing users.

ISSUES TO BE RESOLVED

The following issues remain to be resolved. As discussed in EIR Section 3.4 (Utilities and Service Systems), BVWD may not have adequate wastewater disposal capacity to serve the project. BVWD has disposal capacity to accommodate an additional 1,127 EDUs. However, this additional capacity is contingent on BVWD providing tertiary treatment by October 1, 2010. On September 11, 2008, the Regional Water Quality Control Board (RWQCB) granted an extension of its previous deadline of October 1, 2008. BVWD is currently pursuing an assessment district to finance the tertiary treatment project. If BVWD is unable to provide tertiary treatment by October 1, 2010, no additional capacity would be available to serve the project.

~~BVWD has disposal capacity to accommodate an additional 1,127 EDUs. However, this additional capacity is contingent on BVWD providing tertiary treatment by October 1, 2008, although BVWD has recently submitted a request to the Regional Water Quality Control Board (RWQCB) to extend this deadline until November 2009 (Ritchie 2008). BVWD is currently pursuing an assessment district to finance the tertiary treatment project and, according to BVWD, it is highly unlikely that these facilities would be constructed by October 1, 2008. In that situation, no additional capacity would be available to serve the project (BVWD 2008a).~~

As discussed in EIR Section 3.2 (Population, Housing, and Employment), the project would increase demand on employee housing by generating new seasonal and construction jobs. The project includes a 50-unit employee housing facility. This facility would accommodate approximately one-third of the employee housing needs generated by the project. However, the applicant and the County have not yet reached an agreement about the construction schedule for the facility. It is therefore uncertain whether (or when) the facility would be available to accommodate the need for employee housing generated by the project. The EIR recommends a mitigation measure requiring the applicant to develop an Employee Housing Implementation Plan (EHIP) that ensures adequate employee housing is available to serve each phase of the project, including construction phases.

The feasibility and precise locations of the new or modified ski runs as well as the location and amount of grading and vegetation removal for the ski runs remain to be defined. Also, biological and cultural resource surveys remain to be performed for the ski run alignments. The EIR evaluates impacts of the ski runs based on aerial photo interpretation, topographical information, and results of field surveys of adjacent areas.

PROJECT ALTERNATIVES SUMMARY

Three land use alternatives (including the proposed project, the No Project Alternative, and a No South Village Alternative) were evaluated in this EIR. All of the alternatives include the Village Lift and the new or modified ski runs returning to Bear Valley.

The California Environmental Quality Act (CEQA) Guidelines Section 15126.6(e)(2) requires that the No Project analysis discusses "…what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." Accordingly, the No Project Alternative includes build-out of VC-1 and VC-2 in accordance with the densities allowed in the 1978 BVMP and does not include any development at the County Parking Lots B and C.

The No South Village Alternative includes all the project components except the South Village. The employee housing facility would be built in the County parking lot in the same location as the project. This alternative is being considered because it would reduce vehicle trips generated by the project, thereby reducing traffic impacts on the local road system; would reduce overall demand for public services and utilities; and would reduce demand for employee housing.

The EIR concludes that the No South Village Alternative can be considered the environmentally superior alternative. As discussed in EIR Section 6.3.2, the No South Village Alternative would not include new for-sale residential land uses near the Transportation Center, thereby eliminating a significant, unavoidable project impact related to exterior noise levels at these proposed residences generated by the snowmobile parking area behind the Transportation Center. Similar to the project, however, noise from this snowmobile parking area would exceed County exterior noise levels at the proposed employee housing facility.

This alternative would generate less construction noise at Parking Lots B and C; generate less traffic noise; generate less demand for wastewater disposal, water supply,

and public services; generate less fugitive dust (and less particulate matter smaller than 10 microns [PM10]); generate fewer operational emissions; and generate one-third fewer vehicle trips than the project.

This alternative, however, would result in a significant but potentially mitigable impact related to automobile parking supply that would not occur under the project. As discussed in EIR Section 6.3.2, the No South Village Alternative would result in fewer public parking spaces available to non–Bear Valley Village uses than the project, and fewer spaces than are currently available.

The No South Village Alternative would not meet all of the project objectives. One project objective includes providing all-weather parking for Bear Valley residents and guests. The No South Village Alternative would not meet this objective because it would not include the all-weather parking structure proposed for the South Village. Under this alternative, Parking Lots B and C would remain uncovered surface parking lots. Another objective is to situate most buildings and improvements in areas already disturbed by existing development as a means of limiting impacts on the environment. The South Village project area is mostly composed of parking lots. Under this alternative, the parking lots would remain.

Table ES-3 provides a summary comparison of the alternatives and their advantages and disadvantages.

Table ES-3. Comparison of Alternatives to the Proposed Project

Proposed Project	No Project	No South Village Alternative
Description		
▪ 491 privately owned EDUs ▪ 50-person employee housing facility ▪ 64,000 sf of retail and amenity space ▪ 3 Villages ▪ BVMP Amendment to allow South Village ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ▪ On-site structure parking ▪ New County snowmobile parking area	▪ 562 privately owned units ▪ No employee housing facility ▪ 58,821 sf of retail and amenity space ▪ 2 Villages (no South Village) ▪ No BVMP Amendment ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ▪ On-site structure parking ▪ New County snowmobile parking area	▪ 344 privately owned EDUs ▪ 50-person employee housing facility 58,821 sf of retail and amenity space ▪ 2 Villages (no South Village) ▪ BVMP Amendment to allow employee housing facility ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ~~(including Creekside Drive extention)~~ ▪ On-site structure parking ▪ New County snowmobile parking area
Results of Analysis		
Advantages ▪ Includes employee housing facility ▪ Meets all project objectives Disadvantages ▪ Exterior noise levels at residences near snowmobile parking areas and Open Space Parcel E (SU) ▪ Other noise impacts (SU) ▪ Traffic impacts on SR 4 (SU)	Advantages ▪ Eliminates SU exterior noise impacts at South Village ▪ Less construction noise at Lots B and C Disadvantages ▪ No employee housing facility ▪ No all-weather public parking structure ▪ More demand for water and wastewater disposal ▪ Change to visual character of VC-1 and VC-2 is more noticeable ▪ Other impacts similar to project	Advantages ▪ Eliminates one SU exterior noise impact at South Village ▪ One-third fewer vehicle trips ▪ Less construction noise at Lots B and C ▪ Less traffic noise ▪ Less demand for water and wastewater disposal ▪ Less air pollutants emitted ▪ Includes employee housing facility Disadvantages ▪ Other impacts similar to project ▪ Fewer public parking spaces available

EDU = Equivalent Dwelling Unit; SU = Significant and unavoidable

Table ES-3. Comparison of Alternatives to the Proposed Project

Proposed Project	No Project	No South Village Alternative
Conclusions		
▪ Meets all project objectives	▪ Eliminates SU exterior noise impacts at South Village ▪ No all-weather public parking structure ▪ No employee housing facility ▪ More demand for utilities and services ▪ Does not meet all project objectives	▪ Environmentally superior alternative ▪ Does not meet all project objectives ▪ Eliminates one SU exterior noise impact at South Village ▪ Less demand for utilities and services ▪ Less traffic ▪ Fewer public parking spaces available ▪ Includes employee housing facility

EDU = Equivalent Dwelling Unit; SU = Significant and unavoidable

CHAPTER 1
INTRODUCTION

This chapter provides an overview of the Environmental Impact Report (EIR) and the California Environmental Quality Act (CEQA) review process.

1.1 PURPOSE AND SCOPE OF EIR

Alpine County is the lead agency responsible for preparation of this EIR. The EIR discusses the environmental effects of approving a General Plan Amendment and a zoning change to allow development of a new pedestrian village and related infrastructure in the town of Bear Valley, California, to be named Bear Valley Village (the Village). In addition, the Bear Valley Mountain Resort ski area (ski area) is proposing construction of a new high-speed chair lift (Village Lift) from Bear Valley Village to the ski area and several new or modified ski runs returning to Bear Valley from the ski area. The County is proposing a new snowmobile parking area and loading area (maps are provided in Chapter 2 [Project Description]).

Project development will require subsequent discretionary approvals by the County for each phase of development. These approvals would include tentative maps (TMs) for subdividing the land within the project area and conditional use permits (CUPs) for each building and phase as well as for the Village Lift. In addition, the proposed ski area improvements and activities on County owned land would require County authorization, and public use skiing in the Bear Valley Residents, Inc. (BVRI) common areas would require County and BVRI authorization or revisions to BVRI's Covenants, Conditions, and Restrictions (CC&Rs).

The purpose of this EIR is to provide decision makers, public agencies, and the general public with information on the significant environmental effects of the project components and to identify feasible alternatives and mitigation measures to avoid or reduce those effects. Each subsequent project or phase would be subject to discretionary approvals by the County. It is the County's intent to rely upon this EIR, to the extent appropriate and allowable under CEQA, for environmental review of subsequent projects and phases.

The EIR describes the anticipated effects of the project on the following resources:

- Land Use
- Public Services
- Hydrology and Water Quality
- Cultural Resources
- Transportation and Circulation
- Air Quality
- Recreation
- Population, Housing, and Employment
- Utilities and Service Systems
- Biological Resources
- Aesthetics
- Snowmobile Circulation
- Noise

1.2 INTENDED USES OF THE EIR

The Alpine County Board of Supervisors will use the Final EIR to consider the project's significant environmental effects, mitigation measures, and alternatives in the process of deciding whether to approve the requested General Plan Amendment and zoning change (see Section 2.6 [Regulatory Requirements, Permits, and Approvals] for a complete list).

Each subsequent project or phase would be subject to discretionary approvals by the County. It is the County's intent to rely upon this EIR, to the extent appropriate and allowable under CEQA, for environmental review of subsequent projects and phases.

Responsible and trustee agencies may also use the EIR as needed for subsequent discretionary actions. The following list includes the possible permits or discretionary actions and the agencies responsible for issuing the permits or approving the action. These agencies may use the EIR for their review or approval process.

U.S. Forest Service

- Approval of the Village Lift and Ski Runs
- National Environmental Policy Act (NEPA) Review

U.S. Army Corps of Engineers

- Clean Water Act Section 404 Permit

Central Valley Regional Water Quality Control Board

- Water Quality Certification (Section 401 of the Clean Water Act)
- Stormwater National Pollutant Discharge Elimination System (NPDES) Permit

California Division of Occupational Safety and Health

- Permit to operate the Village Lift (a passenger tramway)

California Department of Transportation (Caltrans)

- Encroachment Permit

California Department of Fish and Game

- California Endangered Species Act Compliance
- Streambed Alteration Agreement

California Department of Forestry and Fire Protection

- Timber Harvest Plan approval
- Conversion Permit

1.3 EIR PROCESS AND PUBLIC INVOLVEMENT

The EIR has been prepared in accordance with CEQA (Public Resources Code [PRC] Secs. 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations [CCR] Secs. 15000 et seq).

1.3.1 Overview of EIR Process

In compliance with Section 15082 of the CEQA Guidelines, the County circulated a Notice of Preparation (NOP) on March 2, 2007, to interested agencies, groups, and individuals, including the State Clearinghouse. The NOP was intended to encourage interagency communication and provide sufficient background information about the project to enable agencies, organizations, and individuals to respond with specific comments on the scope and content of the EIR.

A public scoping meeting was held at the Bear Valley Lodge on March 24, 2007. All written comments received during the NOP public notice period were considered during the preparation of this Draft EIR. The NOP and a memo summarizing the comments received during the NOP public notice period are included in Appendices A and B, respectively.

The public ~~will be~~ was provided a 45-day period to review and provide comments on the Draft EIR. According to the CEQA Guidelines, persons and public agencies reviewing the Draft EIR:

> …should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project [CEQA Guidelines Section 15204].

The public review period ~~closes~~ closed at 5:00 pm on November 7, 2008. Written comments should have been submitted to Brian Peters (Planning Director) by one of the following methods.

U.S. Mail: 17300 Highway 89
Markleeville, CA 96120

Fax: 530-694-9599

Or email: Brian@pd.alpinecountyca.gov

Within this 45-day review period, the County ~~will hold~~ held a public meeting to present the document and solicit comments. Comments received by the County ~~will be~~ were

considered in preparing the Final EIR. Copies of comments, and responses to comments, ~~will be~~ are included in the Final EIR.

1.4 EIR SCOPE AND ORGANIZATION

The Draft EIR is organized into seven main chapters:

- **Chapter ES, Executive Summary:** provides a summary of the project and the environmental analyses for each resource.
- **Chapter 1, Introduction:** provides an overview of the EIR.
- **Chapter 2, Project Description:** provides a detailed description of the proposed project and identifies potential permits and approvals necessary for project implementation.
- **Chapter 3, Environmental Setting, Impacts, and Mitigation Measures:** describes the regulatory and environmental settings, provides an analysis of impacts on resources potentially affected by project implementation, and identifies mitigation measures to reduce significant effects.
- **Chapter 4, Cumulative Impacts:** provides a discussion of cumulative impacts of the project.
- **Chapter 5, Climate Change:** provides an analysis of the project's contribution to climate change from generation of greenhouse gases.
- **Chapter 6, Alternatives:** describes and evaluates feasible alternatives that reduce one or more significant effects of the project.
- **Chapter 7, Other CEQA Considerations:** provides a discussion of significant irreversible environmental changes, a list of significant and unavoidable impacts, and a discussion of the potential growth-inducing effects of the project.

CHAPTER 2
PROJECT DESCRIPTION

Bear Valley Village I, LLC, and Bear Valley Village II, LLC (the project applicant), is proposing a General Plan and Zone Change Amendment to develop a new pedestrian village and related infrastructure in the town of Bear Valley, California, to be named Bear Valley Village (Village). The Bear Valley Mountain Resort (ski area) is also proposing construction of a new high-speed chair lift (Village Lift) from Bear Valley Village to the ski area and several new or modified ski runs returning to Bear Valley from the ski area. The County is proposing a new snowmobile parking area and loading area.

2.1 PROJECT LOCATION

The town of Bear Valley is located in unincorporated Alpine County along State Route (SR) 4 approximately 0.5 mile east of the Calaveras County line (Figure 2-1). Bear Valley is surrounded by the Stanislaus National Forest (SNF). Whereas much of the land within the town is privately owned, the U.S. Forest Service (USFS) owns much of the land surrounding Bear Valley. The ski area is approximately 1.5 miles north of the town of Bear Valley on USFS land, and is accessed via SR 207. The applicant owns and operates the ski area in a separate corporation under the name Bear Valley Alpine Ski Company, LLC, under a Special Use Permit (SUP) with the USFS.

2.2 PROJECT INTRODUCTION AND HISTORY

Bear Valley began as a village in its current form in 1968 upon the opening of Mt. Reba, now known as Bear Valley Mountain Resort, and construction of the Bear Valley Lodge and 125 homes in the residential area outside the town center in the area known as the "subdivision." In 1978, Alpine County approved a Master Plan for the future development of Bear Valley (Alpine County 1978). The Bear Valley Master Plan (BVMP) has been the basis for all development in Bear Valley since that time (see Figure 3.1-1 in Section 3.1).

The applicant owns approximately 14 acres in the town (Figure 2-2). The acreage owned by the applicant is commonly known as Village Center-1 (VC-1) and Village Center-2 (VC-2), referring to the parcels' BVMP land use designations. The Bear Valley Lodge, Lodge pool, and Commercial Center are currently located on VC-1, which is zoned for 62 residential units and additional commercial and retail space. VC-2 contains the Lodge parking lot, the north parking lot, and vacant land, and is zoned for the planned development of 500 residential units and commercial and retail space. The BVMP also provides for a 50-foot-wide chair lift easement through private land and County open space parcels connecting VC-2 with the USFS boundary. The project would implement build-out of VC-1 and VC-2, and construct the chair lift provided for in the BVMP. The Village Lift would connect VC-1 and VC-2 with the ski area.

The applicant is also proposing the purchase of a 4.4-acre parcel southwest of VC-1 and VC-2 for the development of a multi-story parking structure, with residential units above the structure and employee housing adjacent to the structure. This parcel is currently owned by Alpine County and is used for public parking (Lots B and C). The BVMP designates this parcel of land for parking use only. Therefore, the applicant proposes to

amend the BVMP to allow residential, commercial, and retail uses in addition to parking on the 4.4-acre parcel.

2.3 PROJECT SETTING

The Bear Valley Village portion of the project area is located in the central core of Bear Valley at an elevation of about 7,100 feet above mean sea level (msl). The Village is located on the floor of the valley. The topography of the Village area is gently rolling and generally sloped toward Bear Creek, which runs through VC-1 and VC-2 (Figure 2-3). Approximately half of the Bear Valley Village project area has been developed with the Lodge, Lodge pool, Commercial Center, and various parking lots. The remainder of the Village project area primarily supports lodgepole pine forest and also some small areas of riparian scrub, marsh, meadow, seasonal wetland, and several ephemeral drainages.

The elevation of the Village Lift alignment ranges from about 7,100 feet above msl in the Village to about 8,200 feet above msl at the ski area (Figure 2-4). The lift alignment is almost entirely undeveloped, except for crossings at Creekside Drive, a residential driveway, and a Pacific Gas and Electric (PG&E) access road in the mountainous portion of the alignment. The lift alignment primarily supports red fir forest, mixed conifer/huckleberry oak, and chaparral, with small areas of lodgepole pine forest, seep, and meadow, and several ephemeral drainages. The ski runs returning to Bear Valley pass through undeveloped mountainous terrain similar to the lift alignment (Figure 2-5).

VC-1 is bound by Bear Valley Road on the west, No Name Road on the north, VC-2 on the east, and Creekside Condominiums on the southeast and south. Surrounding land uses include condominiums and County Parking Lots B and C to the southwest, parking lots and undeveloped areas on VC-2 to the north and northeast, parking lots and the community center on the east, and condominiums to the south (Figure 2-3).

VC-2 is bound by County open space on the west and north, Creekside Drive on the east, Bear Valley Road on the west, and No Name Road on the south. Surrounding land uses include open space and residential land uses to the west and north, Bear Valley School, PG&E substation, and Bear Valley Water District buildings to the east, and the Bear Valley Lodge facilities on VC-1 to the south.

County Parking Lots B and C are bound by the County-approved 96-unit Silver Mountain (formerly known as Pine Tree Village) Condominiums to the west, Condo Bear Condominiums to the north, Bear Valley Road to the east, and Quaking Aspen Road, Tamarack Condominiums, and the Bear Valley Transportation Center to the south.

Housing in Bear Valley consists of single-family homes and condominiums. Bear Valley's 160 condominium units are located near the central core of Bear Valley and are served by roads that receive snow removal (plowing) in the winter. Bear Valley also has about 271 single-family homes located in thesubdivision (U.S. Census Bureau 2008). The subdivision includes 426 single-family lots. Approximately 64 percent of the subdivision lots, therefore, have been developed (271 homes ÷ 426 lots = 64 percent). Roads in the subdivision are not plowed and are closed to automobiles during the winter.

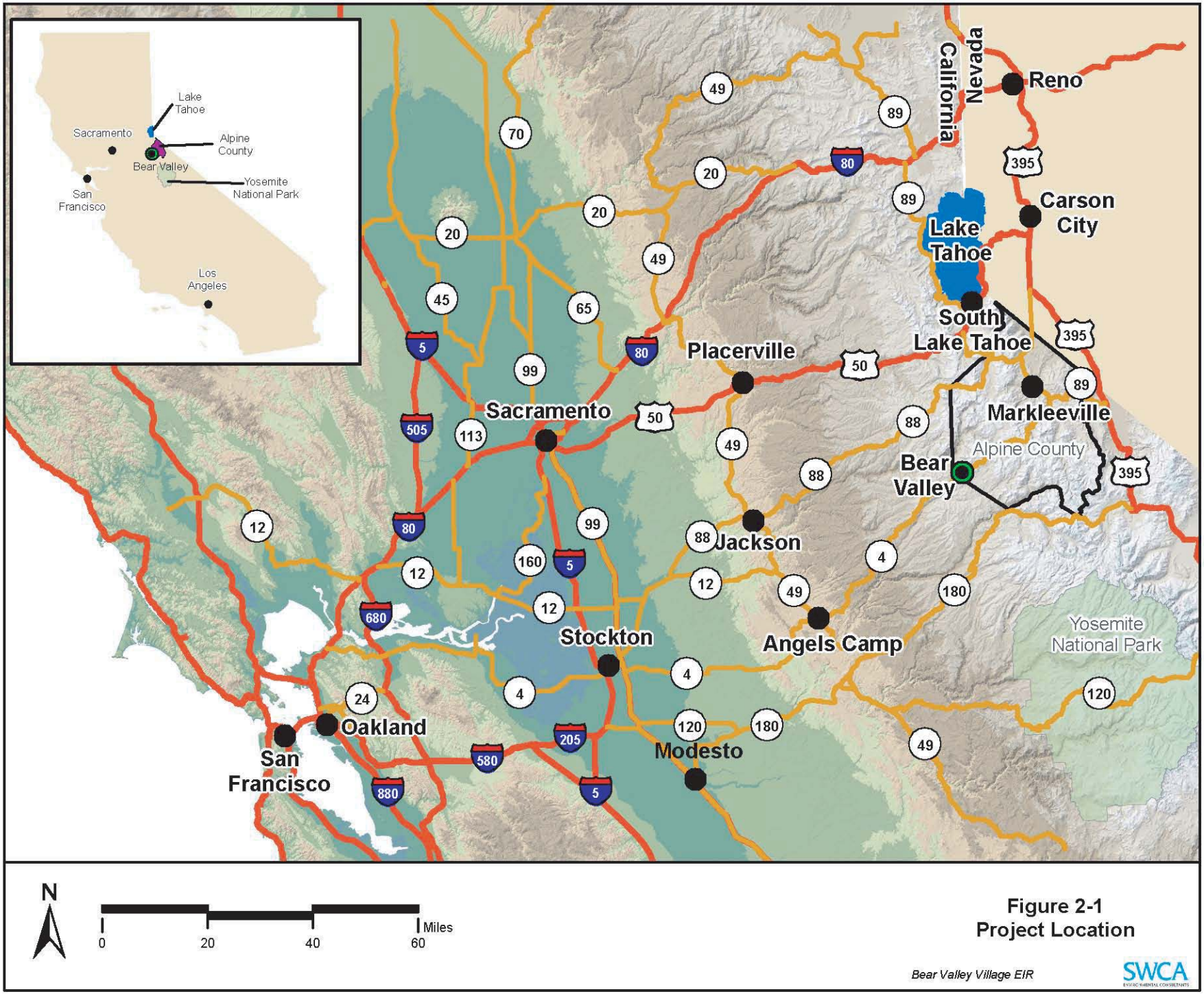
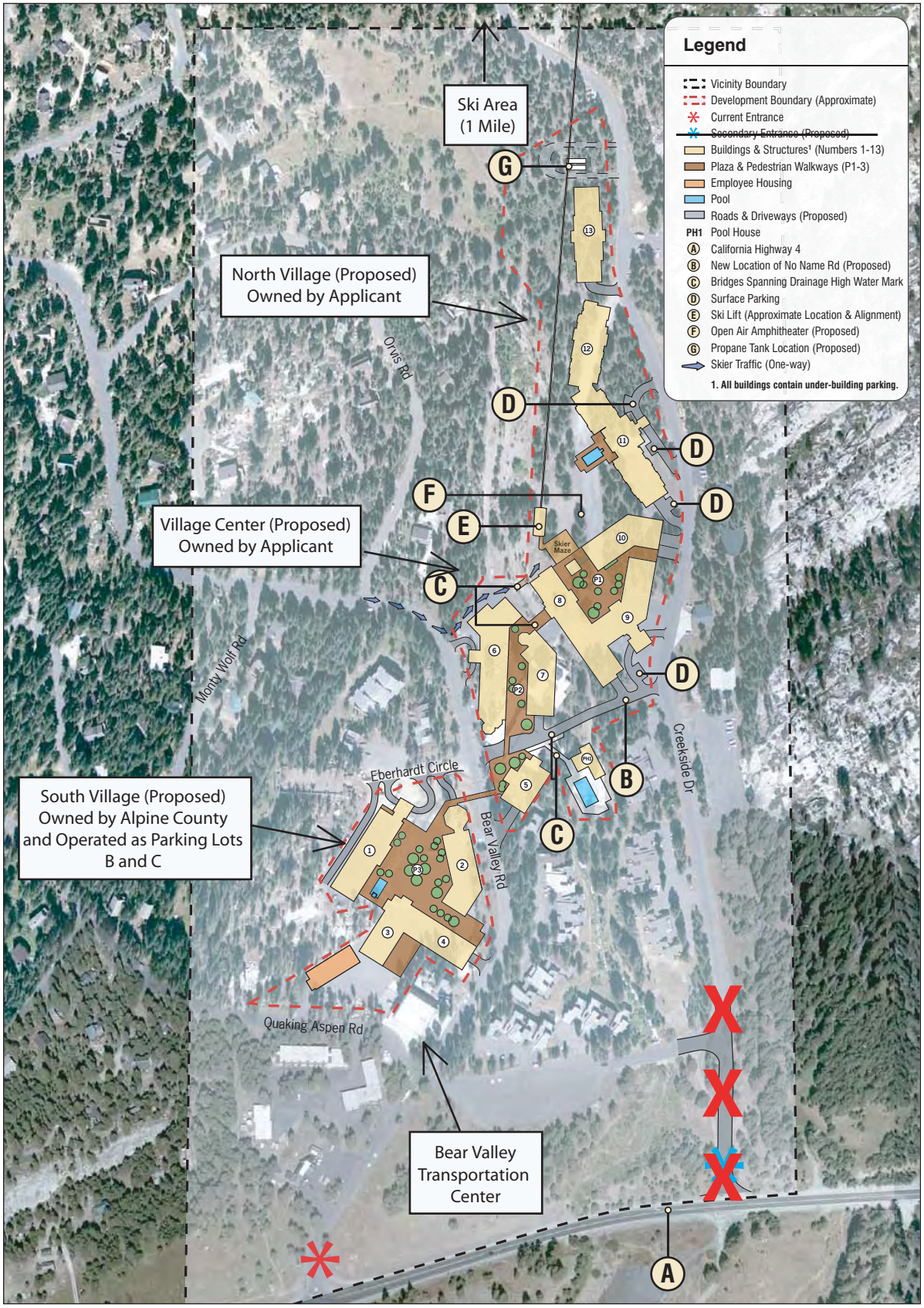


Figure 2-1
Project Location

Bear Valley Village EIR

SWCA



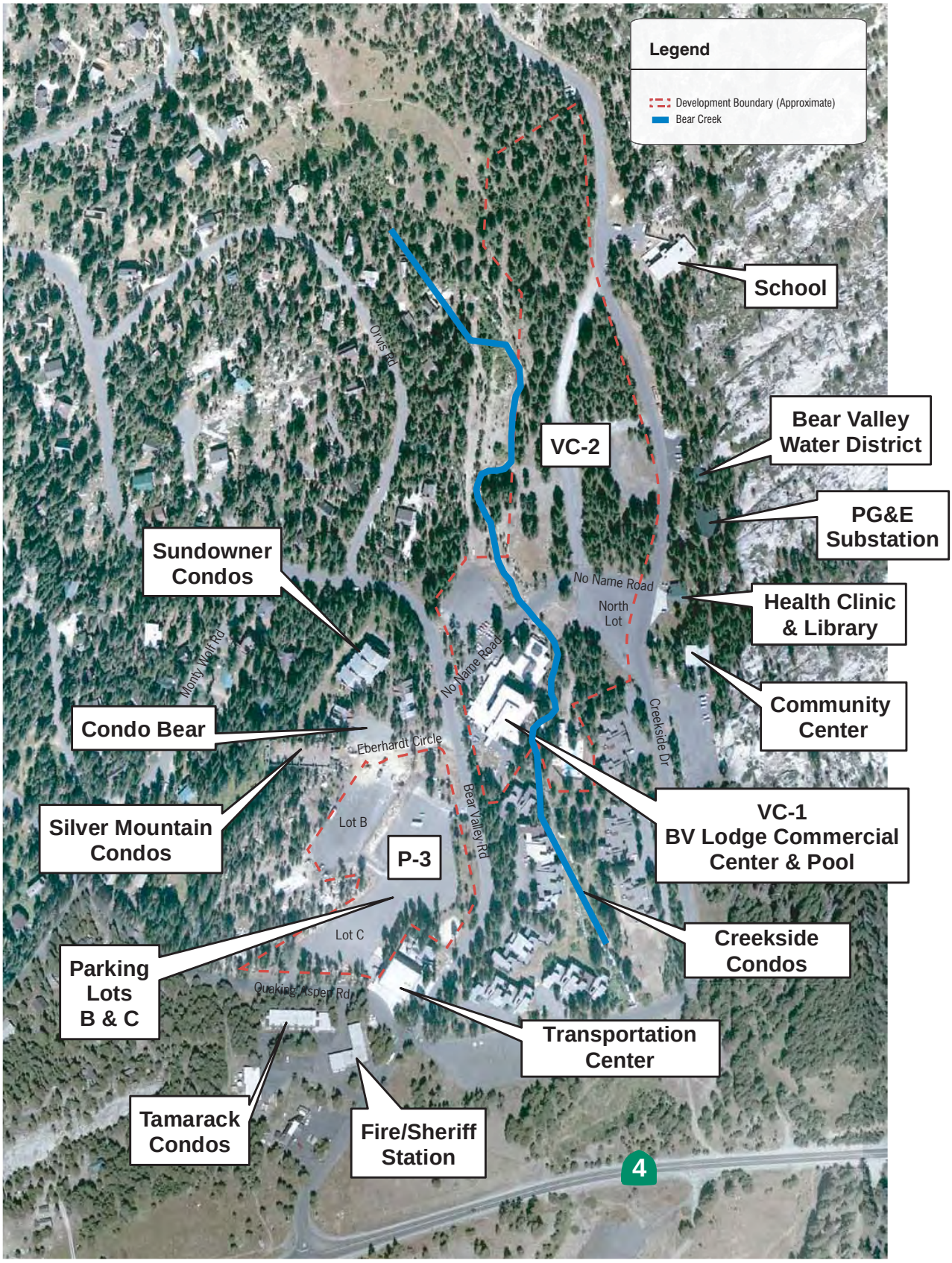
Source: Bear Valley Village I and II, LLCs

N

0' 150' 250' 500'

Figure 2-2
Proposed Master Plan

SWCA ENVIRONMENTAL CONSULTANTS



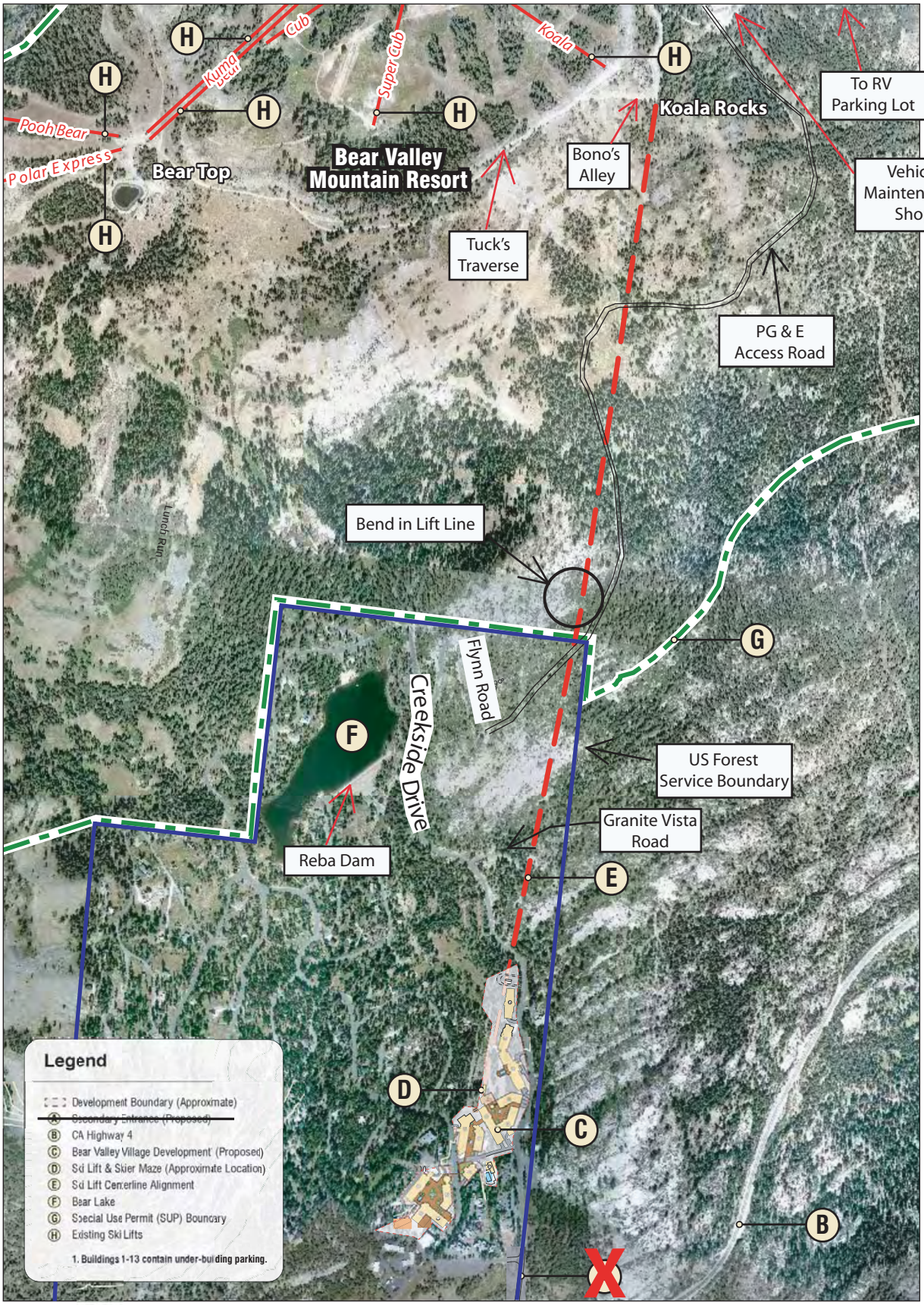
Source: Bear Valley Village I and II, LLCs; Alpine County 1978

N

0' 150' 250' 500'

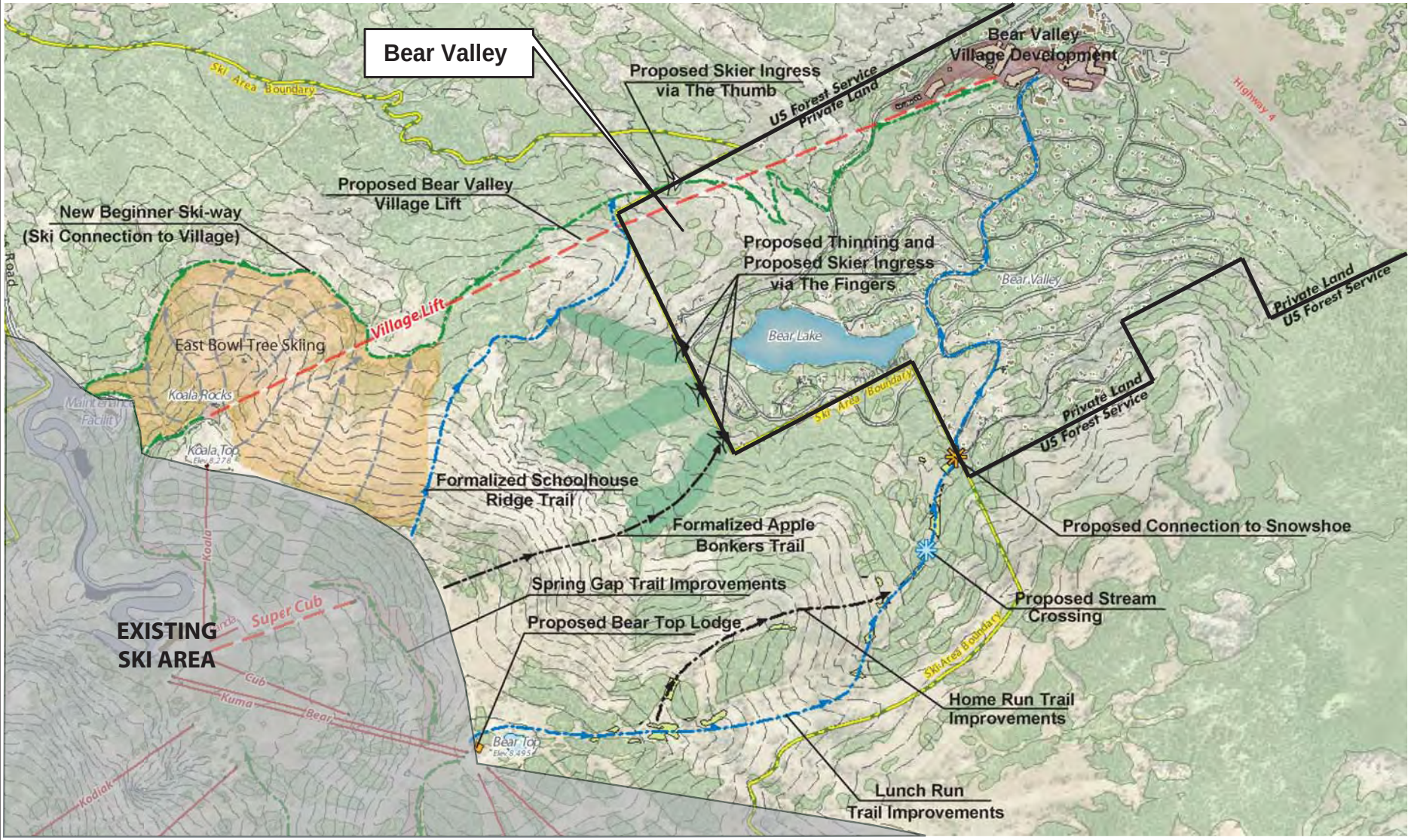
Figure 2-3
Existing Land Uses

SWCA ENVIRONMENTAL CONSULTANTS



Source: Bear Valley Village I and II, LLCs

Figure 2-4
Village Lift



Modified from: *Resort Improvement Plan* by SE Group 2008

Figure 2-5
Ski Runs Returning to Bear Valley

SWCA ENVIRONMENTAL CONSULTANTS

2.4 PROJECT OBJECTIVES

The project objectives are to:

1. Provide Bear Valley with ski-in/ski-out access to the Bear Valley Mountain Resort, both to improve the recreational experience of residents and visitors and to reduce traffic within Bear Valley and to the ski resort via SR 4;
2. Create a pedestrian-oriented Village that will serve as a gathering place and focal point for existing residents and visitors;
3. Improve existing Bear Valley traffic patterns by providing all-weather parking and enhanced vehicular access to the Village for Bear Valley residents and guests as well as the project's residents and guests;
4. Develop an infill project that is consistent with the planning guidelines, principles, uses, and densities of the existing 1978 BVMP and relevant goals, policies, and guidelines contained in the Alpine County General Plan;
5. Establish design guidelines consistent with both the natural surroundings and sustainable development concepts in alignment with the U.S. Green Building Council's Leadership in Energy and Environmental Design standards;
6. Situate the majority of buildings and improvements in areas already disturbed by existing development as a means of limiting impact on the environment.

2.5 PROJECT CHARACTERISTICS

2.5.1 General Plan Amendment and Zoning Changes

The BVMP sets forth specific planning policies to implement the Alpine County General Plan in Bear Valley. The applicant is proposing to amend the BVMP to authorize residential, commercial, and retail uses in addition to parking on the area now known as Parking Lots B and C (Figure 2-2). Parking Lots B and C are owned by the County.

The applicant's proposed number of dwelling units within VC-1 and VC-2 is less than the number allowed in the BVMP. Therefore, the applicant is proposing to transfer a portion of the approved unit density from VC-1 and VC-2 to Parking Lots B and C to allow for the proposed multi-family residential housing.

2.5.2 Bear Valley Village

The Bear Valley Village project would include a village of 15 separate buildings containing approximately 64,000 square feet (sf) of retail and amenity (e.g., nursery/daycare facilities, ski club, lockers) space and 486 privately owned residential units (Table 2-1). The residential units would range in size from one to four bedrooms, providing 663,201 sf of residential space. Fifty-one of the three-bedroom units could include lock-off units where a section of the unit could be locked off and rented or used by others, totaling a maximum of 537 separate units. The applicant is also proposing a 50-person employee housing facility at Parking Lot C~~B~~.

The BVMP provides for 562 two-bedroom residential units and an undefined amount of commercial and retail uses for the VC-1 and VC-2 parcels. Because the Village would consist of many different types and sizes of residential units, the applicant is proposing to re-define the approved density in a form that would place a limit on the overall size of the development but allow the applicant to have the necessary flexibility of unit mix in the development.

Rather than defining a unit as a two-bedroom residence, the applicant is proposing to define the residential portion of the project in terms of Equivalent Dwelling Units (EDUs), where 1,350 sf of residential space is used as the standard of measure for a typical two-bedroom unit. Therefore, one EDU is equivalent to 1,350 sf of residential space. Using this definition, the project would include 491 privately owned EDUs (663,201 sf ÷ 1,350 sf/EDU = 491 EDUs).

The 1,350-sf measure is derived from a standard 15-foot-wide by 30-foot-deep (or 450 sf) building module that is regularly used to plan residential and condominium hotel units. Three modules would provide 45 feet of building frontage for a living/dining kitchen area flanked on either side by a bedroom. EDUs are used by many communities and resort areas to quantify allowable building area. Table 2-1 shows the residential units converted to EDUs.

All residential units (other than the employee housing facility) would be located above structured parking, and in many cases, above an additional floor of commercial and amenity space. No living or commercial space in Buildings 1 through 13 would be located at ground level.

The project would be arranged in three village areas (Figure 2-2). The “Village Center” would be a centrally located pedestrian-oriented village with a central plaza and pedestrian walkways. The Village Center includes Buildings 5 through 10 and the Pool House. The “North Village” would be north of the Village Center and would include Buildings 11 through 13 and the bottom terminal of the Village Lift. The “South Village” would be located on County Parking Lots B and C. The South Village would include Buildings 1 through 4 and a private central plaza for South Village residents on top of a maximum three-story parking structure as well as a 50-bed employee housing facility located adjacent to the structure. A pedestrian bridge would connect the South Village to the pedestrian area of the Village Center. This bridge would span Bear Valley Road and the relocated No Name Road, allowing foot traffic access away from vehicles and a snow-free passage in winter conditions.

The proposal includes the removal of the existing Bear Valley Lodge and Commercial Center located at the southeast corner of Bear Valley Road and No Name Road. Important character features from the Lodge such as the fireplace stones would be reused in the new Village.

Table 2-1. Bear Valley Village Development Plan (Proposed)

Development Area	Lot No.	Lot Area (Acres)	Development Footprint (SF)[a]	Building Nos./ Uses Developed[b]	Residential Unit Type (Bedrooms)					Total Net Residential Area (SF)	EDUs[c]	Non-Residential Uses (SF)			Total Non-Residential Area (SF)	Building Massing (Range of Stories)
					1	2	3	3 w/ Lock -Off	4			Retail	Restaurant	Amenity Space		
North Village	5	6.2	59,326	11, 12, 13	5	59	31	16	13	174,260	129	0	0	2,000	2,000	3–5
Village Center	1	3.6	86,189	8, 9, 10, Village Lift, Plaza 1	8	59	17	11	3	134,496	100	9,010	5,000	22,911	36,921	1–5
Village Center	2	2.0	54,874	6, 7, Plaza 2	6	33	29	13	2	116,992	87	12,400	4,000	3,500	19,900	3-4
Village Center	3	1.4	24,759	5, Pool House	3	16	5	0	1	37,335	28	0	0	0	0	1–3
South Village	4	4.4	122,765	1–4, Plaza 3	12	120	13	11	0	200,118	148	2,950	0	1,250	4,200	3–5
Second Entrance	–	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	
Total	**5**	**18.1**	**347,913**	**–**	**34**	**287**	**95**	**51**	**19**	**663,201**	491	**24,360**	**9,000**	**29,661**	**63,021**	**1–5**
South Village Employee Housing	4	–	11,653	Employee Housing	50					27,968	–	–	–	–	–	3

[a] Development Footprint (SF) excludes square footages for building entrance structures, driveways, paths, pools, and pool decks.

[b] All buildings contain under-building parking.

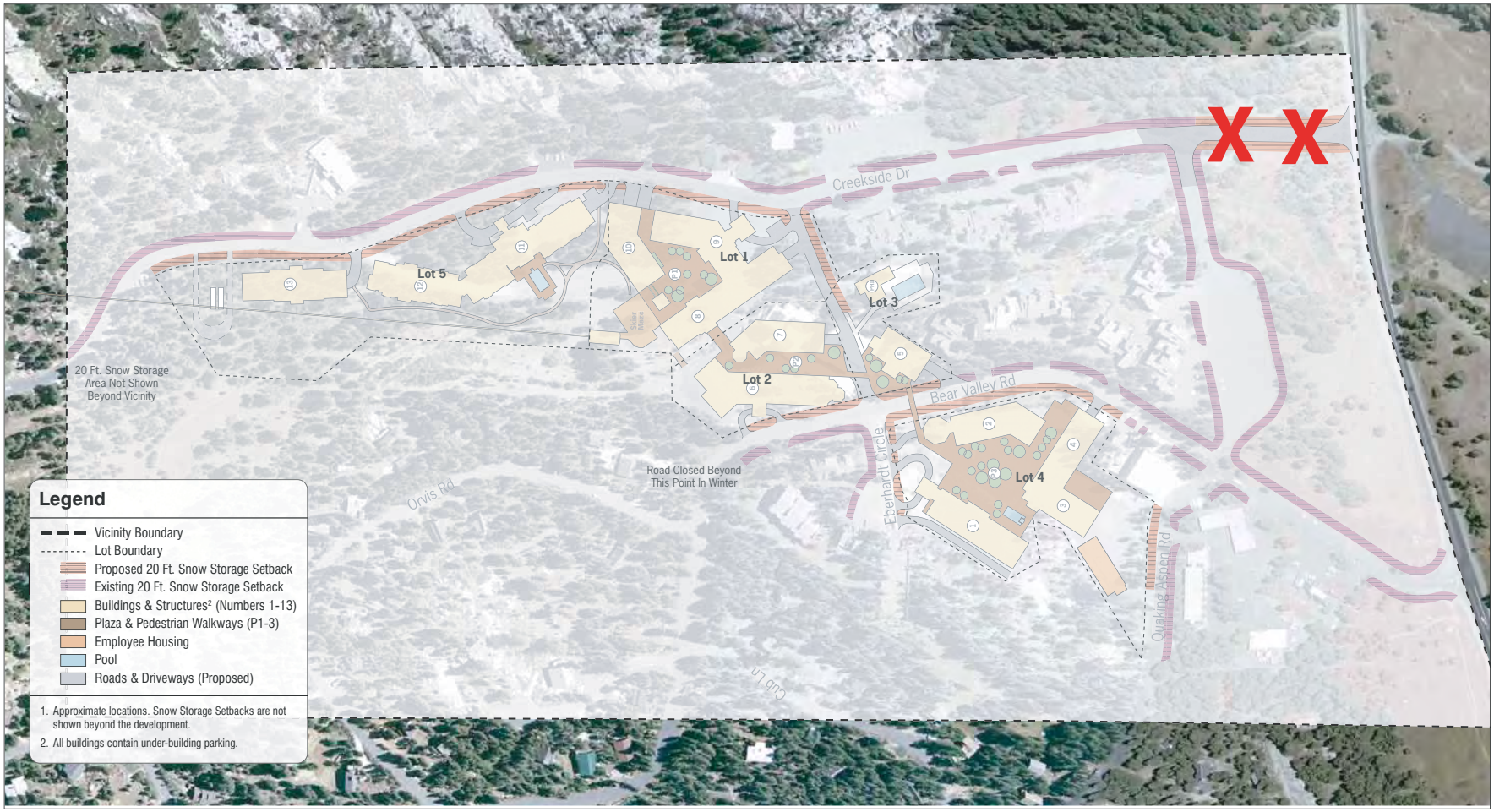
[c] EDU = Equivalent Dwelling Unit. Formula: total residential area sf divided by 1350 sf.

An outdoor amphitheater area is proposed next to the base terminal of the Village Lift. This area is intended as an outdoor gathering place for concerts and/or other artistic performances in the summer months. The noise level and hours of performance have not yet been proposed, but amphitheater operations would be subject to compliance with Alpine County codes related to noise, public safety, and special events. A County special event permit would be required when any event involves a group of 75 or more people. During the winter months, this outdoor amphitheater would not be cleared of snow and would not be used, but would be left as an open area for skiers to access the Village Lift terminal (Figure 2-2). No specific facilities have been proposed for the amphitheater area. If such facilities are proposed at a later date, they may require a County conditional use permit (CUP).

A swimming pool and meeting facility are planned east of Building 5, replacing the existing Bear Valley Lodge pool. This facility is intended to serve as an indoor public gathering place, accommodating demands for meeting venues, weddings, and other local community functions.

Each building in the Village would be governed by a homeowners association, which in turn would contract with a property manager to perform maintenance and enforce the rules and regulations of the association. Each building association would in turn be part of a Master Association that oversees the management and maintenance of the Village as a whole. The applicant intends to establish a transfer tax that would be paid upon the sale of each property (in perpetuity) to create a permanent funding source for the maintenance of Village improvements.

The project includes 20-foot snow storage setbacks between the proposed buildings and County roads throughout a majority of the development. These 20-foot setbacks are consistent and continuous with other snow storage setbacks within Bear Valley (Figure 2-6).



Source: Bear Valley Village I and II, LLCs

Figure 2-6
Snow Storage Setbacks

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2.5.3 Village Chair Lift and Ski Runs

The ski area is currently in the process of requesting modification of its USFS SUP to allow several ski area improvements, including the Village Lift and several new or modified ski runs returning to Bear Valley from the ski area (other proposed ski area improvements are described in Section 4.2.2).

Bear Valley is not currently connected to the ski area by a ski lift. Instead, residents and guests of Bear Valley drive or take a ski area shuttle bus that transports skiers between Bear Valley and the ski area's Day Lodge. A 1.5-mile-long high-speed chair lift (Village Lift) would be constructed through the existing ski lift easement from the Village to Koala Rocks at the ski area (Figure 2-4). The Village Lift is intended to allow for ski-in and ski-out access to the ski area from the homes and Village core in the winter. Skier access from Bear Valley Road to the Village Lift would be via a groomed trail located north of Building 6 and across a bridge spanning Bear Creek to the base terminal location. In the future, the Village Lift might be used for summer mountain bike, hiking, and sight-seeing access, but neither the applicant nor the ski area owners are currently proposing summer use of the Village Lift for these purposes.

The Village Lift would be powered by an electric motor located at the top terminal, supplemented by a diesel backup motor for emergency use during power outages and a gasoline motor for emergency passenger evacuation. The Village Lift is estimated to run nine hours per day between 120 and 150 days during the winter season.

The Village Lift is not expected to entirely replace the shuttle bus. The Village Lift would access the top of the mountain, requiring passengers to ski or snowboard down to the Day Lodge. For those persons needing equipment or beginner lessons, highway travel to the ski area would still be necessary. The ski area is expected to continue providing a shuttle bus service.

The lift alignment is located within a 50-foot-wide easement and is characterized by coniferous forest and chaparral. The lift easement ranges in elevation from about 7,100 feet above msl to 8,200 feet above msl and is almost entirely undeveloped. Topography is steep and generally sloped to the south. Several drainages and associated wetlands exist within the alignment. Some trees would be cleared within the easement to allow for construction and operation of the lift. All timber cutting on USFS land must have specific prior approval from the USFS Calaveras Ranger District staff. Low-growing vegetation would not be cleared. The precise locations and configurations of the lift towers have not yet been determined.

The ski area is also proposing several new or modified ski runs returning to Bear Valley from the ski area to maximize the utility of the Village Lift. The new runs are proposed to include novice, intermediate, and advanced trails that would allow skiers (and snowboarders) of most ability levels to ski to Bear Valley or the lower lift terminal from the ski area. The new trails would also access Bear Valley roads from various locations along the western, northern, and eastern boundaries of the town, thus providing ski-in/ski-out access to much of the town. The ski area and USFS are responsible for determining the feasibility of the ski runs.

The new or modified ski runs are described in Table 2-2 and are shown in Figure 2-5. All the new ski runs would cross USFS land before reaching the town boundaries. Cinch Trail and Schoolhouse Ridge would then pass through County Open Space Parcel D, follow Creekside Drive southeast to the winter road closure, and then pass through Open Space Parcel E to the Village Lift terminal and the town center. Apple Bonkers would cross the Bear Valley Residents, Inc. (BVRI) common areas between Lots 314 and 315 and Lots 319 and 322 before reaching County roads. Snowshoe Traverse would cross a short stretch of private property between USFS land and Snowshoe Road. In accordance with the Covenants, Conditions, and Restrictions (CC&Rs) of the BVRI, ski runs crossing BVRI common areas would be restricted to BVRI property owners, their tenants, families, and guests unless the County and BVRI approve (or revise the CC&Rs to allow) public use skiing in the common areas, and all improvements in these common areas would be performed by the BVRI or its designee.

Some tree removal would be performed in connection with the ski run improvements, as shown in Table 2-2. USFS arborists and silviculturalists would identify trees to be removed for ski run improvement and habitat enhancement. Many of the trees would be selectively removed to thin small thickets of trees to enhance the growth and health of the stand and to remove diseased trees posing hazards to facilities and the recreational public from fire or falling limbs. Some of the tree removal would occur in monoculture old growth red fir forest, where the trees are unhealthy and little understory is present. Selective tree removal would also serve to direct skiers into the BVRI common areas (Clarey 2008).

Table 2-2. New or Modified Ski Runs Returning to Bear Valley

Ski Run	Description
Beginner Ski-Way (Cinch Trail)	New novice-level trail to Bear Valley via County Open Space Parcels D and E. Would require grading and tree removal on 3.3 acres of USFS land. Would require less than 0.05 acre of grading and removal of about 30 to 40 trees.
East Bowl Tree Skiing	New tree (glade) skiing area in the East Bowl and connecting to Cinch Trail. No tree removal or grading is expected.
Schoolhouse Ridge	New intermediate-level trail to Bear Valley via the Cinch Trail. Would require minimal grading (if any). Shoolhouse Ridge and Apple Bonkers would include removal of a combined total of 1,700 trees.
Apple Bonkers	New advanced-level trail to Bear Valley via the Common Areas between Lots 314 and 315 and Lots 319 and 322. Would require minimal grading (if any). Shoolhouse Ridge and Apple Bonkers would include removal of a combined total of 1,700 trees.
Home Run and Lunch Run	Some trail improvements to these existing runs, including a new bridge crossing a drainage. Would include 8.8 acres of selective tree removal and approximately 0.3 acre of grading.
Snowshoe Traverse	New intermediate-level traverse trail that crosses a short stretch of private property between USFS land and Snowshoe Road. Would include a new bridge crossing a drainage. Total disturbance area would be less than 1 acre.

Source: Bear Valley Mountain Resort 2008

These ski runs and improvements are considered connected actions directly related to the Village Lift, and are evaluated at a project level in the Environmental Impact Report (EIR). The ski area is also seeking approval from the USFS for other improvements at the ski area that are not directly related to the Village Lift. These improvements are considered to be related projects and are evaluated in the cumulative impact analysis.

2.5.4 Employee Housing

To accommodate the need for seasonal employee housing for the Village project, an employee housing facility is proposed for the South Village (Figure 2-2). This facility would be a separate three-story building adjacent to the South Village parking structure. It would accommodate about 50 employees and include pedestrian access to the South Village. The applicant would coordinate with the County to reach an agreement about the construction schedule for the facility.

2.5.5 Phasing

The project would be constructed in several phases. Table 2-3 shows the estimated construction and occupancy schedule for Phases 1 through 4 (subject to market demand).

Table 2-3. Phasing and Project Schedule

Phase	Building	Village	Start of Construction	Occupancy Date
Phase 1	11 and Village Lift	North Village	Snowmelt/Spring 2010	Fall 2011
Phase 2	12	North Village	Snowmelt/Spring 2011	Fall 2012
Phase 3	8, 9, 10	Village Center	Snowmelt/Spring 2013	Fall 2014
Phase 4	6, 7	Village Center	Snowmelt/Spring 2015	Fall 2016

Source: Bear Valley Village I and II, LLC 2007

The schedule for future phases (buildings 1–5 and 13) would be determined by market conditions. The Bear Valley Lodge and Commercial Center would be removed at the completion of Phase 3 or the commencement of Phase 4.

2.5.6 Circulation

Automobile and Pedestrian Circulation

The project would include ~~two~~ one change~~s~~ to the roadway system in Bear Valley: realignment and reconstruction of No Name Road ~~and extension of Creekside Drive to create a second entrance into Bear Valley from SR 4~~. No Name Road would be moved

south of its current location to allow room for construction of the Village Center. The existing road would be removed during Phase 3, scheduled to begin in the spring of 2013. The new alignment of No Name Road is located where the Bear Valley Lodge and Commercial Center are now located. The new location of No Name Road would be completed after the Bear Valley Lodge and Commercial Center are removed at the completion of Phase 3 or the commencement of Phase 4, and may not be completed until fall of 2016. No Name Road would therefore not be passable to automobiles for a minimum of three years.

The applicant had initially proposed an extension of Creekside Drive to create a second entrance into Bear Valley from State Route (SR) 4. However, the County received several comments on the Draft EIR (including comments from the California Department of Transportation [Caltrans] and some Bear Valley residents) suggesting elimination of the Creekside Drive extension. In response to these comments, a traffic analysis was prepared to evaluate Bear Valley intersection level of service (LOS) impacts that would result from the project without the Creekside Drive extension. This analysis concluded that adequate LOS can be provided at all Bear Valley intersections without the Creekside Drive second access to SR 4 if certain turn lane improvements are provided at the Bear Valley Road/SR 4 intersection (Appendix L).

Based on this analysis, the County and the applicant have agreed that a single access point from SR 4 at Bear Valley Road is the preferred strategy. The applicant is no longer proposing the Creekside Drive extension. Instead, the applicant is proposing to construct the turn lane improvements at the Bear Valley Road/SR 4 intersection that would allow this intersection to operate at an acceptable LOS. These improvements include:

- An exclusive westbound right-turn lane on SR 4. If Caltrans desires full deceleration off of the through lane, the turn lane would be 530 feet long. This turn lane would be constructed during the first phase of development.
- Lengthening the existing eastbound left-turn lane on SR 4. If Caltrans desires full deceleration off of the through lane, the existing 200-foot-long turn lane would be lengthened to 580 feet long to provide for deceleration and vehicle storage. This turn lane would be lengthened by approximately 380 feet during the first phase of development.
- Construct separate right- and left-turn lanes on the southbound approach on Bear Valley Road. These lanes would be provided with the net addition of 292 residential units, factoring in removal of the Bear Valley Lodge (345 new units – 53 Lodge units = 292 units net increase; note that the 292 units refers to actual units, not EDUs).

Improvements to SR 4 are subject to review and approval by Caltrans, which has expressed support for these improvements (Caltrans 2008b).

These turn lanes would serve future development projects in Bear Valley in addition to the project proposed by the applicant. These turn lanes are therefore partly needed to mitigate the impacts of cumulative growth. As a result, the applicant would be eligible for reimbursement of costs for constructing these roadway improvements in excess of its fair share. A method of reimbursement will be established by the County, which may include an executed agreement between the County and the applicant that is consistent

with State law. The County might also consider implementing a traffic impact mitigation fee program for Bear Valley development to provide funding for roadway improvements in Alpine County that would mitigate traffic impacts caused by Bear Valley development.

~~The project would include construction of a second entrance into Bear Valley from SR 4 (Figure 2-7). Consistent with the BVMP, this second entrance would be located east of the current entrance at the southeasternmost portion of Creekside Drive. This new entrance road (sometimes referred to as the Creekside Drive extension) is intended to improve traffic flow between Bear Valley and SR 4. The Creekside Drive extension would be completed prior to development of a net increase of 200 new units in the Village (including lock-off units, and in addition to the Lodge's existing 53 units). The Creekside Drive extension is therefore expected to be constructed during Phase 3.~~

Other circulation features include four new bridges in the Village Center area. All four bridges would span the ordinary high water mark of Bear Creek. The new bridges include two pedestrian bridges, one skier bridge, and one vehicle bridge on No Name Road. All four creek crossings would have natural stream bottoms. The existing culverts under No Name Road would be removed.

It is important to note that all private driveways, access routes, and easements have been considered in the project design, and none would be blocked by the project.

Automobile Parking

All parking for the specific uses of each building would be supplied by under-building and off-street parking. The applicant is proposing to provide parking spaces based on the parking demand rates recommended in the *Bear Valley Village Traffic/Parking Impact Analysis* prepared by LSC Transportation Consultants (LSC 2008; see Section 3.9 [Transportation and Circulation]). The applicant proposes to design each building to meet the residential, retail, and commercial parking needs generated by the corresponding development phase.

To regulate parking, membership to the proposed members' club facility located in the Village Center would initially be available only to new Bear Valley Village condominium owners and existing Bear Valley homeowners and residents. No other memberships would be sold unless the parking supply is greater than the required demand of the proposed Village uses.

The South Village parking structure would replace the existing open surface parking on County Parking Lots B and C with covered, structured parking. Condominium units would be built above this parking structure. The applicant's proposed number of dwelling units within VC-1 and VC-2 is fewer than the number allowed in the BVMP. Therefore, the applicant is proposing to transfer about 148 units of the approved unit density from VC-1 and VC-2 to Parking Lots B and C to allow for the proposed multi-family residential housing (see Section 3.1 [Land Use] for further discussion).

The South Village parking structure would primarily provide for the replacement of existing winter parking on Parking Lots B and C, as identified in the traffic study, and to meet the needs of the residential/retail uses of South Village Buildings 1 through 4. If

additional spaces area available, they could be used for external (i.e., non–Bear Valley resident) club members or for additional day visitors. ~~This structure is intended to provide parking for non-Village residents and homeowners of Bear Valley, additional day visitors (including day skiers), non-Village resident club members, employees, and owners of the residential units located above the structure.~~

Because the parking structure would be covered, the parking capacity would remain constant and unaffected by snowfall or snow storage. The parking garage would not exceed three stories and would contain separate entrances to each floor.

The phasing of the parking structure and associated condominiums proposed for County Parking Lots B and C would be market dependent. The applicant intends to construct the parking structure in one summer building season so winter parking would be uninterrupted for existing Bear Valley residents. The demand for public parking decreases in the summer season, when residents can access their homes by automobile.

It is important to note that each under-building parking area would have proper ventilation and air circulation per building code.

Pedestrian Circulation

Because of the heavy and unpredictable amounts of snowfall in the winter months, pedestrian access to retail and amenity spaces would be provided primarily by covered arcades in addition to localized areas where snow would be plowed or actively melted to ensure pedestrian safety. A pedestrian bridge is planned to connect the South Village parking structure and condominiums to the Village Center, allowing foot traffic access over Bear Valley Road and away from vehicles.

Snowmobile Parking and Circulation

The applicant currently allows the public to use a paved parking lot at the southwest corner of its VC-2 parcel (the Lodge Lot) for snowmobile parking. The land is made available by the applicant for these uses by a license agreement with the County on a year-by-year basis. The Lodge Lot is Bear Valley's most heavily used snowmobile parking area. Automobile access to this parking lot is from No Name Road. The southern part of the parking lot is plowed in the winter, and the northern part is not. Snowmobilers traveling from other areas of Bear Valley park their snowmobiles on the unplowed part of the parking lot while visiting the town or transferring to their automobiles. Snowmobilers also use this parking lot for transferring people and supplies between their autos and parked snowmobiles, or to unload snowmobiles from their trailers onto the snow. No auto parking is allowed in this lot in the winter months. This parking lot is also the ski area shuttle bus stop.

The applicant also has allowed snowmobilers to travel through the southwest corner of its VC-2 property (a distance of about 160 feet) to access the open space area west and north of VC-2 and the eastern snowmobile route out of Bear Valley to USFS land (Figure 2-8). The applicant entered a ~~2007/2008~~ winter season license agreement with the County allowing this access to continue for the 2007/2008 and 2008/2009 seasons while

the County and the Bear Valley residential owners develop a new snowmobile trail plan to replace the current trail through the applicant's property. To accomplish this, the County formed a committee (Bear Valley Snowmobile Committee) to evaluate potential trail routes that provide the necessary connections and to recommend a preferred route (or routes) to the Board of Supervisors.

The Bear Valley Snowmobile Committee held a public meeting in Bear Valley in June 2008 to present the Committee's preferred alternative. This alternative includes re-establishing a trail through Open Space Parcel E (similar to the trail used in the winter of 2006/2007) subject to certain conditions intended to reduce noise impacts and regulate use of the trail. In July 2008, the Committee's recommended alternative was accepted by the Board of Supervisors.

In early 2008, the Bear Valley Snowmobile Committee met several times to evaluate potential future trail routes. These meetings culminated in a public meeting held in Bear Valley in June 2008 to present the Committee's preferred alternative, which is to re-establish the trail through Open Space Parcel E subject to certain conditions intended to reduce noise impacts and regulate use of the trail. In July 2008, the Committee's ~~recommended~~ recommendation was accepted by the Board of Supervisors.

Construction of the project would convert the Lodge Lot parking area to Village uses~~Construction of the Village would eliminate the area currently allowed by the applicant for snowmobile parking~~. The applicant expects to discontinue the license agreement for the 2009/2010 winter season for snowmobile parking and loading in the Lodge Lot. The applicant is proposing a ~~one-way~~ skier access trail through the southwest corner of its VC-2 property leading to the Village Lift. This skier access trail would be located where snowmobiles are currently allowed to pass through VC-2.

In order to maintain snowmobile access through the portion of VC-2 that serves as the Lodge parking lot between Bear Valley Road and the open space area, the applicant is considering accommodating a snowmobile-only lane along its northern property boundary (north of Building 6), but separate from the skier access trail leading to the Village Lift. This trail segment is a necessary connection to the snowmobile trail to be re-established through Open Space Parcel E. Bear Valley Village and Alpine County would sign an agreement allowing the use of this lane for snowmobile access to the open space area west of VC-2. It is the applicant's intention that the agreement would include a "hold harmless" clause and would include speed and noise restrictions on the snowmobiles permitted to use the access route because of its proximity to the residential units, skiers, and Village Center. This EIR assumes snowmobile access is not included in the applicant's proposed project.

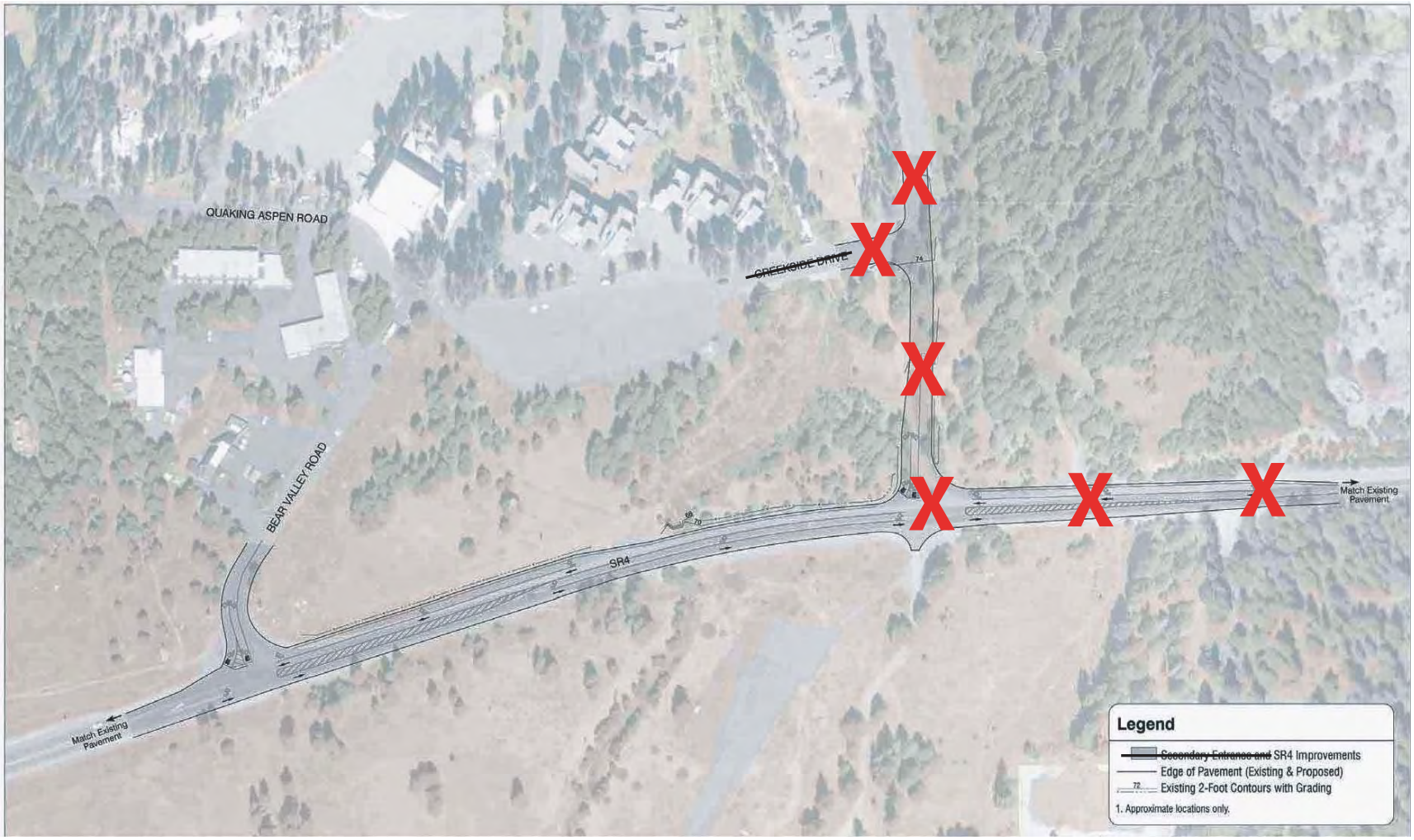
Because the ~~Village would eliminate the~~ Lodge Lot would not~~,~~ longer be available for snowmobile parking ~~area~~, the County is proposing an alternative parking location. The new snowmobile parking area would be located on the west side of Bear Valley Road directly northwest of the road closure and east of the Sundowner Condominiums (Figure 2-8). Site preparation would require removal of about 10 trees, and may require a small amount of fill to raise the surface to the level of Bear Valley Road. Alternatively, snow might be used to raise and contour the surface level rather than earth fill. This parking area would be about the same size as the Lodge Lot parking area. The Lodge Lot

currently has capacity for about 43 snowmobiles plus 23 sleds. The County's proposed parking area would provide similar parking capacity.

~~The County is also proposing to widen the west side of Bear Valley Road by about 25 feet (within the road easement just south of the road closure) to provide capacity for a snowmobile loading area. This would replace some of the snowmobile loading capacity eliminated from the Lodge Lot. Parking would be prohibited in this area.~~

In response to public comments on the Draft EIR about the need for a loading area near the Bear Valley Road winter closure, the County and applicant have refined their proposals to ensure that a loading area would be available for subdivision residents near the Bear Valley Road winter closure. As shown in Figure 2-9 (Proposed Loading Area), the applicant is proposing to construct four automobile spaces on its property for short-term loading on the west side of Building 6. The County is proposing to construct up to two additional loading spaces within the Bear Valley Road easement immediately adjacent to the spaces proposed by the applicant, for a total of five or six loading spaces. Parking would be prohibited in these loading spaces. Permits would be issued to limit use of the loading spaces to subdivision residents, but would not be restricted to snowmobile users. Signage would indicate that use of the loading spaces is restricted to permit holders. The applicant has also modified the proposed driveway configuration on the west side of Building 6 to provide a one-way traffic loop to access the loading spaces.

Due to limited space, no trailers would be allowed at the Bear Valley Road loading area. To accommodate snowmobile trailers, the County is proposing to construct a snowmobile trailer loading area in County Open Space E on the west side of Creekside Drive north of VC-2 just north of the current winter road closure (Figure 2-8). The County would move the winter road closure further north to allow automobile access to the loading area. The snowmobile trailer loading area would allow snowmobilers direct access to the snowmobile trail through Open Space E. The design and layout of the trailer loading area has not been defined, but the size of the loading area would be about 0.1 acre and would be located to avoid the ephemeral drainages (i.e., creeks) in this area. Several trees would be removed for site preparation. A portion of the trailer loading area would be located within the Village Lift alignment.



Source: Bear Valley Village I and II, LLCs

N

0' 50' 100' 200'

Figure 2-7
Roadway Improvements at Full Build-out

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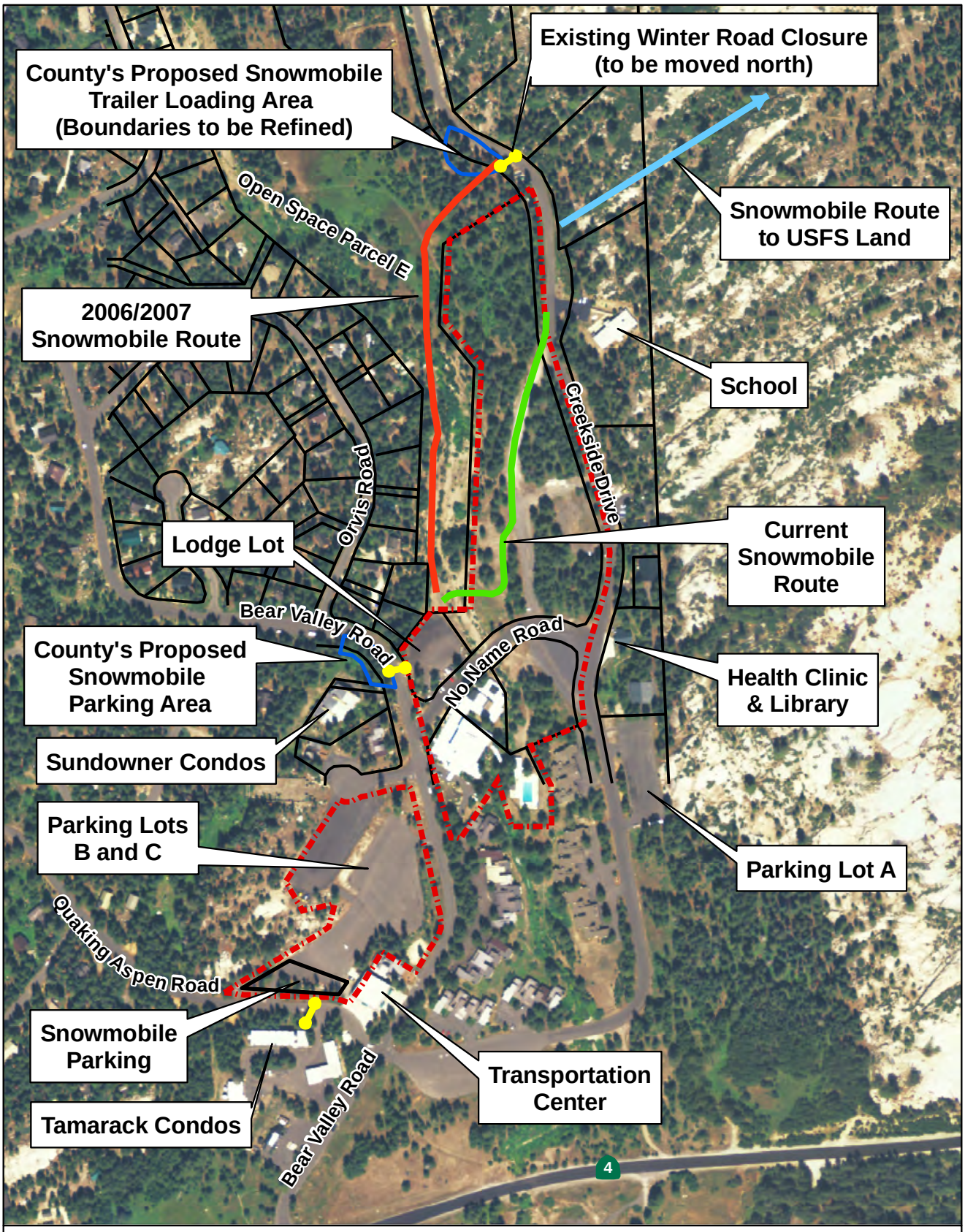

Figure 2-8
Snowmobile Routes and Parking Areas

Bear Valley Village EIR

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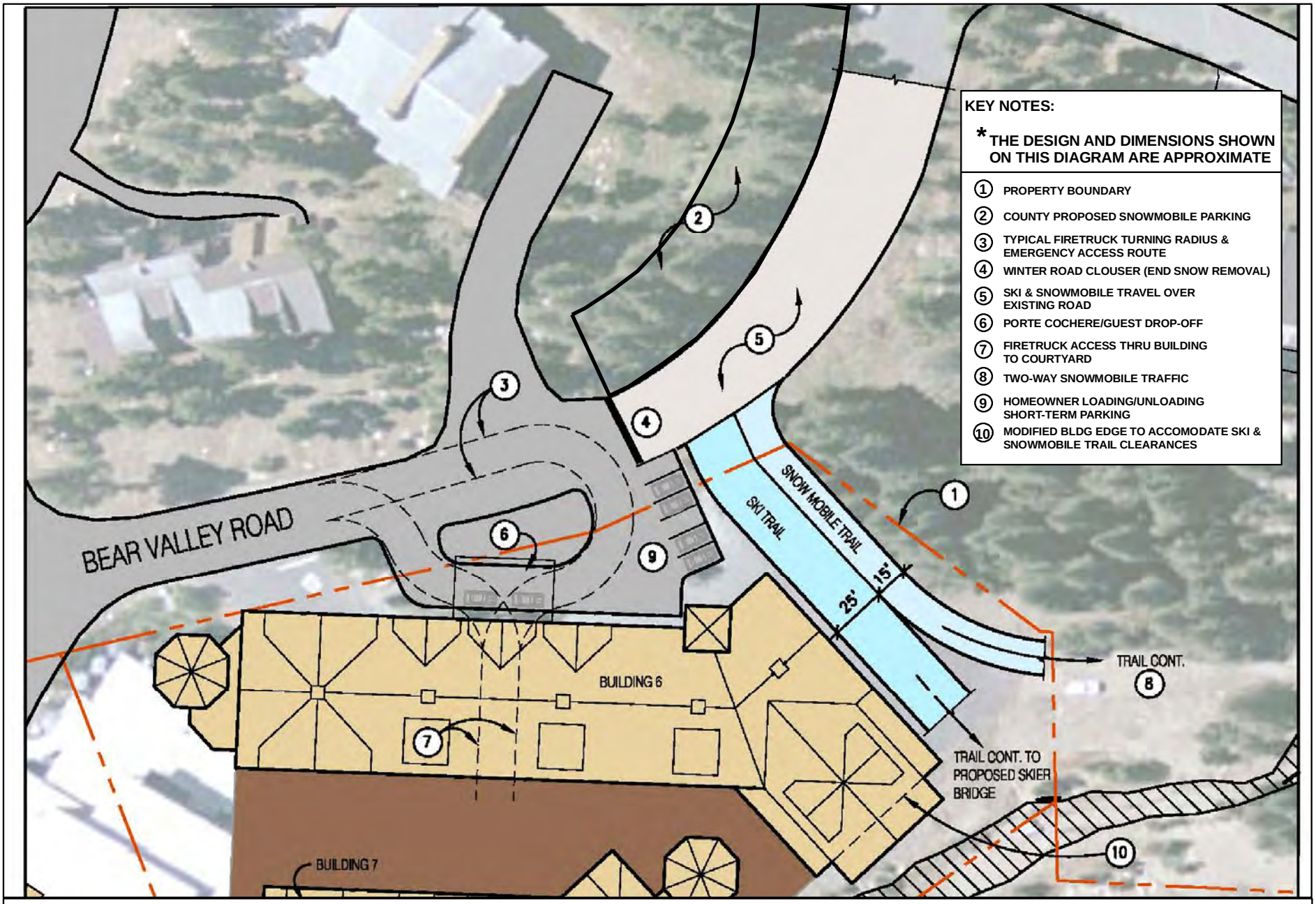


Source: Bear Valley Village I and II, LLCs 2009; SWCA 2009

N

0 30 60 Feet

Figure 2-9
Proposed Loading Area

SWCA

Bear Valley's second most heavily used snowmobile parking area is located behind the Transportation Center and between Parking Lot C~~B~~ and Quaking Aspen Road (Figure 2-8). This parking area is owned by the County. Automobiles access this parking area from the County parking lot, which is paved and plowed. Similar to the Lodge Lot, snowmobilers use this parking lot for transferring people and supplies between their autos and parked snowmobiles, or to unload snowmobiles from their trailers onto the snow. Snowmobilers park their snowmobiles along the north side of Quaking Aspen Road while visiting the town or transferring to their automobiles. The Transportation Center and its customers also use this area to temporarily park snowmobiles being retrieved from or returned to the Transportation Center's storage facility. The employee housing facility is proposed to be located in the northwest corner of this parking area and would eliminate some snowmobile parking capacity.

Considerations for Emergency Vehicles

The project has been designed to accommodate emergency access vehicles throughout the pedestrian-only areas and around the individual buildings. Archways would be provided through Building 6 (at the driveway location off Bear Valley Road) and through Building 8 (connecting the pedestrian bridge from Plaza 2 to Plaza 1) to allow for emergency vehicle access in addition to the flow of pedestrian traffic between the Bear Valley Road closure location and both plazas. Two entry points are proposed for emergency vehicles to enter the plazas: one via the driveway leading into the archway of Building 6, and the other via the plaza/street access between Buildings 9 and 10.

The pedestrian plaza and walkway areas would be designed to accommodate either an approved standpipe for fire flow or a drive-through system for fire and life safety vehicles built to accommodate emergency vehicle weight and maneuverability requirements. The majority of buildings include street frontage to accommodate emergency vehicle access. Buildings with frontages that do not face the street would have standpipes to provide water for fire fighting.

2.5.7 Design Philosophy

The project's architectural character would be based on several key design concepts. These concepts include structures above under-building parking, pedestrian walkways and access, minimized snow impact, balanced building massing and scaling, and a distinct architectural character. Collectively, the applicant intends for these concepts to create a new core Village, of which the scale, visual qualities, and operational layout would harmonize with its surroundings.

The majority of the Village would be composed of three- and four-story buildings, with some five-story maximum heights in selected areas. The massing of the buildings "steps down" at the ends to smooth the transition to taller structures. The arrangement of the buildings also results in numerous public spaces of different sizes that would provide gathering spaces for large assemblies of people or smaller areas for outdoor dining or lounging.

The architectural character of the Village buildings would be designed to complement the natural surroundings. Architectural character would be consistent throughout the project, but the buildings would vary in architectural details and colors. Exterior building materials would be primarily of stone and wood. Every effort would be made to use environmentally friendly products, such as recycled materials and local stone, and sustainable building practices. The architectural color palette would be based on the natural hues of the surrounding environment.

All buildings have been designed to maintain as many existing trees as possible for conservation of natural resources and for further reduction of the visual impact of the proposed buildings from the public roadways. Large irrigated planting areas with native plant materials would be incorporated into the Village to provide shade and natural color, and disguise the fact that the pedestrian plazas are located above a parking structure.

For more information about the applicant's design philosophy for the project, please refer to the *Bear Valley Village Design Philosophy* in Appendix C.

2.5.8 Landscaping Philosophy

According to the applicant's *Design Intent for Landscaping Plan* (Appendix C), the applicant's goal for each building is to integrate the landscaping in such a way that it appears to fit naturally with the least disturbance to existing conditions. The architectural and site design concepts are intended to support and enhance the existing natural landscape by careful integration of the project with the natural features. The intent of the design process is to creatively engage the natural environment into the design process to create an integrated, seamless landscape environment that expresses the textures, forms, colors, and spaces indigenous to the Central Sierra Nevada mountain environment.

The landscape designs would duplicate the plant species, densities, and massing that occur naturally in the project vicinity. Native species tend to occur in groupings instead of single specimens, and each grouping consists of varying heights and sizes of material. Landscape designs would follow this naturally occurring composition of plant materials. Designs would not be complex. Layering of various plant species, reflective of those found in the surrounding area, would help blend the Village into the existing natural environment.

Although the vehicle and pedestrian areas within the Village would be man-made and new, the applicant intends to visually tie these areas into the surrounding environment with the use of native plants and existing site boulders, mimicking native clusters and groupings. In addition, well-maintained drought-tolerant grasses may be used around buildings where appropriate and nonnative flowers may be planted among Village flower plots and Village street planter beds.

In locations other than pedestrian areas, driveways, and streets (i.e., No Name Road), only native plants and local boulders would be used, blending the Village with the surrounding environment. Existing trees would be saved when feasible. Existing trees to be saved would be protected during construction using methods to ensure no damage by heavy equipment is done to the trees.

Retaining walls, where needed, would appear to be rock outcrops that naturally occur in the area. They would be constructed or faced with local stone, with the larger stones located at the bottom. Walls taller than 6 feet would step, have a batter (an inclined face), and provide pockets for plantings.

To provide a transition into the native landscape, a native wild seed mix for the area would be hydroseeded over all areas that are disturbed during construction but would not be covered by landscaping or structures. If needed, the hydroseeded areas would have a temporary irrigation system to ensure a quality establishment.

2.5.9 Utilities

The project would include construction of all required utility infrastructure, including sewer and water lines, and underground lines for all "dry utilities" (e.g., electricity and telephone). The project would be served by the Lake Alpine Water Company (LAWC) and Bear Valley Water District (BVWD) for water and sewer. The applicant is also proposing an on-site propane storage and delivery system to serve the project. PG&E would provide electricity and AT&T would provide telephone service to the project through existing underground lines located under many portions of the project area and adjacent streets.

Water Delivery System

LAWC would provide water to the Village. The applicant would install the appropriate infrastructure to provide for domestic and fire flow and would pay for associated connection costs per the LAWC fee structure. The project would include construction of new water lines and abandonment or removal of some existing lines (Figure 2-~~9~~10). New water lines would be located primarily within road rights-of-way or within the project area. Existing water lines to be bypassed would be abandoned in place or removed.

Wastewater Collection and Treatment

Wastewater collection and treatment service would be provided by BVWD. BVWD is in the design phase to upgrade its wastewater treatment plant from a secondary to a tertiary treatment system. The applicant would pay for associated costs per the BVWD fee structure. The project would include construction of new sewer collection lines and abandonment or removal of some existing lines (Figure 2-~~9~~10). New sewer lines would be located primarily within road rights-of-way or within the project area. One new sewer line serving the North Village, however, may need to cross Bear Creek west of the project area. Existing lines to be bypassed would be abandoned in place or removed.

Stormwater Drainage

Stormwater runoff and snowmelt within the Village area currently flow overland toward Bear Creek or its tributaries. Some of the runoff/snowmelt infiltrates into the ground, and the remainder flows into the drainages. The applicant intends to maintain the existing sheetflow drainage method wherever possible to minimize grading. The applicant would

construct bioswales, fossil filters, or similar methods for controlling pollutants and contaminants generated by the development. The applicant intends to install erosion control fabric along the banks of Bear Creek to reduce scour. Natural vegetation would be allowed to grow through the fabric to stabilize the stream banks, and large rocks would be placed on the fabric in certain locations where needed to protect the banks.

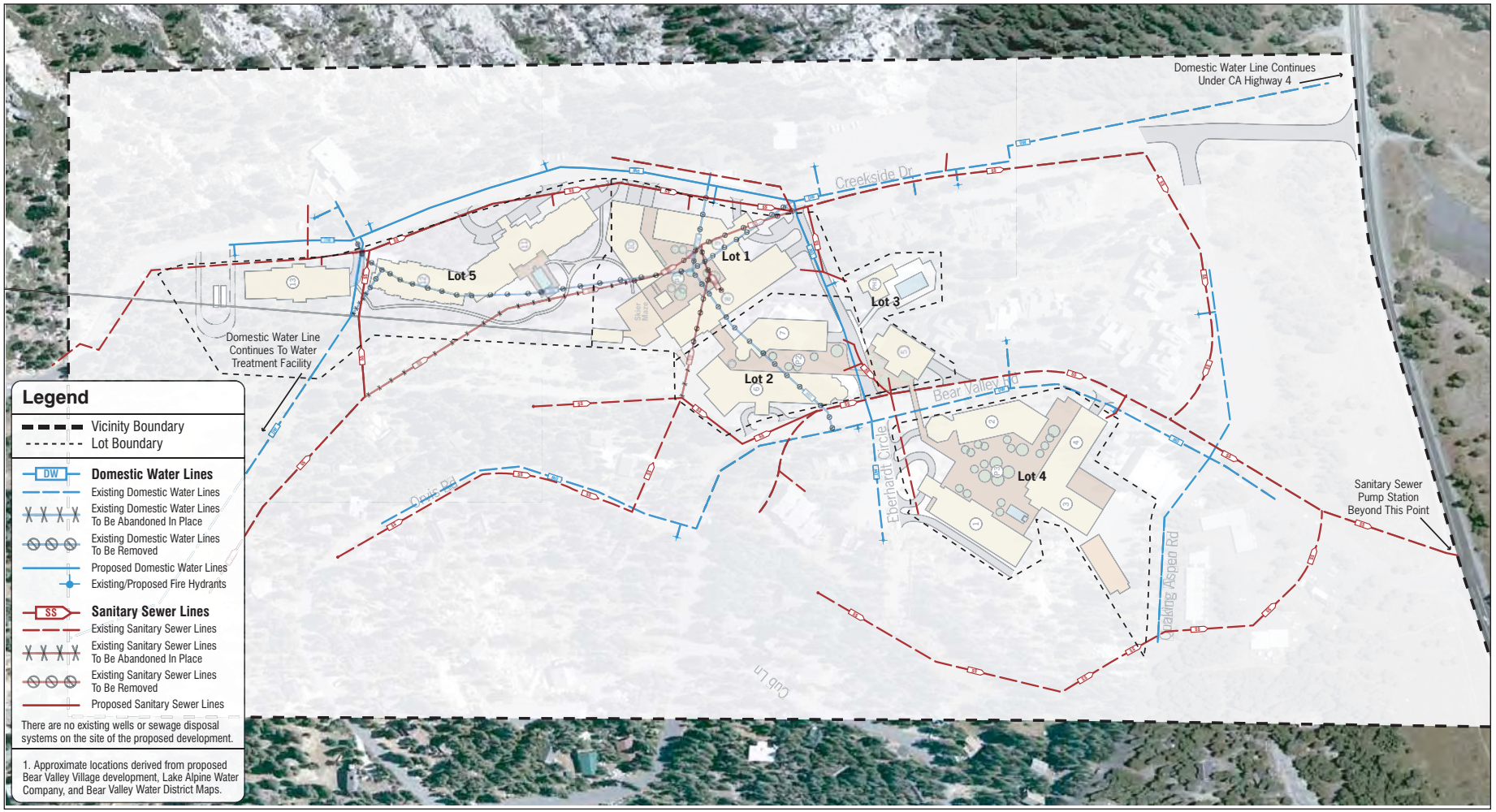
Propane System

Due to California's Title 24 energy efficiency standards, the use of electricity for heating would be limited. The applicant proposes up to five wood-burning fireplaces throughout the Village for aesthetic enhancement.

Because natural gas is not available in Bear Valley, the applicant is proposing propane gas as the fuel for all other fireplaces, heating, and localized snow-melting. The applicant proposes to place two 50,000-gallon propane tanks underground north of Building 13 to serve the Village (Figure 2-2). Service vehicle access to the tanks would be from a separate driveway off of Creekside Drive. The propane system would be designed and constructed in accordance with all applicable fire, safety, and building codes. The system would include all applicable safety measures required by these codes, such as minimum setbacks from buildings, lot lines, and ignition sources.

Solid Waste

Each building would contain solid waste and recycling containers adequate for each building's use. These containers would be located in several designated locations in the under-building parking areas and sized appropriately. Each condominium building would be responsible for the collection and disposal of solid waste and recycled material through the building's homeowners association. Retail and commercial tenants would be provided with containers in designated locations for their specific use.



Source: Bear Valley Village I and II, LLCs

N

0 150' 250' 500'

Figure 2-10
Water & Sewer Lines

2.5.10 Construction, Grading, and Environmental Protection Features

Construction Staging and Access

Bear Valley Village

Construction staging areas would be established during project development. Fenced staging areas for the Village portion of the project would be located on disturbed sites and would be used for vehicles, equipment, materials, fuels, lubricants, and solvent storage. The stockpiling or vehicle staging areas would be identified in the improvement plans and would be located as far as is practical from existing dwellings and protected resources in the area. All construction staging areas for the Village portion of the project would be located on applicant-owned land. Construction vehicles and equipment would access the staging areas using existing County roads.

The applicant is considering a temporary concrete batch plant in the town of Bear Valley to produce the concrete needed to construct the project. The batch plant would be located within the applicant's development boundary on ground that has already been disturbed by grading or development. The applicant is not proposing that the batch plant produce or provide concrete for other projects, but would consider providing concrete to other projects. This EIR assumes the applicant will construct and operate a temporary batch plant.

Village Lift

For Village Lift construction, several staging areas would be used to store construction equipment, lift materials, raw materials, trees, and slash. At the ski area, the RV parking lot, Koala Rocks, and Tuck's Traverse would be used for storage (Figure 2-4). An additional storage area would be required where the lift line corridor crosses the PG&E utility road just north of the town boundary. Staging areas within the Village portion of the project area would also be used. Construction limits would be clearly defined and all wetlands would be completely avoided.

During the winter construction season, construction vehicle and equipment travel routes would be built only with compacted snow to minimize ground impacts and disturbances. The compacted snow travel routes would be used to skid trees to staging areas for removal or burning plus access for lift tower foundation excavation. The compacted route would go from the top chair lift terminal to the bottom terminal, following the 50-foot-wide lift easement. In addition, short, compacted-snow spur routes may also be needed. Oversnow vehicle access would include but not be limited to snowmobiles, snowcats, drilling rigs, and excavators. Access to the snow travel route may be necessary using the lift easement from Granite Vista Road, Flynn Road, or the PG&E utility road.

General summer construction access would be required from several locations along the lift line. To access the top terminal at Koala Rocks, the existing summer access roads at the ski area would be used and the lift line would be accessed from Bono's Alley. The PG&E utility road would be used wherever it crosses the lift easement. In addition,

access would be required from Creekside Drive where the road crosses the lift easement. Generally, motorized travel would be limited to the 50-foot lift line easement between the top and bottom terminals. Additional site-specific consideration for access may be required for certain towers and foundations.

A 3-degree bend in the lift line is needed near the USFS/private land boundary, requiring a multi-tower configuration to be constructed to accommodate this change in direction (Figure 2-4). Ground access would be needed to construct and maintain these assemblies. A temporary access road would be built from existing roads into this area. The road would be rehabilitated to its near-natural state, but an all-terrain vehicle (ATV) track would remain for maintenance purposes. Furthermore, there would be access on the utility road from the ski area's vehicle maintenance shop down to Granite Vista Road and Creekside Drive into Bear Valley. The vehicles accessing these routes would include but not be limited to utility trailers, log-skidders, loaders, drilling rigs, excavators, crawlers, bulldozers, pickup trucks, and ATVs. The use of Granite Vista Road and Flynn Road would be necessary in two- to three-week blocks, up to three times per summer, as construction progresses.

Several lift tower foundations may require the foundation cages and concrete to be flown into the site. If this becomes necessary, foundation cages, concrete, and lift towers would be installed using a helicopter based out of the staging areas.

Grading

Excavations and embankments would be necessary to construct building pads and related improvements, including utility lines. Retaining walls would be necessary in some locations to reduce the horizontal extent of grading and thereby minimize disturbance of natural areas. Below-grade (basement) retaining walls within buildings would be made from reinforced concrete. Excavations and embankments adjacent to open areas and roads would use a combination wall composed of reinforced concrete, native stone rockery, and masonry units (i.e., keystone block). Maximum retaining wall heights would be about 10 feet.

The maximum depth of any excavation would be about 20 feet. Construction-phase slopes would not be steeper than about 1.5:1 (horizontal:vertical). Permanent cut-and-fill slopes are not expected to be steeper than 2:1 (horizontal:vertical).

The applicant anticipates that approximately 9,000 cubic yards (cy) of material from Phase 1 and 8,000 cy from Phase 2 would need to be excavated from the construction areas. Some of this material might be used on-site. The remaining material would be hauled away in trucks to appropriate legal fill disposal sites using existing roads and highways. Generally, haul vehicles are anticipated to be highway-legal dump trucks with capacities up to approximately 20 tons per vehicle.

Materials that may be imported to the proposed project site include but are not limited to aggregate base rock for roadway and parking area sub-grade, sand bedding and backfill for utility lines, and crushed rock for building and foundations.

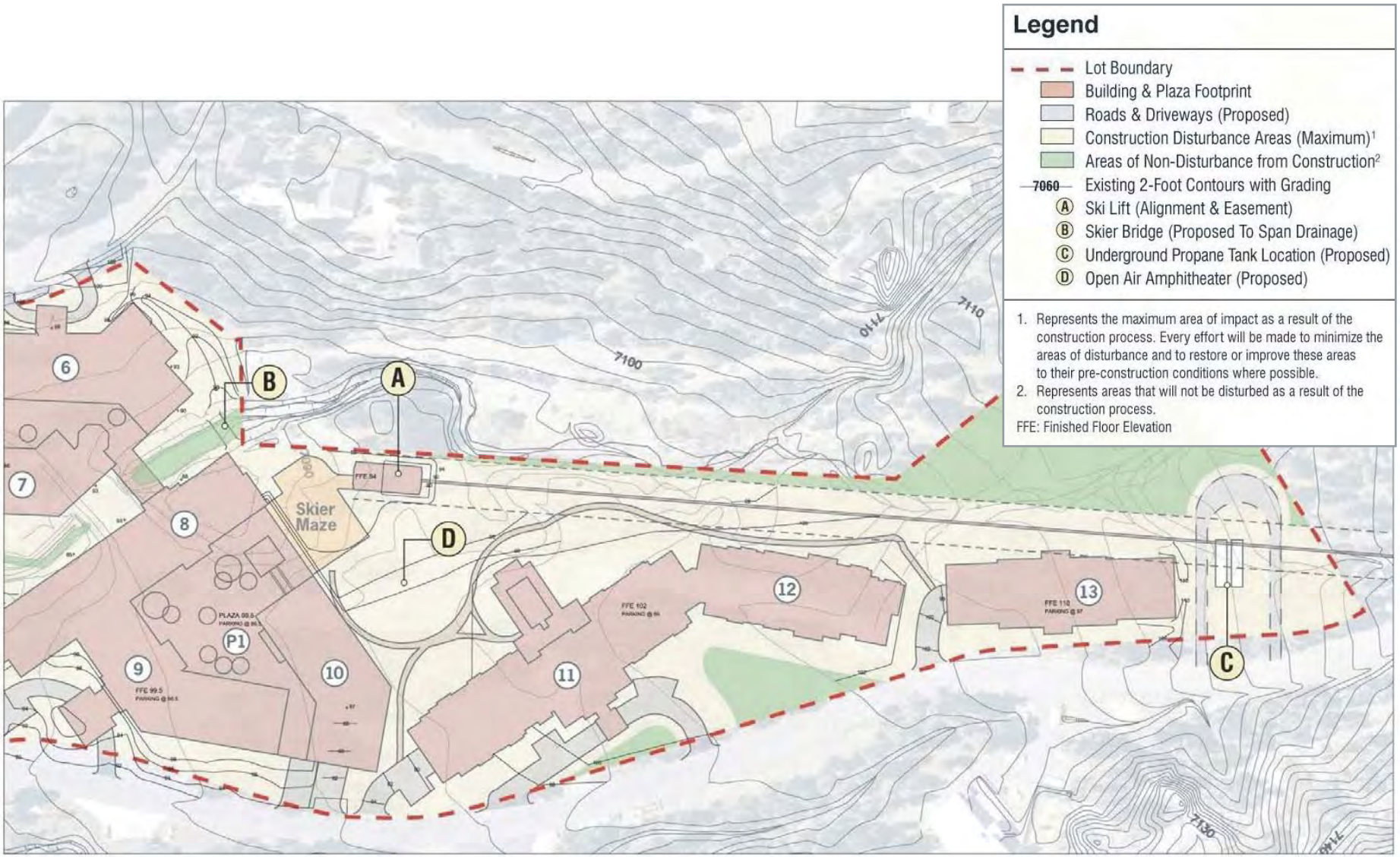
A substantial portion of the Village project area would require land clearing, grading, or trenching. Figures 2-10, 2-11, and 2-12 show the limits of grading and land disturbance proposed by the applicant within the Village.

Environmental Protection Features

The applicant is proposing to incorporate a variety of environmental protection features into the design and construction of the project. These features are described in the *Construction Criteria for Proposed Bear Valley Village* and *Construction Criteria for Proposed Village Lift* documents (Appendix C).

These features address:

- Water quality best management practices for construction
- Erosion and sediment control
- Revegetation
- Avoidance of sensitive natural resources during construction (e.g., wetlands)
- Construction scheduling to avoid wildlife disturbance (e.g., no construction in certain locations on USFS portion of lift line from April 15 to July 15)
- Equipment maintenance
- Environmental training and awareness
- Timber cutting methods



Source: Bear Valley Village I and II, LLCs

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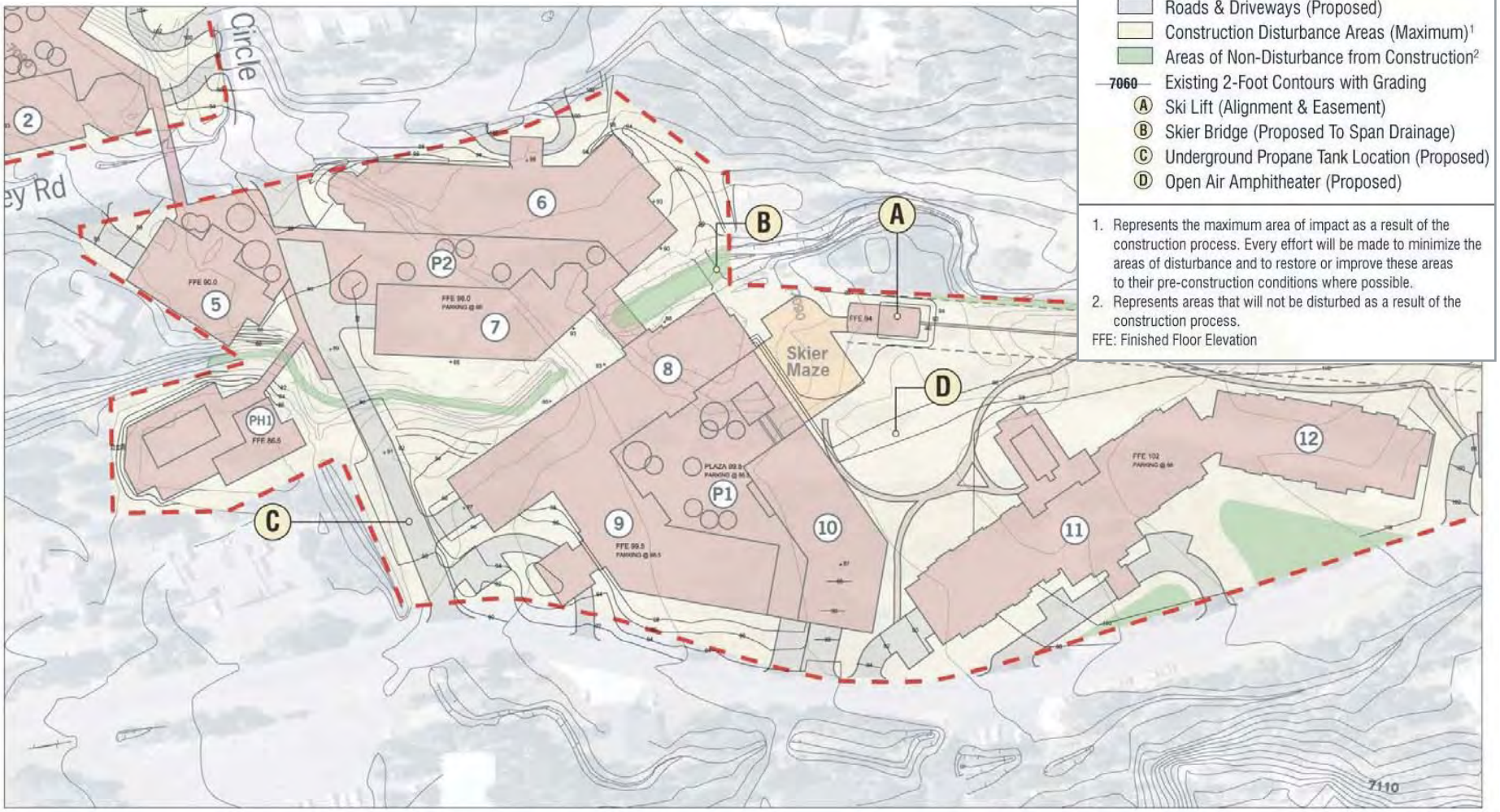
0' 50' 100' 200'

Figure 2-11
Grading and Land Disturbance
North Village

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS



Source: Bear Valley Village I and II, LLCs

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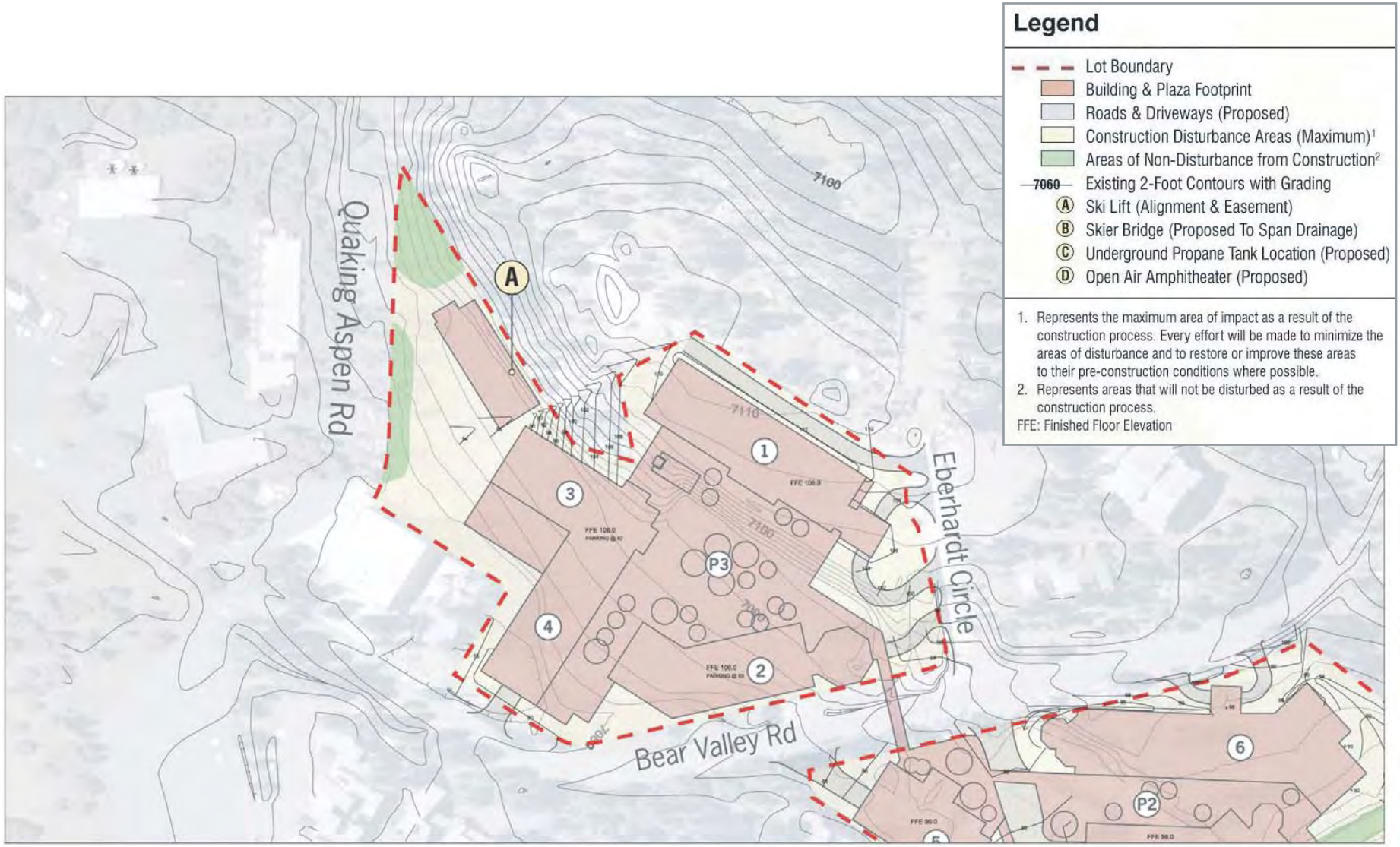
0' 50' 100' 200'

Figure 2-12
Grading and Land Disturbance
Village Center

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS



Source: Bear Valley Village I and II, LLCs

N

0' 50' 100' 200'

Figure 2-13
Grading and Land Disturbance
South Village

SWCA ENVIRONMENTAL CONSULTANTS

2.6 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS

Construction of the project may require several county, state, and federal permits or approvals. Table 2-4 provides a list of the possible permits or discretionary actions and the agencies responsible for issuing the permits or approving the action. Additional permits may be required. These agencies may use the EIR for their review or approval process.

Table 2-4. Possible Permits or Discretionary Actions

Responsible Agency	Permit or Discretionary Action
Alpine County Board of Supervisors	General Plan Amendment and Zone Change Applications
Alpine County Board of Supervisors	Development Agreement
Alpine County Board of Supervisors	Subdivision maps
Alpine County Board of Supervisors	Conditional use permits
Alpine County Board of Supervisors	Approval for use of County owned open space/common area for ski runs
Bear Valley Residents, Inc.	Authorization of public use skiing in the BVRI common areas
USFS	NEPA review and compliance (42 USC Section 4321 et seq.)
USFS	Approval of the Village Lift and Ski Runs
California Division of Occupational Safety and Health	Permit to operate the Village Lift (a passenger tramway)
California Transportation Commission	Encroachment permit
Central Valley Regional Water Quality Control Board	Clean Water Act Section 401 certification for 404 permit Construction stormwater NPDES permit
California Department of Fish and Game	State Endangered Species Act compliance Section 1602 Streambed Alteration Agreement
U.S. Army Corps of Engineers	Clean Water Act Section 404 permit

CHAPTER 3
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

INTRODUCTION TO THE ENVIRONMENTAL IMPACT ANALYSIS

3.0.1 Overview of Environmental Analysis

This chapter describes the environmental and regulatory setting of the project area and evaluates the environmental effects that would occur with implementation of the project. Each resource section includes a summary of applicable laws, regulations, and policies; a description of the existing conditions in the project area; the thresholds for determining impact significance; an impact analysis; and a list of mitigation measures to reduce significant impacts. Cumulative impacts of the project with other foreseeable projects in the area are evaluated in Chapter 4, potential impacts related to climate change generated by the project are discussed in Chapter 5, and growth-inducing effects of the project are discussed in Chapter 7.

This chapter evaluates both direct and indirect environmental effects of the project. For example, the Village project could directly and indirectly affect snowmobile parking capacity and circulation patterns. The ~~Village~~ project would convert ~~remove~~ the Lodge Lot snowmobile parking area ~~for construction of the~~ to Village Center uses, thereby reducing snowmobile parking capacity in the Village. This would be a direct effect of the project. The project would increase the number of residents and visitors to Bear Valley, possibly increasing snowmobile use in Bear Valley. This would also be a direct effect of the project. The applicant may choose to discontinue public snowmobile travel through its property, thereby changing snowmobile circulation patterns within Bear Valley. This would be an indirect effect of the project.

The new and modified ski runs returning to Bear Valley from the ski area are considered connected actions directly related to the Village Lift, and are evaluated at a project level in the Environmental Impact Report (EIR). The ski area is also seeking approval from the U.S. Forest Service (USFS) for other improvements at the ski area that are not directly related to the Village Lift. These improvements are considered to be related projects and are evaluated in the cumulative impact analysis in Chapter 4 (Cumulative Impacts).

3.0.2 Effects Found Not to Be Significant

Impacts related to agricultural resources, geology, hazards and hazardous materials, and mineral resources are discussed briefly below. Impacts to these resources were found not to be significant, and are not considered further in the EIR.

Agricultural Resources

No portion of the project area supports agricultural resources. Therefore, the project would have no impact on agricultural resources.

Geology

Seismic Hazards

The project area is not located within a seismically active zone. The nearest active fault zone is the Genoa Fault, located 20 miles northeast of Bear Valley along the eastern escarpment of the Sierra Nevada (Alpine County 2007). Neither this fault nor more distant faults are expected to involve fault rupture or seismically related ground failure due to their distance from the project area. The project area is classified by the California Building Code (CBC) as located within seismic region Zone 3. Construction procedures that meet current CBC requirements should minimize the effects of possible seismic shaking. Therefore, it is anticipated that the construction of all proposed structures meeting the 2001 CBC would minimize non-liquefaction-related seismic impacts to a less-than-significant level. Seismic-related liquefaction hazards are discussed in Section 3.14 (Soils).

Slope Stability

The Village portion of the project area is located in the relatively flat valley bottom along Bear Creek. There are no nearby steep slope areas that would create a landslide risk within the Village area.

The 1.5-mile-long Village Lift would be constructed along a ridgeline between the Village at 7,100 feet above mean sea level (msl) and the ski area at 8,200 feet above msl. The average slope along the lift alignment would be 14 percent. The steepest section of the alignment is the uppermost 0.25-mile section of the lift, where the slope is about 30 percent. The upper portion of the lift alignment is underlain by the Mehrten Formation (a type of volcanic rock that includes broken pieces of other rock swept up in the cooling magma). The lower portion of the lift alignment is underlain by granitic rock. These two rock types also underlie the ski area. No landslides or slope stability hazards are known to occur within the lift alignment or vicinity of the new ski runs (Stanislaus National Forest [SNF] n.d.). The Village Lift and ski runs would be engineered using the best professional standards. Neither the Village Lift nor the new ski runs are expected to create a risk of landslides.

Avalanche Hazards

The Village portion of the project area is located in the relatively flat valley bottom along Bear Creek. There are no nearby ridges or slopes that would create an avalanche risk within the Village area.

According to the Bear Valley Ski Area Expansion Final Environmental Impact Statement (EIS), the overall risk for avalanches within the portion of the project area on USFS land is low and can be controlled by conventional methods. The ski area routinely employs avalanche control experts when needed to remove all potential avalanches before skiing is allowed (SNF n.d.). This practice would continue within the expanded ski area to ensure skiers on the new runs would not become endangered.

Other Geologic Hazards

The Preliminary Geotechnical Conclusions report prepared for the North Village and Village Center portions of the project area identified potential impacts related to liquefaction. This issue is evaluated in Section 3.14 (Soils). The geotechnical report did not identify geologic issues related to expansive soils, lateral spreading, subsidence, or collapse (Condor Earth Technologies, Inc. 2006).

Hazards

The project would require the routine transport, use, storage, and handling of construction-related chemicals, including fuels, solvents, and paints. Such handling, however, would be performed in compliance with applicable state and federal laws and would not create a significant hazard to the public or the environment. The project area is not within a listed hazardous material site.

No public airports are located within 2 miles of the project area. A private airstrip is located approximately 0.75 mile southwest of the project area on the south side of State Route (SR) 4. Air traffic at this landing strip is very infrequent. The flight pattern for take-off and landing on this airstrip is from the south end of the airstrip, which is approximately 1 mile from the project area. Safety hazards are considered less than significant since the air traffic pattern does not extend over the project area.

The project could interfere with oversnow access and reduce response times for local emergency service providers. This issue is evaluated further in Section 3.3 (Public Services).

Hazards related to wildland and structure fires are evaluated in Section 3.3.

Mineral Resources

There are no known locally important mineral resource recovery sites or known mineral resources within the project area. Therefore, none would be affected by the project.

3.1 LAND USE

This section describes land uses in the project area and immediate vicinity and addresses issues related to consistency with the Bear Valley Master Plan (BVMP), and County zoning designations. This section also evaluates the Village Lift's consistency with the Stanislaus National Forest's (SNF's) Forest Plan Direction.

The project would not physically divide the established community of Bear Valley. The project would include public plazas with pedestrian thoroughfares, thereby improving pedestrian access across the northern portion of the village core. No Name Road would be impassable for a minimum of three years during construction but, once reopened, would provide automobile and pedestrian access across the northern portion of the village core similar to the existing alignment of No Name Road. Physical division of an established community is not discussed further in the Environmental Impact Report (EIR).

3.1.1 Regulatory Setting

Alpine County General Plan

Land use in the project area is guided by the **Alpine County General Plan** (General Plan). The General Plan was adopted in 1999. The Conservation Element was modified in 2003, the Housing Element was revised and readopted in 2004, and the Land Use Element was modified in 2005 (Alpine County 2005a).

The General Plan is a comprehensive, long-range plan for the physical development of land within the County. The General Plan contains goals, policies, objectives, and implementation measures designed to guide growth and development within the County. The General Plan Land Use Map represents the County's intentions regarding future growth, and designates areas of the County in which certain types of development would be best located (Alpine County 2005a). The General Plan's land use designations for the project area are described in the Environmental Setting.

The General Plan Land Use Element sets forth objectives for the provision of specific public services or facilities needed to aid the County's orderly growth and development. It lists policies and actions necessary to finance public services and facilities. Other elements of the General Plan (e.g., Conservation Element, Circulation Element) list policies related to environmental issues and are intended to avoid or mitigate environmental effects. These policies are described in other relevant sections of the EIR (e.g., 3.6 [Biological Resources], 3.9 [Transportation and Circulation]).

Bear Valley Master Plan

In 1978, Alpine County approved a Master Plan for the future development of Bear Valley. The **BVMP** has been the planning document guiding all development in Bear Valley since that time. The BVMP established land use designations for Bear Valley, which essentially function as zoning designations. Where applicable, the BVMP

establishes the maximum density, the maximum number of units and beds, the acreage, and the parking requirements for each land use. The BVMP land use map shows locations for various community service and recreational land uses, including a chair lift connecting Bear Valley to the ski area (Figure 3.1-1). The BVMP's land use designations for the project area and surrounding properties are described in the Environmental Setting.

Zoning

The **Alpine County Zoning Ordinance** (County Ordinance No. 453) establishes development zones and describes the intended purpose for each zone, the principal permitted land uses within each zone, and the uses allowed under a use permit. The official zoning maps are kept at the offices of the County Planning Department and the County Clerk in Markleeville.

Forest Plan Direction

The SNF's **Forest Plan Direction** (SNF 2005) presents the SNF's current Forest Plan management direction. Management direction for the SNF is stated in terms of Forest Goals, Management Goals and Strategies, Forest Objectives, Management Practices, Forestwide Standards and Guidelines, and specific Management Area or Land Allocation direction. Combined with laws, regulations, and National and Regional U.S. Forest Service (USFS) policies, the management direction provide the long-range direction for managing the SNF.

Figure 3.1-1. BVMP Zoning and Land Use Designations

3.1.2 Environmental Setting

On-site and Surrounding Land Uses

The Village portion of the project area is located in the central core of Bear Valley. Much of the Village project area has been developed with the Lodge, Lodge pool, Commercial Center, and various parking lots, including County Parking Lots B and C (see Figure 2-3). The remainder of the Village project area primarily supports lodgepole pine forest and small areas of riparian scrub, marsh, meadow, seasonal wetland, and several ephemeral drainages.

Land uses surrounding the proposed Village Center and North Village include the Creekside Condominiums to the south; the Bear Valley School, the Bear Valley Water District buildings, the community services building, the community center, and the north parking lot on the east; County open space on the west and north; and County Parking Lots B and C, and residential land uses (i.e., single-family residences, Sundowner Condominiums, and Condo Bear) to the west (see Figure 2-3).

Land uses surrounding the proposed South Village include the County-approved 96-unit Silver Mountain Condominiums to the west; Sundowner Condominiums and Condo Bear to the north; Bear Valley Lodge and Creekside Condominiums to the east; and the Bear Valley Transportation Center, the Sheriff and Fire Station, and Tamarack Condominiums to the south (see Figure 2-3).

A portion of the Village Center project area is currently used as a snowmobile parking area (the Lodge Lot) and oversnow travel route. The applicant currently allows snowmobilers to travel through the southwest corner of its Village Center-2 (VC-2) property (a distance of about 160 feet) to access a groomed snowmobile trail that runs through the applicant's property from the Lodge Lot to points east and north. This is the most direct oversnow route connecting Bear Valley Road and the town center with the public buildings (i.e., school, health clinic) east of Creekside Drive, development on the east and northeast side of Bear Lake, and the public access route to USFS land and the extensive recreational snowmobile areas east of Bear Valley. Public use of this trail is currently permitted by the applicant through a lease agreement with the County. In winter 2006/2007, the applicant ceased to make available the use of its land for the trail, and the County groomed a new trail through Open Space Parcel E. The applicant entered into a ~~2007/2008~~ winter season license agreement with the County allowing this access to continue for for the 2007/2008 and 2008/2009 seasons ~~an additional year~~ while the County and the Bear Valley residential owners develop a new snowmobile trail plan to replace the current trail through the applicant's property. A snowmobile route through the Lodge Lot parking area that connects Bear Valley Road with the east and northeast part of town (and passing through Open Space Parcel E, Bear Valley Village property, or both) is a vital transportation route for the community (Refer to Section 3.10 [Snowmobile Circulation] for further discussion).

The Village Lift alignment is almost entirely undeveloped, except for crossings at Creekside Drive, a residential driveway, and a Pacific Gas and Electric (PG&E) access road in the mountainous portion of the alignment. The lift alignment primarily supports red fir forest, mixed conifer/huckleberry oak, and chaparral, with small areas of

lodgepole pine forest, seep, and meadow, and several ephemeral drainages. The ski runs returning to Bear Valley pass through undeveloped mountainous terrain similar to the lift alignment.

General Plan Land Use Designations

The General Plan land use designation for the town of Bear Valley, including the Village, is Planned Development (PD). The PD designation is applied to areas where relatively intensive developments are desirable provided they are carefully planned and closely supervised to ensure conformance with the goals, objectives, and policies of the General Plan. Appropriate uses include any residential, commercial, institutional, and recreational use arranged or designed to result in an integrated and organized development deemed acceptable by the County. The PD designation is intended to serve in conjunction with the County's PD zoning regulations. The project would be consistent with the PD designation.

The land use designation for the portion of the Village Lift alignment (i.e., directly north of the town) is Recreational Site (RS). The RS designation is intended to identify areas that contain, or may contain in the future, recreational facilities, including ski resorts that may draw substantial numbers of people to the County. The ski area is located in the RS designation.

BVMP Land Use Designations and Zoning

The overall zoning for the Village portion of the project area is PD. When combined with the BVMP land use designations, the Village area falls within three different development zones as described below (Figure 3-1.1).

The proposed Village Center and the North Village are located within the VC-1 and VC-2 zones. VC-1 allows 62 residential units with a total of 124 beds (two per unit). VC-2 allows 500 residential units with a total of 1,000 beds (two per unit). The BVMP allows for an undefined amount of commercial and retail uses within VC-1 and VC-2.

The proposed South Village, including the proposed employee housing, is located within the P-3 zone. The P-3 zone is designated for automobile parking and does not allow residential uses.

BVMP land use designations along the Village Lift alignment between VC-2 and USFS land include SF-4 and Multi-Family-12 (MF-12). The lift would also cross County open space within Bear Valley that is not assigned a BVMP land use designation. The proposed Cinch Trail ski run would pass through County Open Space Parcel D. Recreation is an allowed use within open space parcels. Zoning for the Village Lift alignment on USFS land is Agriculture (AG) and Agriculture-Commercial Recreation combined zone (AG-CR).

BVMP land use designations for land surrounding the project area include Community Service (CS), Commercial (C), Parking (P), Multi-Family (MF), and Single-Family Detached (SF).

Forest Plan Direction

The Forest Plan Direction identifies the Bear Valley Mountain Resort ski area as a winter sports site. Management emphasis for winter sports sites is to "provide developed opportunities for winter sports; provide aesthetically pleasing, well maintained, fully equipped facilities for the pleasure and safety of Forest visitors; and to protect proposed winter sports sites for future development" (SNF 2005).

3.1.3 Impact Analysis

Methodology

The project was compared with the County General Plan's land use designations, BVMP land use designations, and County zoning designations to analyze consistency with applicable land use plans, policies, and zoning regulations. Consistency with General Plan objectives for the provision of public services or facilities are evaluated in Section 3.3 (Public Services).

The Village Lift and ski runs would be consistent with the Forest Plan Direction's management emphasis (described above). This issue is not discussed further.

The results of the snowmobile circulation and noise analyses in other sections of the EIR were used to evaluate overall land use compatibility. Land use changes within the proposed Village Center were also evaluated to determine whether changes to snowmobile routes through the project area would physically divide an established community by obstructing these routes.

Levels of Significance

Adverse impacts to land use and planning would be considered significant if the project would:

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Create physical conflicts with existing or planned land uses in neighboring areas caused by factors such as traffic congestion, noise, and lighting.

Impacts and Mitigation Measures

Impact LU-1: With adoption of the proposed BVMP amendment, the proposed land uses would be consistent with BVMP land use designations and zoning.

The Village Center and the North Village are located within VC-1 and VC-2 zones. VC-1 allows 62 residential units and VC-2 allows 500 residential units for a total of 562 units. An undefined amount of commercial and retail uses are also allowed within the VC-1

and VC-2 zones. The project would include a total of 344 Equivalent Dwelling Units (EDUs) within the VC-1 and VC-2 zone plus retail and commercial uses. The applicant proposes to define an EDU as 1,350 square feet (sf) of residential space. Based on this definition, the project would result in about 218 fewer residential units in the VC-1 and VC-2 zones than the maximum allowed (562 units – 344 units = 218 units).

The South Village is located within the P-3 zone (designated for automobile parking). Residential land uses are not allowed in the P-3 zone; however, the project would transfer 148 units of the allowed residential density from the VC-1 and VC-2 zones to the P-3 zone for the proposed multi-family residences at the South Village. The applicant's proposed BVMP amendment would allow residential, commercial, and retail uses in addition to parking in the current P-3 zone.

With the proposed BVMP amendment for the South Village, the project would be consistent with BVMP land use designations and zoning and would result in a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would be consistent with the amended BVMP land use designations and zoning.

Impact LU-2: The project would create physical land use conflicts related to exterior noise levels generated by snowmobiles near existing and proposed residential land uses.

This EIR evaluates the physical environmental effects of the project, including effects that could create physical conflicts with existing, planned, or approved land uses in neighboring areas. These effects are evaluated in various sections of this EIR and include:

- Blocking of snowmobile access to the snowmobile parking area behind the Transportation Center by construction of the employee housing facility (Section 3.10);
- Exposure of existing residential land uses to excessive exterior noise levels from the proposed snowmobile parking area west of Bear Valley Road (Section 3.12);
- Exposure of project residential land uses to excessive exterior noise levels from the snowmobile parking area behind the Transportation Center (Section 3.12).

The first land use compatibility impact could be mitigated to a less-than-significant level, whereas the other two cannot. As discussed in Section 3.10 (Snowmobile Circulation and Parking), removing trees along the north side of Quaking Aspen Road to provide a new snowmobile access route between Quaking Aspen Road and the parking area would ensure snowmobile circulation patterns in the parking area behind the Transportation Center would remain adequate to serve the community.

As discussed in Section 3.12 (Noise), however, no mitigation measures have been identified to feasibly reduce exterior noise levels near the proposed and existing snowmobile parking areas. These two impacts would remain significant and unavoidable.

Level of Significance After Mitigation: Significant and unavoidable because no mitigation measures have been identified to feasibly reduce exterior noise levels near the proposed and existing snowmobile parking areas.

Significant and Unavoidable Impacts

Impact LU-2: The project would create physical land use conflicts related to exterior noise levels generated by snowmobiles near existing and proposed residential land uses.

3.2 POPULATION, HOUSING, AND EMPLOYMENT

This section describes the existing population and housing setting in Bear Valley and Alpine County, as well as demographic trends and projections based on available documentation (e.g., Alpine County planning documents, Department of Finance (DOF) county projections). The impact analysis discusses direct population growth from the project's new housing and indirect growth inducing impacts related to job creation. The project would not remove housing or displace people; therefore, this issue is not discussed further.

3.2.1 Regulatory Setting

Alpine County General Plan

The **Alpine County General Plan** (2005) provides goals and policies applicable to housing and population within the Housing Element. The Housing Element identifies goals and policies that provide for the development of affordable housing and promote the development of employee housing within ski resort communities. Several specific policies and objectives pertain to this project. Policy 45b states that the County encourages the development of employee housing in the ski resort communities of Bear Valley and Kirkwood. Objective 45A emphasizes that the employee/unit ratio in Bear Valley and Kirkwood should be increased.

The **Bear Valley Master Plan (BVMP)** (Alpine County 1978) is the basis for all development within Bear Valley. It provides guidance for densities, maximum number of residential units, parking requirements, and community service and recreation land use facilities. The project area is designated as Village Center-1 (VC-1), Village Center-2 (VC-2), and Parking-3 (P-3) in the BVMP. VC-1 and VC-2 are zoned for commercial and retail uses and a total of 562 residential units. P-3 is designated for automobile parking only. The BVMP Environmental Impact Report (EIR) estimated that build-out of the BVMP would increase Bear Valley's 1978 permanent population of 175 residents by about 431 residents, resulting in a total permanent population of around 600 residents.

3.2.2 Environmental Setting

Existing Housing and Population

Housing

Table 3.2-1 shows the year 2000 housing stock for both Alpine County and Bear Valley. Approximately 62 percent of Alpine County's housing stock is used for seasonal/vacation use. In 2000, the County had a total of 1,514 housing units, of which 483 were occupied and 935 were for seasonal/vacation use. Bear Valley's housing stock totaled 431 in 2000, with 67 housing units occupied and 364 housing units used for seasonal/vacation use. Therefore, approximately 84 percent of Bear Valley's housing stock is used for

seasonal/vacation use, and about 16 percent is permanently occupied (U.S. Census Bureau 2008).

Nearly all of Bear Valley's permanent residents live in the single-family homes outside the town center. Only one of the town's 160 existing condominiums is occupied permanently, representing a 0.6 percent permanent occupancy rate for Bear Valley condominiums. Virtually all the existing condominiums are used as second homes and/or vacation rentals (Woodrow 2008).

Table 3.2-1. 2000 Housing Stock

	Alpine County	Bear Valley
Total Housing Units	1,514	431
Occupied Housing Units	483	67
Seasonal, Recreational or Occasional Use	935	364
Vacant	96	0

Source: 2000 U.S. Census

Population

The population for Alpine County was 1,208 people in 2000 (U.S. Census Bureau 2008), with an average household population of 2.5 people. The population increased by 46 people to a total of 1,254 people by 2006 (DOF 2008). According to the Alpine County General Plan, the projected population for 2008 is 1,268 (Alpine County 2005a). This would be a 5 percent increase over an eight-year period (Table 3.2-2).

In 2000, Bear Valley's permanent population was estimated to be 133 (U.S. Census Bureau 2008), with an average household population of two people. By 2003, the County estimated the town population to be 135, and projected the 2008 population to be 138 persons (Alpine County 2005a). This would be nearly a 4 percent increase over an eight-year period (Table 3.2-2).

Table 3.2-2. Population Trends 2000–2008

Area	2000	2003	2006	2008	Population Change 2000-2008	Percent Change 2000-2008
Alpine County	1,208	1,223	1,254	1,268	60	4.9
Bear Valley	133	135	NA	138	5	3.7

NA = Information not available

Sources: Alpine County 2005, DOF 2008, U.S. Census Bureau 2008

Characteristics of Employee Housing

Most employment in Bear Valley is seasonal in nature, with the highest rate of employment occurring during the winter ski season. The ski area is the largest winter

employer in the Bear Valley area, followed by the Bear Valley Lodge and the multiple businesses located in the town of Bear Valley.

Bear Valley Mountain Resort

The ski area employs approximately 310 full-time and part-time employees for the 4.5 months constituting the high ski season. Of this number, approximately 35 are full-time, year-round employees. The majority of ski area employees have first or second homes in Bear Valley or in communities along the State Route (SR) 4 corridor to the west (e.g., Dorrington, Arnold, Murphys). The largest exception is the group of international (visa) employees who need seasonal housing. The number of international employees varies from year to year but is typically about 20 percent of the winter workforce (65 employees in winter 2007/2008). About three-fourths of this housing need (i.e., 50 beds) is provided in the town of Bear Valley, with the largest single source being the Base Camp Lodge, with 30 beds. Base Camp was recently purchased by the ski area for ski area employee housing. In addition to Base Camp Lodge, nine beds in the Bear Valley Cross Country building are made available for international ski area employees. The remaining international employees are housed in local rental houses and condominiums or find housing in the communities along the SR 4 corridor to the west. Currently, the supply of available housing in Bear Valley and along the SR 4 corridor meets the ski area's demand for seasonal employee housing.

Town of Bear Valley

Additional seasonal employment is generated by the Bear Valley Lodge, the cross-country ski area, Commercial Center tenants, and other local businesses. In general, the current seasonal employee base located in Bear Valley fulfills the additional employment needs of the local businesses during the winter season. Many of the international employees work both at the ski area and in local businesses in the town of Bear Valley.

The Bear Valley Lodge offers six beds for its employees in their employee housing facility located behind the fire station. The remaining demand for seasonal employee housing is met by the various rental cabins and condominiums located in the town and further down SR 4 to the west.

3.2.3 Impact Analysis

Methodology

The impact analysis for population and housing is based on the latest population, housing, and economic information obtained from the DOF (2008), Alpine County General Plan (2005a), and the U.S. Census Bureau (2008). The project's expected increase in housing and permanent population is compared to planned growth identified in the BVMP. For the purposes of this EIR, one project Equivalent Dwelling Unit (EDU) is assumed to represent one residential unit identified in the BVMP. As discussed in Impact PHE-3, the project's expected increase in demand for employee housing is calculated based on employment generation rates used for other ski resort villages, including Vail,

Colorado (Town of Vail 2006); Placer County (Placer County 2005); and Kirkwood, California (Alpine County 2003).

Levels of Significance

Adverse impacts related to population and housing would be considered significant if the project would:

- Induce substantial unplanned housing growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)
- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)
- Generate demand for employee housing in excess of available supply

Impacts and Mitigation Measures

Impact PHE-1: The project would add 491 EDUs to Bear Valley, which is consistent with planned housing growth identified in the BVMP.

The BVMP allows 562 residential units within the Village project area, specifically within in the VC-1 and VC-2 zones. No residential units are currently allowed in the P-3 zone. The project would provide a total of 491 EDUs plus a 50-person employee housing facility. For the purposes of this EIR, one EDU is assumed to represent one residential unit identified in the BVMP. Because the project would include fewer residential units than allowed in the BVMP, the project would be consistent with the planned housing growth identified in the BVMP. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would be consistent with the planned housing growth identified in the BVMP.

Impact PHE-2: The project would increase Bear Valley's permanent population by about six people, which is within the planned population growth identified in the BVMP.

Bear Valley's permanent year-round population is estimated to be about 138 residents. Only one of the town's 160 existing condominiums is occupied permanently, representing a 0.6 percent permanent occupancy rate for Bear Valley condominiums. Virtually all the existing condominiums are used as second homes and/or vacation rentals.

Similar to existing condominium occupancy, permanent occupancy of the proposed Village condominiums is expected to be very low. Applying Bear Valley's existing condominium occupancy rate of 0.6 percent to the project's 491 privately owned residences, three of the Village condominiums would be permanently occupied.

The average household population for Bear Valley is two people. Assuming three EDUs are occupied year-round, the total permanent population increase generated by the

project would be approximately six people. Employment opportunities generated by the project could alter the characteristics of Bear Valley and further increase permanent population within Bear Valley in addition to the Village residents.

The BVMP EIR estimated that build-out of the BVMP would increase Bear Valley's 1978 permanent population by about 431 residents. The six permanent residents estimated for the project does not represent substantial population growth and is well within the planned population growth identified in the BVMP EIR for build-out of the BVMP. Additional permanent population generated by employment opportunities is also expected to be well within BVMP population projections.This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the permanent population increase generated by the project would not exceed the planned population growth identified in the BVMP.

Impact PHE-3: The project would generate demand for non-construction employee housing in excess of available supply.

The applicant's intent is to increase year-round visitation to Bear Valley, which would increase year-round (non-construction) employment opportunities. For the foreseeable future, however, the winter season is expected to remain Bear Valley's peak season for non-construction employment.

The Village Lift and new ski runs returning to Bear Valley would create about four new full-time equivalent employee (FTEE) positions. However, it is anticipated that some of this increase would be offset through efficiency improvements in other areas of mountain operations and by providing more full-time opportunities to part-time employees (Bear Valley Village I and II, LLC~~Toeniskoetter~~ 2008).

The retail, restaurant, amenity space, and housing proposed for the Village would generate a substantial amount of new jobs in Bear Valley. The project would include 64,000 sf of new retail, restaurant, and amenity space and removal of 16,889 sf of retail, restaurant, and amenity space at the Bear Valley Lodge and Commercial Center, resulting in a net increase of 47,111 sf. The project would also increase housing in Bear Valley by 491 EDUs.

Employee generation rates used by ski resort communities vary widly. The Town of Vail, Colorado uses an employment generation rate of 0.09 FTEE positions for each residential use between 1,000 and 1,999 sf in size (Town of Vail 2006). Placer County uses a generation rate of 0.33 FTEE positions per residential unit and two FTEE positions per 1,000 sf of retail, restaurant, and amenity space for ski resort villages including Northstar-at-Tahoe (Placer County 2005). Alpine County has not adopted standard employment generation rates for ski resort villages.

To be conservative, the following analysis uses the Placer County employment generation rate. Using this rate, the project would increase employment in Bear Valley by approximately 256 FTEE positions during the peak visitation season (Table 3.2-3). When added to the four FTEE positions generated by the Village Lift and new ski runs, the project would generate approximately 260 FTEE positions.

Table 3.2-3. Employment Generation (Non-Construction)

Land Use	Employee Generation Rate/Unit	Units Proposed	Employees Generated (FTEE)
Residential	0.33 per dwelling unit	491 EDUs	162
Retail, Amenity, Restaurant	2 per 1,000 sf	47,111 sf	94
Village Lift and Ski Runs	N/A	N/A	4
Total FTEE			**260**

Source: SWCA 2008

Similar to existing conditions, some of the new jobs created by the project would be staffed by local residents who would not generate additional housing needs, some new jobs would be staffed by seasonal workers requiring seasonal employee housing in or near Bear Valley, and some new jobs would draw new residents to Bear Valley, who would need to buy or rent housing in the area.

For the Kirkwood Specific Plan, Alpine County required the Kirkwood Mountain Resort to provide housing for 30 percent of the resort's average peak season FTEE positions, with the presumption that the existing housing inventory would be sufficient to meet the remaining demand (Alpine County 2003). Using this housing requirement, the Bear Valley Village project would generate the need to house approximately 78 new employees at full buildout (260 x 30 percent = 78).

In addition, the project would generate demand for two sheriff deputies in Bear Valley (see Impact PS-1 in Section 3.3).

The project includes a 50-unit employee housing facility. This facility would accommodate some of the employee housing needs generated by the project, but may not be adequate to meet the demand for entire project. This would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure PHE-3: Develop an Employee Housing Implementation Plan.

The County will require the applicant to develop an Employee Housing Implementation Plan (EHIP) that ensures adequate employee housing is available to serve each phase of the project, including construction phases. The plan shall document the existing seasonal and permanent employee housing supply, estimate the number of new seasonal and permanent jobs that would be generated by each phase of development (including sheriff deputies), estimate the demand for employee housing needed for each phase of development, and describe whether the demand would exceed employee housing supplies. The plan shall describe feasible measures to be implemented by the applicant to ensure adequate employee housing is available for each phase of the project, including construction. Such measures may include but shall not be limited to:

- Construction of the proposed employee housing facility before occupancy of any phase that would cause employee housing demand to exceed available supply
- Construction of employee housing in excess of the 50 units proposed by the applicant
- Establishment of an employee rental housing placement program that matches employees with rooms or houses available for rent in or near Bear Valley
- Rental or purchase of existing housing in or near Bear Valley to be leased or provided to project employees

The EHIP shall be submitted to the Alpine County Planning Department for review and approval as part of the application for the first ~~tentative map (TM) and/or~~ conditional use permit (CUP) for the project. An updated EHIP shall be submitted with each CUP application to the County Planning Department for review and acceptance prior to approval of the requested CUP.

Level of Significance After Mitigation: Less than significant because the Employee Housing Implementation Plan would include the necessary measures to ensure adequate employee housing is available for each phase of project development.

Impact PHE-4: The project could generate demand for construction employee housing in excess of available supply.

The project would involve construction over an extended period of six years or more. The majority of the construction work would be performed during the construction season (between snowmelt and the start of winter), thereby introducing additional short-term employment opportunities in the late spring, summer, and early fall months. However, some indoor construction activities would likely continue into the winter months.

Some construction workers would commute to the job site from their existing homes. Populated areas near Bear Valley include Angels Camp, Sonora, and other foothill communities to the west, Markleeville to the east, and Carson City, Reno, and the Lake Tahoe area to the north. All of these population areas are a one- to two-hour drive from Bear Valley during the non-winter months and would therefore require lengthy commutes.

It is therefore reasonable to assume that some construction workers would choose to relocate to the Bear Valley area while working on the project. A small stock of ~~Rental~~ rental housing is ~~abundant~~ available in Bear Valley, and the demand for rental housing is lower during the non-winter season, which coincides with the construction season. Other rental housing opportunities are available in the foothill communities to the west. In addition, the existing winter seasonal employee housing facilities would be available to construction workers during the non-ski season. The proposed 50-person employee housing facility may also provide construction employee housing opportunities depending on the facility's construction and occupancy schedule.

Although it is difficult to quantify the number of construction employees that would relocate to Bear Valley while working on the project, it is reasonable to assume that construction workers could increase demand for housing during the construction season.

Some ~~Rental~~ rental housing and the existing winter seasonal employee housing facilities would be available to accommodate many construction employees. If the project were to generate demand for construction employee housing in excess of the available supply, however, this would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure PHE-4: Develop an Employee Housing Implementation Plan.

Implement Mitigation Measure PHE-3.

Level of Significance After Mitigation: Less than significant because the plan would include the necessary measures to ensure adequate employee housing for construction employees is available for each phase of project development.

Significant and Unavoidable Impacts

None.

3.3 PUBLIC SERVICES

This section describes existing emergency services and schools in Bear Valley, identifies impacts to emergency service providers and schools that may occur with implementation of the project, and recommends mitigation measures to reduce or eliminate significant impacts. The emergency services evaluated in this section include sheriff, fire, and emergency medical services. The schools evaluated in this section include Bear Valley Elementary School (BVES) and Bear Valley High School (BVHS). The discussion contained in this section is based upon personal communications with emergency service providers and the Alpine County Unified School District (ACUSD).

The project would not include a substantial amount of new roadways or surface parking areas that would require additional snow removal or road maintenance equipment or materials. The project would therefore not generate the need for new or expanded County public works facilities. This issue is not discussed further in the Environmental Impact Report (EIR).

3.3.1 Regulatory Setting

The **Alpine County General Plan** (Alpine County 2005a) Land Use Element sets forth objectives for the provision of specific public services or facilities needed to aid the County's orderly growth and development. The General Plan states that, in general, the costs for new public services should be paid by developers or residents of new developments so that they do not unduly burden the existing tax base for County service levels and systems.

3.3.2 Environmental Setting

Fire Hazards

Bear Valley is located within a forested environment. The 2007 Fire Hazard Severity Zone Map shows the wildland fire risk in Bear Valley as High and Very High (CAL FIRE 2007). Bear Valley is served by a central water system with hydrants in place. The community has excellent fire protection capabilities as demonstrated by an ISO rating of 5 for the fire department. In addition, the residents of Bear Valley have been implementing a fuels reduction program within the community, including open space areas near the project area (Alpine County 2007).

Emergency Services

The Bear Valley Public Safety Division of the Alpine County Sheriff's Department provides emergency and public safety services in Bear Valley. These services include police protection, fire prevention, emergency medical, and animal control services. The Public Safety Division is staffed by a public safety supervisor, two full-time deputies (public safety officers), one ¾-time emergency medical service coordinator, and one full-time dispatcher. The public safety supervisor and officers are ~~post~~ Peace Officer Standards and Training (POST)–certified sheriff's deputies, certified firefighters, and emergency medical technicians (EMTs). The emergency medical services coordinator is

an EMT and a registered nurse, and provides health care at the health clinic up to two days a week. Bear Valley has no paramedics.

The Public Safety Division is supplemented by local volunteers. A variety of other agencies provide police, fire protection, and ambulance support to the Public Safety Division as needed, including the California Highway Patrol, U.S. Forest Service (USFS), the Calaveras County Sheriff's Department, and the Ebbetts Pass Fire District.

The Public Safety Division is located in the combined sheriff and fire station building on Bear Valley Road near the intersection with Quaking Aspen Road. The station is a two-story building. County vehicles and equipment are stored in bays on the ground floor. The offices are also located on the ground floor. The second floor cannot be used for public safety services because it lacks elevator access and therefore does not meet the accessibility guidelines of the Americans with Disabilities Act of 1990 (ADA). Instead, the second floor is used by Division personnel as an exercise room. The configuration of the sheriff and fire station building is currently sufficient for the employees assigned to the facility (Levy 2008).

The Public Safety Division's primary firefighting equipment includes one Type-1 fire truck used for structure fires accessible by roads, one Type-3 fire truck that is modified in the winter with rubber tracks for oversnow travel, and one firecat (a snowcat with firefighting equipment). The Type-1 fire truck has a 36-foot ladder that can reach a maximum height of 30 feet and can reach buildings up to three stories high. The Public Safety Division does not have equipment for fighting fires in buildings taller than three stories. The nearest ladder truck is located in Sonora, California, about 2.5 hours away. The Public Safety Division is currently in need of a more modern fire truck. Equipment and staffing levels for non-fire emergency services are currently adequate for serving the community (~~Stevens~~Stephens 2008).

The Public Safety Division responds to calls using trucks, snowmobiles, or other oversnow vehicles, depending on the nature of the call and its location. During the winter, the emergency medical services coordinator relies primarily on a snowmobile for responding to emergency medical calls within Bear Valley and outlying areas, including the ski area, Lake Alpine, and winter recreation areas around Ebbetts Pass. The existing snowmobile route through the applicant's property is the most direct oversnow route connecting Bear Valley Road and the town center with the public buildings (i.e., school and health clinic) and the snowmobile trail east of Creekside Drive, the ski area, and development on the east and northeast side of Bear Lake. This route serves as an important snowmobile route for the emergency medical services coordinator. In addition, the coordinator strategically parks a snowmobile within the project area directly across Creekside Drive from the health clinic to minimize walking distance to the snowmobile, thereby minimizing response times to emergency medical calls (Snyder 2008).

In cases of injury in the areas of Bear Valley not served by plowed roads, the Public Safety Division evacuates the patient using a sled towed behind a snowmobile. The patient is towed by sled along groomed snowmobile routes to the nearest winter road closure location, where the patient is transferred to an ambulance.

The Alpine County Sheriff's Office in Markleeville does not have a direct communications link with the Bear Valley sheriff and fire station. Communication linkages are provided by

land-based telephone lines routed through Sacramento and Calaveras Counties. This communications link is subject to power outages and is unreliable for transferring data related to criminal reports and records and represents an existing risk to officer safety. The Sheriff's Office Communications backbone for radio communication does not provide direct linkage between the Sheriff's Office and the Bear Valley sheriff and fire station and is insufficient to serve the needs of the County. The Sheriff's Office is working with the Calaveras County Sheriff's Office and other counties to create an interoperable communications platform (Levy 2008).

Schools

Two public schools are located in Bear Valley: BVES (grades Kindergarten through 8) and BVHS (grades 9 through 12). Local elementary students attend BVES, and local high school students may choose to attend either BVHS or travel by school bus to Bret Harte High School (BHHS) in Angels Camp. The 45-mile bus trip to BHHS takes about 1.5 hours in each direction, or longer during inclement weather.

The BVES and BVHS are currently housed in the elementary school building at 550 Creekside Drive directly across the road from the project area. BVES has a current enrollment of 15 students and staff of one full-time teacher, one full-time aide, and one part-time aide. BVHS has a current enrollment of five students and a staff of two full-time teachers on-site. One teacher at the ACUSD offices in Markleeville devotes one-fourth time to providing online classroom studies for BVHS students. BVES enrollment fluctuates more than BVHS enrollment, which is relatively steady. Most of the BVHS students are from the town of Dorrington in Calaveras County. The school district owns an undeveloped school site south of State Route (SR) 4.

The school district receives funding through the Necessary Small School Formula. This formula supports districts that operate very small schools, most often in rural districts. The formula provides funding for staff and school supplies, but does not provide funding for new school facilities (Parsons 2008).

3.3.3 Impact Analysis

Methodology

Information about the Bear Valley Public Safety Division's staff, equipment, facilities, emergency response procedures, and access routes was developed through personal communications with representatives of the Public Service Division. Information about the BVES and BVHS was developed through personal communications with representatives of the ACUSD.

Levels of Significance

Adverse impacts related to public services would be considered significant if the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
    - Fire protection
    - Police protection
    - Schools
    - Other public facilities
- Impair implementation of or physically interfere with standard emergency response or evacuation procedures within a community
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

Impacts and Mitigation Measures

Impact PS-1: <u>The project would require two new sheriff deputies and would substantially increase demands for fire protection and emergency medical services.</u> ~~The project would not substantially increase demand for sheriff services, but would substantially increase demands for fire protection and emergency medical services.~~

~~The project would not substantially increase demand for sheriff services, and is therefore not expected to increase the need for sheriff equipment (Stevens 2008).~~

<u>The project would increase the number of visitors to Bear Valley and would increase recreational activity in the Alpine County backcountry. The project would be expected to increase demand for sheriff services for law enforcement and back country patrols. The project would result in the demand for two additional sheriff deputies (Levy 2008).</u>

The project would~~, however,~~ be located within a zone of very high risk for wildland fires. Project residents and structures would be exposed to a risk for wildland fires similar to the existing residents and structures in Bear Valley. The project would also increase the risk for structure fires within Bear Valley. The project would therefore require new firefighting equipment to protect residents and structures from fires. The project would include several buildings exceeding 30 feet (about three stories). The Public Safety Division does not have equipment for fighting fires in buildings taller than 30 feet.

The project could substantially increase demand for emergency medical services, which are currently provided by one emergency medical services coordinator and supplemented by the public safety officers who also perform police, firefighting, and other services (Snyder 2008).

<u>The additional Public Safety Division staff needed to serve the project would require additional work space within the sheriff and fire station. Also, the existing deficiencies of the emergency service communications facilities combined with the expected increase in</u>

emergency service calls could pose a safety hazard for visitors and emergency service staff (Levy 2008).

The potential for significant impacts to residents and visiting guests of the Village and the Bear Valley community due to inadequate fire protection or emergency medical services could result without adequate equipment and facilities (including communication facilities) to serve the increased demand level and to serve buildings taller than 30 feet (about three stories). This is a significant impact.

The project would ~~not~~ result in the need for additional sheriff staff~~, but~~ and may require additional fire protection and emergency medical staff (~~Stevens~~ Levy 2008; ~~and~~ Snyder 2008). The need for increased staffing does not constitute a change to the physical environment and is therefore not considered further in the Environmental Impact Report (EIR). However, the County ~~is currently preparing~~ prepared a Fiscal Impact Analysis (FIA) for the Bear Valley Village project that ~~will~~ evaluates the need for additional County staff to serve the project and whether tax revenues from the project over time would be sufficient to pay for additional staff and associated operational costs (including equipment) to serve the project. The FIA is ~~expected to be completed in August 2008~~ available on the County's website.

Level of Significance Before Mitigation: Significant.

Mitigation Measure PS-1a: Provide funding for new firefighting equipment required to serve the project.

Prior to County approval of any CUP ~~and/or tentative map (TM)~~ for the project, the County will require the applicant to provide documentation to the Planning Department that it has coordinated with the Bear Valley Public Safety Supervisor to determine the equipment levels required to serve each new phase of development. New equipment required to serve the project may include, but is not limited to, a ladder truck or hydraulic platform (snorkel) truck to serve buildings taller than 30 feet. The demand for new fire equipment may be reduced by incorporating fire-suppressing design and building materials into the project, or by reducing building height. To accommodate the demand for additional work space generated by the project, the sheriff and fire station building could be modified to allow for use of the second floor by installing an elevator to provide access to persons of all physical challenges in compliance with ADA. Other needed modifications include interior improvements for offices and retrofitting to accommodate the new fire equipment required for the project. Other equipment needed to serve the project may include emergency service communication equipment or facilities.

The applicant shall provide to the County the required funding needed for each development phase prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for that phase. When determining the amount of funding required for each project phase, the County will consider the conclusions of its FIA for the Bear Valley Village project and will ensure that all mitigation imposed on the project is roughly proportional to the project's impact. The County will ensure adequate equipment is in place to serve each phase of development prior to occupancy.

This mitigation measure is partly needed to mitigate the impacts of cumulative growth. As a result, the applicant would be eligible for reimbursement of equipment costs to

implement this mitigation measure in excess of its fair share. A method of reimbursement shall be established by the County, which may include an executed agreement between the County and the applicant that is consistent with state law.

Mitigation Measure PS-1b: Provide funding for new emergency medical equipment required to serve the project.

Prior to County approval of any CUP ~~and/or TM~~ for the project, the County will require the applicant to provide documentation to the Planning Department that it has coordinated with the Bear Valley Public Safety Supervisor to determine the equipment levels required to serve the portion of the project subject to the requested approval.

Equipment required to serve the project may include emergency medical vehicles (including oversnow vehicles) and emergency medical supplies. If the County determines that tax revenues from the project over time are not sufficient to pay for additional equipment to serve the project, the County will require the applicant to provide the equipment (or funding for the equipment) to serve the portion of the project subject to the requested approval as a condition of the approval.

This mitigation measure is partly needed to mitigate the impacts of cumulative growth. As a result, the applicant would be eligible for reimbursement of equipment costs to implement this mitigation measure in excess of its fair share. A method of reimbursement shall be established by the County, which may include an executed agreement between the County and the applicant that is consistent with State law.

Significance Level After Mitigation: Less than significant because the County would ensure adequate equipment is in place to serve each phase of development. Equipment required to serve the project would be funded by the applicant.

Impact PS-2: The project could interfere with existing oversnow emergency response procedures.

The project could interfere with existing oversnow travel routes used by emergency response providers in various ways. First, the applicant made available a temporary snowmobile route through the applicant's property that became a snowmobile route for the emergency medical services coordinator, who uses the trail to access the health clinic, the school, the eastern snowmobile route out of town, the ski area, and development on the east and northeast sides of Bear Lake. In winter 2006/2007, the applicant ceased to make available the use of its land for the trail, and the County groomed a new trail through Open Space Parcel E. If emergency snowmobile access through the project area (including the portion of the project area currently used for the Lodge Lot) were no longer available, the emergency medical services coordinator and other emergency service providers would need to take other routes to travel between the east and west sides of town. These routes would be more circuitous than either the existing route or the 2006/2007 route, thereby increasing travel distances by up to 2 miles and increasing emergency response times.

Second, the emergency medical services coordinator staffs the health clinic up to two days a week. During the winter, the coordinator strategically parks a snowmobile within

the project area directly across the road from the health clinic to minimize walking distance to the snowmobile, thereby minimizing response times to emergency medical calls. Buildings 9 and 10 would eliminate this parking area. Precluding the emergency medical services coordinator from parking a snowmobile within the project area when staffing the health clinic would increase emergency medical response times.

Third, discontinued use of ~~removing~~ the Lodge Lot snowmobile parking area would eliminate an important location where ~~snowmobilers~~ residents and visitors transfer people and supplies ~~between~~ to and from their autos ~~and parked snowmobiles~~ or unload snowmobiles from trailers onto the snow. This activity would likely shift to the Bear Valley Road winter closure just west of the Lodge Lot, where some loading activity now occurs. The road closure area is a fire lane (±25 feet wide), and is a critical emergency response route. Automobile parking and snowmobile loading in this location is unlawful. Increased ~~snowmobile~~ loading activity at the Bear Valley Road closure, although unlawful, could interfere with emergency response access to the unplowed section of Bear Valley Road. ~~The County intends to widen the west side of the Bear Valley Road shoulder by about 25 feet within the road easement to provide capacity for snowmobile loading.~~ As discussed in the Project Description (Chapter 2), the County and applicant are proposing to to construct five or six loading spaces adjacent to the Bear Valley Road winter closure, and the County is proposing a new snowmobile trailer loading area near the Creekside Drive winter road closure. ~~This~~ These facilities would replace ~~some~~ much of the ~~snowmobile~~ loading capacity eliminated from the Lodge Lot. Some interference with emergency response access to Bear Valley Road is expected to remain.

Interference with existing oversnow travel routes used by emergency response providers could result in significant impacts to residents and visiting guests of the Village and the Bear Valley community. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure PS-2a: Allow emergency service providers to travel through the project area with emergency oversnow vehicles.

The County will require the applicant to allow emergency service providers to travel through the project area with emergency oversnow vehicles to access the project area and the groomed snowmobile routes north and east of the project area while on official business. This requirement shall become a condition of approval for CUPs on each development phase of the North Village and Village Center.

Mitigation Measure PS-2b: Allow emergency medical service personnel to park their emergency snowmobile(s) within the project area near the health clinic while on official business.

While the health clinic continues to occupy its current location, the County will require the applicant to allow emergency medical service personnel to continue to park their snowmobile(s) within the project area at the closest practical location to the health clinic. Prior to construction of Village Center Buildings 8, 9, and 10 (Phase 3), the emergency medical service parking area shall be located near the current intersection of No Name Road and Creekside Drive or in another reasonable location acceptable to the emergency medical service personnel and the applicant. After construction of Village

Center Buildings 8, 9, and 10, the emergency medical service parking area shall be located between Buildings 10 and 11 and as close as possible to Creekside Drive or in another reasonable location acceptable to the emergency medical service personnel and the applicant. The applicant shall provide signage indicating that snowmobile parking by non-emergency personnel within this area is prohibited. This requirement shall become a condition of approval for CUPs on each development phase of the North Village and Village Center.

*Mitigation Measure PS-2c: Notify the Bear Valley community about removal of the Lodge Lot and direct the public to the new loading area*s *and Parking Lot ~~B~~C.*

Prior to ~~removal~~ discontinuation of snowmobile parking at the Lodge Lot parking area, the County will provide public notice to the community that the Lodge Lot will no longer be available for ~~snowmobile~~ loading; that ~~snowmobile~~ loading is available at the new loading area near the Bear Valley Road closure and County Parking Lot ~~B~~C; that snowmobile trailer loading is available near the Creekside Drive winter road closure; and that automobile parking and snowmobile loading in the fire lane at the Bear Valley Road closure is unlawful and subject to citation. The County will also post signs at the Bear Valley Road closure discouraging ~~snowmobile~~ loading in the fire lane at the road closure.

Significance Level After Mitigation: Less than significant because the above mitigation measures would ensure the project would not interfere with emergency oversnow response procedures.

Impact PS-3: New elementary school students generated by the project could cause displacement of the existing high school classroom, requiring construction of a new high school facility.

As discussed in Section 3.2 (Population, Housing, and Employment), new permanent residents of the Village condominiums would directly increase Bear Valley's population by about six people. Some of these new residents may be school-age children. The project would also increase employment opportunities in Bear Valley that would indirectly increase Bear Valley's population. New employment opportunities would include permanent, seasonal, and construction jobs. It is reasonable to assume that some permanent employees and construction workers moving to Bear Valley would also bring school-age children. The project is therefore likely to increase attendance at Bear Valley schools.

BVHS enrollment has historically been more stable than BVES enrollment. An increase in Bear Valley residents would likely increase BVES enrollment substantially more than BVHS enrollment. BVES currently has 15 students. If BVES enrollment increased to 24 students as a result of the project (an increase of nine students), the BVES would be required to hire one additional teacher (and possibly a new aide) and create an additional classroom within its building. This classroom would be located in the space currently used by BVHS, thereby displacing BVHS from the elementary school building and requiring the ACUSD to construct a new BVHS facility on its property south of SR 4. This new facility would likely include a state-approved triple-wide modular building plus necessary site improvements (Parsons 2008).

In summary, if the project were to directly or indirectly increase BVES enrollment to 24 students (an increase of nine students), the ACUSD would need to construct a new high school facility on its property south of SR 4. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure PS-3: Assess developer fees to help pay for additional facilities, or provide other methods for mitigating the impact in a manner acceptable to ACUSD.

ACUSD can assess developer fees for the project to help pay for additional facilities needed to serve new students generated by the project. ACUSD can assess these fees at a maximum rate of $2.97 per square foot of assessable space for residential development and $0.47 per square foot for commercial or industrial development as specified in Government Code Section 65995. These fees constitute the exclusive means of both "considering" and "mitigating" school facilities impacts of projects and are "deemed to provide full and complete school facilities mitigation" (Government Code Section 65996[a][h]). Alpine County will collect these fees from the applicant on behalf of the ACUSD before approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for any project phase.

The applicant may propose alternative methods that accomplish needed mitigation to the satisfaction of ACUSD. Alternative methods may include provision of school facilities by the applicant within the Village project. Such facilities would be required to meet California state standards for construction of new school facilities. Any alternative method for mitigating school impacts would need to be acceptable to ACUSD. The applicant would be required to provide documenentation of ACUSD's acceptance of alternative mitigation measure upon submittal of any application for a CUP ~~and/or TM~~.

Level of Significance After Mitigation: Less than significant because the payment of school impact fees is full and complete mitigation of the impacts on schools, and because alternative methods for mitigating this impact would need to meet the acceptance of ACUSD.

Significant and Unavoidable Impacts

None.

3.4 UTILITIES AND SERVICE SYSTEMS

This section describes the water supply, wastewater, and solid waste providers for the project area. The impact analysis evaluates the ability of service providers to serve the project and focuses on the Lake Alpine Water Company (LAWC) for water services, Bear Valley Water District (BVWD) for wastewater services, and SEI Solid Waste, Inc. (SEI) for solid waste services. Propane is used in place of natural gas in Bear Valley. Hazards associated with propane use are also discussed in this section.

Pacific Gas and Electric (PG&E) provides electrical service to the Bear Valley community. PG&E has been contacted about whether infrastructure modifications would be needed to serve the project, but PG&E has not indicated the need for modifications. This issue is not discussed further in the Environmental Impact Report (EIR).

Bear Valley does not have a stormwater drainage system. Stormwater runoff and water quality issues are discussed in Section 3.5 (Hydrology and Water Quality).

3.4.1 Regulatory Setting

The **Safe Drinking Water Act** (SDWA) (43 United States Code [USC] 300) protects public health by regulating the nation's public drinking water supply. It requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The U.S. Environmental Protection Agency (EPA) sets national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The EPA has delegated its authority for enforcement of the act to the Department of Public Health (DPH) in California.

DPH adopts and enforces primary and secondary drinking water standards consistent with drinking water standards established by the EPA under the SDWA and the DPH Drinking Water Program. This program regulates public drinking water systems, oversees water recycling projects, permits water treatment devices, and certifies drinking water treatment and distribution operators.

Senate Bill (SB) 610 (Chapter 643, Statutes of 2001) requires urban water suppliers that obtain water from a public water system to prepare a Water Supply Assessment (WSA) for large projects, including those that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project. A WSA was prepared for the project in 2008 by Diane Wagner Consulting in coordination with LAWC (Appendix D).

The **Alpine County General Plan** Conservation Element identifies goals related to water quality, water supply, wastewater discharge, and other utilities. Policies within these goals require identification of acceptable means of water supply and wastewater disposal systems. Utility policies require that new development be placed in areas where existing or planned utility corridors or facilities can be easily accessed.

3.4.2 Environmental Setting

Water Supply

The privately owned LAWC was formed in 1964 and is regulated by the California Public Utilities Commission (CPUC). It currently provides potable water from Bear Creek to the existing population of Bear Valley. The LAWC can currently hold 600,000 gallons of potable water in three storage tanks (Diane Wagner Consulting 2008; Appendix D).

Until recently, ~~The~~ the water supply provided by LAWC ~~is~~ was subject to two licenses issued by the Division of Water Rights and the State Water Resources Control Board (SWRCB). The first license, 10840, authorizes 0.075 cubic feet per second (cfs) of water by direct diversion for domestic use, with a limit of 42 acre-feet per year (AFY). License 11007 authorizes 0.5 cfs of water by direct diversion for collection and storage in Bear Lake for municipal and recreational uses between October 1 and June 1. Under this license (11007), the total amount of water to be placed to beneficial use is not to exceed 140 AFY. Thus, the combined total of diverted water under both licenses is not to exceed 182 AFY.

~~LAWC currently has three pending water rights applications pending approval by the SWRCB: amended petition for partial assignment of application 5648X07; petition to change application 5648; and application 31523. These applications seek to increase total water diversions by 395 AFY. This would allow LAWC to serve the remaining development in Bear Valley as defined by the Bear Valley Master Plan (BVMP). LAWC prepared an EIR in 2006 for these applications, and all protests filed with respect to the pending water rights applications have been resolved or dismissed (Diane Wagner Consulting 2008). The SWRCB has scheduled a public hearing for July 14, 2008, to receive evidence on these applications. The approval of these applications has a target date of November 1, 2008 (Wagner 2008).~~

On March 17, 2009, the SWRCB conditionally approved three water rights applications requested by LAWC: amended petition for partial assignment of application 5648(07); petition to change application 5648; and application 31523. These permits increase LAWC's total water diversions by 395 AFY, allowing LAWC to serve the remaining development in Bear Valley as defined by the BVMP (SWRCB 2009). LAWC's water rights now total 577 AFY (182 + 395 = 577). The SWRCB decision is included in EIR Appendix M.

Water conservation measures were initiated by LAWC in 2005. Water consumption decreased by approximately 26 percent in a single year because of these measures. These measures include: a new water filtration/treatment plant system that can accommodate water demand needed for full build-out of the BVMP; a new 300,000-gallon steel-bolted water tank to replace a leaking tank; new meters at all water service connections; a new metering system that can detect leaks within a 24-hour period; and low-flow requirements for all new construction, which includes toilets, faucets, and shower heads.

LAWC's average water use between 1995 and 2007 was 113 AFY, with an average of 0.25 AFY per customer. During this time, LAWC received approximately three new

customers per year. In 2007, LAWC's water use was approximately 0.16 AFY per customer. Annual water demands for the existing Bear Valley Lodge and Commercial Center averaged 1.6 AFY between January 2002 and 2007.

Wastewater Facilities

BVWD provides wastewater collection and treatment service for Bear Valley, Lake Alpine campground, and the ski area. The facilities are located approximately 0.5 mile southeast of the project area. The existing treatment facilities are currently planned to accommodate anticipated wastewater flow from current and future developments within the BVWD service area (see letter provided by BVWD dated March 2008 [BVWD 2008a] in Appendix D). Treated wastewater is disposed with a combination of land disposal and seasonal discharge to Bloods Creek.

BVWD previously calculated its remaining disposal capacity to be 230 Equivalent Dwelling Units (EDUs) (BVWD 2008a and 2008b). This estimate is based on a 100 percent EDU occupancy rate and a wastewater generation rate of 300 gallons per day (gpd) per occupied EDU, which BVWD considers to be a worst-case design scenario. BVWD considers a 34 percent average occupancy rate and a 180 gpd wastewater generation rate to be more representative of actual conditions within its service area. Using these occupancy and generation rates, BVWD estimates it has disposal capacity available to serve 1,127 new EDUs (BVWD 2008b). BVWD defines an EDU as a residential living unit equal to three sewer service units and defines a sewer service unit as one kitchen or full or half bath, or equivalent. For each additional sewer service unit in a residence, one-third of the single-family residential flow should be applied (or one additional sewer service unit per kitchen, full, or half bath) (BVWD 2008a).

Land (i.e., spray) disposal of treated wastewater is distributed between three properties totaling 200 acres. The first property is 120 acres of land leased to BVWD until the year 2048. The second property is approximately 40 acres of U.S. Forest Service (USFS) land; disposal is allowed by a special use permit (SUP) until 2015. The third property is also approximately 40 acres of USFS land, and disposal is allowed by a SUP ~~permit~~ until the year 2011. The USFS has not decided whether the SUPs would be extended following their expiration. Excess wastewater is allowed to be discharged to Bloods Creek primarily in the spring and winter months according to the National Pollutant Discharge Elimination System (NPDES) permit requirements (also known as waste discharge requirements [WDRs]). ~~This discharge is contingent on tertiary treatment being provided by October 1, 2008, although BVWD has recently submitted a request to the Regional Water Quality Control Board (RWQCB) to extend this deadline until November 2009 (Ritchie 2008).~~ This discharge is contingent on BVWD providing tertiary treatment by October 1, 2010. On September 11, 2008, the Regional Water Quality Control Board (RWQCB) granted an extension of its previous deadline of October 1, 2008 (RWQCB 2008). BVWD is currently pursuing an assessment district to finance the tertiary treatment facilities project.

Water and Sanitary Sewer Systems

The main water and sanitary sewer pipelines are located in Bear Valley Road and Creekside Drive. Existing pipelines for the Bear Valley Lodge and Commercial Center connect to these main pipelines (Figure 2-~~9~~10).

Solid Waste

There are no active landfills within Alpine County. A transfer station serves single-family residences and is located on Creekside Drive, north of Bear Valley Lodge. Multi-family residences and commercial businesses have on-site collection. SEI, located in Arnold, California, transports solid waste from Bear Valley to the Rock Creek Landfill located approximately 75 miles west of Bear Valley near the community of Milton in Calaveras County.

The Rock Creek Landfill capacity is 7.65 million cubic yards; the landfill is permitted to accept a maximum of 500 tons of solid waste per day. As of June 2001, approximately 92 percent of this capacity was available (California Integrated Waste Management Board [CIWMB] 2008a).

In 2000, 731 tons of waste from Alpine County was disposed at Rock Creek Landfill. The waste volume collected from Alpine County is less than 1 percent of the total volume currently being disposed at Rock Creek Landfill (Alpine County 2007).

Propane

Commercial propane service is commonly used by Bear Valley residences and businesses. The nearest propane provider is Ebbett's Pass Gas Service located in Arnold, California.

3.4.3 Impact Analysis

Methodology

The impact analysis evaluates the ability of each utility system to service the project's residential and commercial uses based on the system's available or planned capacity. The analysis of impacts on the water supply is based on the SB 610 WSA prepared by Diane Wagner Consulting in March 2008 (Appendix D). The analysis of impacts on BVWD's wastewater facilities and WDRs are based on communication with BVWD (Appendix D). Potential risks associated with use of propane storage tanks were evaluated based on design criteria and regulatory requirements.

Levels of Significance

Adverse impacts related to utilities and service systems would be considered significant if the project would:

- Create a substantial demand for water supplies that cannot be met by existing or planned water supply entitlements or facilities

- Create a substantial demand for wastewater collection and treatment services that cannot be met by existing or planned wastewater facilities
- Exceed any wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Generate a substantial amount of solid waste that exceeds the permitted capacity of a landfill identified to serve the project
- Generate a risk of accidental explosion related to propane facilities

Impacts and Mitigation Measures

Impact U-1: The project would create a water demand that can be met by existing infrastructure and ~~but cannot be met by existing~~ water supply entitlements.

LAWC's water conveyance facilities provide adequate capacity to serve the project (Diane Wagner Consulting 2008). The project would include abandoning or removing existing water lines and installing new water lines within the project area and immediate project vicinity (Figure 2-~~9~~10). However, no other water conveyance facilities would be required. This is a less-than-significant impact.

Project water demand was estimated using a rate of 0.25 AFY per EDU, where one EDU is equal to 1,350 square feet (sf) of residential or non-residential use. The project includes 754,190 sf of new residential and non-residential area. For the purposes of this water supply analysis, the project would add 559 EDUs to LAWC's service area. The project's total water demand would therefore be about 140 AFY (Diane Wagner Consulting 2008).

LAWC has water rights allowing it to divert 577 AFY. The average annual water use in Bear Valley is 113 AFY (although a reduced level of per-customer water usage attributable to LAWC's water conservation measures is expected to continue in the future). LAWC therefore has additional capacity of 464 AFY, which would be adequate to serve the entire project. This is a less-than-significant impact.

~~LAWC has water rights allowing it to divert 182 AFY. The average annual water use in Bear Valley is 113 AFY (although a reduced level of per-customer water usage attributable to LAWC's water conservation measures is expected to continue in the future). LAWC therefore has additional capacity of 69 AFY, which would serve 276 EDUs (about half of the EDUs generated by the project). LAWC's pending water rights applications would provide an additional 395 AFY, which would serve about 1,580 additional EDUs, including all EDUs proposed for the project (Diane Wagner Consulting 2008).~~

~~In summary, LAWC's pending water rights applications would allow LAWC to serve the entire project. Without these additional water rights, LAWC would only have water to supply half of the project (276 EDUs). Unless and until the pending water rights applications are approved, water demand for later project phases would not be met, resulting in a significant impact.~~

Level of Significance Before Mitigation: ~~Significant~~ Less than significant because LAWC has sufficient water rights to serve the project and because LAWC's water conveyance facilities provide adequate capacity to serve the project.

~~*Mitigation Measure U-1: Provide proof of available water supply prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.*~~

~~As part of the application submittal for each discretionary entitlement request (i.e., conditional use permit [CUP] and/or tentative map [TM]), the County will require the applicant to provide documentation to the Planning Department that water supply is available to meet the demand of that phase. Proof of water supply availability may include documentation from the LAWC stating that its approved water supply can meet water demands for the subject (or subsequent) project phase(s). If the pending water rights applications are approved, then copies of the permits shall be provided by the applicant to the County.~~

~~**Level of Significance After Mitigation: Less than significant because the WSA assumes LAWC is reasonably likely to receive approval for its pending water rights applications in time to serve the project. In addition, available water supply would be verified prior to approval of a TM or CUP for each phase. This mitigation measure ensures that if the additional water rights are not secured, development would not exceed the service capability of the LAWC.**~~

Impact U-2: BVWD may not have adequate wastewater disposal capacity to serve the project.

BVWD analyzes available wastewater facility capacity in terms of EDUs. BVWD defines an EDU as a residential living unit equal to three sewer service units and defines a sewer service unit as one kitchen or full or half bath, or equivalent. For non-residential land uses, one EDU is calculated as follows:

- Restaurant/Bar/Lounge/Cafeteria: 1 EDU = 500 sf
- Coffeehouse/Deli: 1 EDU = 1,000 sf
- Office/Retail Shop: 1 EDU = 1,000 sf

The project would include 491 residential EDUs, plus a 50-person employee housing facility. Assuming three sewer service units (i.e., one EDU) would be needed for every four employees, the 50-person employee housing facility would generate wastewater comparable to 13 EDUs. The project would also include a net increase of 47,111 sf of new retail, restaurant, and amenity space; however, the area (square footage) of each non-residential use type has not been determined. Therefore, the project would include between 47 (47,111 sf ÷ 1,000 sf/EDU = 47 EDUs) and 94 (47,111 sf ÷ 500 sf/EDU = 94 EDUs) new non-residential EDUs for a total range of 551 to 598 EDUs.

BVWD's existing wastewater treatment facilities can accommodate wastewater generated by current and future projects within the BVWD service area (BVWD 2008a; Appendix D). The project would therefore not result in the need for expanded treatment facilities.

The project would abandon or remove existing sewer lines and install new sanitary sewer lines within the project area and immediate project vicinity (Figure 2-~~9~~10). The existing 8-inch pipelines within Bear Valley Road and Creekside Drive must be evaluated to determine if their capacity could accommodate peak wastewater flows from the project. If the project were to exceed the capacity of existing sewer lines, this would be a significant impact.

BVWD wastewater disposal facilities (i.e., post-treatment) have the physical capacity to accommodate an additional 1,127 EDUs. However, this additional capacity is contingent on BVWD providing tertiary treatment by October 1, 2010. On September 11, 2008, the RWQCB granted an extension of its previous deadline of October 1, 2008 (Appendix M). BVWD is currently pursuing an assessment district to finance the tertiary treatment project (RWQCB 2008). If BVWD is unable to provide tertiary treatment by October 1, 2010, no additional capacity would be available to serve the project. In addition, if land disposal is necessary after expiration of the USFS SUPs and if the SUPs are not renewed, BVWD would need to find appropriate non-USFS land for land disposal.

~~However, authorized use of this additional capacity is contingent on BVWD upgrading to tertiary treatment by October 1, 2008. BVWD is currently pursuing an assessment district to finance the tertiary treatment project and, according to BVWD, it is highly unlikely that these facilities would be constructed by October 1, 2008. In that situation, no additional capacity would be available to serve the project (BVWD 2008a). BVWD has recently submitted a request to the Regional Water Quality Control Board (RWQCB) to extend the permit deadline for tertiary treatment until November 2009 (Ritchie 2008).~~

In summary, if BVWD can provide tertiary treatment that would treat an additional 598 EDUs, BVWD could accommodate the wastewater generated by the project. If BVWD is not able to provide tertiary treatment, it would have no disposal capacity to serve the project. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure U-2a: Provide proof of available sanitary sewer pipeline capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

As part of the submittal for each ~~discretionary entitlement request (i.e., CUP and/or TM)~~, the County will require the applicant to provide documentation to the Planning Department that BVWD has sanitary sewer line capacity available to meet the demand for the requested phase.

Mitigation Measure U-2b: Construct additional sanitary sewer system improvements if needed to serve the project.

BVWD can and should require the applicant to construct any improvements to BVWD sanitary sewer system necessary to serve the project. Improvement may include replacing existing pipelines with larger diameter pipelines. The applicant may be eligible for reimbursement of construction costs to implement this mitigation measure in excess of its fair share.

BVWD would perform California Environmental Quality Act (CEQA) review for any sanitary sewer system projects that have not already been evaluated under CEQA, and be required to adopt feasible mitigation measures for any significant impacts.

Mitigation Measure U-2c: Provide proof of available wastewater disposal facility capacity prior to County approval of ~~tentative subdivision maps and/or~~ conditional use permits for each construction phase.

As part of the submittal for each ~~discretionary entitlement request (i.e.~~ CUP ~~and/or TM)~~, the County will require the applicant to provide documentation to the Planning Department that BVWD has wastewater disposal capacity available to meet the demand for the requested phase. The County will not approve any development phase without such documentation. Proof of wastewater disposal availability may include documentation from BVWD stating that wastewater disposal capacity can meet wastewater disposal demands for the project. Proof could also include any additional NPDES permit modifications allowing additional discharge to Bloods Creek or land disposal on property for which BVWD has secured authorization from its owner.

BVWD would perform CEQA review for any wastewater disposal projects that have not already been evaluated under CEQA, and would be required to adopt feasible mitigation measures for any significant impacts.

Mitigation Measure U-2d: Fair-share funding for BVWD wastewater disposal facility improvements.

BVWD can and should require the applicant to provide fair-share funding for any improvements to BVWD wastewater disposal facilities (i.e., post-treatment) necessary to serve the project. These improvements could include expansion of the disposal facilities to accommodate the increase in wastewater generated by the project.

In order to be implemented, the costs of the wastewater disposal facilities improvements would need to be determined, and the project's fair share calculated. Payment of these costs should be required by BVWD prior to issuance of sewer connection permits for the project. BVWD would perform CEQA review for any wastewater disposal projects that have not already been evaluated under CEQA, and would be required to adopt feasible mitigation measures for any significant impacts.

Level of Significance After Mitigation: Less than significant because construction of EDUs beyond the capacity of the sanitary sewer and wastewater facilities would not occur, the applicant would construct (or fund) any BVWD sewer system and wastewater facility improvements needed to serve the project, and any significant impacts related to sewer system and wastewater disposal improvements would be mitigated.

Impact U-3: The project could contribute to exceedance of WDRs for copper.

The project's water source would be the same water source for land uses currently served by the BVWD wastewater treatment facility. The proposed land uses are also similar to existing uses currently served by the BVWD wastewater treatment facility. For

this reason, the quality of the project's wastewater is expected to be similar to the existing wastewater being treated at the treatment facility.

BVWD has no information to indicate that the project would cause exceedances of particular WDR water quality limits; however, copper is currently a contaminant of particular concern. Order No. R5-2005-0139 limits copper concentrations in BVWD's wastewater discharge to Bloods Creek to a monthly average of less than 0.95 micrograms per liter (µg/L) and a daily maximum of less than 1.9 µg/L. BVWD has measured copper concentrations in excess of these limits. BVWD is implementing corrosion control programs and analyzing the potable source water and wastewater copper concentrations to determine the cause of exceeding the limits (see scoping letter, Appendix D) (BVWD 2007).

Wastewater generated by the project could also contain copper concentrations that would contribute to exceedances of Order No. R5-2005-0139 limits. This would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure U-3: Minimize the use of copper water supply and wastewater pipes and fixtures.

The County will require the applicant to minimize use of water supply and wastewater pipes and fixtures that contain copper. To the degree allowed by the California Plumbing Code, the applicant shall specify non-copper plumbing materials on building plans submitted to the County Building Department for review and approval. Non-copper plumbing materials for water supply may include chlorinated polyvinyl chloride (CPVC) and cross-linked polyethylene (PEX). Non-copper plumbing materials for wastewater disposal may include cast iron and polyvinyl chloride (PVC). All plumbing pipes, fixtures, and materials shall conform with the California Plumbing Code and shall be subject to review and approval by the County Building Department.

The use of copper pipe shall be allowed if the applicant demonstrates any one of the following:

- Copper piping would not result in exceedence of BVWD's water quality limits for copper
- The water flowing through the copper piping would not contribute to elevated copper concentrations in BVWD wastewater
- The source of elevated copper concentrations is identified and addressed and BVWD concludes that copper piping would not affect these elevated concentrations
- Further testing shows that copper concentrations in BVWD wastewater meets the water quality standards for copper.

BVWD can and should require the applicant to use non-corrosive sewer pipeline materials when constructing sewer collection lines.

Level of Significance After Mitigation: Minimizing the use of copper water supply and wastewater pipes and fixtures would reduce the amount of copper introduced into the BVWD wastewater system by the project. However, BVWD has not yet determined the source of excess copper within its system. It cannot be concluded, therefore, that these measures would reduce the potential for the project to cause BVWD's facility to exceed its WDRs for copper. This impact remains significant and unavoidable.

Impact U-4: The project would generate up to 1,006 tons of solid waste per year but would not exceed the Rock Creek Landfill capacity.

The solid waste generation rates estimated by the CIWMB (2008b) are broken into categories as follows:

- For residential land uses: 0.46 ton/multi-family dwelling unit/year
- For non-residential land uses: between 0.3 and 3 tons/employee/year

Bear Valley Village would generate up to 1,006 tons of solid waste per year (0.46 ton/EDU/year x 491 EDU = 226 tons/year, up to 3 tons/employee/year x 260 employees = 780 tons/year).

Each condominium building would contain solid waste and recycling containers adequate to serve the building's uses. Each building would be responsible for the collection and disposal of solid waste and recycled material through the homeowners association. The project would increase the volume of solid waste generated; however, the County's annual contribution to the Rock Creek Landfill would remain relatively small (less than 1 percent). The impact from the project on landfill capacity would be less than significant.

Level of Significance Before Mitigation: Less than significant because the 1,006 tons of solid waste per year generated by the project is minimal and the County's total solid waste contributions would continue to be less than 1 percent of the total maximum daily capacity of the Rock Creek Landfill.

Impact U-5: Propane storage tanks in the project area would have a minor risk of explosion, resulting in minimal hazards to the public.

The project would be served by two 50,000-gallon propane tanks located underground, north of Building 13 (Figure 2-2). Service delivery pipelines would be constructed to serve the project.

Although unlikely, the tanks or pipeline system could rupture if damaged by accidents such as inadvertent excavation. Propane accidents typically do not result in an explosion. The propane system would comply with applicable fire, safety, and building codes to ensure minimal risk to the public. For example, the underground storage tanks would be clearly marked and set back from buildings, and above-ground components would be surrounded by crash protection devices such as bollards or large boulders. Based on the project design features and compliance with applicable codes, the project's propane system would pose minimal risks to the public and would result in a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the propane system would be designed to comply with applicable fire, safety, and building codes, minimizing the risk to the public.

Significant and Unavoidable Impacts

Impact U-3: The project could contribute to exceedance of WDRs for copper.

3.5 HYDROLOGY AND WATER QUALITY

This section describes surface and groundwater resources in the project vicinity. The impact analysis discusses the potential for the project to affect surface and groundwater quality and surface water quantity. Mitigation measures are identified for significant impacts, followed by determinations of the residual impact significance after mitigation measures are implemented. Compliance with Bear Valley Water District's (BVWD's) waste discharge requirements is evaluated in Section 3.4 (Utilities and Service Systems).

As discussed in the following paragraphs, the project would not expose people or property to hazards associated with flooding, seiches, tsunamis, or mudflows, and the project would not result in a substantial adverse change in groundwater quantity. These issues are not discussed further in the Environmental Impact Report (EIR).

The project would not result in a significant impact related to flooding. The project area has not been mapped as a 100-year flood hazard area on any flood hazard delineation map. The project would therefore not place housing or structures within a 100-year flood hazard area. No development is proposed to occur within the channel or floodplain of Bear Creek and therefore would not substantially alter the drainage pattern of the project area. To promote infiltration and reduce project-generated runoff, undisturbed portions of the project area would be maintained in their natural state and disturbance to natural drainage patterns would be kept to a minimum.

Municipal water would be provided by the Lake Alpine Water Company (LAWC). LAWC relies primarily on surface water collected and stored in Bear Lake. The project would therefore not substantially deplete groundwater supplies. The project would also not adversely affect groundwater recharge. The Village would increase impermeable surfaces within the project area; however, runoff and snowmelt would be allowed to infiltrate within undeveloped portions of the project area. The remaining runoff would flow into Bear Creek similar to existing conditions. There are no existing wells in the surrounding area; therefore, none would be affected by the project.

The project is not located in an area prone to seiches, tsunamis, or mudflows.

3.5.1 Regulatory Setting

Federal

The Clean Water Act (CWA; 33 United States Code [USC] 1251-1376) is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Important sections of the CWA are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 (Water Quality Certification) requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the

United States to obtain certification from the state that the discharge will comply with other provisions of the Act.

- Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States.

In California, the NPDES program is administered by the State Water Resources Control Board (SWRCB). The SWRCB or Regional Water Quality Control Board (RWQCB) issues permits on behalf of the U.S. Environmental Protection Agency (EPA) for activities that could cause impacts to surface and groundwater sources, including construction activities. The SWRCB also administers water rights, water pollution control programs, and water quality functions throughout the state. Regional authority for planning, permitting, and enforcement is delegated to nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans for all areas within their respective regions and establish water quality objectives in the water quality control plans, issue waste discharge requirements (WDRs), take enforcement action against violators, and monitor water quality. The project area lies within the jurisdiction of the Central Valley RWQCB.

State

As mandated by the Safe Drinking Water Act (SDWA; Public Law 93-523) passed in 1974, the EPA regulates contaminants of concern to domestic water supply. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. EPA regulates these types of contaminants through the development of national primary and secondary maximum contaminant levels (MCLs) for finished water. In California, the Department of Public Health (DPH) administers the SDWA.

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality (California Water Code Sec. 13000 et seq.). Under the Act, the state must adopt water quality policies, plans, and objectives that will provide protection to the state's waters for the use and enjoyment of the people of California. The Act sets forth the obligations of the RWQCBs pertaining to the adoption of water quality control plans (Basin Plans) and establishment of water quality objectives and authorizes the SWRCB and RWQCBs to issue and enforce permits containing WDRs. Basin Plans are the regional water quality control plans required by both the CWA and the Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Act requires a the RWQCB to issue WDRs for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state.

The SWRCB and RWQCB enforce the NPDES program under the CWA. As part of this program, projects that would disturb more than 1 acre of land are required to obtain coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as

stockpiling or excavation. For the project area, this permit would be issued by the Central Valley RWQCB.

As part of project implementation, a Stormwater Pollution Prevention Plan (SWPPP) must be developed and implemented to comply with conditions of the General Permit. The SWPPP must include site-specific information on erosion and sediment controls and must list best management practices (BMPs) that will be installed to reduce pollutants and meet water quality standards. As part of the SWPPP, the applicant must implement best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to reduce or eliminate stormwater pollution. Discharges must also comply with water quality objectives as defined in the Basin Plan (Central Valley RWQCB [CVRWQCB] 2007).

In 1975, the Basin Plan for the Sacramento River and San Joaquin River Basins was adopted by the Central Valley RWQCB (amended in 2006, revised in 2007). The Basin Plan lists general beneficial uses for water bodies in the basins. Adverse effects to these beneficial uses should be carefully considered during the review of a proposed project. Beneficial uses are the desired resources, services, and qualities of the aquatic system that are supported by achieving and protecting high water quality. Beneficial uses are specific to the water body and can vary from water body to water body. In general, the beneficial use of a water body specifically identified in the Basin Plan applies to its tributary streams. Water bodies that do not have beneficial uses designated in the Basin Plan are generally given municipal and domestic supply use designations.

Primary issues for waters in the Central Valley region are associated with construction impacts of erosion and sedimentation, stormwater management (including detention and treatment), groundwater contamination, wetlands disturbance, and compliance with prohibitions on waste discharges due to land development. The discharge prohibitions and limitations in permits are designed to ensure the maintenance of public health and safety, protection of receiving water resources, and safeguarding of the designated beneficial uses (CVRWQCB 2007).

The state's Division of Safety of Dams (DSOD) maintains oversight authority for dam safety pursuant to the California Water Code. Dams under DSOD's jurisdiction are inspected by DSOD on an annual basis, and their stability is closely monitored with periodical reviews. DSOD certifies a dam to be safe for operation after it has determined that the likelihood of an uncontrolled release such as dam failure is low, even under extreme loading conditions.

Local

The **Alpine County General Plan** Conservation and Safety Elements addresses County- and region-wide issues related to water resources and flood hazards. These General Plan elements include policies for protecting water resources and reducing safety hazards from flood inundation from dam failure. Policies pertinent to the project are as follows:

- Analysis of runoff from new land developments should consider individual or cumulative increased flows of existing stream or river channels and downstream users.
- No living quarters shall be allowed at ground level, and commercial, industrial, and other human activities shall be controlled within areas possibly subject to flood inundation due to possible dam failure.

3.5.2 Environmental Setting

Regional

The project area is located within the San Joaquin River Hydrologic Region, which encompasses approximately 15,800 square miles. The San Joaquin River Hydrologic Region comprises the entire area drained by the San Joaquin River in the northern end of the Central Valley, and is generally bounded by the Sierra Nevada to the east, the Diablo Range to the west, and the Sacramento Basin to the north. Surface water in the area generally drains to the west and joins with the Sacramento River drainage to form the Delta (CVRWQB 2007). Principal rivers within the San Joaquin River Hydrologic Region include the San Joaquin River and its larger tributaries (Department of Water Resources [DWR] 2005). The Stanislaus River is a principal river in the region, and its north fork is located approximately 4 miles southwest of the project area.

The climate in the region is characterized by very cold and harsh winters and short, cool summers. The major source of precipitation is received in winter months in the form of snow; surface runoff from the project area results mainly from snowmelt in the spring and summer. Average annual precipitation totals in excess of 50 inches per year are characteristic of the western slopes of the Sierra Nevada (Western Regional Climate Center [WRCC] 2007).

With respect to groundwater resources, the project area is situated in the mountain region on the western slopes of the Sierra Nevada mountains. Lying well outside the San Joaquin Valley Groundwater Basin, the mountain region is composed of fractured granite formations and lacks significant groundwater aquifers. Here, groundwater is limited to fractured rock and small pockets of alluvium immediately adjacent to area streams and is generally considered unreliable (DWR 2005).

Local

Hydrology

Topographically, Bear Valley is relatively hilly with an elevation of approximately 7,100 feet above mean sea level (msl). The Village Lift alignment and new ski runs would cross mountainous terrain above Bear Valley, reaching an elevation of about 8,200 feet above msl at the ski area. The project area drains to the south via a network of drainages and is dotted with areas of montane marsh and wetland (Jones and Stokes 2007b). Numerous ephemeral drainages in the surrounding area are tributary to either Bear Creek, the main drainage through the Village area, or to Bloods Creek, which is approximately 0.7 mile east of the project area.

Bear Creek, an intermittent stream, originates approximately 0.4 mile upstream at Bear Lake, a 15-acre man-made reservoir with a storage capacity of 360 acre-feet (AF). Bear Lake is impounded by Reba Dam (see Figure 2-3), an earthen embankment approximately 70 feet high (measured from the lowest downstream toe to the spillway crest) and about 555 feet long at its crest. Bear Creek generally receives water in the fall and spring from Bear Lake when the dam is opened and water is released into the creek, but is also fed by a network of small ephemeral channels that capture snowmelt and stormwater.

Approximately half of the Village portion of the project area is relatively undisturbed, and stormwater runoff follows natural drainage patterns. In these areas, stormwater runoff and snowmelt flow overland toward Bear Creek or its tributaries. Some of the runoff/snowmelt infiltrates into the ground, and the remainder flows into the drainages. In the developed portion of the Village (the southern half), runoff is affected by roadways, impervious surfaces, and human-made channels. About 35 percent of the Village area includes impervious areas (the Lodge, commercial building, and four paved parking lots). The remainder of the project area is not covered, and is relatively permeable. The lift alignment and ski runs are almost entirely undeveloped.

Water Quality

Water quality concerns in the San Joaquin River Basin include both point and non-point source discharges that impact the San Joaquin River and its tributaries. Discharges in upstream tributaries occur from mines, silviculture activities, and urban development activities (CVRWQCB 2007). An increasing problem associated with fast growth rates in mountain communities is sedimentation from land disturbance associated with development and wastewater treatment/disposal systems. Efforts to control these discharges through BMPs and other means are regulated and enforced by State and Regional Water Boards.

The Basin Plan identifies beneficial uses of waters within the San Joaquin River Basin and establishes water quality objectives to achieve or maintain those uses. Water quality objectives are established for the reasonable protection of beneficial uses of water within a specific area. The drainages associated with runoff from the project area are not specifically detailed in the Basin Plan, but they are tributary to the Stanislaus River, which is identified in the plan. Table 3.5-1 is an inventory of beneficial uses for the Stanislaus River (CVRWQCB 2007).

Table 3.5-1. Beneficial Uses of Stanislaus River—New Don Pedro Dam to San Joaquin River

Surface Water	Beneficial Use
Stanislaus River	Municipal and Domestic
	Agriculture
	Recreation—Contact and Non-contact
	Warm Freshwater Habitat
	Cold Freshwater Habitat
	Cold Water Migration
	Warm Water Spawning
	Cold Water Spawning
	Wildlife Habitat

Source: CVRWQCB 2007

3.5.3 Impact Analysis

Methodology

Information concerning the hydrology and water quality of the project area was obtained from available literature and site-specific studies. Where possible, impacts are quantified against existing or modeled numeric data for water quantity. Since the resources in the case of both surface water and groundwater are regional in nature (i.e., the watershed), impacts are regarded in relative terms to the resource as a whole rather than in absolute terms. Where quantification of the impacts is not possible, a general discussion of impacts based on hydrologic principles is used.

Levels of Significance

Adverse impacts to hydrology and water quality would be considered significant if the project would:

- Substantially degrade surface or groundwater quality through the discharge of point or non-point source pollutants, resulting in the loss of beneficial use of receiving waters
- Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding, erosion, or siltation on- or off-site
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam

Impacts and Mitigation Measures

Impact HWQ-1: Construction activities could discharge pollutants into downstream drainages, resulting in adverse effects on surface water quality.

Construction of the project would involve clearing and grading approximately 35 acres within the Village for buildings, roads, and utility lines, with additional earthwork needed for the Village Lift, ski runs, off-site utility pipelines, roadway improvements, and the County's proposed snowmobile parking and trailer loading areas ~~area~~.

Construction activities, such as vegetation clearing, grading, stockpiling of soils, pouring concrete, and building roads, would contribute substantial pollution to runoff and result in adverse short-term effects on surface water quality in Bear Creek and downstream drainages. Excessive erosion and sedimentation are the most noticeable water quality impacts caused by construction activities. These impacts result from soil disturbance and exposure and can result in discharge of soil particles into surface waters. Other less visible impacts are associated with off-site discharge of pollutants, such as metals, nutrients, soil additives, pesticides, construction chemicals, and other construction waste. Soil disturbance associated with construction would be temporary because the disturbed ground surface would either be covered by buildings or roads, or would be revegetated in other areas.

The applicant intends to prepare a SWPPP that includes BMPs for controlling pollutants and contaminants generated during construction. Potential BMPs are described in the *Construction Criteria for Proposed Bear Valley Village* and *Construction Criteria for Proposed Village Lift* documents (Appendix C). Without detailed plans, however, it is not possible to evaluate the effectiveness of these measures, especially considering the relatively narrow setbacks from Bear Creek proposed in the Village Center.

Discharge of construction pollutants, although temporary, could result in substantial adverse effects on downstream surface water quality, which would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure HWQ-1: Implement BMPs to control construction-related stormwater runoff, erosion, and sedimentation.

As part of the submittal for each discretionary entitlement request that would involve construction activity (i.e., conditional use permit [CUP] and/or tentative map [TM]), the County will require the applicant to provide construction staging plans for the requested phase of construction to the County Public Works Department. Such plans shall, at a minimum, include the following provisions to reduce construction-generated erosion and minimize potential adverse construction impacts on water quality in Bear Creek, its tributaries, and downstream surface waters:

- The limiting of site disturbance for all construction associated with the proposed activity or phase of construction and the methods of limiting site disturbance adjacent to these areas

- Limit site disturbance such as clearing, grubbing, and grading to between May 1 and October 15, unless special authorization is provided by the County
- No heavy construction equipment shall operate within 100 feet of any creek during periods when soils are saturated from rain or snowmelt
- No heavy construction equipment shall operate within 100 feet of any creek ~~during periods when soils are saturated from rain or snowmelt~~ unless temporary BMPs are installed to ensure that such operation does not result in any discharge of pollutants to the drainage whatsoever
- Temporary measures for controlling seasonal runoff and stormwater flows from the construction area, including all staging areas and any other area where site disturbance will occur during construction
- Protect exposed soil during the spring and summer construction season from erosion caused by thunderstorms, focusing particular attention on areas near Bear Creek and wetland habitat
- Locations of stockpiles for excavated materials and the method of stabilizing stockpiles in order to reduce the potential for soil erosion
- Locations of all staging areas for construction offices, equipment, and construction materials and the methods of limiting site disturbance adjacent to these areas
- Identification of all trees, drainages, and wetland areas within 25 feet of all areas subject to construction activity or used as a construction staging area and the method of isolating or protecting these features so that they are not disturbed except where disturbance or removal of the identified feature is specifically allowed by the project approvals

Prior to County approval of a TM and/or CUP for any phase that would involve construction activity, the County will require the applicant to provide proof of coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity from the Central Valley RWQCB. The SWPPP will identify the sources of sediment and other pollutants on site and ensure the reduction of such pollutants in stormwater discharged from the site. The SWPPP will include an Erosion and Sedimentation Control Plan and provide descriptions of BMPs selected to control erosion, sediment discharge, and other pollutant sources during construction. Appropriate BMPs will be implemented throughout the duration of construction activities.

Typical BMPs may include the following:

- Use temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) in disturbed areas, and ensure no disturbed surfaces are left without erosion control measures in place during the winter and spring months.
- Retain sediment on-site by a system of sediment basins, traps, or other appropriate measures.
- Develop a spill prevention and countermeasure plan to identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site.

- Schedule construction activities to minimize land disturbance during peak runoff periods and restrict to the immediate area required for construction.
- Implement soil conservation practices to reduce erosion during spring and summer runoff, and retain existing vegetation where possible.
- Control surface water runoff by directing flowing water away from critical areas and by reducing runoff velocity; use diversion structures such as terraces, dikes, and ditches to collect and direct runoff water around vulnerable areas to prepared drainage outlets; use surface roughening, berms, check dams, hay bales, or similar devices to reduce runoff velocity and erosion.
- Contain sediment when conditions are too extreme for treatment by surface protection; use temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins to detain runoff water long enough for sediment particles to settle out; store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.
- Store and treat topsoil removed during construction as an important resource, and place berms around topsoil stockpiles to prevent runoff during storm events.
- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.
- Revegetate disturbed areas after completion of construction activities.

To reduce construction-generated erosion and minimize potential adverse water quality impacts from construction of its proposed snowmobile parking and trailer loading areas, the County shall also develop and implement a SWPPP that includes BMPs.

Level of Significance After Mitigation: Less than significant because implementation of construction BMPs would effectively minimize construction-related erosion and inadvertent releases of pollutants, thereby protecting downstream surface water quality.

Impact HWQ-2: Stormwater runoff from the project area could convey urban pollutants and contaminants to downstream drainages, resulting in adverse effects on surface water quality.

Post-construction urban stormwater runoff from the project area would result in discharge of water quality contaminants, such as sediment, fertilizers, pesticides, grease, oil, and nutrients, to Bear Creek and downstream waters. The Basin Plan indicates that urban stormwater contaminants should not cause a nuisance or adversely affect beneficial uses of water.

The applicant intends to maintain the existing sheetflow drainage method to the degree possible, and to construct bioswales, fossil filters, or similar methods for controlling pollutants and contaminants generated by the development. Without detailed plans, however, it is not possible to evaluate the effectiveness of these measures, especially considering the relatively narrow setbacks from Bear Creek proposed in the Village Center. The project's increased contaminant load would therefore be significant because it could adversely affect downstream surface water quality. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure HWQ-2: Implement Water Quality Control Measures

Prior to any site disturbance associated with any phase of construction, the applicant shall obtain approval of improvement plans for that phase of construction from the County Public Works Department. Such phased improvement plans shall, at a minimum, include the following provisions to reduce erosion and minimize potential adverse impacts on water quality in Bear Creek and downstream surface waters:

- Permanent sediment control structures designed to achieve a minimum 80 percent reduction in sediment load leaving the site and to comply with the design standards contained in the Alpine County Subdivision Ordinance and any other applicable ordinances or standards addressing site grading, erosion control, or drainage that may be adopted by Alpine County.
- Permanent drainage control structures which prevent non-point source runoff from directly entering the natural drainage courses or wetland areas within or adjacent to the site.
- A water quality control program identifying stormwater BMPs to incorporate into project design and manage urban runoff. Monitoring of stormwater runoff may be required to ensure surface water quality in downstream drainages is not substantially affected by the project.

A variety of stormwater BMPs is available for managing urban runoff. Stormwater BMPs are most effective when implemented as part of a comprehensive stormwater management program that includes proper selection, design, construction, inspection, and maintenance measures. Stormwater BMPs can be grouped into two broad categories: structural and non-structural. *Structural* BMPs are used to treat the stormwater at either the point of generation or the point of discharge to the stormwater sewer system or to receiving waters. *Non-structural* BMPs include a range of pollution prevention, education, institutional, management, and development practices designed to limit the conversion of rainfall to runoff and to prevent pollutants from entering runoff at the source of runoff generation. Table 3.5-2 provides a summary of a variety of commonly used structural and nonstructural stormwater BMPs.

Table 3.5-2. Typical BMPs for Managing Post-construction Urban Runoff

BMP	Purpose
General community outreach	Increase public awareness of the need to and how to control non-point source pollution
Constructed wetland basin or water quality basin	Permanent or temporary storage for regulating downstream releases to reduce pollutant discharge
Catch basin cleaning	Capture and remove sediment and debris such as trash and leaf litter
Commercial and retail space: good housekeeping	Reduce pollutants in runoff by using porous pavement or modular paving systems for vehicle parking lots, limit exposure of materials and equipment to rainfall, clean up spills, use dry cleanup techniques instead of wet techniques, and limit direct runoff of rooftops to storm drains
Pesticide/herbicide use	Reduce the amount of pesticides that are carried by urban runoff through education and using alternatives to pesticides, such as an integrated pest management program and insecticide soap or natural bacteria
Street cleaning program	Remove a significant portion of pollutants contributed from streets and parking lots
Filtration systems	Remove constituents found in runoff
Vegetated systems (biofilters)	Convey and treat either shallow flow (swales) or sheetflow (filter strips) runoff
Minimize directly connected impervious surfaces	Reduce amount of surface area directly connected to the storm drainage system by minimizing or eliminating traditional curbs and gutters
Pervious paving	Reduce stormwater runoff by allowing snowmelt and rainfall to infiltrate the ground

Level of Significance After Mitigation: Less than significant because implementation of a water quality control program would adequately protect downstream water quality from urban pollutants carried by project runoff.

Impact HWQ-3: Development in the project area would increase impervious surfaces, resulting in an increase in stormwater runoff.

The Village portion of the project area consists of about 18 acres of land. About 35 percent of this land area includes existing impervious areas (the Lodge, commercial building, and four paved parking lots). The remainder of the project area is not covered, and is relatively permeable.

At full build-out of the Village project, the amount of impervious area would increase by approximately 4 acres, thereby increasing the volume of stormwater runoff from the project area. The project would be required to prevent non-point source runoff from directly entering the natural drainage courses or wetland areas (see Mitigation Measure HWQ-2). In addition, the amount of grading for the project that would occur outside of proposed building envelopes would be limited. Changes to existing sheetflow drainage patterns would be kept to a minimum, thus minimizing impacts to the natural drainage sheds, minimizing stormwater runoff from the project area, and promoting infiltration.

Pre-development and post-development stormwater runoff was modeled for the project area using the Soil Conservation Service (SCS) Unit Hydrograph method (Psomas 2007a, 2007b). Modeled stormwater runoff from existing conditions is 24.0 AF; modeled

stormwater runoff from the full build-out conditions of the Village is 24.8 AF. This is an increase of stormwater runoff of 0.8 AF, or 3.3 percent. An increase of 3.3 percent in stormwater runoff does not represent a substantial increase and is not expected to result in flooding or downstream erosion. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the amount of increased stormwater generated by the project would not be substantial.

Impact HWQ-4: The project would create minimal risks of property loss, injury, or death involving flooding as a result of the failure of Reba Dam.

According to the 1978 Bear Valley Master Plan (BVMP) EIR, flood waters could cover the valley floor if Reba Dam were to break (Alpine County 1978). The BVMP EIR includes an Inundation Potential map showing that the North Village and Village Center areas (and much of the town between Creekside Drive and the lower section of Bear Valley Road) are within the potential inundation area.

To reduce the risk to life and property, the BVMP EIR includes a mitigation measure stating that no living quarters should be allowed at ground level and commercial space should be limited to no more than 100 lineal feet of wall measured at a right angle to the directions of water flow. General Plan Policy 23b includes similar restrictions.

Consistent with the BVMP EIR mitigation measure (and General Plan Policy 23b), the project has been designed so all residential units and commercial space within the mapped inundation potential area would be located above structured parking. In many cases residential units would also be located above an additional floor of commercial or amenity space. This design reduces the risk to life and property from inundation.

In addition, Reba Dam is subject to oversight by DSOD. DSOD inspects the dam annually and has certified the dam to be safe for operation. This means DSOD considers the likelihood of an uncontrolled release such as dam failure to be low, even under extreme loading conditions.

Because DSOD has certified the safety of Reba Dam, and because the project has been designed to reduce the risk to life and property from potential inundation, the project would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of Reba Dam. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because DSOD has certified the safety of Reba Dam, and because the project has been designed to reduce the risk to life and property from potential inundation.

Significant and Unavoidable Impacts

None.

3.6 BIOLOGICAL RESOURCES

This section provides a discussion of the regulations that serve to protect biological resources; a description of the biological resources within the project area, including the vegetation communities, wildlife corridors, wetlands, and special status species; an assessment of the potential impacts of the project; and a discussion of the mitigation measures proposed to reduce impacts to a less-than-significant level where possible. The information contained in this section is based on a Biological Resources Evaluation (BRE) for the project (Jones and Stokes 2007a), supplementary memoranda (Jones and Stokes 2007c), and a Preliminary Wetland Delineation (Jones and Stokes 2007b), and on the results of focused plant surveys (Basey 2007) and focused wildlife surveys (Keyser 2007). These documents are included as Appendix E.

3.6.1 Regulatory Setting

Federal

The **Endangered Species Act** (ESA) (16 United States Code [USC] 1531 et seq.) protects threatened and endangered plants and animals and their critical habitat. Procedures for addressing impacts to federally listed species follow two principal pathways; both require consultation with the U.S. Fish and Wildlife Service (USFWS), which administers the ESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies when a private landowner's actions result in take of a listed species, but do not require a federal permit or approval. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency, or private projects requiring a federal permit or approval, when these projects may adversely affect a listed species or modify critical habitat.

The **Migratory Bird Treaty Act (MBTA)** (16 USC 703 et seq.) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in regulations or by permit. The State of California has incorporated protection of native birds, including birds of prey in Sections 3800, 3513, 3503, and 3503.5 of the Fish and Game Code (FGC) (FGC 1994).

All raptors and their nests are protected from take or disturbance under the MBTA (1918) and California statute (FGC Section 3503.5). Golden eagles are afforded additional protection under the Bald and Golden Eagle Protection Act, amended in 1973 (16 USC 669 et seq.).

Section 404 of the **Clean Water Act** (33 USC 1344 et seq.) prohibits discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The USACE and the U.S. Environmental Protection Agency (EPA) administer the Act. In addition to traditional navigable waters, the definition of waters of the U.S. includes wetland areas in or adjacent to jurisdictional waters "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a

prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3 7b).

Projects with substantial impacts to waters of the U.S. may require an individual permit. Small-scale projects with minimal impacts may be authorized by nationwide permits, which have an expedited process compared with the individual permit process. Mitigation of wetland impacts is required as a condition of the Section 404 permit, and may include preservation, restoration, or enhancement within the project area and/or off-site restoration or enhancement. The characteristics of restored or enhanced wetlands must be equal to or better than those characteristics of affected wetlands to achieve no net loss of wetlands values.

The Stanislaus National Forest, Forest Plan Direction (U.S. Department of Agriculture [USDA] 2005) sets forth general goals and directions to preserve and protect plant, natural communities, and wildlife resources and includes specific standards and guidelines to achieve those goals. Applicable goals include maintaining and restoring wetlands, riparian areas, meadows, and the plant and animal diversity within those habitats. Policies address raptors, including the great gray owl, California spotted owl, and northern goshawk, by mandating protocol-level surveys when vegetation treatments are likely to reduce habitat quality. The Plan protects Pacific fisher habitat by encouraging retention of old forest and corridors between suitable habitat areas.

State

The **California Endangered Species Act** (CESA) (FGC 2050 et seq.) provides protection to California's endangered and threatened species. Section 2080 of the FGC prohibits taking of plants and animals listed under CESA. Section 2081 established an incidental take permit program for state-listed species. In addition, the Native Plant Protection Act of 1977 (FGC 1900 et seq.) gives the California Department of Fish and Game (CDFG) authority to designate State endangered, threatened, and rare plants and provides specific protection measures for designated populations.

CDFG has also identified many "species of special concern" (CDFG 2006). Species with this status have limited distribution or the extent of their habitats has been reduced substantially, such that their populations may be threatened. While they do not have statutory protection, impacts to these species are typically considered in the California Environmental Quality Act (CEQA) review process, requiring mitigation when appropriate.

Fish and Game Code Sections 1601 to 1606 require that a Notification of Lake or Streambed Alteration be submitted to CDFG for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake" (FGC 1994). The CDFG reviews proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG and the applicant is the Lake or Streambed Alteration Agreement. Projects that require a Lake or Streambed Alteration Agreement may also require a permit from the USACE under Section 404 of the Clean Water Act.

Fish and Game Code Section 1900 et seq., or Native Plant Protection Act, lists threatened, endangered, and rare plants as designated by the California FGC (FGC 1994).

Fish and Game Code Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish (FGC 1994). Species that are fully protected by these sections may not be taken or possessed at any time. The CDFG cannot issue Section 2081 permits that would authorize incidental take of a fully protected species (FGC 1994). FGC requirements pertinent to the project for fully protected species include:

- Section 3503 (which prohibits taking, possession, or needless destruction of the nest or eggs of any bird);
- Section 3503.5 (which prohibits taking, possession, or destruction of any bird in the order Falconiformes or Strigiformes (birds of prey) or taking, possession, or destruction of the nest or eggs of any such bird); and
- Section 3513 (which prohibits taking or possession of any migratory non-game bird as designated in the MBTA).

Local

The **Alpine County General Plan** Conservation Element (Alpine County 2005) includes policies to protect wetlands by minimizing development in or conversion of wetlands, and by requiring mitigation of impacts to wetlands on a no-net-loss basis. Additional policies require that notice be provided to CDFG of all projects that may disturb threatened, rare, or endangered plants or encroach upon the critical habitat of sensitive, threatened, rare, and endangered animals. Policy 14a encourages the County to notify CDFG of all development projects within known or suspected critical summer or winter range or deer migration corridors with reasonable time for CDFG to respond with recommendations for project alternatives and mitigation measures. Policy 14b encourages cluster development to avoid encroachment upon important deer habitats. The General Plan does not include policies specifically addressing the protection of native trees.

3.6.2 Environmental Setting

Regional Setting

The project area is located on the western slope of California's Sierra Nevada mountain range approximately 60 miles east of Sacramento and 30 miles south of South Lake Tahoe. It lies within the High Sierra Nevada geographic subdivision of the California Floristic Province (Hickman 1993). The western Sierra Nevada region is characterized by mountainous terrain with moderate to steep topography incised by high-gradient stream channels (Schoenherr 1992). The regional climate consists of warm summer temperatures with infrequent thundershowers and cold winters with significant precipitation, mostly in the form of snow. Large rivers drain the abundant snowmelt, flowing west to the Sacramento and San Joaquin rivers of the Central Valley. The region provides a variety of important habitats for native plants and wildlife. Dense coniferous

forests and chaparral dominate vegetation below about 9,000 feet above mean sea level (msl). These habitats gradually give way to montane scrub and alpine meadows at higher elevations.

Project Area Setting

The project area is located in and near the town of Bear Valley, within unincorporated Alpine County (Sections 6, 7, and 18 of Township 7N, Range 18E). It lies within the Bear Creek watershed, a tributary of the North Fork of the Stanislaus River.

The Bear Valley Village~~, Creekside Drive extension,~~ and County's proposed snowmobile parking and trailer loading areas lie within the town of Bear Valley, just north of the intersection of State Route (SR) 4 and Bear Valley Road, at an elevation of approximately 7,100 feet above msl. The North Village and Village Center are privately owned and contain both natural vegetation, mainly coniferous forest, and developed areas, including the Bear Valley Lodge and Commercial Center. Bear Creek and several smaller drainages exist within the North Village, Village Center, and snowmobile trailer loading area~~Creekside Drive extension~~ portions of the project area. The South Village is located on County-owned land. Most of the South Village project area is characterized by Parking Lots B and C, and the remainder includes the snowmobile parking area behind the Transportation Center. The proposed snowmobile parking area and the parking area behind the Transportation Center contain mostly coniferous forest adjacent to roads. A small drainage bisects the County's proposed snowmobile parking area and two ephemeral drainages are located near the County's proposed snowmobile trailer loading area; one to the west and one to the south. Topography within the town is gently rolling and generally sloped toward Bear Creek.

The Village Lift alignment originates within the Village and terminates approximately 1.5 miles north near Koala Rocks, a granite outcrop at the southeastern edge of the ski area. Much of the land within the alignment is managed by the U.S. Forest Service (USFS) and is characterized by coniferous forest and chaparral. It ranges in elevation from about 7,100 feet to 8,200 feet above msl and is almost entirely undeveloped. Topography is steep and generally sloped to the south. Several drainages and associated wetlands exist within the alignment.

The proposed ski runs (new and modified) would be located north of the Village, between the Village and the ski area, and would cross through similar habitats and elevations as the Village Lift alignment. Drainages and other hydrological features may also cross some of the ski runs; however, surveys have not been conducted to evaluate the runs. Topography is relatively steep and generally sloped to the south.

Habitat Types

The project area contains several vegetation communities, Bear Creek and other drainages, and developed areas, all of which provide habitat for a diversity of wildlife species. The vegetation communities are primarily dominated by conifer trees, but also include chaparral and herbaceous communities. Drainages bisect these communities in several places. Habitats within the Village portion of the project occur in proximity to developed areas and generally display higher levels of disturbance than the relatively

undisturbed Village Lift portion. Surveys of these habitats did not result in observations of any special status species (Jones and Stokes 2007a; Basey 2007; Keyser 2007). Habitats where the ski runs are proposed are also relatively undisturbed, based on an analysis of recent aerial photographs.

Brief descriptions of the vegetation communities are provided below; detailed descriptions are included in the BRE for the project (Appendix E). Table 3.6-1 provides an overview of the acreage of each habitat type in the project area. Figure 3.6-1 provides a map of habitat types in the project area.

Table 3.6-1. Habitat Types in the Project Area

	Acreage				
Habitat Type	**Village**	**Village Lift**	**Snowmobile Parking area**	**~~Creekside Drive/~~SR 4**	**Total**
Lodgepole pine forest	8.97	0.34	0.24	0.00 ~~0.57~~	9.55 ~~10. 12~~
Red fir~~e~~ forest	—	8.67	—	—	8.67
Mixed conifer/huckleberry oak	—	3.99	—	—	3.99
Mixed montane chaparral	—	3.86	—	—	3.86
Montane meadow	0.18	—	—	0.00 ~~0. 28~~	0.18 ~~0. 46~~
Montane freshwater marsh	0.03	—	—	—	0.03
Seasonal wetland	—	—	—	0.00 ~~0.01~~	0.00 ~~0.01~~
Seep wetland	—	0.08	—		0.08~~0.07~~
Bear Creek	0.22	-	—	0.01	0. 23
Ephemeral drainage	0.29	0.09	0.01	—	0.39
Developed	7.48	0.08	—	—	7.56
Total	**17.17**	**17.11~~17.10~~**	**0.25**	**0.01 ~~0.87~~**	**34.54 ~~36.14~~**

Notes: Acreages are estimated using ArcGIS based on habitat maps provided in the BRE (Jones & Stokes 2007a) and project area maps provided by the applicant. Acreages in this table differ from those of the BRE due to differences between the survey boundary and the project boundary.Acreages are not provided for the proposed ski runs or snowmobile trailer loading area because they have not been entirely surveyed.

Lodgepole Pine Forest

Much of the project area (9.55~~10.12~~ acres) contains lodgepole pine forest, a tree-dominated community that consists primarily of lodgepole pine (*Pinus contorta*) but also contains Jeffrey pine (*Pinus jeffreyi*) and white fir (*Abies concolor*). The understory includes smaller trees and shrubs, such as quaking aspen (*Populus tremuloides*) and gooseberry (*Ribes* spp.). A herbaceous layer is present in openings within the shrub and tree canopy layers. Dominant plant species include blue wildrye (*Elymus glaucus*), horsemint giant hyssop (*Agastache urticifolia*), and red fescue (*Festuca rubra*). Within the Village Lift alignment, the lodgepole pine forest is generally undisturbed except for a

few narrow trails. The lodgepole pine forest within the Village_~~, Creekside Drive extension (~~and SR 4 improvement area as well as ~~and~~the proposed snowmobile parking area have been disturbed and fragmented by the surrounding or adjacent roads and development. Several ephemeral drainages cross this community in the northern part of the Village (see below for description of the drainages). Lodgepole pine forests characterize the snowmobile trailer loading area. Lodgepole pine forests also may exist in lower elevations of the ski run areas.

Lodgepole pine forests in the project area provide habitat for a variety of birds and wildlife, such as Pacific treefrog (*Hyla regilla*) and dark-eyed junco (*Junco hyemalis*). Larger trees may provide nesting and roosting habitat for raptors and bats, while smaller birds and mammals may use the understory vegetation and downed trees for cover and foraging habitat. Special status species, such as northern goshawk (*Accipiter gentilis*) and California wolverine (*Gulo gulo luteus*), are known to occur in lodgepole pine forests in the region. However, these species were not observed during reconnaissance or focused surveys (Jones and Stokes 2007a; Basey 2007; Keyser 2007) and are not expected to occur in the project area.

Red Fir Forest

The higher-elevation sections of the Village Lift alignment are dominated by red fir forest (8.67 acres). Red fir forest likely comprises portions of the proposed ski runs as well. This habitat is highly variable within the project area, forming dense stands with little understory vegetation at lower elevations and relatively open stands with abundant shrub and herbaceous vegetation toward the top of the chair lift alignment. In dense stands, the canopy consists nearly exclusively of red fir (*Abies magnifica*). Open stands include scattered Jeffrey pine and western white pine (*Pinus monticola*) and a shrub layer of huckleberry oak (*Quercus vacciniifolia*) and mountain whitethorn (*Ceanothus cordulatus*). Herbaceous plants present include mountain monardella (*Monardella odoratissima*) and mule's ears (*Wyetha mollis*). Red fir forest within the project area is relatively undisturbed with only scattered roads and trails present. Several ephemeral drainages occur in the community along the Village Lift alignment (see below for description of drainages).

Red fir forest within the project area provides habitat for many of the same wildlife species as lodgepole pine, including porcupine (*Erethizon dorsatum*) and mountain chickadee (*Poecile gambeli*). This community also provides potential habitat for special status species, including California spotted owl (*Strix occidentalis* ssp. *occidentalis*) and northern goshawk; however, these species were not observed during focused surveys (Keyser 2007) and are not expected to occur within the project area. Hollow trees within this habitat may provide roosting habitat for the pallid bat (*Antrozous pallidus*) and temporary cover for the Pacific fisher (*Martes pennanti*).

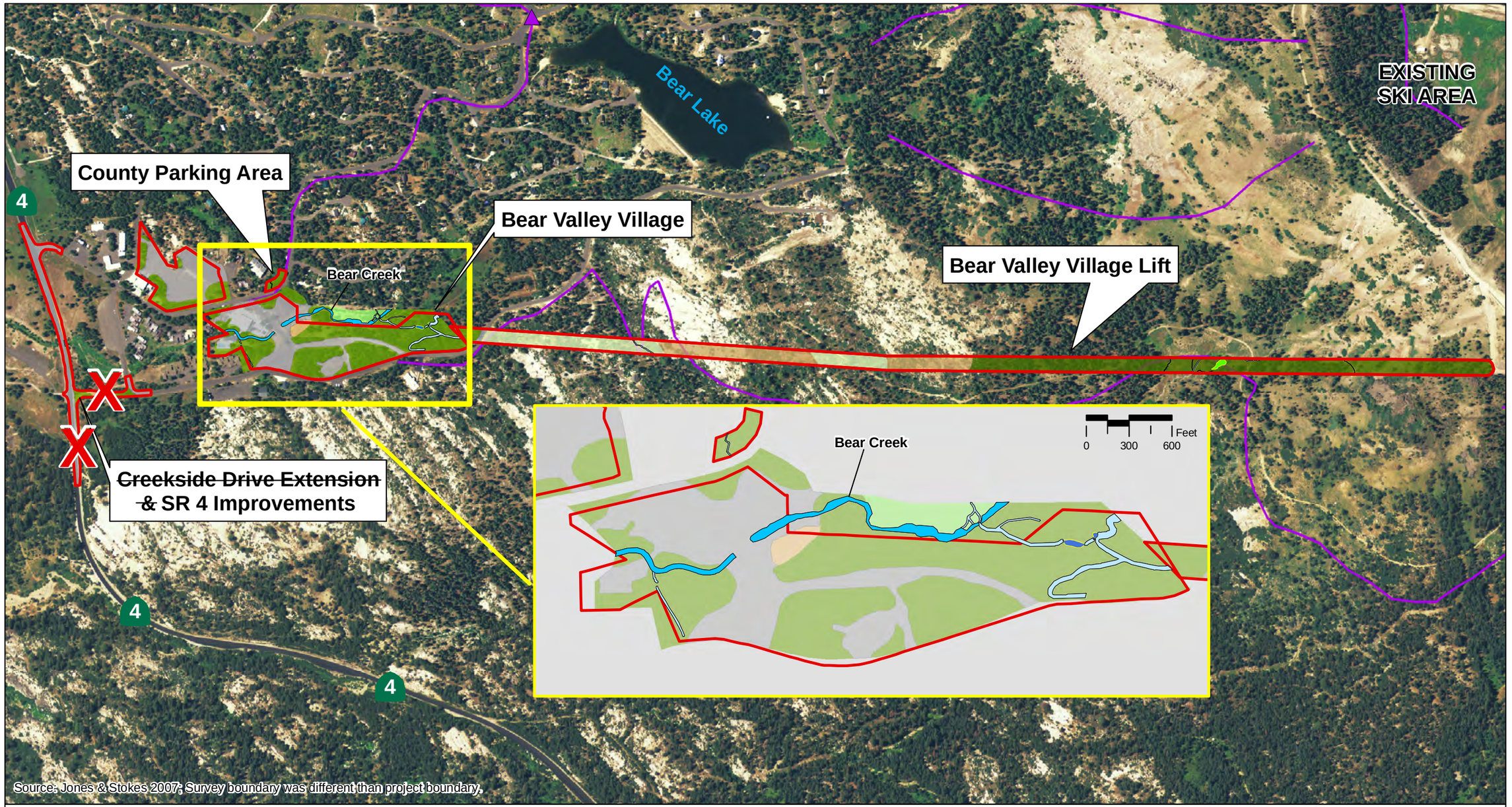


Figure 3.6-1
Habitats in Project Area

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

Mixed Conifer/Huckleberry Oak

Within the project area, 3.99 acres of mixed conifer/huckleberry oak habitat occurs mostly on private land within the Village Lift alignment. This community may also comprise lower-elevation portions of the proposed ski runs. The canopy of this community consists of lodgepole pine, ponderosa pine (*Pinus ponderosa*), and white fir. Huckleberry oak and pinemat manzanita (*Arctostaphylos nevadensis*) form a dense shrub layer, and associated herbaceous plants include buckwheats (*Eriogonum* spp.) and common woolly sunflower (*Eriophyllum lanatum*). Mixed conifer/huckleberry oak habitat within the project area remains relatively undisturbed with few roads and little development adjacent to it. A single ephemeral drainage crosses this community within the Village Lift alignment.

The mixed conifer/huckleberry oak community provides a diversity of food and cover for wildlife due to the large variety of plant species present (CDFG 1988). Birds, such as hairy woodpecker (*Picoides villosus*) and mountain chickadee, may forage within the canopy. Dense understory growth and downed trees provide abundant refugia for mammals, including porcupine, gray fox (*Urocyon cinereoargenteus*), and Pacific fisher.

Mixed Montane Chaparral

A substantial portion of the Village Lift alignment (3.86 acres) near the USFS/private land boundary consists of mixed montane chaparral vegetation. This community is likely also present within the proposed ski runs. This community is shrub-dominated and includes mostly huckleberry oak and pinemat manzanita, although snowbush is also present. Trees are scattered and uncommon and include white fir and Ponderosa pine.

Mixed montane chaparral provides foraging habitat for several species of mammals and birds. Shrubby vegetation provides rabbits and hares with shade, cover, and food. Birds use this community for feeding on insects, seeds, and berries, and for roosting and nesting sites. In addition, it represents important summer range forage, escape cover, and potential fawning habitat for mule deer (*Odocoileus hemionus*). A large granite outcrop (called Koala Rocks) within this community provides potential habitat for Mount Lyell salamander (*Hydromantes platycephalus*); however, focused surveys did not identify this species (Keyser 2007), and it is not expected to occur within the project area.

Montane Meadow

~~Two~~ One small montane meadow~~s~~ occur~~s~~ adjacent to the lodgepole pine forest in the Village (0.18 acre)~~, and a single meadow occurs in the Creekside Drive/SR 4 portion (0.28 acre),~~ totaling 0.~~46~~ 18 acre of montane meadow in the project area. Montane meadows may also be present within the proposed ski runs. Montane meadow vegetation is herbaceous, and dominant species observed in the project area include Pacific lupine (*Lupinus lepidus*), navarretia (*Navarretia* spp.), yarrow (*Achillea millefolium*), and leafy aster (*Symphyotrichum foliaceum*). The montane meadow located adjacent to No Name Road was formerly used for soil excavation several years ago, but native vegetation has become re-established in the area, and it appears undisturbed since that time. In the southern portion of the Village, the meadow habitat shows

evidence of recent vehicle disturbance. ~~The meadow located within the Creekside Drive extension/SR 4 area has been subject to high levels of disturbance from vehicle traffic due to the proximity of SR 4.~~

Montane meadows provide habitat for a variety of wildlife species. Mule deer and elk (*Cervus canadensis*) may feed in wet meadows. Meadow pools and streams also provide potential habitat for several species of amphibians, including mountain yellow-legged frog (*Rana muscosa*) and Yosemite toad (*Bufo canorus*), although none of these species was observed during reconnaissance or focused surveys, and they are not expected to occur in the project area (Jones and Stokes 2007a; Keyser 2007). In summer, dry meadows may provide habitat for small mammals and hunting areas for raptors.

Montane Freshwater Marsh

Two small montane freshwater marshes (0.03 acre) are located within undisturbed portions of an ephemeral drainage, adjacent to Bear Creek, in the Village portion of the project area. These features are considered waters of the U.S., under the jurisdiction of the USACE (Jones and Stokes 2007b), as discussed in the Waters of the U.S. section below. They represent an herb-dominated community composed primarily of slenderbeaked sedge (*Carex athrostachya*), water sedge, and iris-leaved rush (*Juncus xiphioides*). This habitat remains relatively undisturbed within the project area and is surrounded entirely by lodgepole pine forest.

Freshwater marshes are highly productive and important wildlife habitats. Within the project area, they may provide food, cover, and water for a number of amphibians, reptiles, birds, and mammals. Pacific treefrogs, western toads (*Bufo boreas*), beavers (*Aplodontia rufa*), and raccoons (*Procyon lotor*) may use freshwater marsh for foraging or rearing habitat. Although mountain yellow-legged frog and Yosemite toad often use montane freshwater marsh habitats, no special status wildlife species were observed in this habitat type during focused surveys, and neither species is expected to occur within the project area.

~~*Seasonal Wetland*~~

~~A small (0.01 acre) seasonal wetland occurs in a slight depression adjacent to SR 4 within the Creekside Drive extension. The preliminary wetland delineation for the project (Jones and Stokes 2007b) identified this feature as being potentially isolated; thus, it may not be subject to USACE jurisdiction, pending verification of the delineation. However, it may be considered waters of the State, subject to review by the CDFG. In addition, discharge into waters of the State is regulated by the Regional Water Quality Control Board (RWQCB). The wetland did not contain water at the time of survey, but it likely receives runoff from SR 4 and precipitation. Vegetation consists entirely of Mexican rush (*Juncus mexicanus*). The vegetation in the wetland did not appear to be subject to surface disturbance at the time of the field surveys despite its proximity to SR 4.~~

~~The seasonal wetland may provide habitat for invertebrates and amphibians, including western toad. These in turn provide food for species, such as garter snakes~~

~~(*Thamnophis elegans*) and killdeer (*Charadrius vociferous*). However, the small size of the seasonal wetland in the project area and its proximity to SR 4 limit its habitat value for wildlife use.~~

Seep Wetland

One seep wetland (0.08 acre) is present in the Village Lift alignment on USFS land. This feature is considered a potential water of the U.S., under the jurisdiction of the USACE, as discussed in the Waters of the U.S. section below. The wetland is dominated by herbaceous species, including corn lily (*Veratrum californicum*), arrowhead butterweed (*Senecio triangularis*), sedges, and grasses. Wildlife use of the seep wetland would be similar to that described for meadow habitats, with aquatic invertebrates and amphibians potentially using aquatic and adjacent terrestrial areas for foraging, breeding, and rearing.

Ephemeral Drainages

Seven unnamed ephemeral drainages converge with Bear Creek in the Village portion of the project area, while nine ephemeral drainages that represent tributaries of Bloods Creek cross the Village Lift alignment (total area of 0.39 acre). These features were determined to connect to waters of the U.S. (Jones and Stokes 2007b), and potentially fall under the jurisdiction of the USACE, pending verification of the delineation. A single ephemeral drainage occurs in the snowmobile parking area proposed by the County. This drainage was not formally delineated for USACE jurisdiction. However, an informal survey determined that the drainage is approximately 3 feet wide (at the ordinary high water mark) and 78 feet in length within the proposed snowmobile parking area. It runs parallel to Bear Valley Road, enters a culvert, and is piped approximately 250 feet to drain into Bear Creek. Two emphemeral drainages are located near the snowmobile trailer loading area; one to the west and one to the south. Additional ephemeral drainages may cross the ski runs and may be subject to USACE, CDFG, and RWQCB regulation.

Ephemeral drainages within the project area contain little vegetation due to high water flow rates during snowmelt runoff periods. Several of the drainages were completely dry at the time of the survey. The drainages within the project area display varying levels of disturbance, from undisturbed, natural channels in the Village Lift alignment to an excavated channel adjacent to condominiums in the Village.

In general, potential wildlife uses of ephemeral drainages are similar to those of the surrounding habitats. In addition, the narrow channels may act as small-scale travel corridors for amphibians, reptiles, and small mammals. Ephemeral drainages with little vegetation may provide seasonal water for reptiles, birds, and small mammals. Also, one of the features contains freshwater marsh vegetation and would provide similar wildlife habitat as described above.

Bear Creek

Bear Creek is the main drainage within the Village (0.22 acre) and is joined by the smaller, ephemeral drainages as it flows south through the Village project area. Further downstream, it crosses County land within the project area north of SR 4 and passes under the highway via a culvert. The drainage could ~~would~~ be affected by widening of SR 4 ~~that is necessary~~ to accommodate a westbound right-turn~~ing~~ lane at the Bear Valley Road intersection ~~s in association with the Creekside Drive extension~~ (0.01 acre). This feature is considered a water of the U.S. (Jones and Stokes 2007b) and potentially falls under USACE jurisdiction, pending verification of the delineation for the project, as discussed in the Waters of the U.S. section below. The creek is intermittent and experiences controlled fluctuations in the stream flows according to the timing of water releases from Bear Lake, usually in spring and fall. The creek ranges in width from 5 to 30 feet, and in depth from one to several feet. In the northern half of the Village project area, Bear Creek is relatively undisturbed and has not been altered. Further south, the channel has been recontoured, and straw wattles are used for erosion control. Also, several buildings, including the lodge, have been constructed near its banks.

Wildlife use of Bear Creek varies according to the extent of vegetation surrounding it. Wildlife species that may use vegetated portions of the creek, and adjacent terrestrial habitats include western toad, California newt (*Taricha torosa*), Anna's hummingbird (*Calypte anna*), raccoon, and striped skunk (*Mephitis mephitis*). Where vegetation is sparse, invertebrates and fish, such as trout (*Oncorynchus* spp.), may be found in the creek channel, and various reptiles and mammals may use the banks for sunning areas.

Developed Areas

Developed areas within the project area (7.56 acres) include land that has been leveled, graveled, paved, contains buildings, or that has been otherwise disturbed by human presence. Most of the development occurs in the Village; however, some roads cross the Village Lift alignment. Developed areas may contain small patches of vegetation, especially plant species that are associated with disturbance, such as dandelion (*Taraxacum officinale*) and common horsetail (*Equisetum arvense*). In general, these areas provide poor habitat for wildlife. Most species that use developed areas are common and used to human disturbance. However, special status bats such as the pallid bat may roost in buildings within the project area.

Wildlife Corridors

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Animals use wildlife corridors for dispersal, seasonal migrations, and to access resources, such as food, cover, and breeding areas. Mule deer of the Railroad Flat herd are known to use the Bear Valley area for movement between their winter range along the North Fork of the Stanislaus River and summer range at higher elevation meadows. However, within the Village project area, the amount of existing development already provides a significant obstruction to movement. In addition, SR 4 along the south and east sides of the Village is an existing deterrent to movement through this area. Movements on a smaller, "local" scale may exist within the project area, and wildlife may move north-south along Bear

Creek; however, the presence of human activity along this corridor probably minimizes wildlife movement along this drainage. Within the Village Lift alignment, small-scale wildlife movements may occur between the tributary of Bloods Creek and the meadow area.

Waters of the U.S.

Potential waters of the U.S. in the project area consist of wetlands, several drainages, and Bear Creek (Table 3.6-2). These features are described above under the montane freshwater marsh, seep wetland, ephemeral drainage, and Bear Creek habitat types. In addition, potential waters of the U.S. occur within the ski run portion of the project area and near the trailer loading area. Bear Creek is considered jurisdictional as a Relatively Permanent Waterbody (RPW) that conveys seasonal flow to the Stanislaus River, a Traditionally Navigable Waterbody (TNW) (Jones and Stokes 2007b). Most wetlands and ephemeral drainages within the project area were determined to have a "significant nexus" to waters of the U.S. based on their surface connectivity and physical, chemical, and biological contributions to the Stanislaus River. The isolated seasonal wetland described above is not considered a water of the U.S. All determinations are subject to formal verification by the Sacramento District of the USACE.

Table 3.6-2. Potential Waters of the U.S.

Habitat Type	Acreage
Wetlands	
Montane Freshwater Marsh	0.03
Seep Wetland	0.08
Other Waters	
Bear Creek	0.48
Ephemeral Drainage	0.62
Total	**1.21**

Source: Jones & Stokes 2007b. Acreages in this table are based on a Jurisdictional Delineation Study Area larger than the project area. Potential waters of the U.S. within the project area likely total less than 1.21 acres.

Special Status Species

The Village and Village Lift portions of the project area provide potential habitat for two special status plant species and three special status wildlife species. Several other plant and wildlife species that are known to occur in the project vicinity (including the nine U.S. Geological Survey [USGS] 7.5-minute quadrangles encompassing and surrounding the project area and Alpine County) were eliminated from further consideration because the project is outside their range or does not contain suitable habitat (see Jones and Stokes 2007a in Appendix E for a detailed list of special status species and their occurrence potential). Focused surveys were conducted for 11 special status wildlife species and 13 special status plant species to evaluate their potential to occur in the project area; however, none of these species was observed during field surveys, so they are not expected to occur within surveyed portions of the project area (see Basey 2007 and Keyser 2007 in Appendix E for results of focused plant and wildlife surveys). Focused

surveys did not include portions of the ~~Creekside Drive extension,~~ SR 4 improvement area~~,~~ and the proposed snowmobile parking area. However, these portions of the project area lie immediately adjacent to roads and human activity and are unlikely to support any special status wildlife species. Moreover, focused surveys did not include the new or modified ski runs; thus, species that are not expected to occur in the rest of the project area could be present or use habitats along the ski runs.

Special Status Plants

The two special status plants that may occur in the project area include three-bracted onion (*Allium tribractiatum*) and subalpine cryptantha (*Cryptantha crymophila*). Neither of these plants is federally or state listed, but they are considered rare in California according to the California Native Plant Society. Neither of these species was detected during focused surveys of the Village and Village Lift project areas (Basey 2007).

~~Both species are found in volcanic soils in montane coniferous forest and may occur in the understory of lodgepole pine habitat within the Creekside Drive extension/SR 4 area. However, disturbance from the adjacent highway may prevent these species from occurring in the area.~~

In addition, several special status plant species may occur within the proposed ski runs and portions of the trailer loading area outside the Village Lift alignment.~~.~~ Special status plants were not identified during focused surveys of adjacent habitats (e.g. Village Lift) and are not expected to occur there. However, vegetation communities have not been evaluated within the ski runs or the portions of the trailer loading area outside the Village Lift alignment and may provide habitat for special status plants. For a complete list of special status plants with the potential to occur within the ski runs, see Appendix E—Plant Surveys (Sensitive Plant Species in the Bear Valley Area Target Species, Plant Species Watch List for SNF, and Regional Forester's Sensitive Plant Species Watch List).

Special Status Wildlife

One federal candidate species, one California endangered species, one California species of special concern, and various migratory and nesting birds may occur in the surveyed portions of the project area. The Pacific fisher is listed as a candidate species under the ESA and is also a California species of concern, the willow flycatcher is listed as a state endangered species, and the pallid bat is a state species of concern. Brief descriptions of these species' habitat requirements are provided below.

Pacific Fisher

The Pacific fisher is found in intermediate to large tree stages of coniferous forests and deciduous-riparian habitats with a high percentage of canopy closure (Zeiner 1990). They use cavities in large trees, snags, and logs, and prey on small mammals, both on the ground or in trees. Within the project area, lodgepole pine, red fir, mixed conifer forests, and riparian scrub may provide foraging habitat, especially in areas near water and with more than 50 percent canopy cover. Based on the proximity of known

occurrences of the Pacific fisher (within 5 miles), the size of their home ranges (between 5 and 10 square miles), and the presence of suitable habitat, Pacific fishers may forage within the project area. However, they are extremely secretive and sensitive to human presence; thus, they are unlikely to den in the project area due to its proximity to human activity.

Willow Flycatcher

The willow flycatcher primarily inhabits willow thickets and other brushy areas near streams and marshes, but it may forage in open meadows with nearby trees or brush (CDFG 1989). Nests are built in bushes and small trees near water. Suitable roosting and foraging habitat occurs just outside the project area in riparian scrub adjacent to Bear Creek and within montane meadows near water within the project area. Although riparian habitats in and adjacent to the project area may provide temporary habitat for willow flycatchers, especially during migration, they are unlikely to nest within the project area due to a lack of large, unfragmented tracts of willow thickets.

Pallid Bat

The pallid bat occurs in a variety of habitats, including forests and open country, and may forage throughout the project area, although the area lies near the upper elevation limit for year-round residents (Zeiner 1990). These bats rely heavily on trees for roosting sites and may have day roosts, nursery sites, and hibernaculae within large tree cavities in any of the forested habitats within the project area, especially near water. Trees and structures within the Village~~, Creekside Drive extension,~~ and County snowmobile parking area portions of the project area project area would represent marginal roosting habitat due to the extent of human activity therein. However, tree cavities within Village Lift alignment and proposed ski runs represent potential roosting habitat for this species.

Nesting Raptors

Protected raptors may forage and nest in the project area, including red-tailed hawk (*Buteo jamaicensis*), western screech owl (*Otus kennicottii*), northern pygmy owl (*Glaucidium californicum*), and great horned owl (*Bubo virginianus*). Raptors may use cavities in live trees and snags or build platform nests in large trees.

Migratory and Resident Nesting Birds

Protected migratory and resident bird species, such as mountain chickadee and hairy woodpecker (*Picoides villosus*), may forage and nest within the project area. Migratory and resident birds forage and nest in all terrestrial habitats found within the project area. The highest concentrations of birds are found in the less-disturbed forests and riparian areas adjacent to drainages and wetlands.

Special Status Wildlife Species within Proposed Ski Runs and Trailer Loading Area

Other special status wildlife species may use habitats along the ski runs and snowmobile trailer loading area; a list of these species is provided in Table 3.6-3. Focused wildlife surveys were not conducted for the ski run portions of the project area or the portion of the trailer loading area outside the Village Lift alignment; however, several species are unlikely to occur based on the lack of suitable habitat and proximity of existing disturbance. This analysis is based on habitat and disturbance information provided by the BRE (Appendix E) for areas adjacent to or near the ski runs and the unsurveyed portion of the trailer loading area.

Among amphibians, the proposed ski runs and the unsurveyed portion of the trailer loading area are unlikely to provide habitat for the mountain yellow-legged frog and Yosemite toad. Neither species was found in Bear Creek, its tributaries, or adjacent wet meadows during focused surveys of the Village and Village Lift project areas (Jones and Stokes 2007a). As Bear Creek provides the most likely dispersal corridor for amphibians, their absence from Bear Creek makes it unlikely that they would occur in smaller tributaries or adjacent drainages. In addition, proposed ski runs and unsurveyed portion of the trailer loading area are unlikely to provide habitat for the Mt. Lyell salamander. This species' preferred habitat—rocky outcrops, talus, and rock fissures with northern exposure—do not appear to exist within the ski run alignments or trailer loading area.

Among birds, the osprey (*Pandion haliaetus*) and bald eagle (*Haliaeetus leucocephalus*) are unlikely to nest in the ski runs or trailer loading area portion of the project area due to the proximity of human activity. Also, the proposed ski runs do not appear to contain large, contiguous tracts of willow riparian community, the preferred nesting habitat for the willow flycatcher. The trailer loading area does not contain willow riparian community.

Among mammals, the proposed ski runs and trailer loading area are unlikely to provide habitat for the Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), white-tailed jackrabbit (*Lepus townsendii*), the California wolverine, or Sierra Nevada red fox (*Vulpes vulpes necator*). The Sierra Nevada snowshoe hare was not observed during focused surveys in adjacent, similar habitats or the surveyed portion of the trailer loading area (Jones and Stokes 2007a). Further, the project area is not within the range of the white-tailed jackrabbit and existing human activity in the vicinity makes the presence of the California wolverine and Sierra Nevada red fox unlikely. Although the Pacific fisher may forage in the vicinity of the project area, the species is unlikely to den near the proposed ski runs or trailer loading area due to the proximity of human activity. In addition, the American marten (*Martes americana*) is a USFS sensitive species that may occur in the coniferous habitats in the ski run area. It has similar habitat requirements as the Pacific fisher, described above.

Table 3.6-3. Special Status Wildlife with the Potential to Occur along Proposed Ski Runs and Trailer Loading Area

Species	Status	Potential Habitat within Proposed ~~Ski~~ Areas
Northern Goshawk (*Accipiter gentilis*)	CSC	Dense canopy coniferous forests
Sharp-Shinned Hawk (*Accipiter striatus*)	CSC	Dense canopy coniferous forests
Great Gray Owl (*Strix nebulosa*)	CE	Mature coniferous forests bordering meadows
California Spotted Owl (*Strix occidentalis occidentalis*)	CSC	Mature coniferous and deciduous forests.
Pallid Bat (*Antrozous pallidus*)	CSC	Tree canopies in a variety of forest communities

CSC = California Species of Special Concern; CE = California Endangered

3.6.3 Impact Analysis

Methodology

The environmental setting is based on the project's BRE and Preliminary Wetland Delineation, both prepared by Jones and Stokes, and on the results of focused plant surveys performed by Harold Basey and focused wildlife surveys performed by Dale Keyser. Specific survey methods are provided in the BRE and its appendices. The special status species assessment is based on a review of resource agency and county species lists, a taxa-specific literature review, a California Natural Diversity Database query (CDFG 2007), and reconnaissance-level and focused field surveys (Jones and Stokes 2007a; Basey 2007; Keyser 2007). Reconnaissance-level surveys, focused plant and wildlife surveys, and the Preliminary Wetland Delineation were performed for the Village~~,~~ and Village Lift alignment~~, and most of the Creekside Drive extension portions of the project area~~. The ~~remainder of the Creekside Drive extension (and~~ SR 4 improvement area~~)~~, the proposed County snowmobile parking area, the portion of the snowmobile trailer loading area outside the Village Lift alignment, and proposed ski runs were not included in field surveys; thus, habitat and species occurrence analysis was based on aerial photos, topographical information, and results of field surveys of adjacent habitats. The special status species considered for this project area are those having a reasonable probability of occurring on-site under existing conditions based on the presence of suitable habitat conditions.

The impact analysis focused on those special status species that may occur in the project area and may be affected by project activities. The loss of habitat was quantified, where possible, based on habitat maps provide by the BRE that were modified using ArcGIS to reflect the project footprint. The effects of this loss were determined based on the species that may occur in the project area and the jurisdictional status of the habitat.

The County does not have General Plan policies or ordinances that specifically address the protection of native trees. The impacts of tree removal are evaluated based on impacts to wildlife habitat rather than the loss of individual trees.

Levels of Significance

Adverse impacts to biological resources would be considered significant if the proposed project would:

- Substantially reduce the habitat of a fish or wildlife species
- Cause a fish or wildlife population to drop below self-sustaining levels
- Threaten to eliminate a plant or animal community
- Substantially reduce the number or restrict the range of an endangered, rare, or threatened species
- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including seasonal wetlands and ponds) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Impacts and Mitigation Measures

Impact BR-1: Project implementation would result in the loss of approximately 24.9~~26.6~~ acres of conifer forest and chaparral and a minor amount of montane meadow associated with the Village, Village Lift alignment, snowmobile parking area, and SR 4 improvements ~~road extension~~, and less than 40 acres of conifer and shrub habitats associated with the ski runs and trailer loading area.

Construction of the Village Lift, ~~and Creekside Drive extension/~~SR 4 improvements and development of the Village would remove approximately 8.~~98~~ 41 acres of lodgepole pine forest, 8.67 acres of red fir forest, 7.48 acres of developed areas, 3.99 acres of mixed conifer/huckleberry oak, and 3.86 acres of montane chaparral, and less than 1 acre of montane meadow (see Table 3.6-4). The ski runs would result in ~~the loss~~ removal of less than 40 acres of similar habitats. This habitat loss would include the removal of pine and fir trees and may require the removal of approximately 1,700 trees, as discussed further below. The snowmobile trailer loading area would remove less than 0.1 acre of similar habitat, including lodgepole pine forest. Although these habitats are common throughout the region and are not considered sensitive habitats, they do provide foraging, nesting, and roosting habitat for a variety of wildlife species, and may provide foraging habitat for special status species, including the Pacific fisher and pallid bat. Specific impacts to special status species are discussed below in subsequent impact discussions. Impacts to wetlands and other aquatic habitats are discussed below (see Impact BR-2).

Within the Village portion of the project area, existing forested habitats are found directly adjacent to development and are subject to high levels of human disturbance. While wildlife species may use these habitats for foraging and other activities, they are unlikely to nest or den in the area due to the proximity of substantial human activity. Further, abundant lodgepole pine forest habitat occurs in a more pristine condition in the project vicinity. Therefore, the loss of lodgepole pine habitat due to development of the Village would be less than significant. Montane meadows in the project area are also subject to high levels of disturbance due to the proximity of development and human activity; the loss of less than 1 acre of degraded montane meadow habitat would therefore be considered less than significant.

Forest and chaparral habitats along the Village Lift alignment are less subject to human disturbance than those of the Village area and therefore represent higher-quality wildlife habitat. However, existing roads and trails as well as the proximity of the alignment to both the Village and the ski area have reduced the suitability of the habitats for species that require large tracts of undisturbed habitat, such as the wolverine and Pacific fisher. While removal of trees for the Village Lift alignment would result in a loss of forested wildlife habitat, the availability of large amounts of remaining habitat in adjacent areas makes it unlikely that the habitat or range of any species would be significantly restricted by the project. Further, removal of vegetation would result in an increase in transitional, or "edge" habitats, preferred by wildlife such as deer and various raptors, and would result in an increase of habitat diversity. Therefore, the loss of habitat due to construction of the Village Lift would be less than significant.

The project would include modification of existing ski runs and creation of new ski runs, resulting in removal of less ~~impacts to fewer~~than 40 acres of forested, shrub, and herbaceous habitats (see Table 2-2). Direct impacts would include loss of habitat due to vegetation removal, tree thinning, and grading. USFS arborists and silviculturalists would identify trees to be removed for ski run improvement and habitat enhancement. Many of the trees would be selectively removed to thin small thickets of trees to enhance the growth and health of the stand and to remove diseased trees posing hazards to facilities and the recreational public from fire or falling limbs. Some of the tree removal would occur in monoculture old growth red fir forest where the trees are unhealthy and little understory is present. Old growth trees would be preserved to the extent feasible to maintain habitat for wildlife, such as the fisher and marten. The creation of new ski runs would not result in the loss of a large block of contiguous habitat, and the runs would be integrated into the existing habitat. Based on the description of the ski runs and the similarity of habitats in the nearby Village Lift alignment, the ~~loss~~ removal of less than 40 acres of conifer forest, chaparral, and oak habitats would be less than significant.

The amount of forest, chaparral, or montane meadow habitats that would be affected by the project would be minor in the context of large areas of nearby habitats. Also, existing levels of human disturbance limit wildlife use of these habitats within the project area, reducing the quality of the habitats. Therefore, impacts to conifer forest, chaparral, oak woodlands, and montane meadow in the project area would be less than significant.

Table 3.6-4. Affected Habitats within Portions of the Project Area

Habitat Type	Acreage Affected (Total)
Vegetation Community	
Lodgepole pine forest	8.41 (9.55)~~8.98 (10.12)~~
Red fir forest	8.67 (8.67)
Mixed conifer/huckleberry oak	3.99 (3.99)
Mixed montane chaparral	3.86 (3.86)
Montane meadow	0.18 (0.18)~~0.46 (0.46)~~
Potential Waters of the U.S.	
Montane freshwater marsh	0.00 (0.03)
Seasonal wetland	0.00 (0.00)~~0.01 (0.01)~~
Seep wetland	0.08 (0.08)
Bear Creek	0.20 (0.23)
Ephemeral drainage	0.28 (0.39)
Developed	7.48 (7.56)
Total	**33.15 (34.54)~~34.72 (36.14)~~**

Note: Impact acreages are estimated based on project maps provided by the applicant and habitat maps provided by the BRE (Jones and Stokes 2007a). Impact acreages were calculated using ArcGIS to quantify habitats and potentially jurisdictional resources that fall within proposed project activity areas. Impacts to waters of the U.S. are based on a Preliminary Delineation and are subject to verification by the USACE. Acreages do not include impacts ~~to~~ from ski runs and the trailer loading area; however, these impacts ~~to ski runs~~ are qualitatively evaluated within the text.

Level of Significance Before Mitigation: Less than significant because project impacts would not result in a substantial loss of habitat for special status species.

Impact BR-2: Development of the project area would result in the filling of less than 1 acre of waters of the U.S. and waters of the State.

The project area contains several ephemeral drainages, Bear Creek, and wetlands that potentially fall under the jurisdiction of the USACE and the CDFG; these features are also considered sensitive habitats because of their state and federal protections and the important aquatic functions and values the habitats provide. A formal wetland delineation was conducted for the Village and Village Lift portions of the project area (Jones and Stokes 2007b), but the ~~Creekside Drive extension/~~SR 4 improvement area and proposed snowmobile parking area have only received informal surveys for waters of the U.S. Drainages, seeps, wetlands, and other jurisdictional waters may also occur within the proposed new and modified ski runs. Features that are not determined to be waters of the U.S. may still be considered waters of the State and impacts to such features would be subject to CDFG and RWQCB review.

Construction associated with the project would result in direct impacts (placement of fill material) to approximately 0.08 acre of seep wetlands, 0.01 acre of seasonal wetlands, and 0.28 acre of ephemeral drainages, totaling approximately 0.40 acre of impacts to waters of the U.S. and waters of the state (pending verification of the preliminary delineation by the USACE) (see Table 3.6-4). ~~Construction of the Creekside Drive extension would result in placement of fill material into a small amount (less than 0.01 acre) of seasonal wetlands.~~ Construction of new buildings within the Village portion of

the project area would result in filling of portions of several ephemeral drainages (0.18 acre). In addition, the snowmobile parking area proposed by the County would result in fill of a single ephemeral drainage (0.01 acre).

Bear Creek would be also be affected by proposed new buildings, placement of new water lines, and by the road widening within the ~~Creekside Drive/~~SR 4 improvement portion of the project area. However, the project has been designed to minimize impacts to Bear Creek and other potentially jurisdictional waters to the maximum extent feasible. Buildings would be designed to avoid Bear Creek, and bridge crossings (including bridges proposed for the relocated No Name Road) would fully span the ordinary high water mark of the creek, allowing natural flows to remain unimpeded. The project also includes plans to remove several old culverts (including the No Name Road culverts across Bear Creek) and restore the natural streambed in those areas. Impacts to Bear Creek related to removal and replacement of culverts, waterlines, and bridges would be temporary and would total approximately 0.20 acre. In addition, indirect impacts to Bear Creek and other ephemeral drainages (not directly affected by placement of fill) may include urban and construction pollutants in surface runoff and increased flows due to impermeable surfaces (see Section 3.5 [Hydrology and Water Quality]).

Within the Village Lift alignment, several ephemeral drainages (0.09 acre) and a seep wetland (0.08 acre) may be directly affected by construction of the chair lift and supporting towers. However, direct impacts to potentially jurisdictional waters within the Village Lift alignment may be avoided by designing the chair lift alignment and supporting structures to avoid these features. Jurisdictional resources in the Village Lift alignment could still be subject to indirect impacts, including increased sedimentation and altered flows due to uphill construction activities.

Although impacts to jurisdictional waters would amount to less than 1 acre for portions of the project area that have been delineated, development of the ski areas may affect additional jurisdictional waters. At least two drainages have been identified within the new and existing runs that would require new bridges. These drainages and other aquatic features within the ski run alignments have not been formally or informally delineated for waters of the U.S. or waters of the State.

Potential impacts to jurisdictional waters within the ski runs could include removal of riparian vegetation and placement of fill within wetlands and other waters, if present. The snowmobile trailer loading area would avoid drainages and is not likely to affect any wetlands. Direct impacts to jurisdictional waters may be avoided by limiting grading activities to areas without jurisdictional resources, and designing the ski runs to avoid jurisdictional waters, to the extent feasible. Potential indirect impacts could include increased sedimentation within drainages due to vegetation removal and temporary, construction-related erosion.

Direct and indirect impacts to jurisdictional waters could result in a net loss of wetlands and a loss of the aquatic functions and values provided by the wetlands and drainages, which would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure BR-2a: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the Village, the Village Lift, and ~~Creekside Drive Extension~~SR 4 improvements in compliance with the Clean Water Act and Alpine County General Plan to achieve no net loss.

The County will require the applicant to implement a wetland mitigation plan to achieve no net loss of wetland functions and values. The applicant shall conduct a waters of the U.S. delineation for the ~~Creekside Drive/~~SR 4 improvement portion of the project area and submit it to the USACE for formal verification. Further, the applicant shall submit the waters of the U.S. Primary Delineation prepared by Jones and Stokes for the Village and Village Lift project areas to USACE for verification. Estimated impacts to waters of the U.S. shall be refined based on the verified delineation and specific grading plans. Proof of verification of the waters of the U.S. delineation by the USACE for each phase of development shall be submitted to the County as part of the discretionary permit application (tentative map [TM] and/or conditional use permit [CUP]) for each phase of development that would involve construction activity. The applicant will be responsible for obtaining a Clean Water Act Section 404 permit if required and implementing a wetland mitigation plan to offset the loss of impacts to jurisdictional waters.

A wetland mitigation plan that mitigates impacts caused by a particular phase of development shall be provided to the County prior to approval of a CUP for that phase.The wetland mitigation plan shall include measures to avoid direct impacts to jurisdictional resources wherever possible, discuss compensatory mitigation measures for permanent impacts, and describe mitigation measures for temporary impacts. Within the Village Lift alignment, chair lift towers and supporting structures shall be designed to avoid wetlands and ephemeral drainages if feasible. Permanent impacts to waters of the U.S. will require compensatory mitigation to ensure no net loss of aquatic functions or values. For direct impacts that cannot be avoided, mitigation measures may include on-site restoration of wetlands or off-site mitigation through creating or restoring off-site wetlands.

The wetland mitigation plan shall also include measures to avoid or minimize temporary impacts to jurisdictional waters. These measures may include best management practices (BMPs) for erosion control (see Section 3.5 [Hydrology and Water Quality] and Mitigation Measures HWQ-1 and HWQ-2) as well as measures to maintain normal downstream flows and minimize flooding to the maximum extent practicable. Temporary fills shall be placed in a manner that will not be eroded by expected high flows, and they shall be removed in their entirety following construction. All temporarily affected areas shall be returned to pre-construction elevations and conditions, including revegetating, as appropriate.

Mitigation Measure BR-2b: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the proposed ski runs to achieve no net loss.

The USFS can and should require the applicant conduct a waters of the U.S. delineation for USFS land within the ski run alignments and implement measures during ski run design and construction to achieve no net loss of wetland functions and values. The applicant should submit results of the delineation to the USACE for formal verification. Ski runs should be designed to avoid direct impacts to jurisdictional resources wherever possible. To achieve no net loss, the USFS can and should require mitigation measures

to minimize temporary impacts, as well as compensatory mitigation for permanent impacts, if any will occur as a result of ski run improvements.

Prior to granting approval for use of County owned open space/common area for the ski runs on non USFS lands, the County will require the applicant to implement a wetland mitigation plan to achieve no net loss of wetland functions and values for portions of the ski runs outside of USFS land. The applicant shall formally delineate portions of the ski runs outside of USFS land for waters of the U.S. and submit a Preliminary Delineation to the USACE for verification. Specific direct impacts to jurisdictional waters shall be calculated based on the proposed ski run alignments and the verified delineation. Proof of verification of the waters of the U.S. delineation by the USACE shall be required prior to the County granting approval for the ski runs. The applicant will be responsible for obtaining Clean Water Act Section 404 authorization if required and implementing a wetland mitigation plan to offset the loss of impacts to jurisdictional waters.

A wetland mitigation plan that mitigates impacts caused by ski run improvements outside USFS land shall be provided to the County prior to the County granting approval for the ski runs. The wetland mitigation plan shall include measures to avoid direct impacts to jurisdictional resources wherever possible, discuss compensatory mitigation measures for permanent impacts, and describe mitigation measures for temporary impacts. New ski runs shall be aligned to avoid wetlands and other jurisdictional waters wherever possible. Permanent impacts to waters of the U.S. will require compensatory mitigation to ensure no net loss of aquatic functions or values. For direct impacts that cannot be avoided, mitigation measures may include on-site restoration of wetlands or off-site mitigation through creating or restoring off-site wetlands. The wetland mitigation plan shall also include measures to avoid or minimize temporary impacts to jurisdictional waters.

Mitigation Measure BR-2c: Comply with terms of a Streambed Alteration Agreement and implement best management practices during construction.

The County will require the applicant to notify the CDFG of any activities outside of USFS land that could adversely affect fish and wildlife resources associated with construction activities in drainages on-site or in downstream drainages (i.e., North Fork Stanislaus River). A notification package for a Streambed Alteration Agreement shall be submitted to CDFG prior to project construction activities that may affect these resources. The CDFG will determine if the project requires a Streambed Alteration Agreement and will issue a draft agreement to the applicant, if necessary. The applicant will be required to comply with terms of the agreement and implement measures to avoid, minimize, or compensate for impacts to drainages and wetlands that could adversely affect fish and wildlife. These measures may include best management practices (BMPs) for erosion control (see Section 3.5 [Hydrology and Water Quality], Mitigation Measures HWQ-1 and HWQ-2), compensatory mitigation for impacts to wetlands and drainages (Mitigation Measure BR-2a), and minimization of activities during the wet season. Proof of compliance with the terms of the Streambed Alteration Agreement shall be provided to the County prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction.

The USFS can and should require the applicant to submit a notification package for a Streambed Alteration Agreement to the CDFG for activities on USFS land that could

adversely affect fish and wildlife resources associated with construction in drainages on-site or in downstream drainages. The applicant should comply with terms of the agreement and implement measures to avoid, minimize, or compensate for impacts to drainages and wetlands that could adversely affect fish and wildlife.

Mitigation Measure BR-2d: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the County snowmobile parking and trailer loading areas.

The County ~~will~~ shall conduct a formal waters of the U.S. delineation for the proposed snowmobile parking area and trailer loading area and ~~will~~ shall submit the results to the USACE for verification. If waters of the U.S. are present that would be affected by development of the parking and loading areas, the County ~~will~~ shall implement a wetland mitigation plan to achieve no net loss of wetland functions and values. The County ~~will~~shall first consider using snow as fill material in the snowmobile parking area rather than earth.

The mitigation plan shall include measures to minimize temporary impacts and return affected areas to pre-construction conditions, where possible. Permanent impacts would require compensatory mitigation to ensure no net loss of aquatic functions or values (see Mitigation Measure BR-2a above).

The County shall also comply with the terms of a Streambed Alteration Agreement, if required by the CDFG. A notification package for a Streambed Alteration Agreement shall be submitted to CDFG if impacts to fish and wildlife resources in downstream or project area drainages are anticipated. The CDFG will determine if the project requires a Streambed Alteration Agreement and will issue a draft agreement to the County if necessary. Specific requirements may include BMPs for erosion control, implementation of compensatory mitigation, and minimization of activities during the wet season.

Level of Significance After Mitigation: Less than significant because the mitigation measures would ensure minimal impacts to waters of the U.S. and no net loss of wetland functions or values. These mitigation measures would be effective because the wetland mitigation plans would avoid direct impacts wherever possible and would provide for replacement or compensation for permanent impacts where avoidance is not feasible, fully mitigating direct impacts to waters of the U.S. In addition, BMPs included in wetland mitigation plans and Streambed Alteration Agreements would serve to reduce temporary impacts to jurisdictional waters by minimizing the likelihood of inadvertent discharges of sediment and pollutants.

Impact BR-3: Construction of the ~~Creekside Drive extension,~~ snowmobile trailer loading area~~,~~ and the ski run improvements could adversely affect two special status plants (three-bracted onion and sub-alpine cryptantha).

Two special status plants have the potential to occur within the portion of the trailer loading area outside the Village Lift alignment:~~Creekside Drive extension/SR 4 area and trailer loading area~~ three-bracted onion and sub-alpine cryptantha. These species were not observed during focused surveys of the Village and Village Lift project areas; thus, impacts in these areas are not expected. However, ~~less than 1 acre of lodgepole pine~~

~~forest within the Creekside Drive extension and~~ less than 0.1 acre within the trailer loading area (i.e., the portion outside the Village Lift alignment) was not included in focused surveys and may provide suitable habitat for these species. Construction activities could result in direct impacts to these plants through the removal of individuals, local populations, and habitat that supports these species. Regional population impacts are not expected due to the small area of potential habitat affected. However, loss of individuals of these special status species would constitute a substantial adverse effect and would result in a significant impact.

Special status plants also have the potential to occur within the new and modified ski runs connecting the ski area to the Village project area. Vegetation communities have not been evaluated within the ski runs; however, conifer forest, chaparral, and meadow habitats are likely to be present and may provide suitable habitat for special status plants (for a complete list see Appendix E, BRE and Plant Survey Report). Vegetation removal and ground disturbance in these areas could result in removal of individuals, local populations, and habitats that supports these species. Loss of individuals of these special status species would constitute a substantial adverse effect and would result in a significant impact.

Significance Level Before Mitigation: Significant.

~~*Mitigation Measure BR-3a: Avoid direct take of special status plant species during construction activities for the Creekside Drive extension.*~~

~~The County will require the applicant to conduct focused surveys for three-bracted onion and subalpine cryptantha within the Creekside Drive extension/SR 4 area portion of the project area and implement measures during construction to avoid and minimize impacts to individuals and local populations. The focused surveys will be required prior to County approval of a CUP for the project phase that includes the Creekside Drive extension The surveys shall be conducted by a qualified botanist during the appropriate blooming period for each species (July to August) in accordance with CDFG's *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (CDFG 2000). The surveys shall be conducted in the Creekside Drive extension/SR 4 area to assess potential direct impacts and determine if a local population exists on-site.~~

~~If the results of the surveys determine that no special status plant species exist within the project area, then no further measures are necessary.~~

~~If the survey determines that special status plant species exist within the project area, the survey shall include individual or population counts and an assessment of the potential to relocate individuals. A CDFG-approved restoration plan shall also be provided to the County prior to approval of the CUP. Relevant provisions of the restoration plan (e.g., a clearly marked 50-foot "no-disturbance" buffer around individuals or populations) shall be included in the grading and construction plans.~~

Mitigation Measure BR-~~3b~~3a: Avoid direct take of special status plant species during construction activities for the ski runs and snowmobile trailer loading area. ~~[modify to include trailer loading area and remove Creekside drive]~~

The USFS can and should require the applicant to conduct focused surveys for special status plants within the ski run alignments on USFS land and implement measures during ski run design and construction to avoid and minimize impacts to individuals and local populations. Surveys should focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and should occur during the appropriate blooming period for the species.

Prior to granting approval for use of County owned open space/common area for the ski runs on non USFS lands, the County will require the applicant to conduct focused surveys for special status plants within the portions of the ski run alignments outside USFS land and implement measures during ski run design and construction to avoid and minimize impacts to individuals and local populations. The surveys shall be conducted within the ski run alignments to assess potential direct impacts and determine if a local population exists on-site that would be affected by ski run construction. Surveys shall focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and should occur during the appropriate blooming period for the species. The focused surveys will be required prior to County approval of the ski runs. The surveys shall be conducted by a qualified botanist during the appropriate blooming period for each species (July to August) in accordance with CDFG's *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (CDFG 2000).

Prior to constructing the snowmobile trailer loading area, the County will conduct focused surveys for special status plants within the portions of the loading area outside the Village Lift alignment to assess potential direct impacts and determine if a local population exists on-site that would be affected by loading area construction. The County will implement measures during the loading area design and construction to avoid and minimize impacts to individuals and local populations. Surveys shall focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and should occur during the appropriate blooming period for the species. The surveys shall be conducted by a qualified botanist during the appropriate blooming period for each species (July to August) in accordance with CDFG's *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (CDFG 2000).

If the results of the surveys determine that no special status plant species exist within the ski run alignments or snowmobile trailer loading area, then no further measures are necessary.

If the survey determines that special status plant species exist within the project area, the survey shall evaluate the potential for modifying the ski run alignments (or trailer loading area) to avoid populations or individuals of special status plants. The survey shall also include individual or population counts and an assessment of the potential to relocate individuals. A CDFG-approved restoration plan shall also be provided to the County prior to County approval for the ski runs, and the County will prepare such a plan prior to construction of the trailer loading area. Relevant provisions of the restoration plan (e.g., a clearly marked 50-foot "no-disturbance" buffer around individuals or populations) shall be included in the grading and construction plans.

Mitigation Measure BR-~~3c~~3b: Implement a restoration plan for the loss of special status plants.

If any special status plant species would be directly affected by construction activities outside USFS land, the County will require the applicant to prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of the plants. The plan shall discuss the ability to relocate individuals (transplant) to suitable habitat in the project area or a designated off-site area that would be preserved. If individuals cannot be transplanted, they shall be replaced through artificial propagation or seed transfer of plant materials from the project area to a designated restoration site. The ratio of replacement to loss shall exceed a 1:1 ratio (based on number of individuals and in coordination with CDFG) for all species and shall replace the quality of the habitat affected by the project. The restoration plan shall also describe site selection criteria, propagation methods, irrigation, installation designs, maintenance procedures, monitoring guidelines, success criteria, and a project timeline.

If transplanting or replacing plants is not determined to be feasible, the County will require the applicant to provide off-site mitigation by protecting suitable habitats that support populations of special status plants. The size and location of the acquisition will vary depending upon the results of the focused survey and the type, condition, extent and rarity of the habitat and species, and must be approved by CDFG.

The CDFG-approved restoration plan shall be provided to the County prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for any phase affecting special status plants.

If any special status plant species would be directly affected by snowmobile trailer loading area construction activities, the County will prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of special status plants within the trailer loading area.

The USFS can and should require the applicant to prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of special status plants within the ski run alignments on USFS land.

Level of Significance After Mitigation: Less than significant because the mitigation measures would ensure avoidance, minimization, and/or compensation of impacts to special status plants.

Impact BR-4: Development of the project area could result in minor impacts to the Pacific fisher and American marten.

The Pacific fisher, a federal candidate species and California species of concern, and American marten, a USFS sensitive species, may use mature conifer forests within the project area for foraging, temporary refuge, and movement within home territories, though they are highly sensitive to human disturbance and are unlikely to den within the project area (Jones and Stokes 2007a). Noise and increased human presence from ground clearing, vegetation removal, and related construction of the Village and Village Lift may cause fishers or martens to temporarily avoid habitats near the project area. Indirect effects to the Pacific fisher or American marten could occur due to the operation

of the Village Lift and increased human presence within the Village, and could include minor avoidance of local habitats.

The project is not expected to have a substantial adverse impact on the Pacific fisher or American marten because existing disturbance in the project area and vicinity greatly reduces the importance of these habitats for this species. Although fishers and martens may forage within the project area, habitats therein would not be suitable for denning, breeding, or other important behavioral activities. Thus, project implementation would not affect breeding habitat or primary foraging habitat. Also, the Pacific fisher maintains large territories (Zeiner 1990), and the project area would result in impacts to a small percentage of the species' potential local territory. The disturbance created by construction and continued use of project facilities would not substantially affect the Pacific fisher's or American marten's use of nearby habitats if present, and would result in a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because project implementation would result in only minor adverse impacts to the Pacific fisher and American marten.

Impact BR-5: Development in the Village would result in the minor loss of foraging habitat for the willow flycatcher.

The Village portion of the project area is located adjacent to riparian scrub habitat and contains montane meadow habitat that would be affected by development of the Village project area. Impacts to montane meadow (0.~~46~~ 18 acre) could result in the minor loss of foraging habitat used temporarily by the willow flycatcher during migration. This species is unlikely to nest within the project area due to the lack of suitable habitat and the proximity of human activities.

The loss of a small amount of foraging habitat for the willow flycatcher, a California endangered species, would not represent a significant impact because of the minimal area affected by the project and the proximity of existing human activity, which has diminished the importance of the habitat for this species. In the context of the large tracts of undeveloped USFS land nearby, which provides suitable habitat in the project vicinity, the loss of less than 1 acre of habitat that is adjacent to urban development within the project area would not constitute a substantial adverse effect. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would result in only minor adverse effects on the willow flycatcher.

Impact BR-6: Development of the project area would result in the loss of habitat and potential take of nesting raptors and nesting migratory and resident birds.

Construction and associated vegetation removal within the Village, Village Lift, and trailer loading area~~, and Creekside Drive extension~~ would remove 22.~~7~~ 1 acres of conifer forest and 3.86 acres of chaparral. These habitats represent potential nesting habitat for protected raptors and migratory and resident birds. The loss of habitat would have a minor impact on these birds because of the abundant suitable habitat on the surrounding USFS lands.

Vegetation removal activities could cause direct impacts to special status and protected birds in the project area. These activities could result in injury or mortality of individuals and could affect reproductive success of the species through direct impacts to nest sites, eggs, and young if the birds nest in the project area. Impacts to nest sites would be limited to activities conducted between March 1 and August 31 (the general breeding period for birds). Indirect impacts would include noise and disturbance associated with the construction activities that cause birds in adjacent habitats to abandon their nests. Although temporary, construction impacts, especially during the breeding period, could affect the regional populations of these special status and protected species (a substantial adverse effect) and result in a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure BR-6: Avoid impacts to raptor and other protected bird nest sites during construction activities.

The County will require the applicant to conduct pre-construction nest surveys in the portions of the applicant's proposed project area (and surrounding 100–500 feet) located outside USFS land within 30 days prior to grading, vegetation removal, or other ground-disturbing construction activities when those activities would occur during the breeding season for birds (March 1 to August 31).

The County shall conduct pre-construction nest surveys in the snowmobile loading area (and surrounding 100–500 feet) located outside USFS land within 30 days prior to grading, vegetation removal, or other ground-disturbing construction activities when those activities would occur during the breeding season for birds (March 1 to August 31).

The surveys will be conducted by a qualified biologist to identify and locate active nests of raptors and migratory and resident songbirds. Surveys shall be limited to suitable habitat within the project area and surrounding 100-foot buffer for songbirds; raptor surveys will be limited to suitable habitat within the project area and surrounding 500 feet. Trees containing active nests shall be removed during the non-nesting season (September through February). If no active nests are found during the pre-construction surveys, no further measures relating to nest disturbances would be necessary.

All active nest sites identified during field surveys shall be flagged, and a "no-disturbance" buffer shall be established around the nest site using bright-colored flagging, stakes, and other means necessary to inform construction crews to avoid the area. The surveying biologist shall determine the appropriate size for the buffer in consultation with CDFG, and shall be based on the nesting species, its sensitivity to disturbance, and the expected types of disturbance. Construction activities shall be directed away from the nest site until the young have fledged or as determined appropriate by a qualified biologist or the CDFG.

The USFS can and should require the applicant to conduct pre-construction nest surveys within the ski run alignments and along the Village lift alignment on USFS land and implement measures during ski run and chair lift construction to avoid and minimize impacts to nesting birds, including construction outside of the breeding period or use of no-construction buffers.

Level of Significance After Mitigation: Less than significant because implementation of avoidance measures during construction would avoid or minimize adverse impacts to nesting birds. Mitigation Measure BR-6 would be effective because nesting birds subject to construction-related disturbance would be identified during surveys, and no-construction buffers would ensure that nesting birds are not adversely affected by construction activities.

Impact BR-7: Development of the project area could result in the loss of roosting habitat and potential take of the pallid bat.

The pallid bat, a California species of concern, may roost in hollow trees within the Village Lift portion of the project area and at Koala Rocks immediately adjacent to the upper lift terminal. The project would remove approximately 13 acres of conifer forest in the Village Lift alignment that may provide roosting habitat for the pallid bat. However, this loss of habitat would have a minimal effect on the pallid bat because the project would represent a negligible loss of habitat on a regional scale. The loss of suitable roost trees within the Village Lift area would be minimal compared with the availability of large areas of open forest and rocky crevices on surrounding USFS lands.

Construction activities associated with removal of trees in the Village Lift alignment could result in direct impacts to pallid bats in the project area. Vegetation clearing could result in injury or mortality of individuals and could affect reproductive success of the species through direct impacts to day or maternity roosts and/or hibernaculae. Also, noise and disturbance associated with the construction activities could cause bats in adjacent habitats to abandon their roost sites. Although temporary, construction impacts, especially during the reproductive period (generally April to October), could affect the local population of the pallid bat and result in a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure BR-7: Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.

The County will require the applicant to conduct pre-construction bat surveys in the applicant's proposed project areas subject to disturbance and outside USFS land within 30 days prior to construction activities that would occur during the reproductive period for bats (April 1 to October 31).

The County shall conduct pre-construction bat surveys in the snowmobile trailer loading area 30 days prior to construction activities that would occur during the reproductive period for bats (April 1 to October 31).

The surveys will be conducted by a qualified biologist to identify and locate active roost sites of special status bats. The survey shall include suitable habitat in the project area and a 100-foot buffer and should focus on large trees and snags that would be removed within the project area. If no active roost sites are found during the pre-construction surveys, no further measures relating to roost disturbances would be necessary.

All active maternity roost sites identified during field surveys shall be flagged, and a 100-foot "no-disturbance" buffer shall be established around the site using bright-colored

flagging, stakes, and other means necessary to inform construction crews to avoid the sites. Construction activities shall be directed away from the roost site until the young are capable of flying or as determined appropriate by a qualified biologist or the CDFG. For active day-roost sites, bats shall be excluded from or otherwise removed from the trees or structures prior to removal or demolition. For bats that must be relocated due to project activities, the applicant and/or County shall coordinate with CDFG, and a qualified biologist in possession of an applicable CDFG Memorandum of Understanding shall remove and relocate the roosting bats prior to construction activities within 100 feet of the roost site.

Construction crews will also be informed about the identification and regulatory protections of the pallid bat.

The USFS can and should require the applicant to conduct pre-construction surveys within the ski run and Village Lift alignments on USFS land and implement measures during ski run and chair lift construction to avoid and minimize impacts to pallid bat, including construction outside of the breeding period, use of no-construction buffers, exclusion measures, or relocation by a qualified biologist.

Level of Significance After Mitigation: Less than significant because avoidance and minimization measures during construction would avoid or minimize adverse impacts to special status bats. Mitigation measure BR-7 would be effective because pallid bat roosts subject to construction-related disturbance would be identified during surveys and no-construction buffers and because exclusion measures or relocation would ensure that pallid bats are not adversely affected by construction activities.

Impact BR-8: Development of the project area could result in increased vehicle collisions and loss of summer range habitat for mule deer.

Mule deer of the Railroad Flat herd pass through the Bear Valley area during seasonal movements between winter range on the North Fork Stanislaus River and summer range in higher-elevation meadows. In addition, meadows and shrub communities in the project vicinity represent temporary summer feeding grounds for the herd. The General Plan Conservation Element Goal No. 14 protects important deer habitats and migration routes in Alpine County by encouraging cluster development and requiring notice be given to CDFG for projects within critical summer or winter range or migration corridors.

Development of the project would result in increased traffic along SR 4, which may cause an increase in the number of vehicle collisions with mule deer. However, studies at other mountainous locations showed highway traffic volumes are not the single greatest contributor to collision rates (Bertwistle 2001). Rather, behavioral factors (i.e., mating and migration periods) correlate strongly with the number of vehicle collisions. Seasonally, deer collision rates are greatest in October and November, corresponding to the mating season (Hughes et al. 1996). Late spring and late fall may also be a high-risk period due to seasonal movements. In contrast, the project is expected to see the greatest traffic increases in mid-summer (June through Labor Day weekend) and winter (December through February) months (LSC 2008). These months represent relatively low periods for traffic collisions with deer because they remain close to summer and winter ranges, respectively, during these periods. Therefore, increased traffic collisions

due to project implementation are unlikely to result in a substantial adverse impact to mule deer, and traffic-related impacts would be less than significant.

Meadows and shrublands in the Bear Valley area have been identified as critical summer range for the Railroad Flat herd (Alpine County 2005a). However, summer range in the project vicinity has not been identified as fawning grounds for mule deer. Consistent with General Plan Policy 14b, the project has been designed as a cluster development. The project would not increase the footprint of Bear Valley Village, but new development would occur adjacent to existing development. In addition, the applicant would comply with the General Plan Policy 14a to notify CDFG of development plans and comply with mitigation recommendations made by CDFG. Specific measures may include avoiding construction near sensitive areas (e.g., mule deer fawning grounds) during certain periods or locating staging areas to avoid important summer mule deer habitats. Because the applicant would comply with General Plan Goal No. 14, the project would not conflict with local ordinances protecting mule deer. Therefore, impacts to mule deer would be less than significant.

Level of Significance Before Mitigation: Less than significant because compliance with General Plan Goal No. 14 would ensure that the project would not result in adverse effects to mule deer.

Impact BR-9: Construction of new and modified ski runs could result in direct and indirect impacts to special status wildlife.

Vegetation removal and ground disturbance associated with new and modified ski runs connecting the ski area to the Village may have direct and indirect impacts on special status wildlife. Species that may be affected include special status birds—such as northern goshawk, sharp-shinned hawk, great gray owl, California spotted owl, and other nesting and migratory birds—and the pallid bat.

Among bird species, the proposed ski runs may provide nesting habitat for northern goshawk, sharp-shinned hawk, great gray owl, California spotted owl, and other resident or migratory species. Vegetation removal activities could cause direct impacts to special status and protected birds in the project area. These activities could result in injury or mortality of individuals and could affect reproductive success of the species through direct impacts to nest sites, eggs, and young if the birds nest in the project area. Indirect impacts would include noise and disturbance associated with the construction activities that cause birds in adjacent habitats to abandon their nests. Although temporary, construction impacts, especially during the breeding period, could affect populations of special status and protected species (a substantial adverse effect) and result in a significant impact.

The pallid bat may roost in tree cavities within the areas affected by ski run additions and modifications. Vegetation clearing could result in injury or mortality of individuals and could affect reproductive success of the species through direct impacts to day or maternity roosts and/or hibernaculae. Also, noise and disturbance associated with the construction activities could cause bats in adjacent habitats to abandon their roost sites. Direct and indirect impacts to this special status species would be significant.

Because modification and addition of ski runs has the potential to result in adverse effects, impacts to special status wildlife would be significant.

Level of Significance Before Mitigation: Significant.

Mitigation Measure BR-9a: Avoid impacts to raptor and other protected bird nest sites during construction activities.

Implement Mitigation Measure BR-6.

Mitigation Measure BR-9b: Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.

Implement Mitigation Measure BR-7.

Level of Significance After Mitigation: Less than significant because avoidance and minimization measures during construction would avoid or minimize adverse impacts to special wildlife within proposed ski run areas. Mitigation Measures BR-6 and BR-7 would effectively identify nesting birds and pallid bat roosts subject to construction disturbance and avoid or minimize disturbance through use of construction timing, no-construction buffers, and other measures.

Significant and Unavoidable Impacts

None.

3.7 CULTURAL RESOURCES

This section portrays the cultural resources setting for the project area, describes known cultural resources located within the project area, and identifies the potential for unknown cultural resources to occur within the project area. The impact analysis discusses the potential for the project to affect cultural resources. Cultural resources include archaeological sites, features, and isolated finds; built resources older than 45 years; and paleontological resources. The majority of the information is summarized from the cultural resources inventory for the project (Jones and Stokes 2007d, 2008) (Appendix F).

3.7.1 Regulatory Setting

Federal

Cultural resources that may be present in the project area could include some or all of the following types of resources, which would be subject to applicable regulations:

- Historic properties
- Native American cultural items
- Native American sacred sites
- Archaeological sites
- Other cultural resources

Archaeological and architectural resources (buildings and structures) are protected through the **National Historic Preservation Act** (NHPA) of 1966 (16 United States Code [USC] 470f) and its implementing regulation, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), amd the Archaeological and Historic Preservation Act (ARPA) of 1974 and of 1979. Section 106 of the NHPA requires federal agencies, prior to implementing an undertaking (e.g., issuing a federal permit), to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a Native American tribe to be determined eligible for inclusion in the NRHP. Under the NHPA, a find is significant if it meets the NRHP criteria listed in Title 36 CFR 60.4.

The NHPA and its implementing regulations (16 USC 470 et seq., 36 CFR 800, 36 CFR 60, and 36 CFR 63) apply to the project because a portion of the project is on U.S. Forest Service (USFS) land and because a Clean Water Act permit will be required from the U.S. Army Corps of Engineers (USACE). The NHPA establishes the federal government policy on historic preservation and the programs, including the NRHP, through which this policy is implemented. Under the NHPA, historic properties include “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places” (16 USC 470w [5]).

The NHPA authorizes the maintenance of the NRHP, which facilitates the preservation of historic properties possessing integrity and meeting at least one of the following four criteria delineated at 36 CFR 60.4 (Advisory Council on Historic Preservation 2000). The quality of *significance* in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess *integrity* of location, design, setting, materials, workmanship, feeling and association and:

a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
b) That are associated with the lives of persons significant in our past; or
c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) That have yielded, or may be likely to yield, information important in prehistory or history.

State

The **California Environmental Quality Act (CEQA)** Guidelines (14 California Code of Regulations [CCR] Section 15064.5) establish criteria for determining the significance of impacts to archeological and historical resources. A project that may cause a "substantial adverse change in the significance of an historical resource" is considered to have a significant environmental effect. The term "historical resource" includes, but is not limited to:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR; PRC Section 5024.1, 14 CCR, Section 4852)
- A resource included in a local register of historical resources (as defined by PRC Sec. 5020.1[k]), or identified in a historical resource survey meeting the requirements of PRC Section 5024.1(g) (presumption of historical significance).
- Generally, a resource that meets at least one of the criteria for CRHR listing, including:
  1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  2. Is associated with the lives of persons important in our past;
  3. Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
  4. Has yielded, or may be likely to yield, information important in prehistory or history.

A "substantial adverse change in the significance of an historical resource" means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. A lead agency must identify potentially feasible, enforceable mitigation

measures to mitigate these impacts. For archeological sites, preservation in place is the preferred mitigation approach (14 CCR 15126.4[b][3]).

Local

Section J of the **Alpine County General Plan** Conservation Element addresses identification, preservation, and management of the County's prehistoric and historic resources (Alpine County 2005a). Relevant policies include cooperating with local tribes to identify and protect significant archaeological sites, requiring development project applicants to protect known or suspected historic sites and/or artifacts, and promoting proactive planning to avoid impacts to cultural resources and to promote historic preservation.

3.7.2 Environmental Setting

The project area is situated on the western slope near the crest of the Sierra Nevada Range, within a mountainous area that was occupied by different prehistoric cultures dating to at least 6,000 years ago. More than 300 archaeological sites have been recorded within Alpine County; many have stratified subsurface deposits, and most occur along riparian corridors. The project is also within the southeastern territory historically occupied by the Washoe, whose lands straddled the crest of the Sierras around Lake Tahoe and whose language has no recognizable relationships to neighboring tribes (d'Azevedo 1986; Mithun 2001). Ethnographic Washoe established villages near springs and rivers and on major valley floors, including Bear Valley, at elevations averaging 4,500 to 5,500 feet above mean sea level (msl). Since the spring growing season was short in the high elevations of the Washoe core area, the community dispersed widely to make effective use of harvesting locations. Acorns were the main staple for the western and northern groups, while pine nuts filled that role in the south and east. More than 170 plants were used and a variety of tools, implements, and enclosures were employed to fish, hunt land mammals, and capture waterfowl and other birds.

Early historic land use in Alpine County focused on mining and lumber, subsequent to the discovery of gold and silver in the late 1850s and early 1860s. Millions of felled trees were used for mine timbers; fuel for steam engines; and construction of towns, ranches, and flumes between 1860 and 1882, resulting in a corresponding growth in the county's population that declined as lumber and silver production decreased in the late 1800s. The dwindling lumber business was replaced by livestock ranching and agriculture that in turn was succeeded by an increase in economic importance of the recreation industry in the mid-1900s. First settled by Harvey Spaulding Blood, who operated a toll road in the mid-1860s connecting the valley to the town of Silver Mountain on Silver Creek, Bear Valley became a popular summer-home area in the mid-1950s. The Mt. Reba ski resort (now known as the Bear Valley Mountain Resort) and the Bear Valley Lodge opened in the winter of 1967/1968. The Lodge continues to serve the local community as a center for social activities. Of particular note in the Lodge is the stone fireplace and hearth, which includes a large bedrock mortar that was likely used by the Washoe or their predecessors to process plants, acorns, or pine nuts. Although Bear Valley Lodge is not

architecturally significant and is ineligible for listing on the NRHP or CRHR, the applicant plans to reuse the fireplace stones in the new Village.

Approximately 18 acres within the Bear Valley Village and the County's proposed snowmobile parking area, plus 4 acres along the Village Lift (including a portion of the snowmobile trailer loading area), have been subject to intensive surface survey for the presence/absence of cultural resources to date. Two known cultural resources are located either partially within or immediately adjacent to the surveyed acreage. Each is a prehistoric archaeological site with surface lithic scatters and milling features; both are located within the town of Bear Valley outside USFS land. Site CA-ALP-100 was initially recorded in 1956 and was not relocated during the pedestrian survey for this project. Site CA-ALP-138 was initially recorded in 1978 and relocated in 2000 (Davis-King 2000); the majority of the site is situated in the adjacent Silver Mountain development (formerly known as Pinetree Village) and the majority will be mitigated in the future by that project. Although the surface boundary of CA-ALP-138 is mapped partially within the project boundary, and CA-ALP-100 is mapped immediately adjacent to the project boundary, the subsurface extent of the sites is unknown. Neither site has yet been tested for the presence or absence of subsurface deposits or formally evaluated for listing on the NRHP or CRHR.

No sites of traditional Native American religious or cultural significance, including sacred sites or contemporary use areas, have been identified in the project area. No cultural resources were found during the intensive surface surveys performed to date, and there are no architectural resources more than 45 years old located in the project area. Therefore, no significant cultural resources are known to be found within the project area.

Eleven invertebrate and plant fossil localities occur within Alpine County, including one in Bear Valley that contains Miocene plant fossils (University of California Museum of Paleontology [UCMP] 2008). An approximately 0.5-mile portion of the northern extent of the Village Lift and the majority of the ski run area is underlain by the Mehrten Formation, which has produced Miocene and Pliocene plant fossils at five localities in Alpine County and more than 200 paleontological resources recorded throughout the Central Sierra Nevada foothills.

3.7.3 Impact Analysis

Methodology

The environmental setting is based on the following: a literature search by the Central California Information Center (CCIC) at California State University, Stanislaus; a Sacred Lands File search by the Native American Heritage Commission (NAHC) and related communication with local Native American groups and individuals; pedestrian surveys conducted in October 2006 and July 2007 of approximately 22 acres in the project area; and a search of the UCMP database.

This impact analysis is based on the cultural resources inventory (Appendix F) and relevant regulations. The project was analyzed in terms of its potential to affect known

cultural resources (CA-ALP-100 and CA-ALP-138) and undocumented and potentially significant cultural resources, including buried human remains, within the project area.

Levels of Significance

Under federal regulations, adverse impacts to cultural resources would be considered significant if the proposed project would have an adverse effect upon the resource (36 CFR 800.4[d][1]). According to federal regulations, "*Effect* means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" (36 CFR 800.16[i]). The criteria of adverse effect are as follows:

> An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. (36 CFR 800.5[a][1])

Adverse impacts to cultural resources would be considered significant if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Directly or indirectly destroy a unique paleontological resource or site
- Disturb any human remains, including those interred outside of formal cemeteries

Impacts and Mitigation Measures

Impact CR-1: Ground disturbance could affect known prehistoric cultural resources.

Prehistoric archaeological sites CA-ALP-100 and CA-ALP-138 have not been tested for the presence or absence of subsurface material or deposits or formally evaluated for listing on the NRHP or CRHR. Intact subsurface cultural material or features may exist at or immediately adjacent to the recorded locations of these sites and, if present, may have historical significance; thus, construction-related impacts on cultural resources would be significant.

Level of Significance Before Mitigation: Significant.

Mitigation Measure CR-1: Implement construction monitoring by a qualified archaeologist for the protection of known cultural resources~~, including human remains~~.

The County will require a qualified archaeologist who meets the Secretary of the Interior's Standards for archaeologists (National Park Service 1983) to monitor ground-disturbing activities in native sediments/soils within 100 feet of sites CA-ALP-100 and CA-ALP-138. Construction work within stockpile and/or fill material does not require monitoring. The monitor shall be empowered to temporarily halt construction in the immediate vicinity of a discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, the following measures shall be implemented. Preservation is the preferred treatment, but if preservation is not feasible by such measures as avoidance, incorporation within open space or conservation easement, or capping beneath a layer of sterile soil, data recovery through excavation may be required (PRC Section 21083.2, Section 21084.1; CEQA Guidelines Section 15126.4[b][3]). The qualified archaeologist shall prepare a data recovery plan, to be approved by the Alpine County Planning Department (and any other relevant regulatory agencies [e.g., USACE if the resource is located within its area of potential effect]) prior to the start of any archaeological excavation. The technical report detailing the results of the data recovery shall be submitted to the Alpine County Planning Department; Bear Valley Village I and II, LLC; the CCIC; and any relevant regulatory agency. At the conclusion of archaeological monitoring, a monitoring report shall be prepared and submitted to the Alpine County Planning Department; Bear Valley Village I and II, LLC; the CCIC; and any relevant regulatory agency.

Significance Level After Mitigation: Less than significant because the above mitigation measures would adequately protect known prehistoric cultural resources.

Impact CR-2: Ground disturbance could affect undocumented cultural resources, including human remains.

The project area is considered to have a low to moderate sensitivity for the discovery of prehistoric, ethnohistoric, and historic cultural material or subsurface deposits, and it is possible that undocumented cultural resources, including human remains, may be affected during construction or ground-disturbing activities. Prehistoric or ethnohistoric materials might include flaked stone tools, tool-making debris, stone milling tools, shell or bone items, and fire-affected rock or soil darkened by cultural activities (midden); examples of significant discoveries would include villages and cemeteries. Historic materials might include metal, glass, or ceramic artifacts; examples of significant discoveries might include former privies or refuse pits. Due to the possible presence of undocumented cultural resources within the project area, construction-related impacts on cultural resources would be significant.

Level of Significance Before Mitigation: Significant

Mitigation Measure CR-2a: Conduct a pre-construction survey for cultural resources and ensure adequate recordation, protection, or recovery of any significant resources.

The County will require the applicant to obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of ~~the~~ its proposed project

area outside USFS land that was not surveyed in October 2006 and July 2007 ~~(e.g., approximately 18 acres within the Bear Valley Village and snowmobile parking area, and 4 acres along the Village Lift)~~ prior to initiation of ground-disturbing activities. The unsurveyed areas generally refer to the portions of the proposed ski runs located outside USFS land ~~and the portion of SR 4 to be widened for the Creekside Drive extension~~.

The County shall obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of the snowmobile trailer loading area that was not surveyed for the Village Lift in October 2006 and July 2007 (e.g., less than 0.1 acre) prior to initiation of ground-disturbing activities.

The pedestrian survey shall be conducted in compliance with Section 106 requirements of the NHPA (36 CFR 800) and CEQA requirements (14 CCR 15064.5 and PRC 21083.2) and in accordance with the standards set by the Secretary of the Interior. After completion of the surveys, the qualified archaeologist shall complete a technical report documenting the results of all work, and any cultural resources identified during the survey shall be formally recorded on Department of Parks and Recreation series 523 forms. The report shall meet the Secretary of Interior's Standards and Guidelines and follow the Office of Historic Preservation's ARMR guidelines (*Archaeological Resource Management Reports: Recommended Contents and Format*). The report shall include assessment of the significance of any newly identified resources, and recommend appropriate procedures to either further investigate or mitigate adverse impacts in conformance with the protocols set forth in Section 106 and PRC Section 5097.98.

The applicant shall submit a copy of the technical report for its proposed project area as part of any application for a tentative map (TM) and/or conditional use permit (CUP) that would involve construction activity for any portion of the project area that has not been surveyed. The applicant shall include on all grading plans and construction contracts notation of the discovery measures (see below) that would be implemented if cultural resources are discovered during project implementation.

The USFS can and should require the applicant to obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of the project area on USFS land that was not surveyed in October 2006 and July 2007 prior to initiation of ground-disturbing activities.

Mitigation Measure CR-2b: Implement inadvertent discovery measures for the protection of cultural resources, including human remains.

The County will require the applicant to include on all grading plans and construction contracts for work outside USFS land notation of the following cultural resource discovery measures that shall be implemented if cultural resources are discovered during project implementation.

If cultural resources, including human remains, are discovered during construction or earth-disturbing activities without an archaeological monitor present, the applicant or County shall halt all activities within 100 feet of the find until a qualified professional archaeologist can evaluate it. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to either further investigate or mitigate adverse impacts on the resources encountered in consultation with the relevant

regulatory agencies and/or in conformance with the protocols set forth in PRC Section 5097.98. Any human remains and associated funerary objects encountered during construction shall be treated in accordance with the California Health and Safety Code Section 7050.5 if on private land and in accordance with the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013), and implementing regulations at 43 CFR 10.4 if on federal land.

The USFS can and should require the applicant to include on all grading plans and construction contracts for work on USFS land notation of the cultural resource discovery measures described above.

Significance Level After Mitigation: Less than significant because implementation of mitigation measures would ensure that any undocumented cultural resources or inadvertent discoveries of cultural resources during construction or ground-disturbing activities would be properly recorded and the historical significance of the resources documented.

Impact CR-3: Implementation of the project would minimally affect one existing previously disturbed cultural resource.

One large bedrock mortar, which was likely used by the Washoe or earlier Native American inhabitants to process plants, acorns, or pine nuts, was moved during prior construction and incorporated as part of the stone fireplace and hearth in the Bear Valley Lodge. The applicant has stated its intention to reuse the fireplace stones in the new Village. Because the bedrock mortar is not eligible for listing on the NRHP or CRHR, this impact would be less than significant.

Significance Level Before Mitigation: Less than significant because the cultural resource does not qualify as an eligible historical resource under the NRHP or CEQA.

Mitigation Measure CR-3: Incorporate bedrock mortar into relocated fireplace or place in interpretive exhibit.

The bedrock mortar in the existing fireplace should not be destroyed but should be incorporated into the project in a way that guarantees public enjoyment and appreciation of this type of grinding tool, such as at an outdoor exhibit within the new Village with interpretive signage to explain its function and association with indigenous Californians.

Significance Level After Mitigation: Less than significant because the cultural resource does not qualify as an eligible historical resource under the NRHP or CEQA, and because Mitigation Measure CR-3 would reduce this less-than-significant impact even further.

Impact CR-4: Ground disturbance could affect undocumented paleontological resources.

Bear Valley is known to contain Miocene plant fossils, and the Mehrten Formation is considered to have high sensitivity using criteria established by the Society of Vertebrate Paleontology (SVP 1995) because this formation has produced vertebrate fossils. Due to

the possible presence of undocumented paleontological resources within the project area, construction-related impacts on paleontological resources would be significant.

Level of Significance Before Mitigation: Significant

Mitigation Measure CR-4: Implement inadvertent discovery measures for the protection of paleontological resources.

The County will require the applicant to include on all grading plans and construction contracts for work outside USFS land notation of the following paleontological resource discovery measures that shall be implemented if such resources are discovered during project implementation. The County shall include these measures on all grading plans and construction contracts for the snowmobile parking and trailer loading areas.

If paleontological resources are discovered during construction, the applicant or County shall halt all activities in the immediate vicinity of the find until a qualified professional paleontologist can evaluate it. The paleontologist shall examine the resources, assess their significance, and recommend appropriate procedures to either further investigate or mitigate adverse impacts on the resources encountered in conformance with CEQA statutes and guidelines for the protection of paleontological resources. Mitigation measures may include salvage of macrofossils, sampling of sediments for microfossils, and curation. Once mitigation measures are complete, the paleontologist shall prepare a technical report detailing the results of the recovery to be filed with the Alpine County Planning Department; Bear Valley Village I and II, LLC; and any relevant regulatory agency.

The USFS can and should require the applicant to include on all grading plans and construction contracts for work on USFS land notation of the paleontological resource discovery measures described above.

Significance Level After Mitigation: Less than significant because implementation of mitigation measures would ensure that any undocumented paleontological resources or inadvertent discoveries of paleontological resources during construction or ground-disturbing activities would be properly recorded and the significance of the resources documented.

Significant and Unavoidable Impacts

None.

3.8 AESTHETICS

This section evaluates changes to the visual character of the project area and vicinity caused by project implementation; evaluates whether the project would adversely affect public views of scenic vistas, substantially damage scenic resources, or substantially degrade the existing visual character or quality of the site and its surroundings; and evaluates adverse effects related to new sources of light or glare. The information presented in the environmental setting is based on field observations, photographs, and aerial photography interpretation.

3.8.1 Setting

Regulatory Setting

The **California State Scenic Highway Program** is administered by the California Department of Transportation (Caltrans). The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land (California Streets and Highways Code, Section 260 et seq.). A scenic corridor is the land generally adjacent to and visible from the highway, and is identified using a motorist's line of vision (Caltrans 2007).

To gain an official scenic designation, a city or county must nominate the highway and identify and define the scenic corridor. The local nominating agency must also adopt ordinances, zoning, or planning policies to preserve the scenic quality of the corridor, or document that the regulations or policies already exist. These ordinances and/or policies of the nominating agency are considered the Corridor Protection Program (Caltrans 2007).

State Route (SR) 4 (Ebbetts Pass Highway) is an officially designated state scenic highway between Arnold and SR 89 within Alpine and Calaveras counties.

In 2005, Ebbetts Pass Highway was awarded National Scenic Byway (NSB) status by the Federal Highway Administration. Under the NSB Program, the U.S. Secretary of Transportation recognizes certain roads as NSBs based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. This is a non-regulatory program.

According to the **Alpine County General Plan** (2005a), the County's main industries, recreation and tourism, are tied directly to the County's scenic resources. The General Plan identifies goals and policies to protect these resources. Applicable policies include maintaining the scenic highway designation for SR 4; protecting steep slopes from grading, vegetation removal, road construction, or other developments or activities that may affect the viewshed from any designated scenic route; protecting open areas, ridges, peaks, and other skyline features from structures that may impact the viewshed from a designated scenic route; and protecting nighttime views by minimizing outside lighting.

The County's **Scenic Highway Ordinance** regulates land uses adjacent to established scenic highways, including SR 4 (Ordinance No. 658-04). The ordinance prohibits

certain activities and uses "that create a conspicuous visual contrast in form, color, texture, reflectivity or other visual characteristic with the natural background as viewed by the naked eye from the designated scenic highway corridor." Activities and uses that may be prohibited include billboards, junk yards, overhead utilities, and industrial uses. None of these uses is proposed for the project. The ordinance also includes voluntary development guidelines for protecting views from the scenic highway. These voluntary guidelines encourage building height limits, minimal grading and tree clearing, use of muted colors that blend with the landscape, and locating buildings as far as possible from the scenic highway.

In 2004, a **Corridor Management Plan** (CMP) was prepared for the Ebbetts Pass National Scenic Byway. The CMP specifies actions, procedures, operational and administrative practices, and strategies for maintaining the natural, scenic, recreational, historic, and cultural qualities of the byway corridor. CMPs are non-regulatory documents (Calaveras Council of Governments 2004).

Environmental Setting

Visual Character of the Project Area

The visual setting of Bear Valley is consistent with its location and character as a small recreation-oriented town at the 7,000-foot elevation in the Sierra Nevada. Views from any given location may include condominiums, homes, forest, creeks, streets, vehicles, and commercial buildings. Views from ground level within Bear Valley are mostly limited to the local surroundings. Views of nearby ridgelines to the north, west, and east are available from some locations, but are often screened or obstructed by trees and buildings. No distant views are available from ground level in the center of town. Snow is a prominent visual component from late fall to early spring.

Views of the Village project area north of No Name Road include lodgepole pine forest on gently rolling terrain, Bear Creek, the snowmobile parking area, and a partially paved road used for public parking (Photographs 3.8-1 and 3.8-2). Views of the Village Center project area south of No Name Road include the Bear Valley Lodge, the Lodge pool, Commercial Center, Bear Creek, and various parking lots (Photographs 3.8-3 and 3.8-4). Views of the South Village project area include County Parking Lots B and C and the snowmobile parking area behind the Transportation Center (Photograph 3.8-5). Other than views of lodgepole pine forest and Bear Creek (primarily north of No Name Road), which are abundant in the project vicinity, no unique scenic resources (e.g., rock outcroppings, historic buildings) are located within the project area.

The visual setting of the Village Lift alignment and new ski runs are also consistent with their location. The lift alignment and ski runs areas are relatively undeveloped. Views from any given location within these areas include forest and chaparral, rock outcrops, creeks, meadows, and distant views of the Sierra Nevada. Views from the uppermost sections of the lift alignment and ski runs include some ski area facilities.

Views of the Project Area from Off-site Locations

Bear Valley Village

The Village project areas are primarily visible from adjacent roads (i.e., No Name Road, Bear Valley Road, Creekside Drive, and Quaking Aspen Road) and nearby properties. Trees and intervening buildings screen or obstruct views from many off-site locations, and views of the project areas diminish with distance.

Views of the North Village are available from Creekside Drive, and from some homes along the east side of Orvis Road and Schimke Road. Views of the Village Center are available from Bear Valley Road, No Name Road, Creekside Drive, and from the Creekside Condominiums to the south, Condo Bear condominiums and other homes to the west and northwest, and the community center to the east.

Views of the South Village are available from the County-approved Silver Mountain Condominium site to the west, Condo Bear Condominiums to the north, the Tamarack Condominiums and the Bear Valley Transportation Center to the south, Creekside Condominiums to the east, and from Bear Valley Road and Quaking Aspen Road.

The North Village and Village Center project areas are not visible from SR 4. Trees and two-story condominium buildings obstruct views from the highway (Photograph 3.8-6). Views of the South Village project area from SR 4 are almost completely obstructed by trees and by the Bear Valley Transportation Center and the fire station. The South Village project area is virtually indiscernible from SR 4 (Photograph 3.8-7).

Views to the south from the ski area include panoramic views of the forested valleys and ridges forming the headwaters of the North Fork Stainslaus River, the Dardanelles, and high peaks of the Sierra Nevada. The town of Bear Valley is not a prominent feature in the ski area's viewshed. Views of the town and Village project area are only available from Tuck's Traverse ski run, and from Home Run and Lunch Run. Tuck's Traverse is currently served by chair lifts and is more heavily used than the other two trails, which primarily serve residents and guests returning to the village.

Views of the town from Tuck's Traverse are often screened or blocked by trees or intervening ridges. The best views of the village from Tuck's Traverse are available near the top of Koala Chair, near the proposed location for the upper Village Lift terminal. Views of the town include several earthtone-colored buildings, including the Lodge in the middle distance, but neither the visible structures nor the town as a whole are a dominant component of the expansive viewshed from the ski area (Photograph 3.8-8).

Village Lift and Ski Runs

Views of the Village Lift and proposed ski run alignments are available from some locations within the town and along SR 4, from the ski area near the top of Koala Chair and along Tuck's Traverse, and from other locations in the Stanislaus National Forest (SNF). Trees and topography inhibit views of the entire alignments from most locations. Views of the proposed alignments are often restricted to discrete sections.

Close-range views of the lift alignment from the town are available from some locations along No Name Road, Creeskide Drive, Granite Vista Road, and Flynn Road. Views of the upper section of the alignment are screened by trees and buildings from many locations in town, including the town center, but some views may be available from other locations. Views of the proposed ski runs are screened by trees and buildings from many locations in town, including the town center, but some views are available from other locations.

Views of the lift and proposed ski run alignments from SR 4 are screened by trees from most locations. Some views of the upper section of the lift alignment (about 1.5 miles away) and proposed ski runs are available between breaks in the trees (Photograph 3.8-7). However, views of these areas are not prominent visual features from SR 4, and are virtually indiscernible to motorists on SR 4.

Views of the lift alignment and ski runs are available from some locations in the SNF. Close-range views are available near the lift and ski run alignments, and distant views are available farther to the south.

Nighttime Views of the Project Area and Vicinity

The most prominent light sources in the town center are the amber street lights. Other light sources include exterior building lights and interior lights visible through windows. On clear nights, individual light sources are more apparent than an overall nighttime "skyglow." Lighting is not prominent in the project area. Aside from street lights and vehicle lights, the only light sources within the project area emanate from the Lodge and Commercial Center. Lighting from the Lodge and Commercial Center is relatively subdued, except the fluorescent lighting at the entrance to the village shops from No Name Road, which is fairly bright.

Photograph 3.8-1. View of Project Area North of No Name Road

Photograph 3.8-2. View of Snowmobile Parking Area North of No Name Road

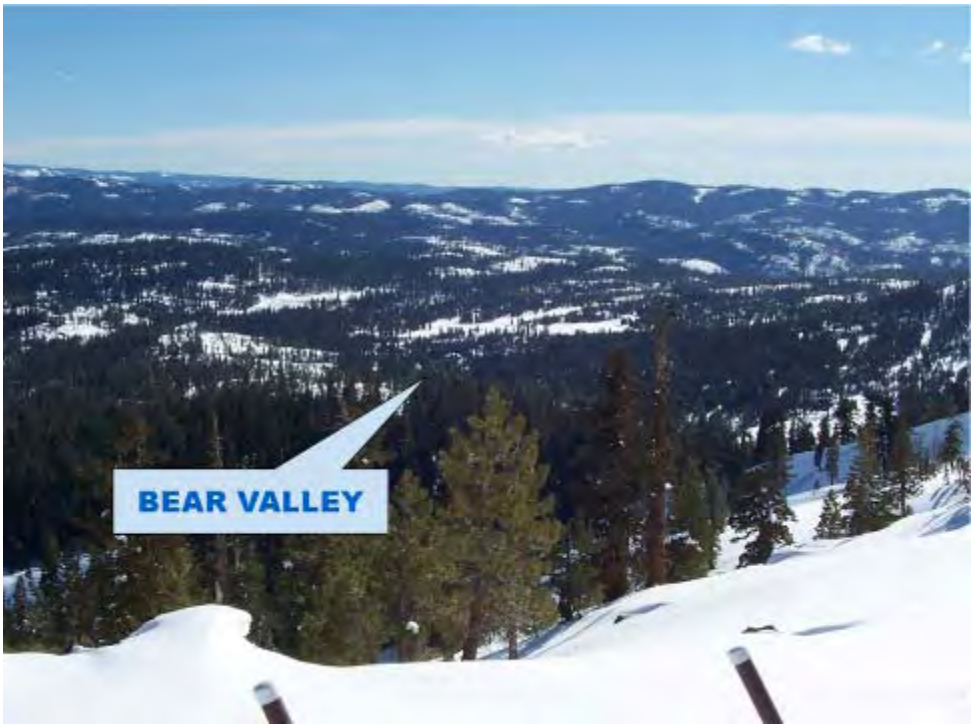
Photograph 3.8-3. Bear Valley Lodge within the Village Center Project Area

Photograph 3.8-4. Commercial Center within the Village Center Project Area

Photograph 3.8-5. View of the South Village Project Area (photo taken near north side of Tamarack Condominiums)

Photograph 3.8-6. View Toward the Village Center and Village Lift Alignment from SR 4

Photograph 3.8-7. View Toward the South Village from Bear Valley Road Near SR 4



Photograph 3.8-8. View Toward Bear Valley from the Top of Koala Chair

3.8.2 Impact Analysis

Methodology

As discussed above, no unique scenic resources are located within the project area. The following analysis therefore evaluates changes to visual character and quality and to scenic vistas.

Visual impacts are evaluated by comparing expected visual changes the project would generate against the existing visual character of the project area and vicinity. The applicant has not proposed a specific architectural style or designs for the project. Rather, the applicant has proposed design and landscape philosophies for the Village, which are used as the basis for evaluating visual changes generated by the Village (see Chapter 2 [Project Description]).

The analysis also considers whether the project would affect scenic vistas from SR 4, the ski area, and public viewing areas in Bear Valley. Expected changes to views from private property are described, but are not evaluated for their level of significance.

Criteria for Determining Significance

Adverse impacts to aesthetics would be considered significant if the project would:

- Have a substantial adverse effect on public views of a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area

Impacts and Mitigation Measures

Impact A-1: The project would not be visually prominent from SR 4 and therefore would not affect scenic vistas from the highway.

Neither Bear Valley Village nor the Village Lift or ski runs would adversely affect scenic vistas from SR 4. Trees and two-story condominium buildings obstruct views of the North Village and Village Center project areas from SR 4 (Photograph 3.8-6). The North Village and Village Center buildings are not expected to be visible from most locations along SR 4. ~~The Creekside Drive extension would remove some trees along the north side of SR 4, opening a narrow view corridor from SR 4 to the Village Center about 0.25 mile away.~~ Views of the project would appear visually consistent with other development, and would not be visually prominent from SR 4.

Views of the South Village project area from SR 4 are largely obstructed by trees and buildings, including the fire/sheriff station and the Transportation Center (Photograph 3.8-7). The South Village would include buildings up to five stories high atop the multi-

level parking structure. In comparison, the Bear Valley Lodge is four stories high (plus an additional level of structure), and many of the existing condominium buildings are three stories high (some atop one level of parking). Some portions of the upper floors of the South Village buildings would be visible from SR 4 between intervening trees, but they would be consistent with (and generally indistinguishable from) other nearby buildings visible from SR 4. This is a less-than-significant impact.

Views of the Village Lift alignment and ski runs from SR 4 are screened by trees from most locations. Only the upper sections (about 1.5 miles away) would be visible between breaks in the trees (Photograph 3.8-7). From a distance, the most noticeable feature of a chair lift alignment (and a ski run) is typically the swath of cleared trees, which is especially noticeable when snow covers the ground and low-growing vegetation. By comparison, the lift towers, cables, and chairs are typically far less noticeable. The visible section of the Village Lift alignment and the ski runs are the uppermost sections, where vegetation is sparser and where fewer trees would be cleared. Because views of the Village Lift alignment and ski runs would not be prominent visual features from SR 4, because relatively few trees would be cleared within the visible sections, and because the lift structure would be difficult to distinguish from a distance, the lift and ski runs would not affect scenic vistas from SR 4. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because project features would not be visually prominent from SR 4.

Impact A-2: The project would not adversely affect scenic vistas from public viewpoints in Bear Valley or from the ski area.

No scenic vistas are available near the center of town. Views from ground level within Bear Valley are mostly limited to the local surroundings, although screened views of nearby ridgelines to the north, west, and east are available from some locations. The project would include new buildings ranging from one to five stories high atop structured parking. The majority of the Village would be composed of three- and four-story buildings with some five-story maximum heights in selected areas. These buildings would change the views from many locations. Some views of the nearby ridgelines would no longer be available. For example, the South Village would block views of nearby ridgelines to the north and northeast from Bear Valley Road and Quaking Aspen Road and from some of the Creekside and Tamarack condominiums. In other locations, views would change from views of trees, buildings, the County parking lots, or the bus stop to views of the Villages. Because no scenic vistas are available from the center of town, none would be adversely affected by the Village project.

Views to the south from the ski area include panoramic views of the SNF. The town of Bear Valley, however, is only visible from a few locations and is not a prominent feature in the ski area's expansive viewshed. Where available, views of the town include several earthtone-colored buildings, but neither the visible structures nor the town as a whole are a dominant component of the viewshed (Photograph 3.8-8). The project would include several new buildings up to five stories high atop structured parking. Some of these buildings would be visible from the ski area. The applicant is proposing to design the buildings to complement the natural surroundings, and to use a color palette based on the natural hues of the surrounding environment. The massing of the new buildings would likely cause the town to become more noticeable from the ski area than it

currently is. However, Bear Valley would still not be a prominent component of the ski area's southern viewshed. The Village would therefore not adversely affect scenic vistas from the ski area. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because no scenic vistas are available from the center of town, and because the project would not adversely affect the ski area's southern viewshed.

Impact A-3: The project would change the visual character of the project area, but would not substantially degrade the visual character or quality of the project area or the town of Bear Valley.

Each Village would individually change the visual character of its respective project area; together, the Villages would substantially change the visual character of central Bear Valley. The Villages, however, would not degrade the existing visual character or quality of the project areas or Bear Valley.

Project Areas

The North Village would remove trees and other vegetation as well as the partially paved road passing through the project area, and would include construction of three new condominium buildings ranging in height from three to five stories atop structured parking. The North Village would be visible from Creekside Drive and from some homes along the east side of Orvis Road and Schimke Drive, although trees would screen most views from the west. The visual character of the project area would change from undeveloped lodgepole pine forest to a condominium village, although much of the area would remain undeveloped.

The Village Center would remove trees and other vegetation, the Bear Valley Lodge and Commercial Center, and the partially paved road. North of the existing No Name Road the visual character would change from undeveloped lodgepole pine forest to include the northern part of the Village Center and the Village Lift terminal. South of the existing No Name Road, the visual character would change from views of the Lodge and Commercial Center to include the Village Center. The Village Center would be visible from Bear Valley Road, No Name Road, Creekside Drive, and many nearby homes and condominiums.

The South Village would convert County Parking Lots B and C to the South Village complex. The visual character of this area would change from paved parking lots and an undeveloped strip along Bear Valley Road to a mixed-use complex with condominiums, retail and commercial space, a multi-level parking structure, a plaza, and an employee housing facility. The South Village would be visible from Bear Valley Road, Quaking Aspen Road, and many nearby homes and condominiums. The South Village would appear especially prominent from Bear Valley Road.

The Village buildings would cast new shadows and provide shade in some locations. Similar to shadows now cast by existing trees and structures, shadow length and location would change throughout the day and the year, depending on the position of the sun. Morning shadows would be cast on the west side of the buildings, and evening

shadows would be cast on the east side. Shadows cast on the north side would vary by season, with the longest shadows occurring around the winter solstice in late December and the shortest shadows occurring around the summer solstice in late June. The locations most affected by new shadows would be those areas closest to the new buildings.

Bear Valley

As a whole, the Village project would substantially change the visual character of central Bear Valley by creating a new core village. The Village Center and South Village would represent the greatest visual change because these villages would be prominently located near the town entrance (South Village) and the village core (Village Center), and would be connected visually by a consistent architectural character and by pedestrian bridges over Bear Valley Road and No Name Road.

The project would add new prominent visual elements to the town, including several new buildings with more height and mass than existing buildings, all sharing a distinct architectural character. The majority of the Village would be composed of three- and four-story buildings with some five-story maximum heights in selected areas. Several other buildings in Bear Valley reach or exceed three stories, including the Lodge (four stories), but none has the maximum height or mass proposed for the Village. To smooth the height and mass transition among existing and proposed buildings, the applicant is proposing massing that “steps down” at the ends.

The entire Village would share a distinct architectural character that, considering the relative scale of the project and its location, would provide a prominent visual element to Bear Valley and would likely become the dominant visual element in town. The applicant has not proposed a specific architectural style or designs for the project, but is proposing an architectural character designed to complement the natural surroundings. The applicant proposes exterior building materials made primarily of wood and stone (including local stone where possible), and an architectural color palette based on the natural hues of the surrounding environment.

Visual changes caused by tree removal would also be noticeable in some locations, especially north of No Name Road, where the lodgepole pine forest is more abundant. The applicant is proposing to maintain as many existing trees as possible to reduce the visual impact of the Village buildings from public roadways, and is proposing large irrigated planting areas with native plant materials to provide shade and natural color. The applicant’s stated intent for the landscape design is to duplicate the actual plant species, densities, and massing that occurs naturally in the project vicinity.

In summary, the Village project would substantially change the visual character of the Village project areas and Bear Valley. However, the project would not adversely affect the scenic character or quality of the project areas or Bear Valley because the project would be designed with an architectural character intended to complement the natural surroundings. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would be designed with an architectural character intended to complement Bear Valley's natural surroundings.

Impact A-4: The project would introduce a substantial amount of new nighttime lighting to Bear Valley, and could adversely affect the visual character of the community at night.

Nighttime views of the project would include new exterior light sources for buildings, driveways, landscaping, signs, and public areas, and would also include interior lighting visible through windows. Project lighting would introduce a substantial amount of new nighttime lighting to Bear Valley, and could adversely affect the visual character of the community at night. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure A-4: Implement a~~n outdoor~~ lighting plan for every development phase.

As part of the application submittal for a ~~tentative map (TM) and/or~~ conditional use permit (CUP) for each phase of development, the project proponent shall submit to the County a plan for outdoor lighting (and interior lighting sources visible from off-site locations) showing all proposed exterior lighting (and interior lighting sources visible from off-site locations) on the site, including all light sources for buildings, driveways, landscaping, signs, parking structures, commercial windows, and public areas. All exterior lighting fixtures shall be full cutoff type and provide only the minimal amount of light necessary for safe pedestrian and vehicular access to the site and the dwelling units. All interior lighting sources visible from off-site locations should be shielded in a manner that precludes light sources from shining directly toward the sky. ~~Exterior~~ Project lighting shall not cause glare beyond the boundaries of the site.

Significance Level After Mitigation: Less than significant because control of light sources would ensure minimal impacts to Bear Valley's nighttime visual character.

Significant and Unavoidable Impacts

None.

3.9 TRANSPORTATION AND CIRCULATION

This chapter presents the potential transportation and circulation impacts resulting from implementation of the project. Project-generated effects on the roadway, parking, and pedestrian systems are evaluated against the environmental setting (existing) and cumulative conditions. The study area includes State Road (SR) 4 between Angels Camp and Bear Valley and key intersections within the town of Bear Valley. This Environmental Impact Report (EIR) section is based on the transportation and parking analysis prepared by LSC Transportation Consultants, Inc. (LSC) (Appendix G).

The transportation and parking analysis evaluated~~s~~ traffic impacts associated with the proposed Bear Valley Village project assuming the provision of the Creekside Drive extension, which ~~is~~ was a component of the proposed project when the Draft EIR was prepared. Following review of the traffic study and before release of the Draft EIR, Caltrans requested an analysis of the level of service (LOS) and an identification of necessary intersection mitigation measures that would be needed at the existing SR 4/Bear Valley Road intersection assuming the Creekside Drive extension to SR 4 is not constructed as previously proposed. To accomodate Caltrans' request, LSC prepared a memo that includes the requested analysis. This memo is included in Appendix G for informational puroposes. This analysis, however, ~~is~~ was not included in the Transportation and Circulation Section of the Draft EIR because it did ~~does~~ not evaluate environmental conditions that would have resulted from the project as previously proposed.

The County received several comments on the Draft EIR (including comments from Caltrans and some Bear Valley residents) suggesting elimination of the Creekside Drive extension. In response to these comments, LSC prepared a traffic analysis to evaluate Bear Valley intersection LOS impacts that would result from the project without the Creekside Drive extension (*Memorandum Regarding Bear Valley Road/SR 4 Mitigation Requirements for Bear Valley Village Assuming No Creekside Drive Access to SR 4 dated January 6, 2009*; Appendix L). This analysis concluded that adequate LOS can be provided at all Bear Valley intersections without the Creekside Drive second access to SR 4 if certain turn lane improvements are provided at the Bear Valley Road/SR 4 intersection.

As discussed in Chapter 2 (Project Description), the County and the applicant have agreed that a single access point from SR 4 at Bear Valley Road is the preferred strategy. The applicant is no longer proposing the Creekside Drive extension. This section has therefore been modified to evaluate the potential transportation and circulation impacts resulting from implementation of the project as it is currently proposed. This section incorporates the analysis and conclusions of LSC's January 2009 traffic memorandum (Appendix L).

Snowmobile parking and circulation issues are evaluated in EIR Section 3.10 (Snowmobile Circulation). Chapter 6 (Alternatives) evaluates parking impacts of a project alternative that does not include development of the South Village. The project would not affect air traffic patterns; therefore, this issue is not evaluated in this EIR.

3.9.1 Regulatory Setting

California Department of Transportation (Caltrans)

California Department of Transportation (Caltrans) **Guide for the Preparation of Traffic Impact Studies** (Caltrans 2002) summarizes the state's policies applicable to state highways, including SR 4. These guidelines identify when a traffic impact study is required, what scenarios should be analyzed, and what analysis methodologies should be used. The state's LOS policy is stated in the guidelines as follows.

> Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on state highway facilities; however, Caltrans acknowledges that this may not be always feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing state highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness should be maintained [Caltrans 2002].

The *State Route 4 Transportation Concept Report* prepared by the Caltrans District 10 Office of System Planning identifies LOS "C" as the "concept facility" LOS for the section of SR 4 in Bear Valley (LSC 2008).

Alpine County Regional Transportation Plan

The **Alpine County Regional Transportation Plan (RTP) 2005–2025** (Alpine County 2005b) is designed to be a blueprint for the systematic development of a balanced, comprehensive, multi-modal transportation system within the County. The RTP was developed to provide a clear vision of the County's regional transportation goals, objectives, and policies, complimented by short-term and long-term strategies for implementation. The following are key objectives and policies identified in the County RTP.

- Objective 5.3.1.B: Maintain roadways at acceptable safety standards.
  - Policy: Identify and eliminate unsafe conditions on state highways, in coordination with Caltrans.
- Objective 5.3.1.E: Maintain Caltrans' desired LOS on all state highways.
- Objective 5.3.1.G: Construct passing lanes on SR 4 to improve safety and circulation.
  - Policy: The County supports the construction of a passing lane on SR 4 between Arnold, in Calaveras County, and Bear Valley, in Western Alpine County, as its second highest priority.
- Objective 5.3.1.I: The County will work with the developers and Caltrans to ensure that intersection improvements are installed at the appropriate time and in accordance with State and County highway standards.
  - Policy: Developers shall be responsible for constructing or improving intersections at new developments, including resort communities and ski areas, to maintain acceptable LOS during the implementation of planned or phased development in these areas.

- Objective 5.3.6.A: Plan and develop a continuous and easily accessible pedestrian and bikeway system within the region.
    - Policy: Ensure accessibility to non-motorized facilities within new developments.
- Objective 5.3.6.B: Provide a pedestrian and bikeway system that emphasizes the safety of people and property.
    - Policy: Encourage secure facilities for bicycle storage at industrial, governmental, commercial, recreational, and educational locations.
- Objective 5.3.6.C: Integrate pedestrian and bikeway facilities into a multi-modal transportation system.
    - Policy: Incorporate non-motorized facilities when implementing improvements or new developments to the existing roadway network.
    - Policy: Prioritize roadway and street designs that avoid bicycle-auto, pedestrian-auto, and bicycle-pedestrian conflicts.
- Objective 5.3.7.A: Promote off-street parking to reduce congestion, to accommodate snow removal, and to ensure safety and mobility.
    - Policy: Work with law enforcement to prohibit parking where unsafe or problematic and with the planning department to ensure adequate parking is part of all new development plans.
- Objective 5.3.7.B: Assess progress and complete the following projects:
    - Bear Valley Ski Resort's construction of a ski lift between the Bear Valley subdivision and the ski area.

The Alpine County Code restricts winter traffic to one direction on Bear Valley Road and Creekside Drive during the winter closure of the upper portion of Bear Valley subdivision roads (County Code Chapter 10.12).

3.9.2 Environmental Setting

Existing Transportation System

Roadway Network

The roadway network is described below and depicted in Figure 3.9-1.

SR 4 runs southwest to northeast from Stockton and Arnold to Bear Valley and SR 89. This roadway is generally one lane in each direction, with auxiliary climbing lanes on several grades and additional turn lanes in developed areas to the west of Bear Valley. To the east of Bear Valley, SR 4 over Ebbetts Pass does not have centerline striping due to limited pavement width. In the ~~study~~ Bear Valley area, SR 4 has one 12-foot travel lane in each direction and 4-foot shoulders. Shoulder width in other sections within the study area vary. During the winter, SR 4 over Ebbetts Pass is closed from Mt. Reba Road (2 miles east of Bear Valley) to SR 89. SR 4 is assumed to travel in the east-west direction for purposes of this study.

Mt. Reba Road (SR 207) is a short 1.3-mile roadway that extends from SR 4 to Bear Valley Mountain Resort. At its junction with SR 4, Mt. Reba Road has 12-foot travel

lanes and 3-foot paved shoulders. This two-lane road provides the only traffic access to the ski area.

Bear Valley Road begins at SR 4 and continues north to Bear Valley Village, forming the western side of the roadway loop serving the town center. The road continues north through a residential area (the "subdivision") and turns into Creekside Drive. Many smaller roadways branch off of Bear Valley Road to access residences. During the winter, Bear Valley Road is plowed from SR 4 to just north of No Name Road. The remainder of the road is not accessible by car and snowmobiles serve as the primary form of transportation. An eastbound left-turn lane is provided on SR 4 at the Bear Valley Road intersection.

Creekside Drive is a two-lane paved road that connects Bear Valley Road north of SR 4 to No Name Road on the northeast side of the town center. It provides the southern and eastern sides of the town center access loop. During the winter, Creekside Drive is plowed from Bear Valley Road to just north of the Bear Valley School. The remainder of the road is not accessible by car and snowmobiles serve as the primary form of transportation.

No Name Road is a two-lane roadway that provides the northern portion of the town center access loop. In winter, it operates in a one-way (eastbound) direction.

Quaking Aspen Road is a two-lane paved road oriented east/west that connects residences on the west to Bear Valley Road and Creekside Drive. ~~Once Creekside Drive is connected directly to SR 4, it is assumed for purposes of this study that the "Quaking Aspen Road" designation would be extended eastward to Creekside Drive.~~

Traffic Control

Traffic control at the SR 4/Bear Valley Road and SR 4/Mt. Reba Road intersections is provided by stop signs on the southbound approaches. The Bear Valley Road/Creekside Drive/Quaking Aspen Road intersection is controlled by four-way stop signs.

Study Area

The traffic study prepared by LSC analyzed traffic data; roadway and intersection capacity; and LOS, traffic impacts, and safety impacts in accordance with the requirements of Caltrans and Alpine County. The study area includes the 44-mile stretch of SR 4 from Angels Camp to Bear Valley and roadways within Bear Valley. The following SR 4 segments were evaluated for traffic volumes and LOS:

- Bear Valley Road to Big Meadows
- Big Meadows to Moran Road East (Arnold)
- Moran Road East (Arnold) to Moran Road West (Avery)
- Moran Road West (Avery) to Big Trees Road (Murphys)
- Big Trees Road (Murphys) to Angels Camp

The following intersections in Bear Valley were evaluated for traffic volumes and LOS:

- SR 4/Bear Valley Road
- Bear Valley Road/Quaking Aspen Road/Creekside Drive
- Bear Valley Road/No Name Road
- Creekside Drive/No Name Road
- ~~Creekside Drive/Quaking Aspen Road (future, with extension of Creekside Drive)~~
- ~~Creekside Drive/SR 4 (future, with extension of Creekside Drive)~~

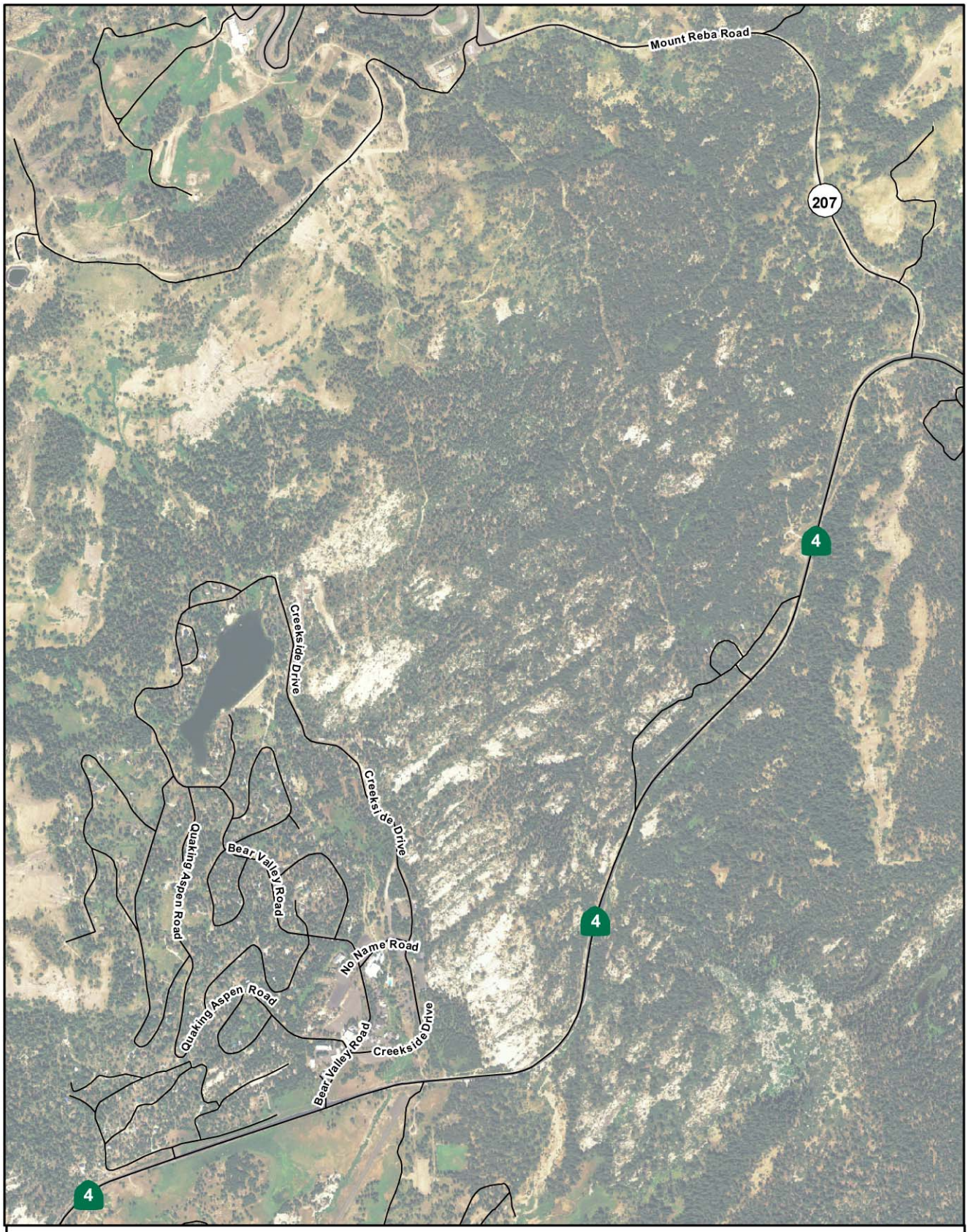


Figure 3.9-1
Bear Valley Road Network

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

The traffic study area did not include SR 4 west of Angels Camp (i.e., west of SR 49) for the following reasons:

- Project traffic is expected to disperse along SR 49, reducing the project's net traffic effect on SR 4 west of SR 49. In particular, many drivers from the Sacramento region and points to the north would travel to Angels Camp via SR 16, then south via SR 49, which is 17 miles shorter than traveling via SR 99 and SR 4 through Stockton. In the summer (and to a lesser degree in the winter), a substantial number of Bear Valley visitors would be tourists touring the Gold Country, and would thus be traveling along SR 49.
- Existing traffic volumes on SR 4 west of SR 49 are substantially less than traffic volumes east of SR 49. For example, volumes at Copperopolis (west of SR 49) are 5,800 per day on average over the peak month, while at Murphys (east of SR 49) the volumes are 9,700 per day. Therefore, more roadway capacity is available west of SR 49 than east of SR 49.
- The Wagon Trail realignment project along SR 4 between Copperopolis and Angels Camp (west of SR 49) would address the worst existing geometric deficiencies along SR 4 between Copperopolis and SR 49. The section of SR 4 west of Copperopolis has relatively good geometrics.
- Due to the very long travel distances on SR 4 between Bear Valley and Angels Camp, the peak-hour volumes generated by the project would be expected to spread out over a longer period of the day as the distance from Bear Valley increases. For example, some drivers heading home (west) from Bear Valley on a winter Sunday afternoon would not stop on SR 4, whereas others would stop for dinner in places like Murphys and Angels Camp, resulting in declining peak-hour volume impacts further to the west.

For these reasons, LSC concluded that there is no potential for the project to generate a significant traffic impact west of SR 49 (Shaw 2008).

Existing Volumes

Traffic volumes are highest in the summer (June through Labor Day weekend) and winter (December through February) months. August has the highest volume of traffic in the summer months, while February has the highest volume of traffic in the winter months. Weekend traffic volumes are higher than weekday traffic volumes in both seasons. During the summer months, SR 4 eastbound traffic volumes are highest on Saturday mornings, and SR 4 westbound traffic volumes are highest on Sunday afternoons. During the winter months, SR 4 eastbound traffic volumes are highest on early Saturday mornings, and SR 4 westbound traffic volumes are highest on Sunday evenings (Table 3.9-1) (LSC 2008).

Table 3.9-1. Existing Volumes for SR 4 between Angels Camp and Bear Valley

SR 4 Segment	A.M. Peak Hours		P.M. Peak Hours	
	Eastbound	Westbound	Eastbound	Westbound
Winter				
Bear Valley Road to Big Meadows	257	20	41	469
Big Meadows to Moran Road East (Arnold)	491	22	64	629
Moran Road East (Arnold) to Moran Road West (Avery)	549	66	73	615
Moran Road West(Avery) to Big Trees Road (Murphys)	471	61	67	506
Big Trees Road (Murphys) to Angels Camp	442	55	61	485
Summer				
Bear Valley Road to Big Meadows	79	40	144	115
Big Meadows to Moran Road East (Arnold)	363	194	103	394
Moran Road East (Arnold) to Moran Road West (Avery)	525	280	149	570
Moran Road West(Avery) to Big Trees Road (Murphys)	481	257	137	522
Big Trees Road (Murphys) to Angels Camp	437	234	124	475

Source: LSC 2008

Figures 3.9-2 and 3.9-3 show the existing winter and summer traffic volumes, respectively, for studied intersections within the town. Weekend traffic volumes are higher than weekday traffic volumes.

Existing Traffic Operations

The LOS for winter and summer conditions for SR 4 segments and Bear Valley intersections are shown in Table 3.9-2. All Bear Valley intersections operate at LOS "A." During the summer months, SR 4 operates at LOS "C" for all sections except the segment between Bear Valley Road and Big Meadows, which operates at LOS "A" for summer a.m. peak hours and LOS "B" for summer p.m. peak hours. During the winter months, SR 4 operates at LOS "C" for all segments except the segment between Moran Road East and Moran Road West, which operates at LOS "D" in the p.m. peak hours.

Table 3.9-2. Existing Level of Service

Roadway Segment/Intersection	Winter LOS		Summer LOS	
	A.M.	P.M.	A.M.	P.M.
SR 4 Segments				
Bear Valley Road to Big Meadows	C	C	A	B
Big Meadows to Moran Road East (Arnold)	C	C	C	C
Moran Road East (Arnold) to Moran Road West (Avery)	C	**D**	C	C
Moran Road West(Avery) to Big Trees Road (Murphys)	C	C	C	C
Big Trees Road (Murphys) to Angels Camp	C	C	C	C
Bear Valley Intersections				
SR 4/Bear Valley Road	A	A	A	A
Bear Valley Road/Quaking Aspen road	A	A	A	A
Bear Valley Road/No Name Road	A	A	A	A
Creekside Drive/No Name Road	A	A	A	A

Bold text indicates the LOS standard of "C" is exceeded.

Source: LSC 2008

Existing Shuttle Service

Bear Valley Mountain Resort operates a free shuttle bus service to and from the town. This shuttle currently runs from the Bear Valley Lodge to the ski area once an hour between 8 a.m. and 4 p.m., with no service between 1 p.m. and 2 p.m. during weekdays. The shuttle operates every half-hour on the weekends and holidays, with hours of operation between 8 a.m. and 5 p.m. The shuttle begins the winter season in mid-November, operating only on the weekends. By mid-December, the shuttle runs daily and continues operation through the end of March. During the 2005/2006 ski season, a total of 15,016 passengers used the shuttle service. The peak day for the shuttle service totaled 673 passengers.

Existing Pedestrian and Bicycle Conditions

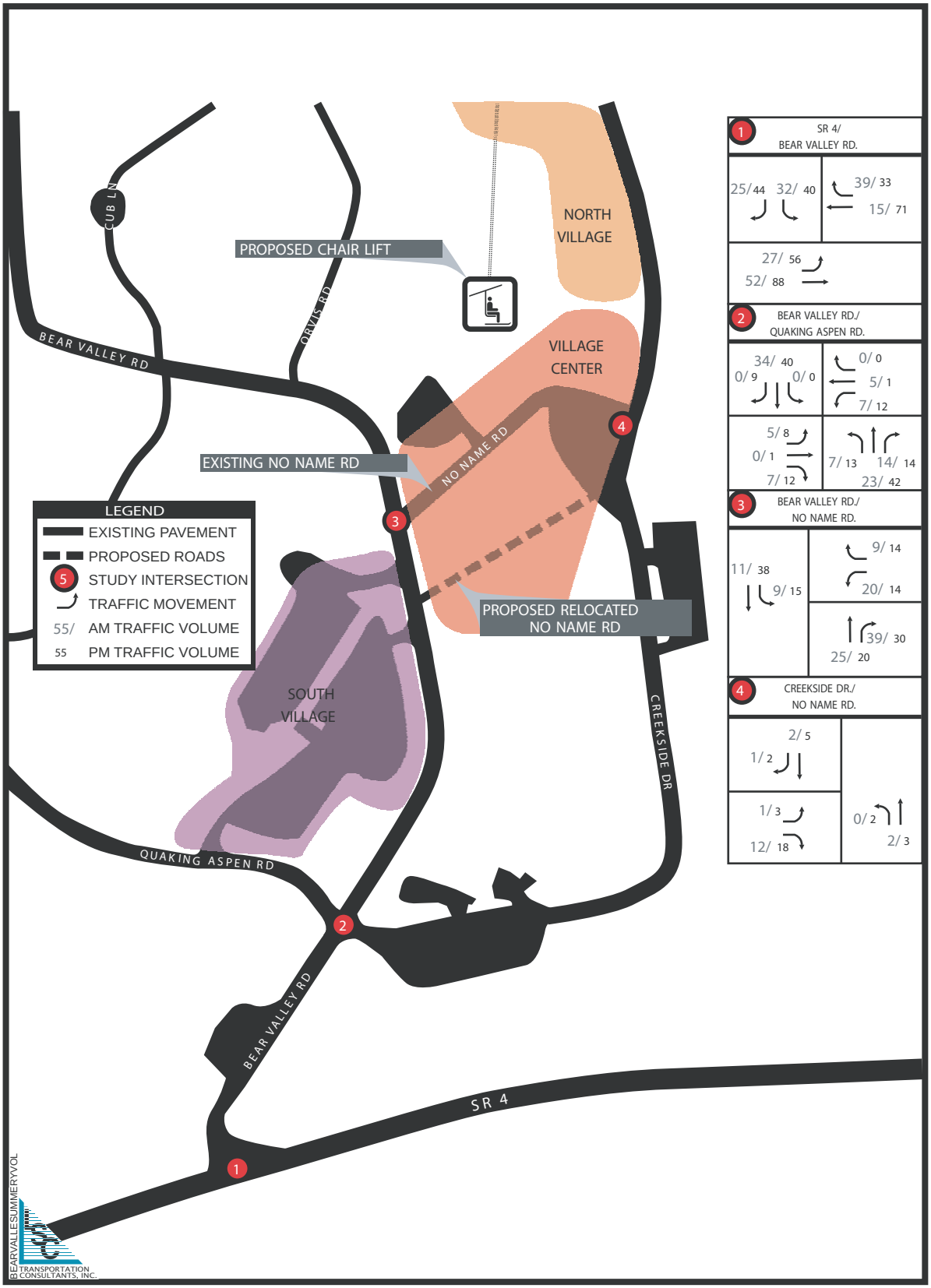
There are currently no sidewalks, road shoulders, or dedicated bicycle lanes or pathways in town. The roadways are used for pedestrian and bicycle travel.

Existing Parking Within the Project Area

No Name Road, Creekside Drive north of No Name Road, and the North Lot (at the southwest corner of No Name Road and Creekside Drive) contain 101 parking spaces. Lots B and C currently contain 190 parking spaces. This equals a total of 291 collective parking spaces available within the project area during a peak winter ski day. The current peak parking demand associated with the existing Bear Valley Lodge is estimated to equal 94 parking spaces: 53 spaces for lodge guests, five spaces for employees, and 36 spaces for restaurant and retail customers. Therefore, 197 parking

spaces within the project area are currently available for public (non-Bear Valley Village) uses.

Other parking areas within Bear Valley but outside the project area include the South Lot located between SR 4 and the Creekside Condominiums (65 parking spaces), Parking Lot A located south of the community center, and street parking along Creekside Drive south of No Name Road.



Source: LSC Transportation Consultants, 2009

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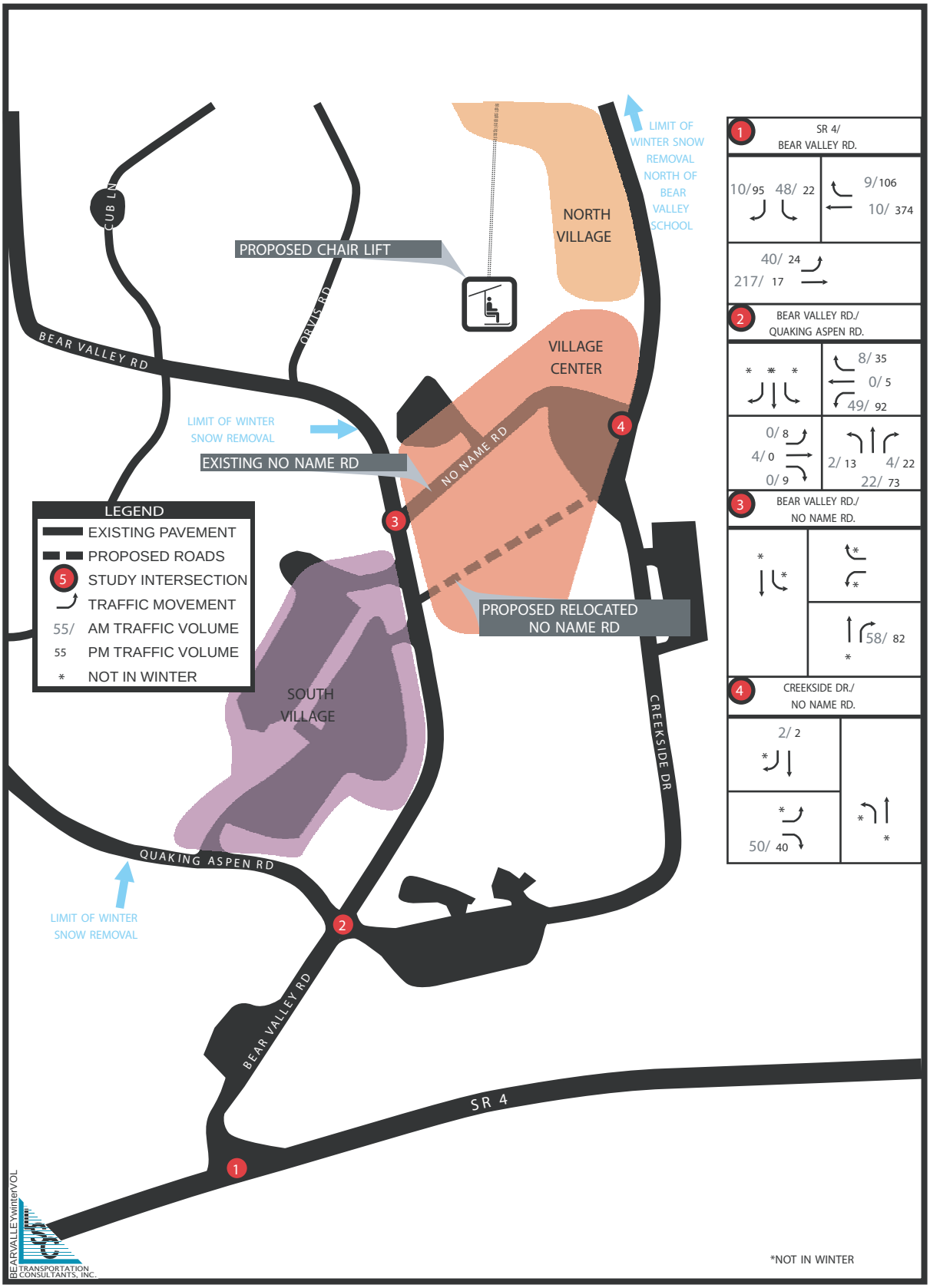
Figure 3.9-2
Existing Summer Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS



Source: LSC Transportation Consultants, 2009

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Figure 3.9-3
Existing Winter Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

3.9.3 Impact Analysis

Methodology

Existing Trip Generation

Trip generation rates had to be established to analyze roadway and intersection capacity and LOS, traffic impacts, and safety impacts for this project. Trip generation rates were based on the rates contained in the Institute of Transportation Engineers (ITE) Trip Generation Handbook (ITE 2003). The ITE Trip Generation Handbook does not provide a rate for recreational multi-family units; therefore, the rate for recreational single-family units was used in the analysis (LSC 2008). Adjustments were made for internal trips (trips within the Bear Valley area) because they are often made either by walking or cycling. A second adjustment was made for occupancy rates. During the winter months, the occupancy for second home/lodging was assumed to be 100 percent, while occupancy in the summer months was assumed to be 73 percent (based on historic occupancy ratios). Winter traffic counts conducted over Martin Luther King, Jr. Weekend (January 2007) were used to calibrate the trip generation rates to the traffic volumes observed on Bear Valley Road. Summer traffic counts conducted on Saturday, June 30, 2007, were used to calibrate the trip generation rates to the traffic volumes observed in Bear Valley.

Existing Plus Project Trip Generation

Winter

Existing plus project trip generations for winter months were estimated to analyze the project impacts on existing conditions. The existing plus project conditions were estimated by applying the trip rates and internal factors discussed in the existing trip generation section above. Trip generation reductions associated with the shuttle bus were estimated by factoring the total bus traffic reduction for the area as a whole by the proportion of area trip generation associated with the Village.

The Village Lift would reduce the vehicle trips between Bear Valley and the ski area. This lift would attract a higher percentage of guests and residents of Bear Valley that would walk to the Village Lift to access the ski area. The impact was evaluated using the existing traffic numbers, existing shuttle bus ridership, and an estimate that 80 percent of travel between the Village and the ski area would be accommodated on the Village Lift. The reduction was found to be 32 vehicle-trips in the peak hour (see page 32 of *Bear Valley Village Traffic/Parking Impact Analysis* [Appendix G] for an expanded discussion).

Summer

Existing plus project trip generations for the summer months were estimated using an analysis similar to that for the winter months. The existing plus project conditions were estimated by applying the trip rates and internal factors discussed in the existing trip generation section above. ~~The Village Lift would operate during the summer months;~~

~~however, n~~No trip generation reduction attributed to the lift was factored into the summer trip generation. The shuttle bus does not operate during the summer months; therefore, trip generation reduction rates for the shuttle bus were not applied (LSC ~~200b~~2008).

Cumulative Plus Project Trip Generation

Winter

Future trip generations for winter months were estimated for future conditions by applying the trip rates and internal factors discussed in the existing plus project trip generation section above. Traffic volumes were based on land use development allowed under current plans that can be expected to occur over a 20-year period.

Pass-by trips were estimated for the winter months and are included in the site driveway movement estimates, but do not change through volumes on roadways away from the site driveways. It was estimated that some of the commercial trips would be generated by an increase in the proportion of day skiers and winter trail users that would stop by the expanded commercial uses in Bear Valley. The ITE Trip Generation Handbook was used to estimate the appropriate percentages for the various proposed land uses. It was estimated that 30 percent of the external retail/restaurant trips generated by Bear Valley Village would be pass-by trips.

Summer

Future trip generation for the summer months was estimated using an analysis similar to that for the winter months. Traffic volumes were based on the land use development allowed under current plans that can be expected to occur over a 20-year period. Pass-by trips were estimated into the summer trip generation, just as they were for the winter months. ~~The Village Lift would operate during the summer months; however, n~~No trip generation reduction attributed to the lift was factored into the summer trip generation. The shuttle bus does not operate during the summer months; therefore, trip generation reduction rates for the shuttle bus were not applied (LSC 2008).

Level of Service

Traffic operations within the study area were assessed in terms of LOS. LOS at unsignalized intersections was quantified in terms of delay per vehicle for each movement/approach. For rural roadway segments, LOS was assessed as a function of the proportion of travel time spent following another vehicle. The intersection LOS evaluation was completed using the Synchro/Simtraffic software based on the 2000 *Highway Capacity Manual* (Transportation Research Board 2000) methodologies at all intersections studied. Appendix G provides the technical information and data sheets for the LOS evaluations.

When LOS exceeded the LOS “C” standard on SR 4 segments, the Highway Capacity Software 2-Lane analysis was applied to the scenario. The percent passing (or climbing lane) provided along each segment was increased until LOS “C” was identified. This was

then used to estimate the length of a new passing or climbing lane that would be required to achieve the LOS standard.

Parking Rates

Alpine County does not include a parking demand rate specifically for resort residential units. The Bear Valley Master Plan defines parking rates within Village Center-1 (VC-1) and Village Center-2 (VC-2) to be one space per unit. The *Parking Study for Beaver Creek Landing at Avon* (2001) and *The Automotive Parking Needs of Timeshare Resorts* (1998) were reviewed to determine parking needs. In addition, parking requirements for the City of South Lake Tahoe and Douglas and Washoe Counties in Nevada were reviewed.

Although the BVMP indicates a requirement of 1.5 spaces per multi-family unit, this does not reflect the differences in parking demand between various unit sizes and types. Based on review of parking professional literature and parking demand rates adopted by jurisdictions in the Lake Tahoe basin, the following residential parking rates are used for this project:

- 1 space per studio or 1-bedroom unit;
- 0.25 spaces per bedroom over 1-bedroom (a total of 1.25 per 2-bedroom unit, 1.5 per 3-bedroom unit, and 1.75 per 4-bedroom unit) (LSC 2008; Appendix G).

For restaurants, the Alpine County Code identifies one parking space for every four restaurant seats. The project does not include a defined number of seats; it was assumed that 26 seats per 1,000 square feet (sf) of restaurant space would accommodate the project based upon observed restaurant industry averages, yielding an equivalent rate of 6.5 spaces per 1,000 sf.

For retail uses, the Alpine County Code identifies five parking spaces for every 1,000 sf of retail floor area, plus one space per employee. The number of employees is unknown; however, two employees per 1,000 sf of retail floor space were assumed on the peak shift for the retail land use, resulting in a base parking demand of seven spaces per 1,000 sf.

Based upon the analysis of p.m. peak hour trips remaining internal to the Bear Valley area, rates were reduced by 50 percent to reflect non-auto access to these land uses. In addition, as the peak overall parking demand for the project land uses is in the evening and as retail parking demand peaks in the afternoon, the retail rate is further reduced by one-third to identify retail needs in the period of overall peak need. With these reductions, the effective demand rate used in the analysis is 3.25 spaces per 1,000 sf of restaurant space, and 2.35 per 1,000 sf of retail space.

Levels of Significance

Adverse impacts related to automobile transportation and traffic would be considered significant if the project would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)
- Exceed, either individually or cumulatively, a level of service standard established by the County or Caltrans on designated roads or highways
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Reduce the amount of existing public parking available on peak winter ski days
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts)
- Conflict with any applicable objectives or policies of the Alpine County Regional Transportation Plan adopted for the purpose of avoiding or mitigating an environmental effect related to transportation.

Impacts and Mitigation Measures

Project-specific and cumulative operational impacts are identified below. In addition, construction impacts are identified. Each impact is discussed along with one or more mitigation measure. The level of significance before and after mitigation is stated for each impact.

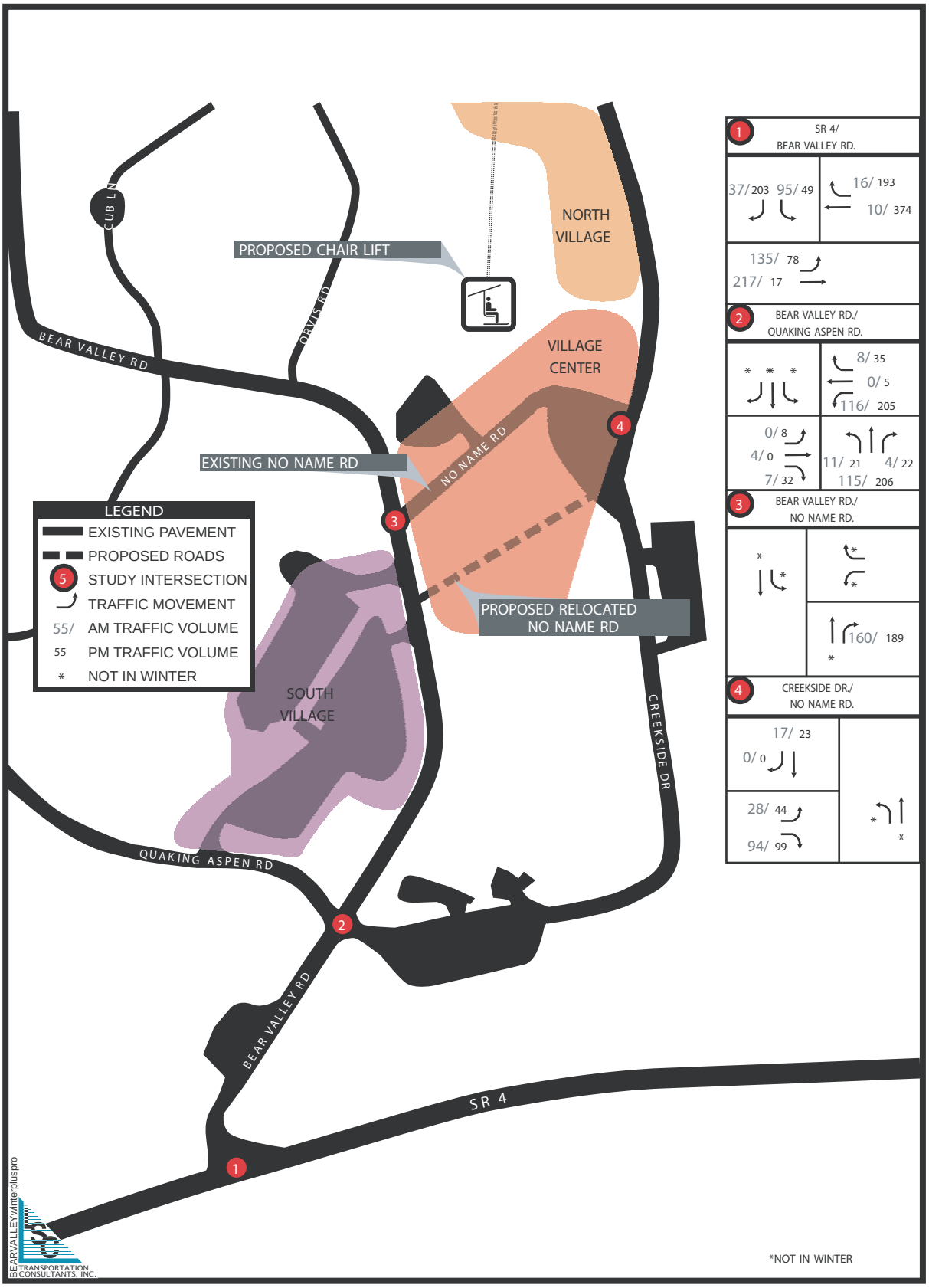
Impact TC-1: Bear Valley intersections would continue to operate at acceptable levels of service.

Figures 3.9-4 and 3.9-5 provide existing plus project intersection traffic volumes for winter and summer months, respectively. ~~Table 3.9-3 shows the change in traffic volumes between existing conditions and existing plus project conditions at the studied intersections.~~ Bear Valley Road would continue to be the only access road from SR 4 to the town of Bear Valley.

~~The project, including the Creekside Drive extension, would redistribute traffic accessing SR 4. The number of vehicles turning from southbound Bear Valley Road onto eastbound SR 4 (southbound left-turn movement) during both the summer and winter months would be reduced. The right-turn movement (southbound Bear Valley Road to westbound SR 4) traffic volumes would be reduced in the winter months and increased in the summer months. In general, the traffic movements at the two future intersections, Creekside Drive/Quaking Aspen Road and Creekside Drive/SR 4, would redistribute town traffic, allowing for two SR 4 access points.~~ Tables E and F of Appendix L show the winter and summer LOS for the four Bear Valley intersections that were studied. As shown in these tables, the worst-movement LOS is found to be LOS “B” for the winter a.m. peak hour and LOS “C” for the winter p.m. peak hour. The worst movement during the summer for both a.m. and p.m. peak hours is estimated to operate at LOS “B”. The worst movement operates at an acceptable LOS “C” or better for all time periods analyzed.

~~During the winter months, all intersections would operate at LOS "A." The intersection of Bear Valley Road and SR 4 has one turning movement that would operate at LOS "B" during the a.m. and p.m. peak hours. The Creekside Drive/SR 4 intersection would operate at LOS "C" for turning movements from southbound Creekside Drive to eastbound SR 4 during the PM peak hours. LOS during the summer months would operate at LOS "A." Two intersections, Creekside Drive/SR 4 and Bear Valley Road/SR 4, have turning movements that would operate at LOS "B." The queue lengths were also analyzed for the at the Creekside Drive/SR 4 and Bear Valley Road/SR 4 intersections, and were found to be less than 50 feet (approximately two vehicle lengths).~~ The queue lengths were also analyzed for the single shared southbound lane at the Bear Valley Road/SR 4 intersection. This lane is predicted to have a queue length of 66 feet (less than three vehicles) during the winter p.m. peak hour. The first access point along Bear Valley Road north of SR 4 is located approximately 200 feet from the intersection. Therefore, there is adequate space without blocking access points. This is considered a less-than-significant impact to intersection operations.

Level of Significance Before Mitigation: Less than significant because all intersections would continue to operate at acceptable levels.



Source: LSC Transportation Consultants, 2009

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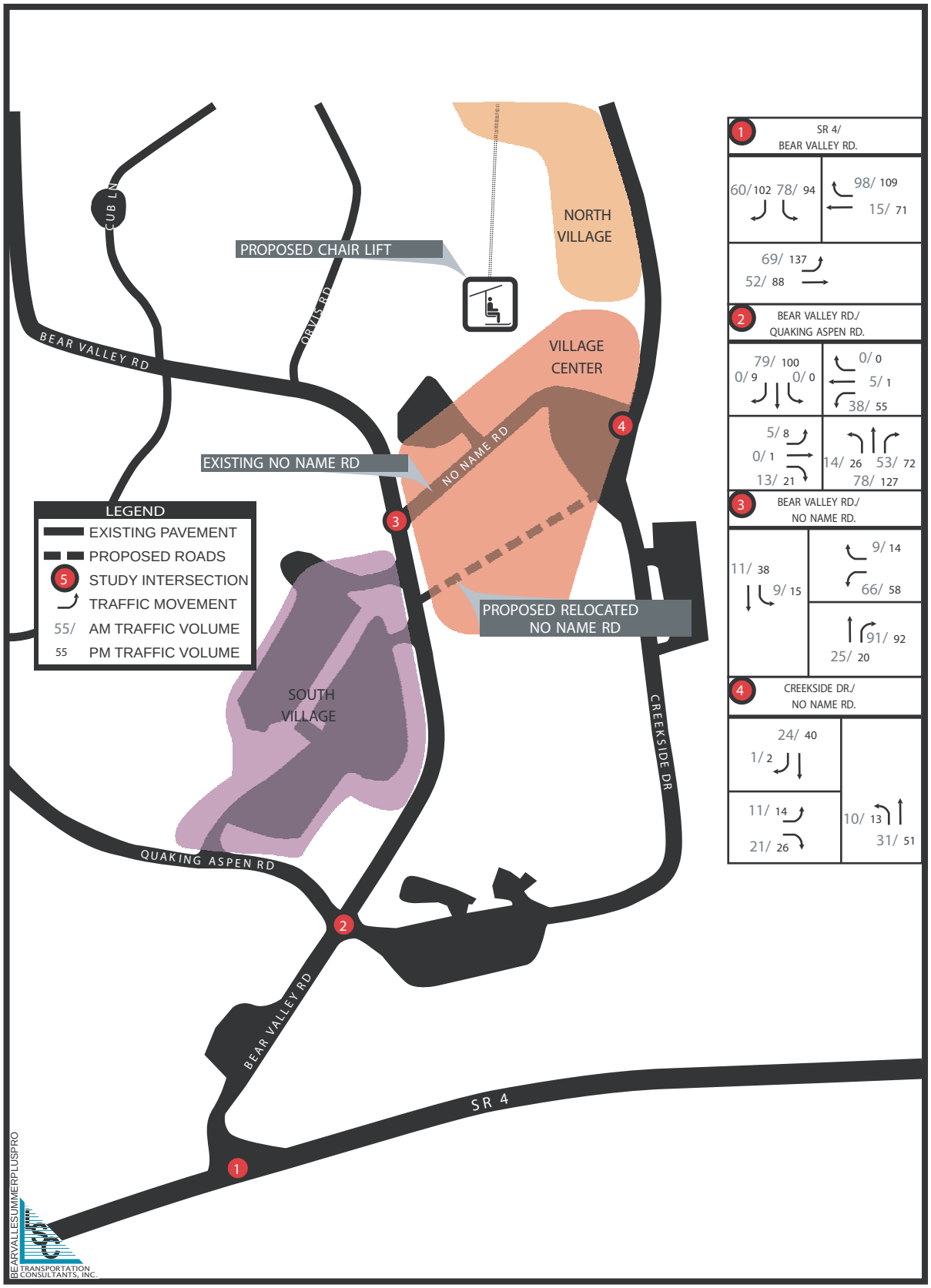
Figure 3.9-4
Existing Plus Full Project Winter Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS



Source: LSC Transportation Consultants, 2009

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Figure 3.9-5
Existing Plus Full Project Summer Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

Impact TC-2: SR 4 would operate at unacceptable LOS levels between Moran Road East and Moran Road West and between Big Meadows and Moran Road East.

Table 3.9-4 provides the traffic volumes for the project. The project would increase winter traffic volumes on SR 4 between Big Meadows and Bear Valley by 37 percent in the eastbound direction during the a.m. peak hours and 23 percent in the westbound direction during p.m. peak hours. Summer volumes on SR 4 between Big Meadows and Bear Valley would be increased by 53 percent on eastbound SR 4 in the a.m. peak hours and 50 percent in the westbound direction during the p.m. peak hours.

Traffic volumes on SR 4 between Moran Road East in Arnold and Moran Road West in Avery would increase by 17 percent in the eastbound direction during a.m. peak hours and 18 percent in the westbound direction during p.m. peak hours during the winter months. The increase of traffic volumes in the summer months would be less, with a 7 percent increase in the eastbound direction during a.m. peak hours and an 8 percent increase in the westbound direction during p.m. peak hours.

Table 3.9-5 shows the existing plus project LOS for SR 4. During the winter months, SR 4 between Big Meadows (milepost 62.8) and Moran Road East would be reduced from LOS "C" to LOS "D" for p.m. peak hours. SR 4 between Moran Road East and Moran Road West would go from existing LOS "C" to LOS "D" during the a.m. peak hours, while the p.m. peak hours would remain at LOS "D." During the summer months, SR 4 between Moran Road East and Moran Road West would be reduced from LOS "C" to LOS "D" for both the a.m. and p.m. peak hours. These roadway segments are located in Calaveras County. Although the reduction of LOS to unacceptable levels would only occur during peak traffic periods, this is a significant impact.

Table 3.9-3. Volumes for SR 4 between Angels Camp and Bear Valley—Existing Plus Project

SR 4 Segment	A.M. Peak Hours		P.M. Peak Hours	
	Eastbound	Westbound	Eastbound	Westbound
Winter				
Bear Valley Road to Big Meadows	333	43	97	577
Big Meadows to Moran Road East (Arnold)	567	45	120	737
Moran Road East (Arnold) to Moran Road West (Avery)	625	89	129	723
Moran Road West (Avery) to Big Trees Road (Murphys)	547	84	123	614
Big Trees Road (Murphys) to Angels Camp	518	78	117	593
Summer				
Bear Valley Road to Big Meadows	121	75	226	173
Big Meadows to Moran Road East (Arnold)	405	229	185	452
Moran Road East (Arnold) to Moran Road West (Avery)	567	315	231	628
Moran Road West(Avery) to Big Trees Road (Murphys)	523	292	218	580
Big Trees Road (Murphys) to Angels Camp	479	269	206	533

Source: LSC 2008

Table 3.9-4. SR 4 LOS Levels—Existing Plus Project

Roadway Segment	A.M. Peak Hours	P.M. Peak Hours
Winter		
Bear Valley Road to Big Meadows	C	C
Big Meadows to Moran Road East (Arnold)	C	C
Moran Road East (Arnold) to Moran Road West (Avery)	**D**	**D**
Moran Road West(Avery) to Big Trees Road (Murphys)	C	C
Big Trees Road (Murphys) to Angels Camp	C	C
Summer		
Bear Valley Road to Big Meadows	C	C
Big Meadows to Moran Road East (Arnold)	C	**D**
Moran Road East (Arnold) to Moran Road West (Avery)	**D**	**D**
Moran Road West(Avery) to Big Trees Road (Murphys)	C	C
Big Trees Road (Murphys) to Angels Camp	C	C

Note: **Bold** indicates LOS standard is exceeded.

Source: LSC 2008

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-2: Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.

Passing Lanes

The traffic study prepared by LSC determined that construction of ~~9~~ 8.8 miles of climbing or passing lanes on SR 4 between Moran Road East (on the eastern edge of Arnold) and Big Trees Road (in Murphys) would allow SR 4 to operate at LOS "C" or better, thereby reducing this impact to a less-than-significant level. One mile of passing lane would mitigate an existing deficiency; therefore, the project would be responsible for 7.8 miles. Constructing ~~9~~ 7.8 miles of climbing or passing lanes, however, would be financially infeasible for the project. Based on average costs for SR 4 projects included in the Calaveras County 2007 Regional Transportation Plan (LSC 2007), and adjusting for terrain, a unit cost of $630,000 per mile (2007 dollars) is estimated, which equals $645,000 per mile in 2008 dollars. For ~~9~~ 7.8 miles of additional lanes, the total construction cost for the applicant would be ~~$5.8~~ million (2008 dollars), which equates to more than ~~$11,000~~ $10,000 per privately owned Equivalent Dwelling Unit (EDU) and would render these improvements infeasible (refer to *Feasibility of Funding SR 4 Widening* memo in Appendix G).

The environmental consequences of constructing ~~9~~ 8.8 miles of climbing or passing lanes in this area may also be undesirable. For example, widening of SR 4 could adversely affect sensitive habitats (e.g., wetland and riparian) or other environmental resources along the roadside. In addition, widening the highway between central Arnold and Moran Road East could alter the scenic character of a 1-mile section of SR 4 that

has been designated a state scenic highway and holds National Scenic Byway (NSB) status. For these reasons, neither Alpine County nor Calaveras County supports constructing ~~9~~ 8.8 miles of climbing or passing lanes to mitigate this impact. Calaveras County indicated its opposition to these passing lanes during two meetings with Alpine County in June and August 2008, and in written correspondence to Alpine County dated June 30, 2008 (Appendix G).

Calaveras County Road Impact Mitigation Fee Program

This impact is located entirely within Calaveras County. Therefore, Alpine County considered whether requiring the applicant to pay into the Calaveras County Road Impact Mitigation (RIM) Fee program would mitigate the project's LOS impact on SR 4. Under this program, Calaveras County imposes RIM fees on development projects throughout Calaveras County, and is used to fund a variety of improvements both on and off of the state highway system. If the RIM fee rates are applied to the proposed project, a total fee of roughly $1.2 million is identified. However, few projects within the project impact area are slated to be funded by the RIM. Payment of Calaveras RIM fees would therefore not effectively mitigate project impacts.

SR 4 Improvement Projects in Arnold and Murphys

Alpine County will require the applicant to provide fair-share funding of roadway improvements along SR 4 in Arnold and Murphys that will offset project impacts on SR 4.

The Arnold Rural Livable Community-Based Mobility Plan (ARLCBMP) was recently completed for the Calaveras Council of Governments, providing a strategy to enhance overall mobility conditions in the Arnold area which was based upon an extensive public input process (Calaveras Council of Governments 2008). The following projects identified in the ARLCBMP are directly associated with traffic volumes along SR 4:

- The Meadowmont Gateway project includes constructing a roundabout at the intersection of SR 4 and Fir Drive in Arnold to reduce the speed of vehicles entering Arnold from the west.
- The Eastern Gateway project in the eastern portion of Arnold along SR 4 is a traffic calming project that would include a raised intersection, alerting drivers that they have entered the community of Arnold and may need to reduce their speed.
- Constructing intersection improvements at the SR 4/Blagen Road/Dunbar Road/Henry Street intersection complex would reduce congestion and improve traffic flow between SR 4 and county roads in the eastern portion of Arnold.
- The Meadowmont Roadway Infrastructure Improvement project includes constructing raised roadway medians, sidewalks, striped crosswalks, and curb enhancements along SR 4 located between Fir Drive and Country Club Drive.
- The SR 4 Sidewalk Implementation project includes constructing sidewalks along the eastbound travel lane of SR 4 between Country Club Drive and Sierra Pine Way. These sidewalks would provide a safe route for pedestrians to travel and would provide an opportunity for travel between commercial shopping areas.

- The SR 4 Infrastructure Improvements project (Applewood Center to Meadowview Road) includes various roadway infrastructure improvements along SR 4 between Applewood Center and the eastern intersection of Meadowview Road and SR 4. The roadway improvements would include raised roadway medians, sidewalks, and striped crosswalks to provide a safe route for pedestrians and bicyclists to travel and enhance the pedestrian and bicycle amenities in Arnold.
- The SR 4 Infrastructure Improvements project (Meadowview Road to Manual Road) includes roadway medians, sidewalks, curb extensions, and striped crosswalks. The roadway improvements would improve both vehicular and pedestrian/bicycle transportation gaps by providing a more balanced transportation network and would increase the bicycle and pedestrian amenities throughout town.
- The SR 4 Infrastructure Improvements project (Pine Drive to Lilac Drive) would include striped crosswalks, sidewalks, raised medians, and curb extensions to help improve resident mobility in town by creating a recognized space for pedestrians. In addition, the raised medians and sidewalks would reduce the tendency to speed by narrowing the travel lanes.
- The SR 4 Infrastructure Improvements project (Manual Road to Henry Street) would include striped crosswalks, sidewalks, raised medians, and curb extensions.

Alpine County will also require the applicant to provide fair share funding to widen and re-stripe SR 4 to provide a three lane cross-section from the vicinity of Main Street to Apple Blossom Drive in Murphys. This project would improve traffic flow at the SR 4 intersections with Main Street, Williams Street, and Apple Blossom Drive and also has the benefit of providing a two-way left-turn lane to serve other public streets and commercial driveways. This project is consistent with the Murphys Circulation, Pedestrian, Bicycling, and Parking Study (LSC 2002), which calls for a consistent center turn lane along SR 4 through Murphys. Total length of widening (including the tapers at both ends) would be 4,705 feet, or roughly 0.9 mile (see *Draft Bear Valley Village SR 4 Mitigation Plan* dated August 8, 2008, in EIR Appendix G for more details on this project).

The projects listed above are consistent with recent planning studies prepared for the Calaveras Council of Governments, including the ARLCBMP (Calaveras Council of Governments 2008), the Draft Calaveras County Bicycle Master Plan (Alta Planning and Design 2007a), the Draft Calaveras County Pedestrian Master Plan (Alta Planning and Design 2007b), and the Murphys Circulation, Pedestrian, Bicycling, and Parking Study (LSC 2002).

Project Costs

Estimated costs for the projects in Arnold are based upon those presented in the ARLCBMP. The consultant that developed these costs, however, indicates that the costs presented in that document are strictly construction cost estimates, and do not include the costs necessary for design and engineering. To estimate the actual funding that would be needed to implement the projects, the construction costs were increased by 30

percent. These projects in the Arnold area are estimated to require $12,998,700 in construction, design, and engineering costs (2008 dollars).

An estimate of total costs associated with the Murphys turn lanes is provided in the *Draft Bear Valley Village SR 4 Mitigation Plan* (EIR Appendix G). Including project design and engineering costs, the total cost of this combined project is estimated to equal $845,000 (2008 dollars). Total costs for all mitigation projects equal $13,843,700.

Cost Allocation

The proportion of total costs attributable to the Bear Valley Village project was determined based on the proportion of total impacts associated with the project. As discussed in the *Draft Bear Valley Village SR 4 Mitigation Plan* (EIR Appendix G), the proportion of total growth in summer traffic along SR 4 generated by Bear Valley Village ranges from 28 percent at the east end of Arnold to 20 percent in Murphys. In winter, this proportion ranges from 26 percent to 17 percent.

Multiplying the total project costs by the associated proportion of total future growth in traffic volumes yields the proportion of costs potentially allocated to Bear Valley Village. Summing across all projects yields a total cost potentially attributable to Bear Valley Village of $3,002,400.

Reflecting the fact that there are other potential funding sources available for roadway projects (state and federal programs), impact fee programs typically are not designed to fully fund roadway project using impact fees, particularly along state highways. The Calaveras County RIM fee program allocates 25 percent of costs for projects on state highways to the fee program. Applying this same reduction factor to the impact fees imposed on Bear Valley Village for improvements along SR 4 in Calaveras County results in total fees of $750,600 to be provided upon full build-out of Bear Valley Village.

Funding Mechanism

Alpine County will impose the required traffic mitigation fees using ~~either~~ an impact fee of $1.132 per sf imposed on project lodging/residential land uses ($1.132/sf × 663,201 sf = $750,744). ~~each proposed lodging/residential unit (including lock-off units), an impact fee imposed on each type of land use proposed for the project, or another approach to be developed by Alpine County~~ Improvements to SR 4 in Calaveras County could adversely affect sensitive habitat (e.g., streams, wetlands) and cultural resources, and construction of the improvements could result in temporary traffic, water quality, soil, or noise impacts. SR 4 improvements are subject to review, approval, and subsequent environmental review pursuant to CEQA by Caltrans and Calaveras County. Alpine County will hold the collected funds in escrow until the improvements are approved by Caltrans District 10 and are programmed by Calaveras County. This will allow Calaveras County (or Caltrans) to draw on these funds when they are needed to construct the improvements.

Level of Significance After Mitigation: Implementation of the identified improvements to SR 4 would offset or reduce the project's contribution to traffic congestion in Arnold and Murphys, but would not reduce project impacts on

roadway LOS to a less-than-significant level for the following reasons: the improvements would not mitigate all SR 4 roadway segments affected by the project, Caltrans approval of the improvements is uncertain, and there is no guarantee that these improvements would be implemented on a schedule that effectively mitigates the impact. For these reasons, this impact is considered significant and unavoidable.

Impact TC-3: Increased traffic volumes at the Bear Valley Road/SR 4 intersection would meet guidelines warranting a right-turn lane on SR 4 and extending the existing left-turn lane.

LSC analyzed whether a right-turn lane is warranted for the westbound SR 4 approach to northbound Bear Valley Road to ensure safe turning movements. The right-turn lane warrant analysis indicates that a 530-foot long right-turn lane on SR 4 is warranted in the winter p.m. peak hour existing plus project conditions for the Bear Valley Road intersection. LSC also evaluated whether the existing 200-foot–long eastbound left-turn lane is adequate to serve the project, and concluded that the turn lane would need to be extended by approximately 380 feet to fully meet Caltrans standards. The applicant is proposing to construct these improvements as part of the project. This is a less-than-significant impact.

Level of Significance Before Mitigation: ~~Significant~~ Less than significant because the proposed intersection improvements would allow safe turning movements at this intersection.

~~*Mitigation Measure TC-3: Construct a westbound right-turn lane on SR 4 at the Bear Valley Road/SR 4 intersection.*~~

~~The County will require the applicant to construct a westbound right-turn lane on SR 4 at the Bear Valley Road/SR 4 intersection. The applicant shall construct this improvement during the first phase of project development. The construction of the right-turn lane is subject to Caltrans review and approval. Caltrans has expressed support for this improvement (Caltrans 2008).~~

~~**Level of Significance After Mitigation: Implementation of the identified improvement to SR 4 would reduce this impact to a less-than-significant level.**~~

~~**Impact TC-4: Right-turn movements from westbound SR 4 onto Creekside Drive would meet guidelines warranting a right-turn lane.**~~

~~LSC analyzed whether a right-turn lane is warranted for the westbound SR 4 approach to northbound Creekside Drive to ensure safe turning movements. The right-turn lane warrant analysis indicates that a right-turn lane on SR 4 is warranted in the winter p.m. peak hour existing plus project conditions for the Creekside Drive intersection. This is a significant impact.~~

~~**Level of Significance Before Mitigation: Significant.**~~

~~*Mitigation Measure TC-4: Construct a right-turn lane along westbound SR 4 at Creekside Drive.*~~

The County will require the project applicant to construct a right-turn lane on westbound SR 4 at Creekside Drive. This would allow for safer movements between westbound SR 4 and northbound Creekside Drive. The applicant shall construct the lane while the applicant is constructing the Creekside Drive extention. The construction of the right-turn lane is subject to Caltrans review and approval. Caltrans has expressed support for this improvement (Caltrans 2008).

Level of Significance After Mitigation: Implementation of the identified improvement to SR 4 would reduce this impact to a less-than-significant level.

Impact TC-5: The corner sight distance for the new Creekside Drive/SR 4 intersection would be less than the *Caltrans Highway Design Manual* guidelines.

Intersections between public roads and state highways must meet Caltrans standards for adequate sight distance. The sight distance is broken down into two categories: stopping sight distance and corner sight distance. Stopping sight distance is the distance an oncoming driver along the state highway needs to perceive an object in the travel lane, react to the object, and come to a safe stop. Corner sight distance requirements are meant to ensure that adequate time is provided for the waiting driver at an unsignalized intersection to either cross all lanes of through traffic, cross the near lanes, and turn left or right without requiring through traffic to radically alter their speed. Corner sight distance requirements are based on the need for a driver to discern a gap of 7.5 seconds in oncoming traffic to safely choose an adequate gap.

According to the *Caltrans Highway Design Manual* methodologies, the Creekside Drive/SR 4 intersection is required to have a stopping distance of 580 feet and a corner sight distance of 660 feet. A field survey conducted for the traffic study found that the intersection has a sight distance of 525 feet for southbound Creekside Drive. The 525-foot sight distance would be above the required stopping sight distance, but less than the required corner sight distance. The corner sight distance is obstructed by pine trees along the north side of SR 4, approximately 275 and 500 feet east of the Creekside Drive alignment. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-5: Remove the pine trees on the north side of SR 4 approximately 275 to 500 feet east of the Creekside Drive alignment.

These trees are located on U.S. Forest Service (USFS) land and may also be located within the SR 4 right-of-way. Caltrans can and should require the project applicant to remove the pine trees located approximately 275 to 500 feet east of the Creekside Drive/SR 4 intersection before the intersection becomes operational. The vegetation must be removed to allow an unobstructed line of sight from Creekside Drive (15 feet back from the north edge of the westbound SR 4 travel lane) for a minimum of 660 feet to the east in order to provide adequate sight distance at this intersection.

Level of Significance After Mitigation: While removal of these trees would reduce this impact to a less-than-significant level, this project is outside the jurisdiction of Alpine County. USFS (and Caltrans if the trees are within the SR 4 right-of-way) can and should implement the suggested or similar mitigation measure. If these

~~**trees are not removed, the corner sight distance at this intersection would remain obstructed. Therefore, this impact is considered significant and unavoidable.**~~

Impact TC-~~6~~4: Increased traffic volumes would not result in an unsafe pedestrian or bicycle environment along Bear Valley Road.

Much of the pedestrian and bicycle travel in the Bear Valley central core area, particularly in winter, occurs along the shoulder of the local roadways. Currently, the traffic volumes are approximately two vehicles per minute along Bear Valley Road, north of Quaking Aspen Road. With the project, this average traffic volume would increase to approximately three vehicles per minute on the same section of Bear Valley Road. Even with this increase, pedestrians and bicyclists would still be able to safely cross Bear Valley Road.

In addition, the project would provide pedestrian overpasses for safer pedestrian access. This includes a pedestrian bridge that connects the South Village parking structure and condominiums to the Village Center, thus separating pedestrians and vehicles on Bear Valley Road.

Level of Significance Before Mitigation: Less than significant because the project would build walkways and overcrossings to separate pedestrians and vehicles and because the project would not increase traffic volumes to an unsafe level for pedestrian and bicycle travel on the shoulder.

Impact TC-~~7~~5: Increased demand for in-town parking generated by the Village Lift could reduce parking availability within Bear Valley for existing users.

The project includes sufficient parking to serve the Village and existing uses on most days. However, new day-skier demand generated by the Village Lift could reduce parking availability within Bear Valley for existing users on peak days.

Public Parking Spaces

The number of parking spaces that would be removed to construct the Village and relocate No Name Road is approximately 291 spaces: 190 spaces in Lots B and C and 101 spaces in the parking areas along No Name Road, the North Lot, and Creekside Drive north of No Name Road. Of these 291 parking spaces, 94 are currently required for Bear Valley Lodge land uses. After demolition of the Lodge, parking would no longer be needed to serve the Lodge. Therefore, 197 spaces (291 - 94 = 197) are needed if the project is to maintain public parking spaces at existing levels (LSC 2008).

The project would require a total of 980 spaces. The project would provide 30 new on-street public parking spaces: four on No Name Road and 26 along Creekside Drive north of No Name Road. Of the remaining 950 spaces, 783 spaces are required for the new Bear Valley Village land uses (e.g., residential, retail), plus another 167 replacement public parking spaces. All 783 spaces needed for the Village uses would be supplied by under-building and off-street parking. The remaining 167 public parking spaces would be provided in the South Village parking structure (LSC 2008). Parking would also continue to be available at the South Lot, Lot A, and along Creekside Drive south of No Name

Road. With this parking supply, there would be no net change in parking spaces available to non–Bear Valley Village uses following completion of all phases.

It is important to note that the project would reduce availability of public parking spaces during construction activities and between phases. This issue is evaluated in Impact TC-~~9~~7.

Increased Parking Demand Generated by Village Lift

The construction of the Village Lift would provide downhill skiers a new way to access the ski area. Some day skiers would park in public parking spaces in the Village specifically to access the new lift. This would decrease the number of parking spaces available to existing users (i.e., Bear Valley residents and cross-country skiers). If this use pattern were to develop, parking conditions for existing users could be substantially affected.

Overall, it can be concluded that there would be a modest potential for day skiers to choose to access the ski area by parking in the Village area and using the Village Lift. This use pattern could be particularly prevalent on busier ski days, as the shuttle trip from the more remote parking on Mt. Reba Road is longer and traffic delays are greater (LSC 2008).

To summarize, the project includes sufficient parking to serve the Village and existing uses on most days. However, new day-skier demand generated by the Village Lift could reduce parking availability within Bear Valley for existing users on peak days. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-~~7~~5: Prepare a Parking Management Plan for Bear Valley.

The County will require the applicant to prepare a Parking Management Plan (PMP) for the Village area of Bear Valley for each development phase. An updated PMP shall be submitted with each ~~tentative map (TM)/~~conditional use permit (CUP) application to the County Planning Department for review and acceptance prior to approval of the requested ~~TM/~~CUP.

The purpose of the PMP will be to establish methods to control parking within Bear Valley to ensure the Village Lift does not reduce existing parking availability for existing users. The PMP will include specific actions to be implemented by the applicant (at the applicant's expense) and may suggest actions for the County to implement. The PMP will include a schedule for implementation that ensures adequate parking will be available during each phase of project development. In no way shall the actions be designed to limit Village Lift access to specific users (such as residents or lodging guests of the Bear Valley area) or to deny equal access to the lift. However, public access to the Village Lift may be limited indirectly by limited public parking availability on busy days.

Actions to be considered for inclusion in the PMP may include, but shall not be limited to:

- **Parking Surveys:** The applicant will conduct a survey of persons parking in the Village public parking areas on peak ski days. The survey will be conducted for a minimum of six days per year (selected to represent the days of greatest skier activity) from 8 a.m. to 1 p.m. Using a minimum of two surveyors, driver destinations will be identified either through direct questioning or through observation. These surveyors will also record total parking counts in each available parking area on an hourly basis, as well as whether active parking enforcement is in effect. These surveys will be required until two years after completion of any new development phases of Bear Valley Village.
- **Annual Parking Management Report:** An annual parking management report will be prepared by the applicant and provided to Alpine County by May 1 of each year that surveys are required. This report will present the collected data regarding parking demand and the number of parked cars associated with the Village Lift, and will also identify any proposed changes in parking management for the next ski season.
- **Parking Permits:** Permits will be made available (possibly using a reservation system) to Bear Valley homeowners and employees. Daily permits will also be made available to local businesses (not located within the Bear Valley Village development) for the vehicles of their customers.
- **Parking Signs:** The County may post signs stating “Permit Parking Only” in public parking areas and authorize an ordinance to allow enforcement of this restriction. Specific dates for the ski season may be defined and included on the signs. Also, a limited time of enforcement may be considered (restricting parking between 8 a.m. and 3 p.m. on weekends and holidays may be sufficient to address the skier parking issues). Recommended sign locations include: Bear Valley Road north of Quaking Aspen Road, No Name Road, Creekside Drive, Lots B and C, Lot A (near the community center), and South Lot. All signs will be located so that at least one sign is visible from all restricted parking spaces. Signs will also be posted by the applicant to direct Bear Valley Village residents to appropriate private parking.
- **Parking Enforcement:** The PMP will describe methods and funding sources to enforce parking restrictions as necessary to address periods of potential parking shortages. Enforcement personnel will only issue tickets for vehicles parked without a valid permit for more than 15 minutes to allow drivers an opportunity to obtain a day permit.
- **Parking Attendants:** Parking attendants may be used during peak demand periods to maximize parking capacity (e.g., double-parking) of public parking areas.
- **Satellite Parking:** Overflow parking may be provided at remote satellite parking locations during peak demand periods. Ski area shuttle buses may serve the satellite parking locations, carrying skiers to the ski area and carrying homeowners and visitors to town.

Level of Significance After Mitigation: Less than significant because monitoring, enforcement, and management of parking within the Village based on the actions included in the PMP would ensure adequate parking would remain available for existing users.

Impact TC-~~8~~6: The project would be inconsistent with three Regional Transportation Plan objectives.

Table 3.9-6 summarizes RTP objectives and policies that relate to transportation, traffic, bicycle circulation, and pedestrian access and routes and that are applicable to the project. The project ~~(as mitigated by measures recommended in this EIR)~~ would be consistent with all the relevant objectives and policies except Objectives 5.3.1.E, 5.3.1.G, and 5.3.6.B.

Objective 5.3.1.E encourages maintenance of Caltrans' desired LOS on all state highways. As discussed in Impacts TC-2 and TC-~~14~~11, the project would cause (or contribute to) unacceptable LOS on SR 4 during peak traffic periods. Mitigation Measures TC-2 and TC-~~14~~ 11 require the applicant to provide fair-share funding of roadway improvements along SR 4 in Arnold and Murphys that will offset project impacts on SR 4 LOS. These measures, however, would not mitigate all SR 4 roadway segments affected by the project. No additional feasible measures are available to reduce Impacts TC-2 and TC-~~14~~ 11 to a less-than-significant level.

Objective 5.3.1.G encourages construction of passing lanes on SR 4, especially between Arnold and Bear Valley, to improve safety and circulation. As discussed in Mitigation Measures TC-2 and TC-~~14~~11, ~~9~~ 8 miles and 28 miles of passing lanes, respectively, would mitigate project and cumulative LOS impacts on SR 4. The cost of constructing passing lanes, however, would be financially infeasible for the applicant, and their environmental consequences may also be undesirable. Neither Alpine County nor Calaveras County supports constructing these lanes for this impact.

Objective 5.3.6.B encourages developers to provide safe and secure bicycle storage facilities. The project, however, does not include bicycle storage facilities. This is a significant impact.

Table 3.9-5. General Plan Transportation Policy Consistency

Objective/Policy	Finding	Discussion
~~Objective 5.3.1.B~~	~~Consistent after Mitigation~~	~~Mitigation Measure TC-5 recommends removal of pine trees on the north side of SR 4 east of the Creekside Drive alignment to eliminate an unsafe sight distance condition at this intersection upon completion of the Creekside Drive extention.~~
Objective 5.3.1.E	Inconsistent	Mitigation Measures TC-2 and TC-~~14~~ 11 require the applicant to provide fair-share funding of roadway improvements along SR 4 in Arnold and Murphys that will offset project impacts on SR 4 LOS. The measures, however, would not mitigate all SR 4 roadway segments affected by the project.
Objective 5.3.1.G	Inconsistent	As discussed in Mitigation Measures TC-2 and TC-~~14~~11, ~~9~~ 8 miles and 28 miles of passing lanes, respectively, would mitigate LOS impacts on SR 4. Passing lanes, however, would be financially infeasible and their environmental consequences may also be undesirable. Neither Alpine County nor Calaveras County supports constructing these lanes for this impact.
Objective 5.3.1.I	Consistent~~ after Mitigation~~	~~Several mitigation measures in this EIR require the applicant to fund or~~The applicant proposes to construct intersection improvements to maintain acceptable LOS.

Table 3.9-5. General Plan Transportation Policy Consistency

Objective/Policy	Finding	Discussion
Objective 5.3.6.A	Consistent	The project would include a centrally located pedestrian-oriented village with a central plaza and pedestrian walkways and bridges.
Objective 5.3.6.B	Consistent after Mitigation	The Bear Valley Village design does not currently have bicycle storage facilities designated in the plans. Mitigation Measure TC-~~8~~ 6a would require Bear Valley Village to provide bicycle storage.
Objective 5.3.6.C	Consistent	No bicycle routes are designated along No Name Road or Creekside Drive. ~~The extension of Creekside Drive would be constructed to provide shoulder width that is adequate for bicycle use.~~ No Name Road would be relocated and would provide adequate shoulder width for bicycle use.
Objective 5.3.7.A	Consistent	All parking for the specific uses of each building would be supplied by under-building and off-street parking.
Objective 5.3.7.B	Consistent	The project would include the Village Lift.

Source: Alpine County 2005b; SWCA 2008

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-~~8a~~6a: Provide bicycle storage facilities within Bear Valley Village.

The County will require the applicant to include safe and secure bicycle storage facilities within Bear Valley Village. Storage facilities may include bike racks where bicyclists can lock their bikes, or bike lockers for Village residents and guests. Bike storage facilities shall be shown on plans for each development phase submitted as part of any CUP ~~and/or TM~~ application.

Mitigation Measure TC-~~8b~~6b: Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project~~Reduce SR 4 Traffic Congestion in Arnold and Murphys~~.

Implement Mitigation Measures TC-2 and TC-~~14~~11.

Level of Significance After Mitigation: Providing bike storage facilities within Bear Valley Village would ensure the project is consistent with RTP Objective 5.3.6.B. Mitigation Measure TC-~~8b~~ 6b would reduce project-generated traffic congestion on SR 4 in Arnold and Murphys, but would not provide full consistency with RTP Objectives 5.3.1.E and 5.3.3.G. This is a significant and unavoidable impact.

Impact TC-~~9~~7: Construction activities would affect traffic circulation and reduce public parking.

No Name Road would be moved to the south to allow for construction of the Village Center. The existing road would be removed during Phase 3 (Spring 2013). The new road alignment would be built after the Bear Valley Lodge and Commercial Center are removed at the completion of Phase 3 (Fall 2014). No Name Road would not be passable for vehicles until Fall 2016, a minimum of three years. ~~The extension of~~

~~Creekside Drive would provide direct access to the east side of Bear Valley from SR 4. However,~~ Creekside Drive would only be accessible from one location, its intersection with Bear Valley Road, between the time that No Name Road is removed and ~~the Creekside Drive extension~~new No Name Road is completed. This would increase the automobile travel distance between the east and west sides of town by up to 2,000 feet. This increased travel distance would be relatively short, resulting in a minor inconvenience for the public. This is a less-than-significant impact.

Construction activities would result in the potential for lane closures, reductions of roadway widths, tighter turning movements at intersections, and hazards to pedestrians and bicyclists. These impacts would be temporary in nature; however, they would affect traffic circulation and are considered significant impacts.

The project would also reduce availability of public parking spaces during construction activities and between phases. Construction activities would temporarily reduce on-street parking along Creekside Drive. On-street parking would not be available on No Name Road for a minimum of three years during Phases 3 and 4 when the road is closed. The North Lot parking area would be removed during Phase 3, and replacement parking would not be available until the South Village parking structure is completed. Also, 190 spaces at Lots B and C would be unavailable while the South Village is under construction. In addition, closure of No Name Road would discontinue the one-way (single lane) traffic circulation pattern currently used in Bear Valley during the winter to accommodate both snow storage and parking along the roadside. Two-way traffic during the winter would require more road width and could eliminate on-street parking in some locations, including Bear Valley Road and Creekside Drive. The applicant intends to construct the South Village parking structure in one summer building season so winter parking would be uninterrupted for existing Bear Valley residents. Parking for summer activities (e.g., the Bear Valley Music Festival), however, could be affected. A reduction of public parking spaces below the levels required for seasonal demand would be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-~~9~~7: Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.

The County will require the applicant to prepare a Construction Traffic Control Plan (CTCP) for each development phase. An updated CTCP shall be submitted with each application for any TM and/or CUP approval that would involve construction activity~~application~~ to the County Public Works and Planning departments for review and acceptance prior to approval of the requested TM/CUP. Each such TM and/or CUP will include conditions requiring the applicant to update the CTCP prior to commencement of each year of construction activity and submit it to the County Public Works and Planning departments for review and acceptance.

At a minimum, the plan shall address truck haul routes, truck turning movements, traffic control signage, parking supply, bicycle and pedestrian traffic, on-site circulation and staging areas, and monitoring of the in-place traffic controls.

Actions to be considered for inclusion in the CTCP may include, but shall not be limited to:

- **Provide public outreach for construction activities:** The applicant would post public notices of construction activities along affected roadways one week prior to construction. The applicant would also provide written notice to property owners along affected roadways one week prior to construction or closures.
- **Identify a temporary automobile circulation route** for the period when No Name Road is closed for construction.
- **Place steel plates over open trenches in roadways** at the end of each workday to restore full vehicle access to all residents.
- **Limit daily construction equipment traffic** by staging heavy construction equipment and vehicles on the project site at the end of each workday, rather than removing them, to the degree possible. Construction staging areas would be included on improvement and grading plans in a location acceptable to the County.
- **Provide replacement public parking spaces** to ensure an adequate seasonal parking supply, including parking needed for the Bear Valley Music Festival. During the winter ski season, provide parking equal to the number of spaces lost to public use because of construction staging and access restrictions, two-way winter traffic on town roadways, and removal of the Lodge Lot.
- **Provide pedestrian routes** between the event/festival venues and Lots B and C that are as direct as possible given construction site access restrictions.
- **Design temporary roadways and intersections** so that all emergency response vehicles would be accommodated.
- **Direct construction traffic** that could access construction sites from either Bear Valley Road or Creekside Drive to use Creekside Drive.

In addition, Alpine County will modify the County Code to temporarily allow two-way traffic on Bear Valley Road and Creekside Drive while No Name Road is closed for relocation.

Level of Significance After Mitigation: Less than significant because the CTCP would increase public awareness about construction activities, identify temporary automobile circulation routes, ensure adequate parking is available for seasonal demand, provide pedestrian routes, limit daily construction traffic, and provide safe emergency vehicle access on Bear Valley roadways.

Impact TC-~~10~~8: Construction activities within County roadways and temporary closure of No Name Road could reduce emergency access and response times.

During construction, emergency access would be reduced temporarily during certain phases. In particular, the closure of No Name Road would eliminate one of the two available access routes to Creekside Drive and the east side of Bear Valley from the fire/sheriff station and the west side of town. During the period that No Name Road is closed, the emergency vehicle route from the station and the west side of town would be limited to Quaking Aspen Road/Creekside Drive. The fire/sheriff station is located at the intersection of Bear Valley Road and Quaking Aspen Road/Creekside Drive. Therefore, temporary closure of No Name Road would not be expected to substantially reduce

response times from the station to Creekside Drive and the east side of town. However, the closure of No Name Road could increase response times for emergency service personnel responding to calls between crosstown locations. For example, if firefighters were responding to a call in the northwest portion of the subdivision, response times to a call from the east side of town (e.g., community center) would be longer when No Name Road is closed.

Also, temporary construction areas could encroach on roadways or intersections and reduce their width. Emergency access routes would be impaired if the roadway widths are not large enough to accommodate emergency vehicles.

Both the temporary closure of No Name Road and temporary construction areas that reduce intersection or roadway widths could reduce emergency access and increase response times. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-~~10~~8: Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.

Implement Mitigation Measure TC-~~9~~7.

Level of Significance After Mitigation: The CTCP would ensure roadway and intersection widths are sufficient for emergency response vehicles. However, no mitigation is available to compensate for the temporary loss of No Name Road as an emergency vehicle access route. This impact would therefore be significant and unavoidable.

Impact TC-~~11~~ 9 (Cumulative): The project and other reasonably foreseeable projects would not cause Bear Valley Road/SR 4 ~~and future Creekside Drive/SR 4~~ turning movements to operate at an unacceptable LOS in 2027.

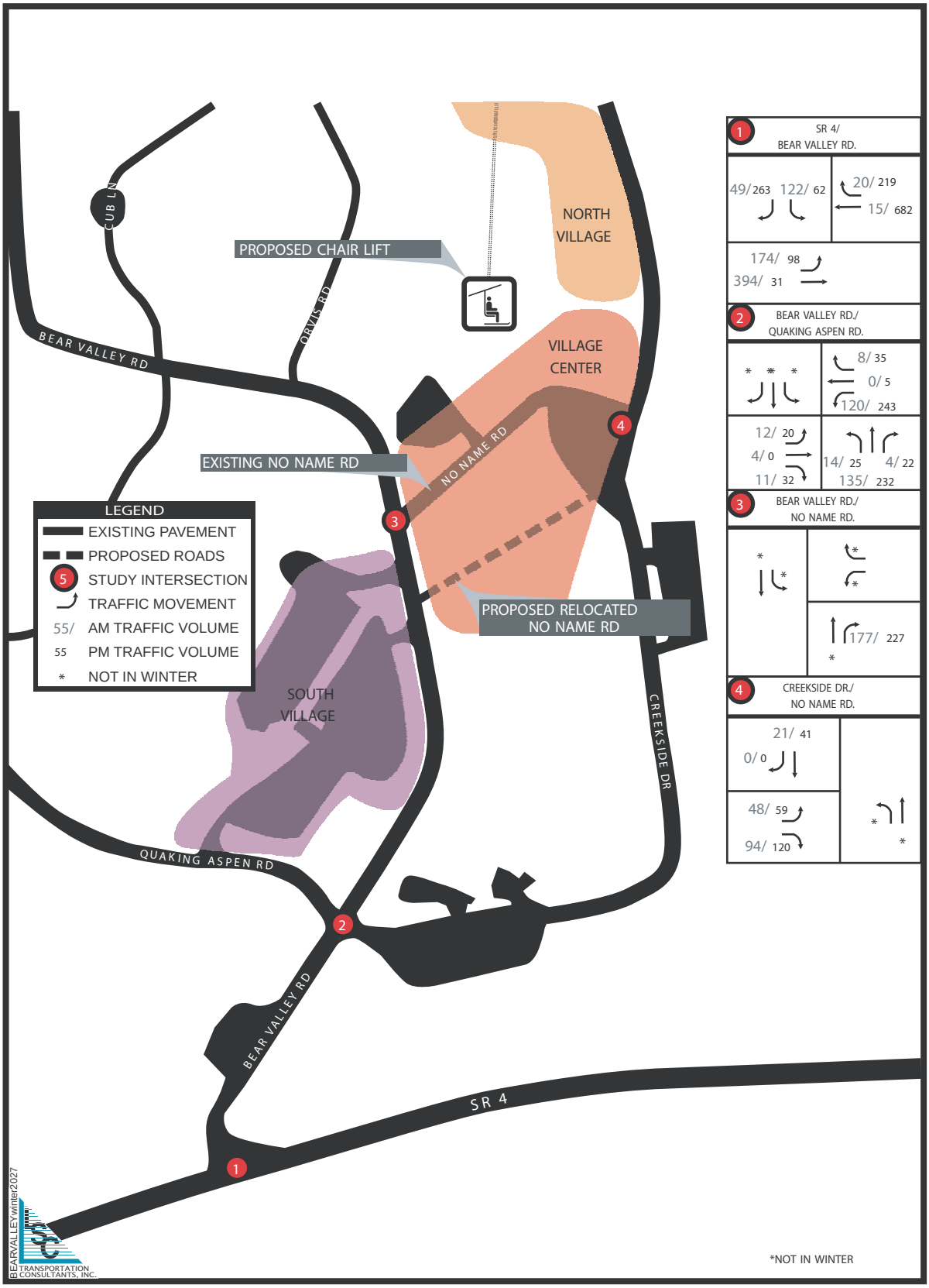
The queue lengths were analyzed for the Bear Valley Road/SR 4 intersection ~~and a future four-way Creekside Drive/SR 4 intersection~~ under year 2027 cumulative conditions. The southbound right-turn lane is predicted to have a queue length of 138 feet or six vehicles during the winter p.m. peak hour. ~~The southbound Creekside Drive shared left-turn/right-turn lane onto SR 4 would have a queue length of 121 feet (approximately five vehicle lengths).~~ All other queue lengths would be less than ~~50~~ 58 feet (approximately ~~two~~ three vehicle lengths). The first access point along Bear Valley Road north of SR 4 is located approximately 200 feet from the intersection. Therefore, there is adequate space without blocking access points. The resulting queues would not block any driveways or public streets, and would result in a less-than-significant impact.

Figures 3.9-6 and 3.9-7 provide year 2027 cumulative plus project intersection traffic volumes for winter and summer months, respectively. Tables G and H of Appendix L show the winter and summer LOS for the four Bear Valley intersections that were studied. As shown in these tables, the worst-movement LOS is found to be LOS "D" for the winter a.m. and p.m. peak hours at the Bear Valley Road/SR 4 intersection. The worst movement during the summer is the p.m. peak hour at the same intersection, which is estimated to operate at LOS "C". All other movements would be LOS "A" or "B".~~All intersections would operate at LOS "A" during the summer months. Two intersections, Bear Valley Road/SR 4 and a future four-way Creekside Drive/SR 4~~

~~intersection, have turning movements that would operate at LOS "B." This is a less-than-significant impact.~~

~~During the winter months, all intersections would operate at LOS "A"; however, individual turning movements would operate at unacceptable LOS for the Bear Valley Road/SR 4 intersection and a future four-way Creekside Drive/SR 4 intersection. The Creekside Drive/SR 4 intersection would operate at LOS "E" during the p.m. peak hours for the northbound approach (from a future potential residential area south of SR 4). Assuming project and non-project traffic volumes grow at the same rate, the Bear Valley Road/SR 4 intersection would operate at LOS "D" during p.m. peak hours for the southbound approach after construction of about 220 new project Equivalent Dwelling Units (EDUs) (LSC 2008).~~ Individual turn movements operating at LOS "D" are acceptable for a minor road (Caltrans 2008a). This impact would be less-than-significant. ~~would be considered significant impacts.~~

Level of Significance Before Mitigation: ~~Significant.~~ Less than significant because this intersection would continue to operate at acceptable levels.



Source: LSC Transportation Consultants, 2009

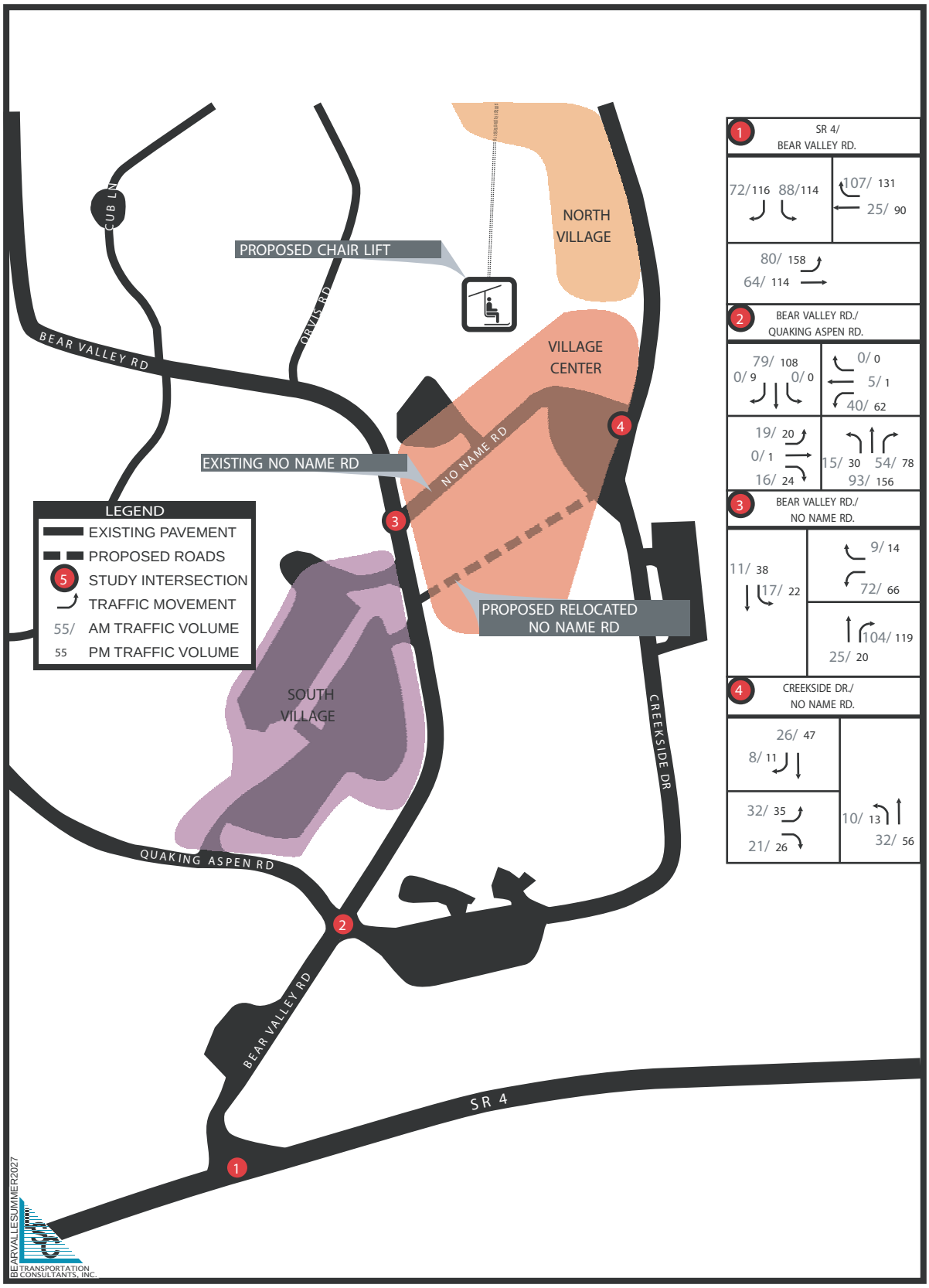
N

0' 200'

Figure 3.9-6
2027 With Full Project
Winter Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS



Source: LSC Transportation Consultants, 2009

N

0' 200'

Figure 3.9-7
2027 With Full Project Summer Traffic Volumes

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

~~*Mitigation Measure TC-11a: Construct a westbound right-turn lane on SR 4 at the Bear Valley Road/SR 4 intersection.*~~

~~Implement Mitigation Measure TC-3.~~

~~*Mitigation Measure TC-11b: Construct a separate left-turn lane for the southbound Bear Valley Road approach to SR 4.*~~

~~The Bear Valley Road/SR 4 intersection would operate at LOS "D" during p.m. peak hours for the southbound approach after construction of about 220 new project EDUs. Therefore, the County will require the applicant to construct a separate left-turn lane on the Bear Valley Road southbound approach to SR 4 before approval of Improvement Plans/Grading Permit or other authorization to begin on site construction of the project phase that would cause the total number of project EDUs to exceed 220. The construction of the separate turn lane would allow for safer movements between Bear Valley Road and SR 4. With the turn lane, the turn movement operations would be at LOS "C" or better and the overall intersection would continue to operate at LOS "A." The construction of the left-turn lane is subject to Caltrans review and approval.~~

~~*Mitigation Measure TC-11c: Provide fair-share funding for a Traffic Control Officer program at the intersection of Creekside Drive and SR 4 during the winter months.*~~

~~If and when a future section of Creekside Drive south of SR 4 is constructed and becomes operational, providing a Traffic Control Officer (TCO) during peak p.m. traffic periods on peak ski days would ensure adequate conditions for traffic entering SR 4 from Creekside Drive. With a TCO, the intersection would operate at LOS "C" or better for all turn movements, and operate at overall LOS "A. TCO programs are safely and effectively provided at many California ski areas, including Alpine Meadows, Northstar, and Sugar Bowl.~~

~~This impact, however, would not occur until a future section of Creekside Drive south of SR 4 is constructed and becomes operational. The timing of this impact is uncertain, but is not expected to occur in the near future. It is therefore not practical for the County to develop and implement a funding mechanism for a TCO program at this location.~~

~~Level of Significance After Mitigation: Implementation of the improvements to SR 4 identified in Mitigation Measures TC-11a and TC-11b would reduce the corresponding impacts to a less-than-significant level. These improvements are subject to Caltrans review and approval. Caltrans has expressed support for Mitigation Measure TC-11a (Caltrans 2008), but has not expressed support for (or opposition to) Mitigation Measure TC-11b. If a separate left-turn lane on Bear Valley Road at the southbound approach to SR 4 is not approved by Caltrans, this impact would be significant and unavoidable. In addition, developing and implementing a funding mechanism for a TCO program at a future Creekside Drive four-way intersection is impractical. Without such a program, the northbound approach to this future intersection would operate at an unacceptable level on peak ski days under project plus cumulative conditions. Therefore, this impact is considered significant and unavoidable.~~

Impact TC-~~12~~ 10 (Cumulative): Increased traffic volumes at the Bear Valley Road/SR 4 intersection as a result of the project and other reasonably foreseeable

projects would meet guidelines warranting a right-turn lane on SR 4 in 2027 and extending the existing left-turn lane.

LSC analyzed whether a right-turn lane is warranted for the westbound SR 4 approach to northbound Bear Valley Road to ensure safe turning movements. The right-turn lane warrant analysis indicates that a 530-foot-long right-turn lane on SR 4 is warranted in the winter p.m. peak hour under the 2027 plus project scenario for the Bear Valley Road/SR 4 intersection. LSC also evaluated whether the existing 200-foot long eastbound left-turn lane is adequate to serve the project, and concluded that the turn lane would need to be extended by approximately 380 feet to fully meet Caltrans standards. The applicant is proposing to construct these improvements as part of the project.This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the proposed intersection improvements would allow safe turning movements at this intersection~~Significant~~.

~~**Level of Significance After Mitigation: Implementation of the identified improvement to SR 4 would reduce this impact to a less-than-significant level.**~~

~~**Impact TC-13 (Cumulative): Increased traffic volumes at the Creekside Drive/SR 4 intersection as a result of the project and other reasonably foreseeable projects would meet guidelines warranting an eastbound SR 4 left-turn lane in 2027.**~~

~~LSC analyzed whether a left-turn pocket is needed on eastbound SR 4 at the Creekside Drive/SR 4 intersection to ensure safe left-turn movements. The analysis determined that an eastbound SR 4 left-turn lane is warranted under the year 2027 cumulative plus project conditions. This is a significant impact.~~

~~**Level of Significance Before Mitigation: Significant.**~~

~~*Mitigation Measure TC-13: Construct a left-turn lane on eastbound SR 4 at Creekside Drive.*~~

~~The County will require the project applicant to construct a left-turn lane on eastbound SR 4 at the Creekside Drive intersection. This would would provide a consistent intersection design between the two entrances to Bear Valley and allow for safer movements between eastbound SR 4 and northbound Creekside Drive. The applicant shall construct the lane while the applicant is constructing the Creekside Drive extention. The construction of the turn lane is subject to Caltrans review and approval.~~

~~**Level of Significance After Mitigation: Implementation of this left-turn lane on SR 4 would reduce this impact to a less-than-significant level. These improvements are subject to Caltrans review and approval. Caltrans has not expressed support for (or opposition to) this mitigation measure. If a separate left-turn lane on SR 4 at Creekside Drive is not approved by Caltrans, this impact would remain significant and unavoidable.**~~

Impact TC-~~14~~ 11 (Cumulative): The project and other reasonably foreseeable projects would cause SR 4 to operate at unacceptable LOS levels in 2027.

Table 3.9-7 compares the 2027 cumulative plus project conditions with and without the project for SR 4 LOS. During the winter months, the LOS for SR 4 would remain the same with or without the project.

During the summer months, three roadway segments would experience a degradation in LOS with the project. The addition of the project degrades the LOS from "C" to "D" during a.m. and p.m. peak hours between Big Meadows and Moran Road East. The segment between Moran Road East and Moran Road West would be reduced from LOS "E" to LOS "F" during the a.m. peak hours, while SR 4 between Moran Road West and Big Trees Road would go from LOS "D" to LOS "E" during a.m. peak hours. This is a significant impact.

Table 3.9-6. SR 4 LOS for Year 2027

Intersection	No Project		Plus Project	
	A.M. Peak Hours	P.M. Peak Hours	A.M. Peak Hours	P.M. Peak Hours
Winter				
Bear Valley Road to Big Meadows	C	**D**	C	**D**
Big Meadows to Moran Road East (Arnold)	**D**	**D**	**D**	**D**
Moran Road East (Arnold) to Moran Road West (Avery)	**E**	**E**	**E**	**E**
Moran Road West(Avery) to Big Trees Road (Murphys)	**D**	**D**	**D**	**D**
Big Trees Road (Murphys) to Angels Camp	**D**	**D**	**D**	**D**
Summer				
Bear Valley Road to Big Meadows	B	C	B	C
Big Meadows to Moran Road East (Arnold)	C	C	**D**	**D**
Moran Road East (Arnold) to Moran Road West (Avery)	**E**	**F**	**F**	**F**
Moran Road West(Avery) to Big Trees Road (Murphys)	**D**	**D**	**E**	**D**
Big Trees Road (Murphys) to Angels Camp	**D**	**D**	**D**	**D**

Bold text indicates LOS "C" standard is exceeded.

Source: LSC 2008

Level of Significance Before Mitigation: Significant.

Mitigation Measure TC-~~14~~11: *Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project****~~Reduce SR 4 Traffic Congestion in Arnold and Murphys~~.***

The traffic study prepared by LSC determined that construction of approximately 29.5 miles of climbing or passing lanes on SR 4 between Bear Valley and Angels Camp would allow SR 4 to operate at LOS "C" or better, thereby reducing this cumulative impact to a less-than-significant level. Approximately 27.7 miles of additional travel lanes along SR 4 would be required to mitigate this cumulative impact even if the project were not built. The project's contribution would therefore be 1.8 miles (29.5 – 27.2 = 1.8).

Such passing lanes, however, are neither programmed nor funded by Caltrans or Calaveras County. The passing lanes are not programmed in the Calaveras County 2007 RTP (LSC 2007) or the 2006 Alpine/Amador/Calaveras Tri-County Regional Transportation Improvement Program (Alpine County 2005c). Based on average costs for other projects included in the Calaveras County RTP and adjusting for terrain, a unit cost of $630,000 per mile (2007 dollars) is estimated, equal to $645,000 per mile in 2008 dollars. For 29.5 miles of additional lanes, total construction cost is estimated to be $19 million. The project's fair share can be estimated by considering the proportion of total future growth in traffic generated by the project. This varies from 35 percent (closest to Bear Valley) to 10 percent (in Arnold). Applying the proportion for each roadway segment to the total cost of additional travel lanes in each link, the total allocated cost to the applicant would be about $4 million. If the applicant were to provide the $4 million, Caltrans and the Calaveras Council of Governments (and possibly others, as part of the three-county coalition with Alpine and Amador Counties) would be faced with identifying the remaining $15 million. The current Calaveras RTP does not include plans for substantial widening of SR 4 east of Angels Camp. The RTP does include some programmed improvements along SR 4 between Bear Valley and SR 49, including curve corrections near Arnold and near the entrance to Calaveras Big Trees State Park, and some additional turn lanes. These projects, however, would not significantly address the need for additional passing or climbing lanes. State Transportation Improvement Program (STIP) funds are already fully allocated for projects such as the Angels Camp Bypass and improvements of SR 4 west of Angels Camp. The likelihood of raising $15 million of additional funds from non-applicant sources is extremely low. This would require substantial re-allocation of highway funds (both those controlled directly by the state and those controlled by Calaveras Council of Governments) away from other projects to address this specific deficiency.

The environmental consequences of constructing 29.5 miles of climbing or passing lanes in this area may also be undesirable. For example, widening of SR 4 could adversely affect sensitive habitats (e.g., wetland and riparian) or other environmental resources along the roadside. In addition, widening the highway between central Arnold and Bear Valley could alter the scenic character of a 25-mile section of SR 4 that has been designated a state scenic highway and holds NSB status, including the section of SR 4 passing through Calaveras Big Trees State Park. For these reasons, neither Alpine County nor Calaveras County supports constructing ≥29.5 miles of climbing or passing lanes to mitigate this impact. Calaveras County indicated its opposition to these passing lanes during two meetings with Alpine County in June and August 2008, and in written correspondence to Alpine County dated June 30, 2008 (Appendix G).

This impact is located entirely within Calaveras County. Therefore, Alpine County considered whether requiring the applicant to pay into the Calaveras County Road Impact Mitigation (RIM) Fee program would mitigate the project's LOS impact on SR 4. Under this program, Calaveras County imposes RIM fees on development projects throughout Calaveras County, and is used to fund a variety of improvements both on and off of the state highway system. If the RIM fee rates are applied to the proposed project, a total fee of roughly $1.2 million is identified. However, few projects within the project impact area are slated to be funded by the RIM. Payment of Calaveras RIM fees, therefore, would not effectively mitigate project impacts.

Therefore, Alpine County will require the applicant to implement Mitigation Measure TC-2 as mitigation for cumulative impacts on SR 4. In addition, Calaveras County can and should require projects within their jurisdiction to mitigate their contributions to this significant cumulative impact on SR 4.

Improvements to SR 4 in Calaveras County are subject to review, approval, and subsequent environmental review pursuant to CEQA by Caltrans and Calaveras County.

Level of Significance After Mitigation: Implementation of the identified improvements to SR 4 would offset or reduce the project's contribution to traffic congestion in Arnold and Murphys, but would not reduce project impacts on roadway LOS to a less-than-significant level for the following reasons: the improvements would not mitigate all SR 4 roadway segments affected by the project, Caltrans approval of the improvements is uncertain, and there is no guarantee that these improvements would be implemented on a schedule that reduces the project contributions to this significant cumulative impact to a less-than-significant level. For these reasons, this impact is considered significant and unavoidable.

Impact TC-12 (Cumulative): The County's Parking Management Plan would ensure adequate public parking will be available in Bear Valley to serve reasonably foreseeable future development.

As discussed in EIR Section 4.2.1, build-out of Bear Valley north of SR 4 (other than the proposed project) could add up to 391 dwelling units to the area. As shown in Table 4-1 (EIR page 4-2), 158 of these dwelling units would be multi-family units accessible by car in the winter. These include Black Forest, Silver Mountain, and the remaining Creekside Condominiums. All of these units are required to provide year-round, on-site parking. It is reasonable to assume, however, that because of its distance from the Village core, Black Forest would generate some winter automobile trips between the condominium complex and the central portion of Bear Valley, thereby generating occasional parking demand in town.

As shown in Table 4-1, Bear Paw Ridge could add 40 single-family units or 102 multi-family units to Bear Valley. Because of its location in the northeast corner of Bear Valley and its steep terrain, the roads leading to Bear Paw Ridge (i.e., Creekside Drive and Flynn Road) would not likely be plowed in the winter. Therefore, Bear Paw Ridge residents would likely need to park in public spaces in the Village core during the winter. The remaining dwelling units would include 131 single-family dwelling units that would not have winter car access. These residents would also need to park in public spaces in the Village core during the winter.

Over the next 20 years, therefore, between 171 and 233 new dwelling units could be added to Bear Valley whose residents (or visitors) would need to park in central Bear Valley when using their units. Demand would be highest during winter peak use periods. It is reasonable to assume, however, that use of all these dwelling units (and associated parking demand) would not occur simultaneously.

It is important to note that over the next 20 years, some residential development could also occur in the BVMP south of SR 4. At this time, however, it would be speculative to

evaluate whether such dwelling units would generate winter parking demand in the Bear Valley village core.

In order to ensure adequate public parking is available for future development in Bear Valley, Alpine County is committed to preparing a Parking Management Plan for the town of Bear Valley with the purpose of ensuring adequate public parking will be available in Bear Valley to serve existing uses in addition to reasonably foreseeable future development. Actions to be considered for inclusion in the County's plan might include, but not be limited to: expansion of the South Lot located between SR 4 and the Creekside Condominiums; expansion of Parking Lot A located south of the community center; creating additional parking areas near the community center; and increasing efficiency of on-street parking. Other opportunities may also be available.

The County's Parking Management Plan will include a schedule for implementing any necessary actions in a timeframe that ensures parking will be available to adequately accommodate future demand. This Plan will also include funding strategies to ensure equitable funding will be provided by future development to minimize the financial burden on the County for implementing any necessary improvements.

Implementation of this plan will ensure future development in Bear Valley would not generate a significant cumulative parking impact. The project would not contribute to a significant cumulative parking impact. Therefore, this cumulative impact is considered less than significant.

Level of Significance Before Mitigation: Less than significant because the County's Parking Management Plan will ensure adequate public parking will be available in Bear Valley to serve reasonably foreseeable future development and that future development in Bear Valley would not result in a significant cumulative parking impact.

Significant and Unavoidable Impacts

Impact TC-2: SR 4 would operate at unacceptable LOS levels between Moran Road East and Moran Road West and between Big Meadows and Moran Road East.

~~**Impact TC-5: The corner sight distance for the new Creekside Drive/SR 4 intersection would be less than the *Caltrans Highway Design Manual* guidelines.**~~

Impact TC-~~8~~6: The project would be inconsistent with three Regional Transportation Plan objectives.

Impact TC-~~10~~8: Construction activities within County roadways and temporary closure of No Name Road could reduce emergency access and response times.

~~**Impact TC-11 (Cumulative): The project and other reasonably foreseeable projects would cause Bear Valley Road/SR 4 and future Creekside Drive/SR 4 turning movements to operate at an unacceptable LOS in 2027.**~~

~~**Impact TC-13 (Cumulative): Increased traffic volumes at the Creekside Drive/SR 4 intersection as a result of the project and other reasonably foreseeable projects would meet guidelines warranting an eastbound SR 4 left-turn lane in 2027.**~~

Impact TC-~~14~~ 11 (Cumulative): The project and other reasonably foreseeable projects would cause SR 4 to operate at unacceptable LOS levels in 2027.

3.10 SNOWMOBILE CIRCULATION AND PARKING

This section describes existing snowmobile use, snowmobile parking, and snowmobile circulation patterns used by Bear Valley residents and visitors; identifies impacts related to changes in snowmobile use, parking, and circulation patterns that may occur with implementation of the Bear Valley Village project and ~~a~~ new snowmobile parking and trailer loading areas ~~currently being considered~~ proposed by the County; and recommends mitigation measures to reduce or eliminate significant impacts related to public use of snowmobiles.

Impacts related to oversnow access and response times for emergency service providers are evaluated in Section 3.3 (Public Services), and impacts related to snowmobile noise are evaluated in Section 3.12 (Noise). Some of these impacts are referenced in this section to provide a more comprehensive discussion of the expected changes in snowmobile activity. To avoid double-counting, however, impacts evaluated in other Environmental Impact Report (EIR) sections are not included in the impact analyses or conclusions in this section.

The discussion contained in this section is based on the information presented in the *Snowmobile Parking and Circulation Study for the Bear Valley Village Project* (SWCA 2008), attached as Appendix H.

3.10.1 Regulatory Setting

County Regulations

The **Alpine County Snowmobile Ordinance** regulates snowmobile operation within the County (County Code Chapter 10.24). The ordinance prohibits snowmobile use between 10:00 p.m. and 6:00 a.m., except when going to or returning from an evening ride or necessary travel between residences and/or business, and prohibits operation on private property without the consent of the owner. The ordinance also limits snowmobile speed to 20 miles per hour (mph) within developed areas, limits snowmobile use in common areas to emergency response purposes and gaining access to residences and businesses, and requires snowmobiles to be operated in a manner that minimizes disturbance to adjacent properties.

The Snowmobile Ordinance also describes permissible snowmobile parking areas on Bear Valley snowways (i.e., roadways closed to auto traffic during winter snow conditions and specifically groomed and packed for oversnow travel). Snowmobile parking is generally prohibited on any snowway, with limited exceptions on Bear Valley Road between the road closure and Orvis Road, and Quaking Aspen Road between County Parking Lot C and Fremont Road.

Bear Valley Residents Covenants, Conditions, and Restrictions

Bear Valley Residents, Inc. (BVRI) serves as the homeowners association for the subdivision. BVRI has jurisdiction over certain open space common areas within the

subdivision that are subject to BVRI's adopted Covenants, Conditions, and Restrictions (CC&Rs). These CC&Rs establish rules governing the use of the common areas within the subdivision. These CC&Rs do not, however, apply to Open Space Parcel E, which generally runs along the valley floor between the subdivision and the Bear Valley Village project area (Figure 3.10-1).

Pursuant to the CC&Rs, open space common areas within BVRI's jurisdiction are to be preserved as open space and used for recreational purposes and other purposes incidental and ancillary to the use of lots within the subdivision. The CC&Rs allow snowmobile use in the open space common areas provided the use complies with the County's Snowmobile Ordinance.

3.10.2 Environmental Setting

Characteristics of Snowmobile Use in Bear Valley

Snow is not removed (plowed) from most Bear Valley roads. Snow removal is limited to a few roads in central Bear Valley, including the southern portion of Bear Valley Road, No Name Road, and the southern half of Creekside Drive. These plowed roads primarily serve the town's Commercial Center, community services, automobile parking lots, and condominiums.

Most single-family homes in Bear Valley are located outside the town center in the area known as the "subdivision." Roads in the subdivision are not plowed and are closed to automobiles during the winter. Automobile road closures are located on Bear Valley Road just north of No Name Road, Quaking Aspen Road just west of the Bear Valley Transportation Center, and Creekside Drive 0.3 mile north of No Name Road (Figure 3.10-1). Snowmobiles are the traditional form of motorized transportation within the subdivision during the winter. Most homeowners in the subdivision own and rely upon snowmobiles for transportation between the town center and their home in the subdivision. Snowmobile ownership is well distributed throughout the subdivision.

Between 500 and 600 snowmobiles are estimated in Bear Valley. Approximately 295 privately owned snowmobiles are stored at the Bear Valley Transportation Center, most belonging to subdivision homeowners. It is estimated that another 200 snowmobiles are stored at the homes in the subdivision. In addition, Bear Valley Snowmobiles operates a rental fleet of about 50 snowmobiles from the Transportation Center. Approximately 4 percent (12 snowmobiles) of the snowmobiles stored at the Transportation Center are owned by condominium owners, indicating a proportionally low ridership among condominium owners (Denicola 2008). A reasonable explanation is that condominiums in Bear Valley are served by plowed roads accessible by automobile. Therefore, condominium owners generally do not use snowmobiles for travel within Bear Valley; instead, they are used by condominium owners for recreational purposes.

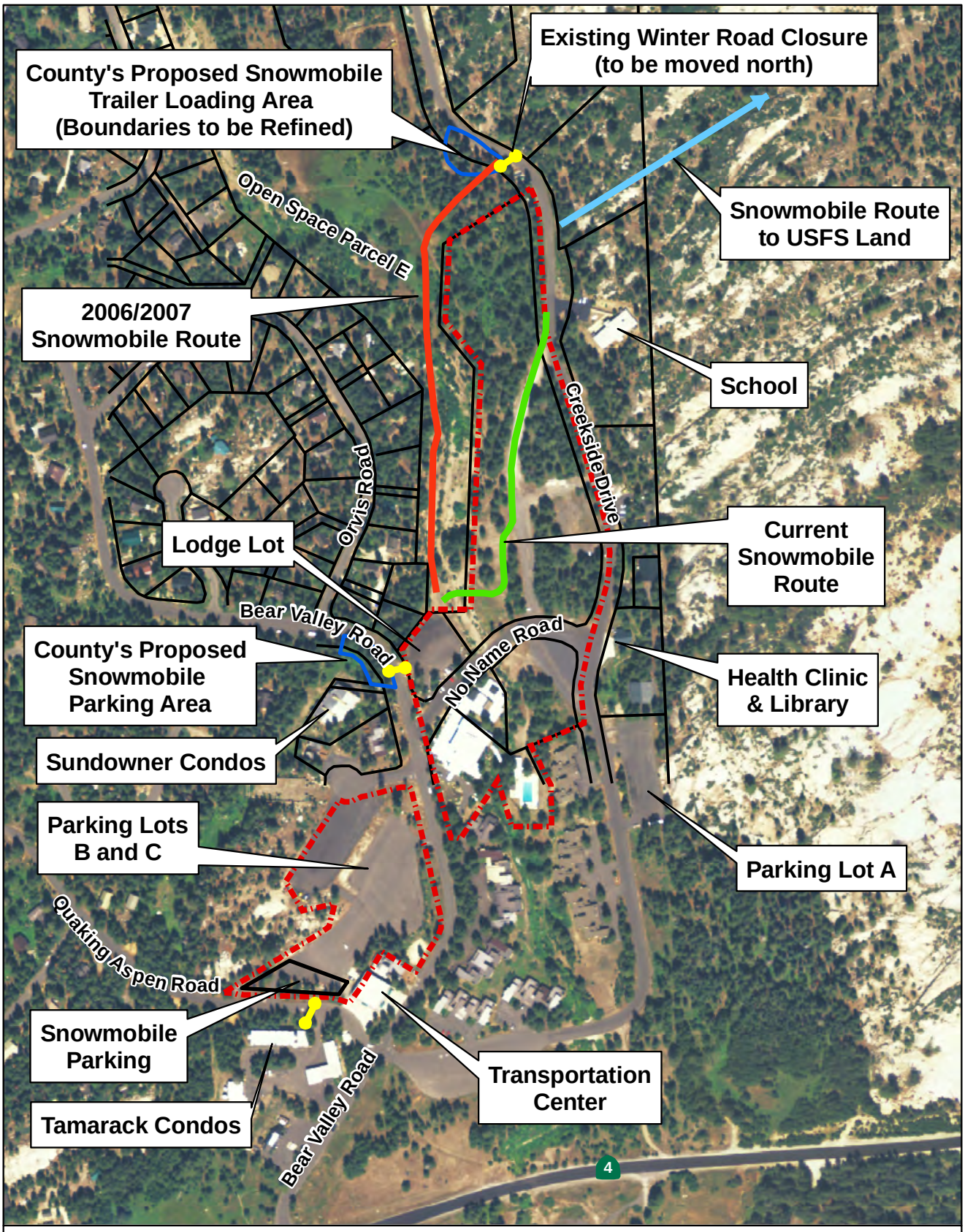


Figure 3.10-1
Snowmobile Routes and Parking Areas

Bear Valley Village EIR

SWCA

Bear Valley has relatively few permanent residents. Most houses and condominiums are second homes used primarily during weekends and holidays. Snowmobile activity levels are a function of visitation to Bear Valley. Peak snowmobile use periods generally correspond with peak winter visitation periods, which include the year-end holiday period, Presidents Day Weekend, and Martin Luther King, Jr. Weekend. These peak-use periods are followed by non-holiday winter weekends. Non-holiday winter weekdays see the least amount of snowmobile activity.

Peak hours for weekend snowmobile use is related to various factors, including homeowner arrival and departure times, ski area hours, and available sunlight. Many homeowners arrive in Bear Valley on Friday afternoon or Saturday morning, and leave Bear Valley on Sunday afternoon.

Most snowmobile trips within Bear Valley are for transportation purposes within town rather than for recreational purposes. A typical snowmobile trip might include transporting people and supplies between the subdivision and the town center to access automobiles parked in the town center, the ski area shuttle bus at the Lodge Lot, shops and services at the Commercial Center, and the Bear Valley School. Some snowmobile trips are for the purpose of accessing one of the two public snowmobile routes out of Bear Valley, and some snowmobile trips include cruising the unplowed roads of the subdivision for recreational purposes.

Recently, some homeowners in the subdivision have started using private snowcats known as Tuckers to access their homes. Tuckers are much larger than snowmobiles and can carry more cargo; unlike snowmobiles, their passenger cabins are enclosed and heated. Like snowmobiles, Tuckers are legal off-highway vehicles when registered with the California Department of Motor Vehicles.

Snowmobile Circulation

Travel Routes

The County's Snowmobile Ordinance allows snowmobiles to travel on all snowways and across common areas and open space, subject to the use limitations described previously. All unplowed roads within Bear Valley are considered snowways. Most snowmobile travel occurs on snowways and other groomed trails, and most travel across open space and common areas occurs across the common area between lots 63 and 64 on Quaking Aspen Road. In winter 2006/2007, substantial snowmobile travel also occurred within Open Space Parcel E when a trail was groomed through this parcel (see discussion below).Snowmobile travel across other common and open space areas and trespassing across private property occurs, but is less prevalent.

The two primary snowways connecting the subdivision with the town center are Bear Valley Road and Quaking Aspen Road. Quaking Aspen Road provides oversnow access to the Transportation Center and County Parking Lots B and C. Bear Valley Road provides oversnow access to the Lodge Lot and connecting trails to the east. The Lodge Lot parking area is the closest snowmobile parking area to the ski area shuttle bus, the Bear Valley Lodge, and the Commercial Center, and is a short walk from Parking Lots B

and C. The Lodge Lot is Bear Valley's most heavily used snowmobile parking area (see discussion of snowmobile parking below).

Another primary snowmobile route is a groomed trail that currently runs through the applicant's property from the Lodge Lot to points east and north (Figure 3.10-1). This is the most direct oversnow route connecting Bear Valley Road and the town center with the public buildings (i.e., school, health clinic) east of Creekside Drive, development on the east and northeast sides of Bear Lake, and the public access route to U.S. Forest Service (USFS) land and the extensive recreational snowmobile areas east of Bear Valley. Public use of this trail is currently permitted by the applicant through a lease agreement with the County. In winter 2006/2007, the applicant ceased to make available the use of its land for the trail, and the County groomed a new trail through Open Space Parcel E. The applicant entered into a ~~2007/2008~~ winter season license agreement with the County allowing this access to continue for for the 2007/2008 and 2008/2009 seasons ~~an additional year~~ while the County and the Bear Valley residential owners develop a new snowmobile trail plan to replace the current trail through the applicant's property.

Creekside Drive also serves as an important snowway for residents in the northern portion of the subdivision. Creekside Drive provides these residents access to the solid waste transfer station at the Creekside Drive closure and the snowmobile route along the valley floor to the school, the Lodge Lot, and the eastern snowmobile route out of town. Creekside Drive does not receive as much snowmobile traffic as Bear Valley Road or Quaking Aspen Road because the road serves far fewer homes than the other two roads. Public use of Creekside Drive will increase in the future, however, as build-out of the eastern and northeastern part of Bear Valley progresses.

Vehicle Miles Traveled

Snowmobile vehicle miles traveled (VMT) is a function of many variables, including the number of snowmobiles used during a season, the frequency and destinations of snowmobile trips, and the length of time snow covers the ground. Calculating the precise amount of VMT by snowmobiles owned by Bear Valley residents is difficult. As discussed in Appendix H, however, a rough number of VMT can be estimated using broad assumptions. Bear Valley residents and visitors are estimated to generate approximately 97,000 snowmobile VMT annually.

Snowmobile Parking

Bear Valley has two primary snowmobile parking areas and two primary snowmobile trailer parking areas. Most snowmobiles park either at the Lodge Lot (also known as the bus stop) or the parking area behind the Transportation Center (Figure 3.10-1). In addition, the privately owned Transportation Center provides indoor snowmobile storage facilities on a fee basis. Snowmobiles are also parked along the edge of the Bear Valley Road and Quaking Aspen Road snowways. Snowmobile trailers are parked at County Parking Lot A, and some trailers are also parked along Creekside Drive north of No Name Road.

Lodge Lot

The Lodge Lot is Bear Valley's most heavily used snowmobile parking area. The Lodge Lot is also the ski area shuttle bus stop. The applicant owns this paved parking lot and currently allows the public to use the lot for snowmobile parking. The land is made available by the applicant for these uses by a license agreement with the County on a year-by-year basis. Automobile access to this parking lot is from No Name Road. The southern part of the Lodge Lot is plowed in the winter, but the northern part is not. Snowmobilers park their snowmobiles on the unplowed part of the parking lot while visiting the town or transferring to their automobiles or the ski area shuttle bus. Snowmobilers also use this parking lot for transferring people and supplies between their autos and parked snowmobiles, or to unload snowmobiles from their trailers onto the snow. No auto parking is allowed in this lot in the winter months. The Lodge Lot currently provides parking capacity for about 45 snowmobiles and 25 sleds.

The applicant entered a ~~2007/2008~~ winter season license agreement with the County allowing public snowmobile parking to continue on the Lodge Lot for the ~~current~~ 2007/2008 and 2008/2009 seasons while the County and the Bear Valley residential owners develop a new snowmobile trail plan to replace the current trail through the applicant's property.

Snowmobiles are also parked along the edge of the Bear Valley Road snowway immediately west of the Lodge Lot and north of the road closure. This public parking area serves as overflow parking for the Lodge Lot.

Snowmobile trip and parking counts were conducted at the Lodge Lot between the hours of 4:00 p.m. and 5:00 p.m. on the weekend of February 8–10, 2008, which immediately preceded Presidents Day Weekend. This was the first sunny weekend following two weeks of winter storms and snowfall, and coincided with the Bear Valley Telemark Festival. The skier count for Saturday, February 9, 2008, was 3,054, which represented the eighth highest skier day for the 2007/2008 season as measured through February 19, 2008 (a period that included Presidents Day weekend).

As discussed in Appendix H, the data represent a small sample (a one-hour period on three consecutive weekend days), but provides information about the characteristics of snowmobile usage during the survey periods:

- Half of the observed trips through the Lodge Lot were parking trips, and half were through trips.
- About 70 percent of the parking trips originated from or were destined to the west toward Bear Valley Road.
- Saturday represented the busiest day, with about 45 percent of the overall trips; Friday and Sunday each represented about 27 percent of the overall trips.

The number of trips involving transfer of people or supplies between automobiles and snowmobiles was also recorded during the survey period to better understand use of the Lodge Lot for this purpose. During the survey period, inbound transfers occurred on Friday and Saturday, and outbound transfers occurred on Sunday. Transfer activity was also observed at the Bear Valley Road closure, but no data were recorded for this location.

Observations about snowmobile parking demand and relative capacity were also recorded for three time periods over the February 8–10, 2008, weekend. As discussed in Appendix H, parking demand in the Lodge Lot on Saturday was observed at about 90 percent of capacity (the busiest day of the three days observed), while parking on the Bear Valley Road was observed at about 20 percent capacity at the same time, indicating that Bear Valley Road had underused parking capacity.

Transportation Center Parking Area

The other primary snowmobile parking area is located behind the Transportation Center between Parking Lot ~~B~~ C and Quaking Aspen Road. This parking area is owned by the County. Automobiles access this parking area from the County parking lot, which is paved and plowed. Similar to the Lodge Lot, snowmobilers use this parking lot for transferring people and supplies between their autos and parked snowmobiles, or to unload snowmobiles from their trailers onto the snow. Snowmobilers park their snowmobiles along the north side of Quaking Aspen Road while visiting the town or transferring to their automobiles. The Transportation Center and its customers (i.e., Bear Valley residents) use the northern half of this area to temporarily park snowmobiles being retrieved from or returned to the Transportation Center's indoor storage facility. ~~According to some estimates, parking demand at the Transportation Center parking area is about 60 percent of the demand at the Lodge Lot.~~

One existing practice that reduces parking efficiency in this parking area is unlawful long-term snowmobile parking. Some snowmobile owners park their snowmobiles for a week or longer, preventing certain portions of the parking area from being groomed. This reduces the effective parking capacity in this area.

Bear Valley Transportation Center

The Bear Valley Transportation Center offers indoor snowmobile storage on a fee basis. The Transportation Center stores its customers' snowmobiles until the customer schedules a pickup. At the customer's request, typically at the start of a visit, the Transportation Center retrieves the snowmobile and parks it in the adjacent parking area to await customer pickup. At the end of the visit, the customer returns the snowmobile to the Transportation Center for storage.

The Transportation Center is operating at about 90 percent of its capacity. The Transportation Center currently stores about 295 snowmobiles (not counting Bear Valley Snowmobiles' rental fleet of about 50) and has a total capacity of 330 snowmobiles. This leaves a remaining capacity of about 35 snowmobiles (Denicola 2008).

Snowmobile Trailer Parking

Most snowmobile trailers are parked either in County Parking Lot A, located on the east side of Creekside Drive south of the community center, or along Creekside Drive north of No Name Road. On Saturday, February 9, 2008, three snowmobile trailers were parked in Lot A, including two that appeared to belong to Bear Valley Snowmobiles. Two trailers

were parked on Creekside Drive. Both parking areas had substantial unused capacity available.

Conflicts and Disturbances

Snowmobiles commonly share Bear Valley roads and trails with skiers and pedestrians, including small children, yet collisions are uncommon. The only known accident within the past six years involved a snowmobiler who clipped a pedestrian while driving under the influence of alcohol. The driver was arrested (~~Stevens~~Stephens 2008). Snowmobilers commonly reduce their speed while passing though congested areas, including parking areas.

Most snowmobile trips within Bear Valley are for transportation purposes within or across town rather than for recreational purposes. Some snowmobile trips involve cruising the unplowed roads of the subdivision for recreational purposes. Cruising snowmobilers typically observe speed limits, and generate very few nuisance complaint calls to the Sheriff (~~Stevens~~Stephens 2008). Snowmobile trespassing across private property occurs, but is not very prevalent. This activity generates few complaint calls to the sheriff (Stoner 2008).

3.10.3 Impact Analysis

Methodology

Information about snowmobile use, snowmobile parking, and snowmobile circulation patterns used by Bear Valley residents and visitors is based on direct observation and interviews with select individuals with knowledge of the characteristics of snowmobile use in Bear Valley.

The analysis contained in this section is based on the information presented in the *Snowmobile Parking and Circulation Study for the Bear Valley Village Project*, attached as Appendix H.

Project impacts related to provision of oversnow emergency services and snowmobile noise are evaluated in Sections 3.3 (Public Services) and 3.12 (Noise), respectively. Some of these impacts are referenced in this section to provide a more comprehensive discussion of the expected changes in snowmobile activity for public disclosure purposes. To avoid double-counting, however, impacts evaluated in other EIR sections are not included in the impact analyses or conclusions in this section.

Levels of Significance

Adverse impacts related to snowmobile circulation and parking are considered significant if the proposed project would:

- Alter snowmobile activity in a manner that would substantially increase conflicts or incidents of trespass or disturbance

- Substantially alter an important snowmobile travel route used by Bear Valley residents and visitors
- Result in inadequate snowmobile parking capacity
- Eliminate an important function now served by an existing snowmobile parking area
- Substantially increase the likelihood of conflicts between snowmobilers and skiers/pedestrians

Impacts and Mitigation Measures

Impact SNO-1: The project would increase Bear Valley snowmobile ownership by about 7 percent, but would not substantially increase snowmobile traffic or parking demand within town, conflicts with skiers/pedestrians, or incidents of trespass or disturbance.

The project is not expected to substantially increase snowmobile (or Tucker) activity in Bear Valley because the Village condos would be accessible by car, similar to existing condos whose owners represent a small percentage of Bear Valley snowmobile users. At full build-out, the project would add 491 privately owned Equivalent Dwelling Units (EDUs) to Bear Valley over a period of seven years or more. Approximately 12 snowmobiles are owned by Bear Valley's 160 existing condo owners, representing one snowmobile for every 13 condos. At this rate, the project could introduce approximately 38 new snowmobiles to Bear Valley. This represents an increase of about 7 percent over current snowmobile ownership. Snowmobiles owned by Village residents would need to be stored at the Transportation Center, which has a remaining capacity of about 35 snowmobiles, and would serve as a limiting factor for snowmobile use by Village residents.

The project is also not expected to substantially increase the use of Tuckers because the Village condos would have automobile access.

It is reasonable to assume that snowmobiles owned by Village residents would be used primarily for recreation rather than transportation within town, and that most recreational riding would occur outside of town. New snowmobile ownership resulting from the Village project would therefore not be expected to substantially increase snowmobile traffic or parking demand within town, conflicts with skiers/pedestrians, or incidents of trespass or disturbance. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the increase would not be substantial and most new snowmobiles would be used for recreation outside town.

Impact SNO-2: Discontinuation of a snowmobile route between Bear Valley Road near the road closure and the east and northeast sides of town would increase snowmobile VMT, increase snowmobile traffic noise levels along Creekside Drive and the northern portion of Bear Valley Road, increase incidents of trespass and noise complaints, and reduce snowmobile safety, resulting in a significant impact.

The applicant is considering accommodating a snowmobile-only lane through the Lodge Lot (but separate from the skier access trail leading to the Village Lift) to provide snowmobile access to Open Space Parcel E.

Continued snowmobile access through the Lodge Lot snowmobile parking area and a groomed snowmobile route connecting the Lodge Lot area to the general area of the school, the public access route to USFS land, and development north and northeast of Bear Lake is vital to the community.

If snowmobile access through the project area were no longer allowed, snowmobilers would take other travel routes between the east and west sides of town. The only alternate snowmobile route that is currently groomed follows Bear Valley Road around Bear Lake to Creekside Drive. Following this route, the distance between the Bear Valley Road closure and the Bear Valley School is about 2 miles. This route would increase snowmobile VMT within the community and would increase snowmobile traffic noise levels along Creekside Drive and the northern portion of Bear Valley Road.

This route is steeper and more remote than the existing route, creating a potential safety hazard for children (and adults) driving snowmobiles between the western portion of the subdivision and Bear Valley School or other destinations on the east side of town, especially during inclement weather. Bear Valley Road is a safer travel route than Creekside Drive because it receives more use and passes through more populated areas of town. More help for stranded snowmobilers is available along Bear Valley Road than Creekside Drive.

Rather than driving around Bear Lake, many snowmobilers would likely find shorter routes between the east and west sides of town. Expected shortcuts would include travel over BVRI common areas or trespassing across private property, especially in the area of Orvis Road and Schimke Road between Bear Valley Road and Open Space Parcel E. Existing snowmobile traffic on Orvis and Schimke Roads consists primarily of local traffic, with trips starting or ending at homes located on these roads. If snowmobile access through the project area were no longer allowed, more snowmobile traffic would be expected along these roads to access shortcuts to or from Open Space Parcel E. This would increase snowmobile traffic noise levels at some homes, and would increase complaints about noise and trespassing. Another shortcut might include trespassing across Lots 231 and 232 between Bear Valley Road and Open Space Parcel E (Figure 3.10-2). If snowmobile access through the project area were no longer allowed, some snowmobilers might also continue to use the existing route, thereby trespassing on the applicant's property.

To address the need for continued snowmobile access between the Bear Valley Road winter closure and the east/northeast part of town, the County formed the Bear Valley Snowmobile Committee to evaluate potential trail routes that provide the necessary connections and to recommend a preferred route (or routes) to the Board of Supervisors. In early 2008, the Bear Valley Snowmobile Committee met several times to evaluate potential future trail routes. These meetings culminated in a public meeting held in Bear Valley in June 2008 to present the Committee's preferred alternative, which is to re-establish the trail through Open Space Parcel E subject to certain conditions intended to reduce noise impacts and regulate use of the trail (see Mitigation Measure SNO-2a

below). The connection through the Lodge Lot is a critical component of this route. In July 2008, the Committee's recommendation was accepted by the Board of Supervisors.

In summary, continued snowmobile access through the area now used as the Lodge Lot snowmobile parking area and a groomed snowmobile route connecting the snowmobile parking area to the east and northeast sides of town is vital to the community. This would require snowmobile access through the Lodge Lot area and a groomed trail to the east and north sides of town. Discontinuation of this route would increase snowmobile VMT, increase snowmobile traffic noise levels along Creekside Drive and the northern portion of Bear Valley Road, increase incidents of trespass and noise complaints, and reduce snowmobile safety, resulting in a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure SNO-2a: Re-establish the 2006/2007 snowmobile trail between Bear Valley Road and Creekside Drive through Open Space Parcel E.

Alpine County and applicant shall implement the recommendations of the Bear Valley Snowmobile Committee to re-establish the 2006/2007 snowmobile trail between Bear Valley Road and Creekside Drive through Open Space Parcel E. Full implementation includes the following actions by the County:

1. Adjust the alignment of the trail to stay within the County owned Open Space Parcel E and not encroach onto or travel across any private property (except the area now used for the Lodge Lot snowmobile parking area).
2. When practical given snow depths and snow conditions, use trail grooming techniques such as trenching the trail through the snow or creating a sound wall with snow to reduce noise impacts to surrounding properties.
3. Provide the County Sheriff officers with equipment to monitor travel speeds and sound generated by snowmobiles.
4. Request that the Sheriff's office actively monitor and enforce applicable requirements, including existing state and federal noise limits for snowmobiles. More restrictive local regulation of sound levels is not recommended.
5. Reconstitute the committee in 2010 to evaluate trail use and the effectiveness of the noise reduction measures, and to make further recommendations as necessary.

The County will ensure the route will be available for public use prior to County approval of conditional use permit (CUP) and/or tentative map (TM) approvals for any construction phase of the Bear Valley Village project.

Mitigation Measure SNO-2b: Allow snowmobile access through the Lodge Lot to access the groomed snowmobile route to be re-established through Open Space Parcel E.

The County will require the applicant to allow snowmobiles to travel through the northern most portion of the area now used as the Lodge Lot snowmobile parking area to access the groomed snowmobile route to be re-established through Open Space Parcel E.

Significance Level After Mitigation: Less than significant because these measures would ensure continued snowmobile travel between Bear Valley Road near the winter road closure and the east and northeast sides of town.

Impact SNO-3: A new snowmobile parking area on the west side of Bear Valley Road just north of the road closure would compensate for the loss of Lodge Lot parking capacity and would adequately replace the Lodge Lot's function as the parking area closest to the town center.

Building 6 (proposed for Phase 4) would be built in the location of the Lodge Lot and the snowmobile parking area; however, snowmobile parking at the Lodge Lot would likely be discontinued sooner than Phase 4. The applicant expects to discontinue the license agreement for the 2009/2010 winter season for snowmobile parking and loading. The applicant also intends to use the ~~when the~~ Lodge Lot ~~would be used~~ to replace lost automobile parking at the North Lot during Phase 3. As discussed in the Project Description (Chapter 2), the County is proposing an alternative parking area to replace the Lodge Lot. The new snowmobile parking area would be located on the west side of Bear Valley Road just north of the road closure and east of the Sundowner Condominiums (Figure 3.10-2). This parking area would be about the same size as the Lodge Lot parking area, and would compensate for the loss of Lodge Lot parking capacity. The location of the new lot would also adequately replace the Lodge Lot's function as the parking area closest to the town center. This is a less-than-significant impact.

Removing the Lodge Lot snowmobile parking area~~, however,~~ would eliminate an important location where ~~snowmobilers~~ residents and visitors transfer people and supplies to and from ~~between~~ their autos ~~and parked snowmobiles~~ or unload snowmobiles from trailers onto the snow. As discussed in the Project Description (Chapter 2), the County and applicant are proposing to to construct five or six loading spaces adjacent to the Bear Valley Road winter closure and the County is proposing a new snowmobile trailer loading area near the Creekside Drive winter road closure. These facilities would replace much of the loading capacity eliminated from the Lodge Lot. Some interference with emergency response access to Bear Valley Road is expected to remain. ~~This activity would not be replaced by the County's proposed parking area, and would likely shift to the Bear Valley Road closure just west of the Lodge Lot where some loading activity now occurs. The road closure area is a fire lane (±25 feet wide), and is a critical emergency response route. Increased snowmobile loading activity at the Bear Valley Road closure could interfere with emergency response access to the unplowed section of Bear Valley Road.~~ This significant impact is fully evaluated in Section 3.3 (Public Services) and is not evaluated further in this section.

The new parking area would also relocate noise associated with snowmobile parking activities from the Lodge Lot to the new parking area, which is closer to the Sundowner Condominiums by about ~~100~~ 40 feet. The new parking area would therefore increase snowmobile noise at these condominiums. This issue is fully evaluated in Section 3.12 (Noise) and is not evaluated further in this section.

Level of Significance Before Mitigation: Less than significant because the new parking area would have adequate parking capacity and would be located near the town center.

Impact SNO-4: The employee housing facility would block snowmobile access from Quaking Aspen Road and could eliminate part of the short-term snowmobile storage area used by the Transportation Center.

The employee housing facility would be located in the northwest portion of the parking area behind the Transportation Center. In its proposed location, the employee housing facility would block the western snowmobile access route from Quaking Aspen Road. This is a significant impact.

The facility would also block the location where the County currently grooms snow to create a pedestrian access ramp from County Parking Lot ~~B~~ C to the snowmobile parking area. The County, however, can relocate the snow ramp further east (closer to the Transportation Center). This would be a less-than-significant impact.

The employee housing facility would be located in a portion of the short-term snowmobile storage area used by the Transportation Center. The proposed location for the South Village parking structure would allow the snowmobile parking/storage area to extend further to the northeast than the existing parking area, compensating for the amount of snowmobile parking that would be removed to accommodate the employee housing facility. The employee housing facility, however, could be constructed before the South Village parking structure is built. In that case, the housing facility would reduce the amount of available snowmobile parking. This is a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure SNO-4: Improve snowmobile access and ~~replace snowmobile parking capacity~~ implement measures to ensure the employee housing facility does not reduce the amount of available snowmobile parking.

To ensure the employee housing facility does not reduce the amount of available snowmobile parking, the applicant has committed to (and will be required to) implement at least one of the following three alternative mitigation measures. These measures are listed in order of the applicant's and County's preference:

- The applicant shall not construct the proposed employee housing facility before the South Village is constructed. The applicant shall provide the required amount of employee housing determined to be necessary in the EHIP (see Mitigation Measure PHE-3) by either: (1) using the existing Base Camp employee housing facility to house project employees (including construction workers); or (2) arranging other housing for employees until the South Village and employee housing facility can be built simultaneously.
- If the requirements for employee housing are such that it is necessary to build the new employee housing structure before South Village (i.e., the applicant demonstrates to the County that the first two alternative mitigation measures are not feasible), the County will expand the snowmobile parking area further north by plowing less parking lot to accommodate for the reduced parking area. To offset the loss of automobile parking, the applicant shall be responsible for supplying the total lost automobile parking spaces elsewhere in the Village project.

~~To replace snowmobile parking capacity eliminated by the employee housing facility, the applicant shall grade and contour the western corner of the County's property at Parking Lot B to increase snowmobile parking capacity in this area.~~ The applicant shall also remove trees along the north side of Quaking Aspen Road to provide a new snowmobile access route between Quaking Aspen Road and the parking area. This new route would compensate for the existing access route that would be blocked by the employee housing facility.

~~These~~ This improvement~~s~~ shall be completed prior to or concurrent with construction of the employee housing facility, and shall be completed prior to the first winter season following the start of construction of the employee housing facility. The County will also enforce short-term parking restrictions in the parking area, thereby allowing more frequent grooming of the parking area and maximizing parking efficiency in this area.

The applicant shall show ~~these~~ this improvement~~s~~ on any plans submitted as part of CUP and/or TM applications for construction of the employee housing facility.

Significance Level After Mitigation: Less than significant because these measures would ensure parking capacity and circulation patterns in the parking area behind the Transportation Center would remain adequate to serve the community.

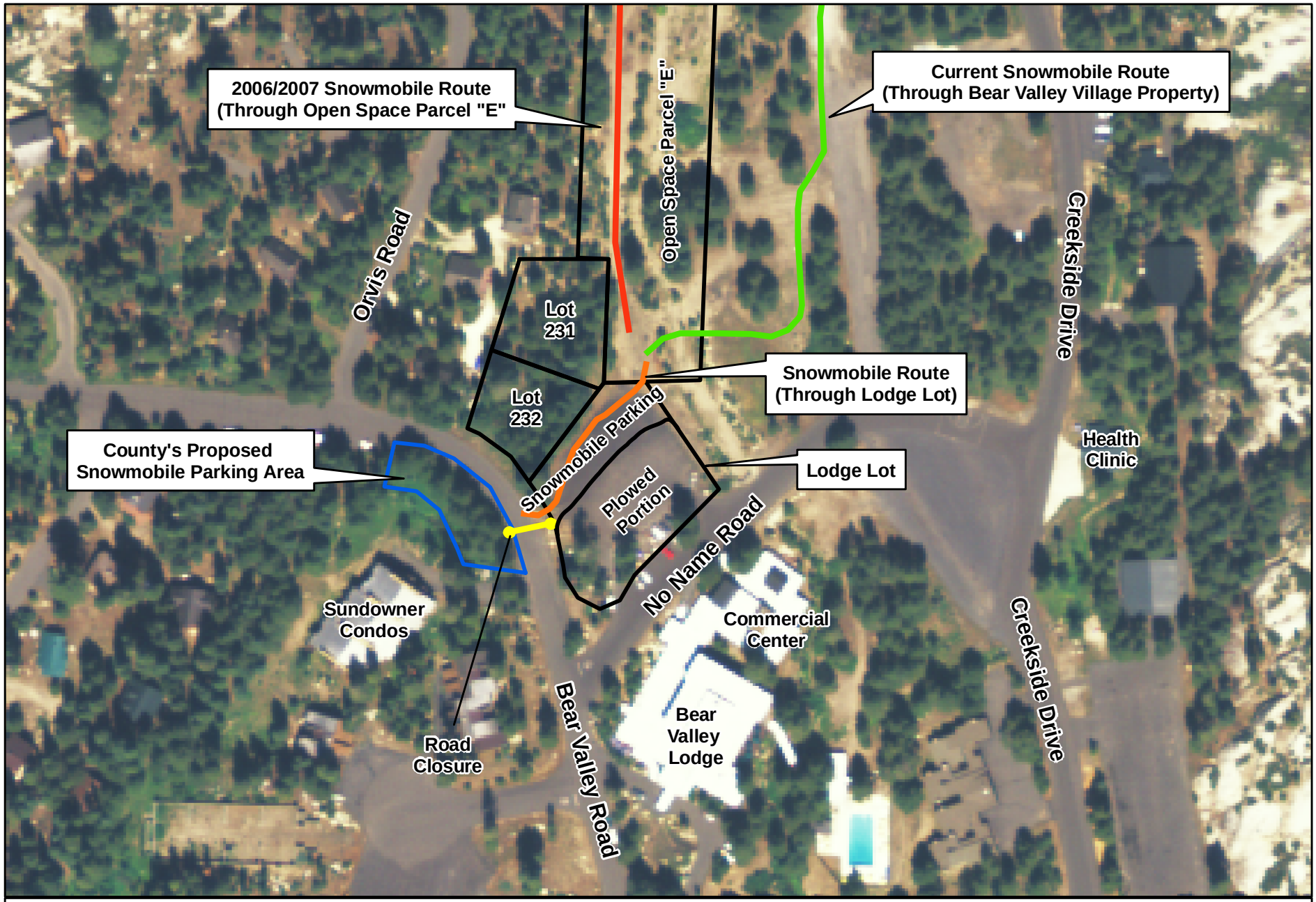


Figure 3.10-2
Lodge Lot Parking Area

Bear Valley Village EIR

SWCA ENVIRONMENTAL CONSULTANTS

Impact SNO-5: Conflicts between snowmobiles and skiers/pedestrians are not expected to increase substantially.

The project would increase the number of snowmobiles in Bear Valley, and the Village Lift and new ski runs connecting the ski area to the town would increase the number of skiers and expand the ability levels of the skiers (i.e., more novice skiers) using Bear Valley roads to return to town or access the Village Lift.

Few conflicts between snowmobiles and skiers/pedestrians occur now, and such conflicts are not expected to increase for the following reasons. First, snowmobiles commonly share Bear Valley roads and trails with skiers and pedestrians, including small children, yet collisions are uncommon. Second, the project would increase Bear Valley snowmobile ownership by about 7 percent, which is not a substantial increase. Third, re-establishment of the snowmobile trail through Open Space Parcel E (as discussed in Impact SNO-2) would eliminate the need for snowmobiles to share a bridge across Bear Creek with skiers. In addition, the applicant's proposed ski bridge across Bear Creek would need to be about 20 feet wide to accommodate a snowcat for grooming, similar to the existing culvert crossing. Even if the proposed ski bridge were to be used for skiers and snowmobiles, a 20-foot width would provide adequate room for skiers and snowmobiles to pass. Finally, the gradients (slopes) of the return ski runs in the areas where snowmobiles are more abundant (e.g., Bear Valley Road near town) are relatively gentle, which promotes slow skier speed. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because few conflicts between snowmobiles and skiers/pedestrians occur now, and such conflicts are not expected to increase.

Significant and Unavoidable Impacts

None.

3.11 AIR QUALITY

This section describes current air quality conditions in the project vicinity and identifies sensitive land uses that could be affected by air pollution. The impact analysis discusses the expected emissions associated with the project and evaluates potential effects on project residents and sensitive receptors in the vicinity. Mitigation measures are identified for significant effects, followed by identification of the residual impact significance after mitigation measures are implemented. An analysis of the project's contribution to global climate change is included in Chapter 5 (Climate Change).

3.11.1 Regulatory Setting

Federal

The **Federal Clean Air Act** (FCAA; 42 United States Code [USC] 7401 et seq.) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone, carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide, respirable particulate matter (less than 10 microns [PM10] and 2.5 microns [PM2.5]), and lead. Two types of NAAQS have been established: primary standards, which protect public health; and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria set forth in the FCAA. The primary NAAQS are intended to protect, with an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or others engaged in strenuous work or exercise.

Pursuant to the 1990 Federal Clean Air Act Amendments (FCAAA), the EPA classifies air basins (or portions thereof) as "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS are achieved. The FCAA required each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAAA added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them.

Snowmobiles

Snowmobiles currently emit more than 220,000 tons of hydrocarbons (HC) and 580,000 tons of CO each year across the United States (EPA 2008). These emissions contribute to ambient concentrations of CO, air toxics (such as benzene), and fine particulate matter, which is largely responsible for visibility impairment at national and state parks. To address these emissions, in November 2002, EPA adopted emission standards for recreational vehicles, including snowmobiles, off-highway motorcycles, and all-terrain vehicles (ATVs). Regulations require snowmobile manufacturers to ensure that each

new snowmobile sold meets the new emission standards. The standards apply only to new snowmobiles produced in 2006 or later. Existing snowmobile owners may not disable any emission controls installed on the snowmobile. California currently does not have separate emission standards for snowmobiles, so the federal standards apply in California.

Under-building Parking Structures

The American National Standards Institute/American Society of Heating, Refrigeration and Air Conditioning Engineers (ANSI/ASHRAE) Standard 62-2007 requires the ventilation of indoor spaces, including parking garages, to prevent accumulation of air emissions that can be hazardous to people's health (ASHRAE 2007). The acceptable emission levels are based on EPA recommendations. The 2007 California Building Code references ASHRAE Standard 62-2007.

State

Under the California Clean Air Act (CCAA) (Chapter 1568 of the Statutes of 1988), patterned after the FCAA, areas have been designated as attainment or non-attainment with respect to the California Ambient Air Quality Standards (CAAQS). The CAAQS are more stringent than the national standards and include air quality standards for some pollutants for which there is no corresponding national standard. The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs). CARB regulates local air quality indirectly by establishing state ambient air quality standards and vehicle emissions and fuel standards, and by conducting research, planning, and coordinating activities.

CARB Handbook

In April 2005, CARB published *Air Quality and Land Use Handbook*: *A Community Health Perspective* (CARB 2005). This handbook is intended to give guidance to local governments in the siting of sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, near sources of air pollution. However, the project does not include siting of sensitive receptors that would be considered inconsistent with the handbook; therefore, this issue is not discussed further in this Environmental Impact Report (EIR).

Attainment Status

The current attainment status for the project area (Great Basin Valleys Air Basin) is shown in Table 3.11-1.

Table 3.11-1. Project Area Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone—One Hour	No Federal Standard*	Unclassified
Ozone—Eight Hour	Unclassified/Attainment	Unclassified
PM10	Unclassified	Attainment
PM2.5	Unclassified/Attainment	Unclassified
CO	Unclassified/Attainment	Unclassified
NO2	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment
Lead (Particulate)	Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-Reducing Particles	No Federal Standard	Unclassified

* The Federal One Hour Ozone National Ambient Air Quality Standard was revoked on June 15, 2005.

Source: CARB, www.arb.ca.gov/desig/adm/adm.htm

A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

Temporary Batch Plants

The California Stormwater Quality Association's (CSQA's) *California Stormwater Best Management Practices Handbook* identifies proper control and use of equipment, materials, and waste products from temporary batch plant facilities to reduce the discharge of potential pollutants to the storm drain system or watercourses, reduce air emissions, and mitigate noise impacts (CSQA 2008). Practices include:

- Proper control and use of equipment, materials, and waste products from temporary batch plant facilities will reduce the discharge of potential pollutants to the storm drain system or watercourses, reduce air emissions, and mitigate noise impacts
- Temporary batch plants should be managed to comply with AQMD Statewide Registration Program and/or local AQMD Portable Equipment Registration requirements
- Construct temporary batch plants downwind of existing developments whenever possible
- Placement of access roads should be planned to mitigate water and air quality impacts
- Filter, contain, and/or suppress particulate matter to eliminate visible emissions beyond the property line, while the equipment is being operated

Local

The proposed project is located within the Great Basin Valleys Air Basin, which covers the eastern portion of the Sierra Nevada range from Alpine County south to and

including Inyo and Mono Counties. The Great Basin Unified Air Pollution Control District (GBUAPCD) is the regulatory agency with jurisdiction over air quality within this area. As noted in Table 3.11-1, the District is in non-attainment with state standards for PM10. The major sources of PM10 in the GBUAPCD include Owens Lake, Mono Lake, and the town of Mammoth Lakes. In response to the FCAA, which requires the District to produce a SIP detailing how to address this issue, the District has prepared the Coso Junction PM10 Planning Area SIP, the Mono Basin Planning Area PM10 SIP, the Mammoth Lakes Air Quality Management Plan, and the 2008 Owens Valley PM10 Planning Area Demonstration of Attainment SIP. Each Plan summarizes the area's air pollution problem and its projected resolution, including a synopsis of the regulatory status, a description of the planning area, an inventory and analysis of the sources and severity of polluting emissions, and the impact on human health and natural resources, the effects of population growth on future PM10 levels, and effectiveness of controls to attain and maintain the PM10 federal standard. Although the entire GBUAPCD was classified as non-attainment for state PM10 standards, Alpine County is considered in attainment of federal PM10 standards (Alpine County 2005).

The GBUAPCD has developed rules to limit the quantity of pollutants in the area. Rules relevant to this project are described below (GBUAPCD 2008).

GBUAPCD Rule 216—New Source Review Requirements for Determining Impact on Air Quality requires project proponents to obtain an Authority to Construct and/or Permit to Operate for any new stationary source or modification of an existing stationary source.

GBUAPCD Rule 216—New Source Review Requirements for Determining Impact on Air Quality Secondary Sources prohibits initiating, modifying, constructing, or operating any secondary source which will cause the emission of any man-made air pollutant for which there is a state or national ambient air quality standard without first obtaining a permit from the Air Pollution Control Officer. A secondary source includes any structure, building, facility, equipment, installation, or operation (or aggregation thereof) which is located on one or more bordering properties within the District and which is owned, operated, or under shared entitlement to use by the same person.

GBUAPCD Rule 401—Fugitive Dust requires operators to take reasonable precautions to prevent visible particulate matter from being airborne, under normal wind conditions, beyond the property from which the emission originates. Reasonable precautions include, but are not limited to:

- Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces that can give rise to airborne dusts;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate contaminant methods shall be used during such handling operations;

- Use of water, chemicals, chuting, venting, or other precautions to prevent particulate matter from becoming airborne in handling dusty materials to open stockpiles and mobile equipment; and
- Maintenance of roadways in a clean condition.

GBUAPCD Rule 402—Nuisance prohibits discharging air contaminants or other materials that cause injury, detriment, nuisance (including odors), or annoyance to a considerable number of people or to the public; that endanger comfort, repose, health, or safety; or have a natural tendency to cause injury or damage to business or property.

GBUAPCD Rule 431—Particulate Matter prohibits sales or installation of solid fuel-burning appliances that do not carry the EPA's Phase II certification. Exceptions are allowed for fireplaces supplied with gas and fitted with artificial logs and for one fireplace located in a hotel/motel lobby or similar common area lobby or in the common area of a condominium project.

The GBUAPCD does not require California Environmental Quality Act (CEQA) analyses of short-term construction impacts to include detailed quantification of construction-related emissions. Instead, the GBUAPCD requires the project proponent to obtain a permit from the Air Pollution Control Officer and implement the above-referenced dust control measures during construction activities.

3.11.2 Environmental Setting

Topography

Air pollution is directly related to a region's topography, climate, and meteorology. These attributes for the project area are described below.

The Village is oriented north to south-southwest and is surrounded to the east, north, and west by steep terrain and mountain peaks. Elevations within the Village area are about 7,200 feet above mean sea level (msl). The mountainous topography surrounding Bear Valley Village influences wind direction through the valley and affects distribution of rain and snowfall. Although local winds can be quite variable due to topography, they tend to flow from the east and northeast for most of the year. Air movement is also characterized by a complex valley-mountain, diurnal circulation. Wind speeds average 8 miles per hour. Winter storms are frequent, bringing an average annual snowfall of approximately 360 inches. Thunderstorms occur on average less than 10 times per year. Summer temperatures range from average daytime highs of 79 degrees Fahrenheit to average nighttime lows of 40 degrees Fahrenheit, while winter temperatures range from average daytime highs of 42 degrees Fahrenheit to average nighttime lows of 14 degrees Fahrenheit (Weather Channel 2008).

Local Air Quality

The Great Basin Valley Air Basin is designated as non-attainment for state PM10 standards (Table 3.11-1). PM10 violations within the GBUAPCD are primarily due to the pollutants from Owens Lake, Mono Lake, and the town of Mammoth Lakes. Secondary

sources of PM10 include the use of internal combustion engine, wood-burning stoves, fireplaces, and occasional smoke from nearby wildfires.

The nearest air monitoring station, Echo Summit station, is located about 25 miles north of the project area. Table 3.11-2 summarizes the highest average ozone concentrations from 2004 through 2006 and the highest average CO, NO2, and PM10 concentrations for 2004, and compares them with the federal and state standards. State one-hour average ozone standards were exceeded one day out of each year for 2004 and 2006. CO, NO2, and PM10 standards for 2004 were not exceeded. As noted earlier, Alpine County is considered in attainment of federal PM10 standards (Alpine County 2005). Based upon these measurements, compliance with the standards, and knowledge of other areas throughout California, the air quality in the air basin can be generally described as excellent. Descriptions of the various pollutants and their effects on the environment are provided below.

Table 3.11-2. Summary of Air Quality Monitoring Data for the Project Area, 2004–2006

Pollutant	State Standard	National Standard	Pollutant Concentration by Year[a]		
			2004	2005	2006
Ozone					
Highest 1-hour average, ppm[b]	0.09	0.12[c]	**0.096**	0.079	**0.096**
Days over State Standard			1	0	1
Days over National Standard			0	0	0
Highest 8-hour average, ppm[b]	0.07	0.08	**0.082**	0.070	**0.083**
Days over National Standard			0	0	0
CO					
Highest 8-hour average, ppm[b]	9	9	4.35	NA	NA
Days over State Standard			0	NA	NA
Days over National Standard			0	NA	NA
NO2					
Highest 1-hour average ppm[b]	0.18	NA	0.068	NA	NA
Days over State Standard			0	NA	NA
Days over National Standard			0	NA	NA
Annual average, ppm[b]	0.03	0.053	0.002	NA	NA
PM10					
Highest 24-hour average, µg/m^3 [b]	50	150	24	NA	NA
Days over State Standard			0	NA	NA
Days over National Standard			0	NA	NA
Annual average, µg/m^3 [b]	20	NA[d]	8.3	NA	NA

NOTE: **Bold** values are in excess of applicable standard. NA = Not Applicable or Not Available.

[a] Data were collected at the Echo Summit Station approximately 25 miles north of the project area.

[b] ppm = parts per million; µg/m^3 = micrograms per cubic meter.

[c] Federal One Hour Ozone National Ambient Air Quality Standard was revoked on June 15, 2005.

[d] Federal Annual PM10 National Ambient Air Quality Standard was revoked on December 17, 2006.

SOURCE: CARB, *Summary of Air Quality Data, Gaseous and Particulate Pollutants*, 2004, 2005, and 2006 data; www.arb.ca.gov/adam

Air Pollutant Effects

Ozone

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) and nitrogen oxides (NOx). The principal sources of ROGs and NOx are the combustion of fuels and the evaporation of solvents, paints, and fuels.

Motor vehicles are often the major generator of ozone precursors. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution problem. Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources. Depending on meteorological conditions, ozone precursors can be transported well away from the source area before ozone concentrations peak.

Although ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems such as forests and foothill communities, and damages agricultural crops and some man-made materials, such as rubber, paint, and plastics. Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Alpine County is designated unclassified with state ozone standards. A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Carbon Monoxide (CO)

CO is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Ambient CO concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence CO concentrations. Under inversion conditions, CO concentrations may be distributed more uniformly over an area, out some distance from vehicular sources.

CO binds strongly to hemoglobin, the oxygen-carrying protein in blood, and thus reduces the blood's capacity for carrying oxygen to the heart, brain, and other parts of the body. At high concentrations, CO can cause heart difficulties, impair mental abilities, and cause death.

CO concentrations have declined dramatically in California due to cleaner-burning motor vehicles and motor vehicle fuels. CO concentrations are expected to continue declining due to the continued retirement of older, more polluting vehicles from the mix of vehicles on the road network. The County is designated unclassified with state CO standards.

Nitrogen Dioxide (NO2)

The major sources of NO2, essential to the formation of photochemical smog, are vehicular, residential, and industrial fuel combustion. NO2 is the “whiskey brown”-colored gas evident during periods of heavy air pollution. NO2 increases respiratory disease and irritation and may reduce resistance to certain infections. The County is designated in attainment with state NO2 standards.

Suspended Particulate Matter (PM10 and PM2.5)

PM10 and PM2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter.) One common source of PM2.5 is diesel emissions. Traffic generates particulate matter and PM10 emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM10 also is emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. PM10 can remain in the atmosphere for up to seven days before gravitational settling, rainout, and washout remove it.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases; heart and lung disease; and coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health (Pope and Dockery 2006).

Additional effects include reduced visibility and soiling of buildings. As noted earlier, Owen Lake, Mono Lake, and the town of Mammoth Lakes are the main source of PM10 for the GBUAPCD. However, Alpine County is considered in attainment of federal PM10 standards.

Toxic Air Contaminants (TACs)

Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources, including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. TACs are regulated separately from the criteria air pollutants at both federal and state levels. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

CARB works in partnership with the local air districts to enforce regulations that reduce TACs in the state. CARB has authority for motor vehicles, fuels, and consumer products. CARB identifies the TACs, researches prevention or reduction methods, adopts standards for control, and enforces the standards.

CARB conducted a study to estimate cancer risks from exposure to diesel particulate matter (DPM) in the state and has developed a risk reduction plan (CARB 2000). The study reported that the statewide average ambient air concentration of DPM was determined by using measured ambient air concentrations of surrogates to DPM in a receptor model to estimate exposure levels. For the year 2000, the statewide average cancer risk from exposure to DPM was estimated to be 540 in one million. The study also states that cancer risks from DPM are about 70 percent of the total risk from exposure to toxic air contaminants in the ambient air, so the average total exposure to all air contaminants has a cancer risk estimated to be 770 in one million.

Odors

Odors rarely cause any physical harm, but can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the GBUAPCD. The GBUAPCD has no rules or standards specifically related to odor emissions, other than its nuisance rule, Rule 402 (GBUAPCD 2008). In such cases, it is appropriate that a qualitative assessment should be used to determine if odor impacts may reasonably be expected to be generated by the project.

Facilities that often result in odor complaints include wastewater treatment plants, chemical manufacturing plants, painting and coating businesses, feed lots and dairies, composting facilities, solid waste landfills, and solid waste transfer stations.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, schools, convalescent facilities, and residential areas. The Bear Valley School is located directly east of the project area, near proposed Building 13 of the North Village. The closest existing residential area includes the 53 units of the Bear Valley Lodge located in the project area, which will be demolished at the completion of Phase 3 or the commencement of Phase 4. Additional residential areas include the Creekside Condominiums immediately southeast and south of the project site and condominiums and single-family homes to the west and north.

3.11.3 Impact Analysis

Methodology

The impact analysis for this section was prepared using the GBUAPCD requirements and air quality issues identified in Appendix G of the CEQA Guidelines. The impact analysis involves qualitative and quantitative discussions of emissions likely to be generated during construction and a quantitative discussion of the types of emission sources associated with the project, including emissions related to motor vehicle traffic. Daily increases in emissions associated with the project were estimated using the

CARB-approved URBEMIS 2007 (version 9.2.2) computer program based on the project description and default assumptions contained in the model (Appendix I).

Levels of Significance

The GBUAPCD currently has no thresholds of significance and recommends using state standards as applicable. Most of the air quality-related requirements in the District are related to agricultural activities, PM10 from wood burning, or dust from Owens and Mono Lakes. For a project of this size, it is a general practice to compare the operational emissions with limits that are used by other air districts to determine the significance of the emission levels. Since GBUAPCD has no emission thresholds for operations, this analysis uses the thresholds from the neighboring El Dorado County Air Quality Management District (EDCAQMD 2002). Other air districts surrounding Alpine County have no emission thresholds for operations or emission thresholds higher than the EDCAQMD. Thus, the EDCAQMD operational emission thresholds represent a stringent limit for the review of the emissions for this project. The EDCAQMD thresholds of significance of operational emissions include the following:

- ROGs of 82 pounds per day
- NOx of 82 pounds per day

According to the CEQA Guidelines Appendix G Environmental Checklist, adverse impacts to air quality would be considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Impacts and Mitigation Measures

Impact AQ-1: The proposed project would not conflict with the regional air quality management plans.

When a project is proposed in a city or county with a general plan that is consistent with the most recently adopted Clean Air Plan (CAP), and if the project is consistent with the land use designation of the general plan, then the project is considered consistent with applicable air quality plans and policies.

As discussed in Section 3.1 (Land Use), the project is consistent with the General Plan's land use designation for the project area. The applicable air quality management plans are the Coso Junction PM10 Planning Area SIP, the Mono Basin Planning Area PM10 SIP, the Mammoth Lakes Air Quality Management Plan, and the 2008 Owens Valley

PM10 Planning Area Demonstration of Attainment SIP. The County's General Plan is consistent with the CAP because data and projections from the General Plan are incorporated into the CAP. The project is therefore consistent with the plan. This is a less-than-significant impact because the project would not conflict with the region's air quality management plans.

Level of Significance Before Mitigation: Less than significant because the project would be consistent with the regional air quality management plans.

Impact AQ-2: The project would result in short-term construction-related dust and vehicle emissions that could contribute to existing or projected air quality violations.

For the purpose of this EIR analysis, construction of the project was assumed to occur over six phases, as shown below in Table 3.11-3. Proposed construction start and occupancy dates for Phases 1 through 4 were provided by the project proponent. Proposed construction start and occupancy dates for Phases 5 and 6 were estimated based on the information provided by the project proponent.

Table 3.11-3. Proposed Construction Start and Occupancy Dates for Phases 1–6

Phase	Construction Start Date	Occupancy Date
Phase 1	Spring 2010	Fall 2011
Phase 2	Spring 2011	Fall 2012
Phase 3	Spring 2013	Fall 2014
Phase 4	Spring 2015	Fall 2016
Phase 5 (Future Phase – Market-Driven)	Spring 2017	Fall 2018
Phase 6 (Future Phase – Market-Driven)	Spring 2019	Fall 2020

Source: Source: Bear Valley Village I and II, LLC 2007; Miller Environmental Consultants 2008

Should actual construction occur at later dates than those assumed, the emissions would likely be lower than the emissions in this analysis because future equipment would likely be cleaner than current equipment due to new regulations for cleaner engines in off-road equipment and the retirement of older construction equipment.

Short-term construction emissions are typically generated by clearing, grading, excavating, and using heavy equipment or trucks. Emissions are also generated from commute vehicles for construction workers, trucks hauling equipment and materials, and stationary construction equipment used on-site, such as a temporary batch plant. Construction related emissions consist primarily of ROGs, NOx, and PM10. Emissions of ROGs and NOx are generated primarily by the operation of gasoline- and diesel-powered motor vehicles and the application of architectural coatings. Emissions of PM10 are generated primarily by wind erosion of exposed graded surfaces. Construction-generated emissions would vary from day to day, depending on the specific activities being conducted and meteorological conditions.

The URBEMIS 2007 computer model was run to calculate the site-grading emissions and exhaust emissions for construction. The emissions presented in Table 3.11-4 are the highest daily emissions modeled by URBEMIS 2007 for the construction of this project.

Table 3.11-4. Construction Emissions

Emissions	Pollutant (Pounds Per Day)			
	ROG	CO	NOx	PM10
Project Construction Emissions[a]	298	272	170	421

Note: Emissions were calculated using the URBEMIS 2007 emissions model. The model does not contain specific emission factors for the GBUAPCD; thus, emission factors from the Mountain Counties Air Basin, the model's air basin nearest the project site, were used. Input to the model included project-specific data provided in the project description.

[a] Calculations include emissions from numerous sources, including site grading, construction worker trips, stationary equipment, diesel and gas mobile equipment, off-site haul import for aggregate material, asphalt off-gassing, and painting.

Source: Miller Environmental Consulting 2008

As previously discussed, the GBUAPCD's approach to CEQA analyses of short-term construction impacts is to require implementation of effective and comprehensive control measures in compliance with GBUAPCD Rules 216, 216-A, and 401 rather than to establish construction-related emission significance thresholds and require detailed quantification of emissions. Without proper mitigation of construction activities, the project could generate a significant fugitive dust impact.

Mitigation Measure AQ-2a: Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas.

The County shall require the applicant to prepare a construction pollutant reduction plan that implements the mitigation measures listed below, including those recommended by the GBUAPCD to reduce air emissions from short-term construction. The applicant shall submit the construction pollutant reduction plan to the County as part of the discretionary permit application (tentative map [TM] and/or conditional use permit [CUP]) that would involve construction activity for each phase of development.

Reasonable precautions shall be taken to prevent visible particulate matter from being airborne, under normal wind conditions, beyond the property from which the emission originates. Reasonable precautions include, but are not limited to:

- Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces that can give rise to airborne dusts;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate contaminant methods shall be used during such handling operations;

- Use of water, chemicals, chuting, venting, or other precautions to prevent particulate matter from becoming airborne in handling dusty materials to open stockpiles and mobile equipment; and
- Maintenance of roadways in a clean condition.

Mitigation Measure AQ-2b: Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.

The County shall require the applicant to implement the following mitigation measures, including those recommended by the *California Stormwater Best Management Practices Handbook* to reduce short-term construction emissions from the temporary batch plant:

- Temporary batch plants shall be managed to comply with AQMD Statewide Registration Program and/or local AQMD Portable Equipment Registration requirements
- Locate temporary batch plants downwind of existing developments whenever possible
- Placement of access roads shall be planned to mitigate water and air quality impacts
- Filter, contain, and/or suppress particulate matter to eliminate visible emissions beyond the property line while the equipment is being operated

The applicant shall demonstrate compliance with these measures as part of the discretionary permit application (TM and/or CUP) that would involve construction activity for each phase of development.

Level of Significance After Mitigation: Less than significant because the project would implement effective and comprehensive control measures in compliance with GBUAPCD Rules.

Impact AQ-3: Project operations would increase ROG, NOx, and PM10 emissions.

Bear Valley Village

Long-term air quality impacts would consist of mobile source emissions generated by project-related traffic and stationary source emissions generated directly and indirectly by the natural gas (or propane) consumed. Long-term emissions would be generated from vehicle trips to and from the project area and fuel combustion for space heating, fireplaces, and landscape maintenance.

Fuel Consumption for Heating

As noted in the project description, propane gas would be the predominant source of energy for the project. Emissions from electricity are typically not included in this type of analysis because the emissions occur outside of the project area at the electrical power plant and are accounted for at the point of generation.

As proposed, this analysis assumes five wood-burning fireplaces within common areas, and the remainder would be propane gas-burning fireplaces. As previously noted, GBUAPCD Rule 431 requires all solid fuel-burning appliances to be certified as meeting the emission requirements of the EPA for Phase II certification. Exceptions are made for one fireplace located in a common area lobby or in the common area of a condominium project. The project would include 13 buildings, three plazas, and five wood-burning fireplaces. The GBUAPCD, however, has indicated that a maximum of three wood-burning fireplaces would be allowed under Rule 431 (Ono 2008).

Snowmobiles

Emissions from snowmobiles are determined by the type of engine, speed, and number of snowmobile vehicle miles traveled (VMT). VMT is a function of many variables, including the number of snowmobiles used during a season, the frequency and destinations of snowmobile trips, and the length of time snow covers the ground. Calculating the precise amount of VMT by snowmobiles owned by Bear Valley residents is difficult. However, using broad assumptions, Bear Valley residents and visitors are estimated to generate approximately 97,000 snowmobile VMT annually (SWCA 2008; Appendix H).

The project would be expected to increase snowmobile ownership within Bear Valley by about 7 percent, and the snowmobiles owned by Village residents would be used primarily for recreation outside of town rather than transportation within town. Assuming recreational trips outside Bear Valley were to increase by 7 percent and snowmobile trips within town were to increase by a smaller percentage (e.g., 4 percent), the total estimated increase in snowmobile VMT generated by new snowmobile ownership would be about 4,300 VMT or a 4-percent increase of annual VMT.

As discussed in Section 3.10 (Snowmobile Circulation), the project would potentially create a change in snowmobile circulation patterns. However, it is difficult to estimate changes in VMT caused by discontinued snowmobile access through the project area because the location of the replacement routes cannot be determined at this time. Shortcuts through common areas and across private land would shorten some snowmobile trips. It is reasonable to assume, however, that VMT would substantially increase if most snowmobile trips were diverted around Bear Lake, a distance of 2 miles between the Bear Valley Road closure and the Bear Valley School (SWCA 2008; Appendix H).

Village Lift

The proposed Village Lift would be powered by a 700 horsepower electric motor, with a back-up diesel motor. The diesel motor is for emergency use only and would be used less than 19 hours per year. Per GBUAPCD Rule 216, the project proponent would be required to obtain an Authority to Construct and Permit to Operate for any new stationary source, including the backup Village Lift motor.

Under-building Parking Structures

Under-building parking structures can be partially open or fully enclosed. Partially open parking structures generally do not need mechanical ventilation to prevent accumulation of potentially hazardous air emissions. As noted in Chapter 2 (Project Description), each under-building parking area would have proper ventilation and air circulation per building code. This would ensure the project does not result in a significant issue related to ventilation of the parking structures.

Operational Emissions

Table 3.11-5 shows the daily operational emissions due to the project. Project-related CO emissions are further analyzed in Impact AQ-~~3~~4.

Project operational emissions (stationary and mobile) have been estimated using the URBEMIS 2007 computer model (Appendix I). This model predicts ROGs, NOx, PM10, and CO emissions based on the project land uses and an estimate that the project would be completed by 2015. Project trip generation rates used data from the traffic study conducted by LSC Transportation Consultants, Inc (LSC 2008). CO, NOx, and PM10 emissions from snowmobiles were calculated based on an entire fleet of two-stroke engines, EPA and Montana Department of Environmental Quality emission factors, and data from the Snowmobile Parking and Circulation Study for the Bear Valley Village Project (SWCA 2008). If the project were completed at a later time, the emissions would likely be lower due to improved vehicle engine technology, improved snowmobile engine technology as required by EPA, and the retirement of older vehicles and snowmobiles.

Table 3.11-5. Daily Operational Emissions–2015

Emissions	Criteria Air Pollutants (Pounds Per Day)			
	ROG	CO	NOx	PM10
Project Operational Emissions – Phases 1 through 6 (Year 2015)[a]	35	310	49	34
Project-Related Emissions – Snowmobile Use[b]	NA	86	<1	2
Total Project Operational Emissions	35	396	49	36
Significance Thresholds	82	NA[c]	82	NA[d]
Are Thresholds Exceeded?	No	No[c]	No	NA[d]

Note: Emissions were calculated using the URBEMIS 2007 emissions model. The model does not contain specific emission factors for the Great Basin Unified APCD; thus, emission factors from the Mountain Counties Air Basin, the model's air basin nearest the project site, were used. Input to the model included project-specific data provided in the project description. NA = Not available.

[a] Calculations include emissions from numerous sources, including vehicle trips, landscape maintenance, and use of propane gas for space heating, fireplaces, and consumer products.

[b] Emissions from snowmobiles were based on an entire fleet of two-stroke engines, EPA and Montana Department of Environmental Quality emission factors, and data from the Snowmobile Parking and Circulation Study for the Bear Valley Village Project.

[c] The Great Basin Unified APCD refers to the CAAQS for CO (9 parts per million [ppm]), and does not have a pounds per day limit. See Impact AQ-3.

[d] The Great Basin Unified APCD refers to the CAAQS for PM10 (50 micrograms per cubic meter [µg/m^3]), and does not have a pounds per day limit.

Source: Miller Environmental Consulting 2008

As shown in Table 3.11-5, daily operational emissions from the project would not generate more than 82 pounds per day of ROGs or NOx, and would not result in a significant impact related to these pollutants. The project would therefore not be expected to violate any air quality standard or contribute to an existing or projected air quality violation in the project vicinity. However, the proposed project may not be in compliance with Rule 431 because the project may exceed the allowed number of wood-burning fireplaces. This is a significant impact.

Level of Significance Before Mitigation: Significant because although project operation would not exceed thresholds for ROG, NOx, or PM10, the project could be in violation of Rule 431 pertaining to the number of wood-burning fireplaces.

Mitigation Measure AQ-3: Ensure the number of wood-burning fireplaces does not exceed the maximum number allowed by the GBUAPCD.

The County will require the applicant to coordinate with the GBUAPCD to ensure the project does not exceed the number of wood-burning fireplaces allowed under Rule 431. As part of the ~~discretionary permit application (TM and/or~~ CUP~~)~~ for each phase of development, the applicant shall submit documentation from the GBUAPCD to the County indicating the maximum number of wood-burning fireplaces allowed for that phase or, alternatively, for the entire project.

Level of Significance After Mitigation: Less than significant because compliance with GBUAPCD Rule 431 would effectively reduce the project's PM10 emissions to a less-than-significant level.

Impact AQ-4: Project traffic would increase CO concentrations at intersections, but would not expose sensitive receptors to substantial CO concentrations.

Local CO concentrations were estimated using the impact methodology in the El Dorado County AQMD's *Guide to Air Quality Assessment* and the results of the EIR traffic study (LSC 2008). Although the area is designated as unclassified with state CO standards, and CO levels are declining due to improvements in vehicle engines, CO concentrations were calculated for comparison purposes.

As shown in Table 3.11-6, the emissions from the project would not exceed the CO standards and thus would be considered less than significant.

Table 3.11-6. Estimated CO Concentrations Due to the Project during Peak Hour

Averaging Time (hours)	Concentrations (ppm)[a]			
	State Standard	Background (2010)	Project (2010)	Background Plus Project (2010)
1	20	1.3	1.0	2.3
8	9	0.4	0.7	1.1

Note: Other receptors farther from the project vicinity would experience lower CO concentrations, and the impact would also be less than significant.

[a] The one-hour and eight-hour CO analysis focuses on peak-hour traffic, calculated as 10 percent of the average daily traffic, because the project's effects on traffic congestion and related CO concentrations are greatest during that period. CO estimates shown above include background concentrations for 1 hour and 8 hours as calculated according to the El Dorado County AQMD-CEQA Guide, First Edition, February 2002.

Source: Miller Environmental Consulting 2008

Level of Significance Before Mitigation: Less than significant because the project would not expose sensitive receptors to substantial CO concentrations.

Impact AQ-5: The project would not create objectionable odors that would affect a substantial number of people.

In general, the types of land uses that pose potential odor problems include refineries, chemical plants, wastewater treatment plants, landfills, composting facilities, and transfer stations. No such uses are proposed.

Certain engines, including engines used for snowmobiles and diesel-powered engines used for construction, can also generate objectionable odors. The project would not substantially increase the use of snowmobiles. Therefore, any increase in odors from project snowmobiles would not be distinguishable from existing odors generated by snowmobiles.

Diesel engines would be used for some construction equipment, and might be used for the temporary concrete batch plant. Odors generated by construction equipment (including the batch plant) would be variable, depending on the location and duration of use. Diesel odors may be noticeable to some individuals at certain times, but would not affect a substantial number of people. This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would not create objectionable odors that would affect a substantial number of people.

Impact AQ-6: Implementation of the proposed project would contribute to a cumulative air quality impact in the project area.

Construction emissions from the project would result in the generation of air pollutants in the project area and in the immediate vicinity, and would incrementally add to cumulative emissions. The project's ongoing operations would also add to ozone precursor emissions on a regional basis and would incrementally add to PM10, PM2.5, and CO

emissions on a local basis. As discussed in Impact AQ-3, however, CO emissions associated with the project on a near- and long-term basis would be less than significant.

Based on the procedure for evaluating cumulative impacts of projects specified by the EDCAQMD's CEQA Guidelines, any project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. As discussed in Impact AQ-2, the project would result in short-term construction-related fugitive dust (PM10) emissions. Therefore, this significant project impact is also considered a significant cumulative impact.

Operational emissions from project sources would be combined with emissions from other sources, primarily including area traffic (local streets and highways) from existing and future development in the greater project area. These emissions are shown in Table 3.11-7.

Table 3.11-7. Cumulative Operational Emissions–2027

Emissions	Criteria Air Pollutants (Pounds Per Day)			
	ROGs	CO	NOx	PM10
Project Operational Emissions – Phases 1 through 6[a]	24	151	27	34
Project-Related Emissions – Snowmobile Use[b]	NA	86	<1	2
Total Project Operational Emissions	24	237	27	36
Cumulative Without Project Emissions	11	66	11	15
Cumulative With Project Emissions	35	303	38	51
Significance Thresholds	82	NA[c]	82	NA[d]
Are Thresholds Exceeded?	No	No[c]	No	NA[d]

Note: Emissions were calculated using the URBEMIS 2007 emissions model. The model does not contain specific emission factors for the Great Basin Unified Air Pollution Control District; thus emission factors from the Mountain Counties Air Basin, the model's air basin nearest the project site, were used. Input to the model included project-specific data provided in the project description.

[a] Calculations include emissions from numerous sources, including vehicle trips, landscape maintenance, and use of propane gas for space heating, fireplaces, and consumer products.

[b] Emissions from snowmobiles were based on an entire fleet of two-stroke engines, EPA and Montana Department of Environmental Quality emission factors, and data from the Snowmobile Parking and Circulation Study for the Bear Valley Village Project. Emissions in 2027 would be lower due to required emissions reductions.

[c] The Great Basin Unified APCD refers to the CAAQS for CO (9 ppm), and does not have a pounds per day limit. See Impact AQ-3.

[d] The GBUAPCD refers to the CAAQS for PM10 (50 micrograms per cubic meter [$\mu g/m^3$]), and does not have a pounds per day limit.

NA = Not available

Source: Miller Environmental Consulting 2008

Project operational emissions are projected to be lower in 2027 than in 2015 due to improved technologies, and cumulative with project emissions in 2027 are projected to be less than the significance thresholds. As shown in Table 3.11-7, cumulative emissions (including the project) would not generate more than 82 pounds per day of ROGs or NOx, and would not result in a significant cumulative impact related to these

pollutants. Also, because the project would not exceed the allowed number of solid fuel-burning appliances (i.e., fireplaces), it would not substantially contribute to a significant cumulative operational impact related to PM10.

To summarize, the project would result in short-term construction-related fugitive dust (PM10) emissions. The project would result in a cumulatively considerable incremental contribution to a significant cumulative air quality impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure AQ-6a: Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas.

Implement Mitigation Measure AQ-2a.

Mitigation Measure AQ-6b: Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.

Implement Mitigation Measure AQ-2b.

Level of Significance After Mitigation: Less than significant because implementation of these measures would ensure short-term construction emissions and operation-related emissions remain within acceptable levels.

Significant and Unavoidable Impacts

None.

3.12 NOISE

This section describes the regulatory and environmental settings for noise in the project area. The impact analysis evaluates the effects of traffic, snowmobile, and construction noise on existing and proposed land uses, and the effects of the project on ambient noise levels in the project vicinity. Mitigation measures are identified to reduce significant impacts.

An outdoor amphitheater is proposed next to the base terminal of the Village Lift. This venue is intended as an outdoor gathering place for concerts and/or other artistic performances in the summer months. The noise level and hours of performance have not yet been proposed, but amphitheater operations would be subject to compliance with Alpine County codes related to noise, public safety, and special events. A County special event permit would be required when any event involves a group of 75 or more people. Because the noise level and hours of performance have not yet been defined, it would be speculative to evaluate noise impacts of the amphitheater. This issue is not addressed further in the Environmental Impact Report (EIR).

The project is not located within an airport land use plan area or within 2 miles of a public airport. A private airstrip is located approximately 0.75 mile south of the project area on the south side of State Route (SR) 4. This airstrip sees only occasional traffic. The flight pattern for take-off and landing on this airstrip is off the south end of the airstrip, which is approximately 1 mile from the project area. Noise impacts are considered less than significant since the air traffic pattern does not extend over the project area (Alpine County 2007). This issue is not addressed further in the EIR.

Terminology used throughout this section includes the following noise measurement terms. A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called “sound level”) measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. The most commonly used noise descriptors are the equivalent sound level over a given time period (Leq), average day-night 24-hour average sound level (Ldn), and community noise equivalent level (CNEL). Leq is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time-varying sound energy in the measurement period. Ldn is the day-night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-dB penalty applied to night between 10:00 p.m. and 7:00 a.m. Ldn is typically within ±2 dBA of the peak-hour Leq under normal traffic conditions (Caltrans 1998). CNEL is the day-night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-dB penalty applied to night between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied in the evening between 7 p.m. and 10 p.m.

3.12.1 Regulatory Setting

The **Alpine County General Plan** defines noise-sensitive land uses within the County as hospitals, clinics, schools, libraries, and residences. The Safety Element identifies goals and policies to protect the residents of Alpine County from the harmful effects of exposure to excessive noise. In addition, the policies contained within the General Plan

identify acceptable transportation noise exposure levels for new noise-sensitive land uses, including residential uses (Table 3.12-1). These noise exposure levels also pertain to noise created by new transportation sources, including roadway improvement projects, on existing noise-sensitive land uses. These levels are a guide to acceptable noise levels for project residences and surrounding residences that could be affected by the construction or operation of the project (Alpine County 2005a).

Table 3.12-1. Maximum Allowable Noise Exposure from Transportation Sources

Land Use	Outdoor Activity Areas Ldn/CNEL (dB)[a]	Interior Spaces Ldn/CNEL (dB)	Leq (dB)[b]
Residential	60[c]	45	—
Transient Lodging	60[c]	45	—
Hospitals, Nursing Homes	60[c]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	60[c]	—	40
Office Buildings	60[c]	—	45
Schools, Libraries, Museums	—	—	45
Playgrounds, Neighborhood Parks	70	—	—

[a] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

[b] As determined for a typical worst-case hour during periods of use.

[c] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Alpine County General Plan 2005

The **Alpine County Zoning Ordinance** also includes noise standards for new permanent noise sources. The ordinance prohibits development or activities that would produce sound levels in excess of 60 dBA, Ldn (measured across parcel or lot boundaries) within residential zones where the density is greater than one unit per 5 acres (County Ordinance 18.68.090). The maximum acceptable noise levels are shown in Table 3.12-2.

Table 3.12-2. Alpine County Zoning Code Noise Levels

Zone	Maximum Ldn (dBA)
Urban Residential	60
Residential, less than 5-acre density	60
Residential, more than 5-acre density	55
Institutional (INS)	65
Planned Development (CD, TD)	65
Commercial Recreational (CR)	70

dBA = A-weighted decibel; Ldn = equivalent sound level.

Source: Alpine County

3.12.2 Environmental Setting

The noise environment within the project area is that of a quiet rural or suburban area. At various locations within the project area, and depending on atmospheric conditions, some traffic noise is audible from SR 4, Creekside Drive, and Bear Valley, Quaking Aspen, and No Name Roads. There is also occasional snowmobile noise.

Typical noise levels for indoor and outdoor activities in an urban setting are presented in Table 3.12-3. Lower noise levels typically occur in rural or suburban areas than commercial or industrial zones.

Table 3.12-3. Typical Noise Levels

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock band
80–90	Diesel truck at 50 feet	Loud television at 3 feet
70–80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60–70	Commercial area	Normal speech at 3 feet
40–60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher in next room
20–40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10–20	—	Broadcast/recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: modified from Caltrans 1998

Project Area Noise Levels

In order to characterize the noise conditions in the project area, three short-term measurements were made in the project area with concurrent observations recorded. The noise monitoring locations are shown in Figure 3.12-1. Location A is near the Lodge Lot snowmobile parking area, Location B is near the snowmobile parking area behind the Transportation Center, and Location C is on Bear Valley Road at Orvis Road and was selected to get several measurements of typical snowmobile pass-by events.

The noise measurements are summarized in Table 3.12-4. Typical noise levels ranged from 41 to 46 dB during quiet times. Although 24-hour noise measurements were not taken at the project area, the Ldn can be expected to fall within a 40- to 65-dBA range, depending on how close the receptor is to the road or snowmobile path, the day of the week, and the season. Noise levels in the quieter sections of the town are estimated to be 40 to 50 dBA Ldn. Occasional snowmobile noise and minimal aircraft-related noise was observed during the measurements. Other noise sources include people, dogs, and idling shuttle buses.

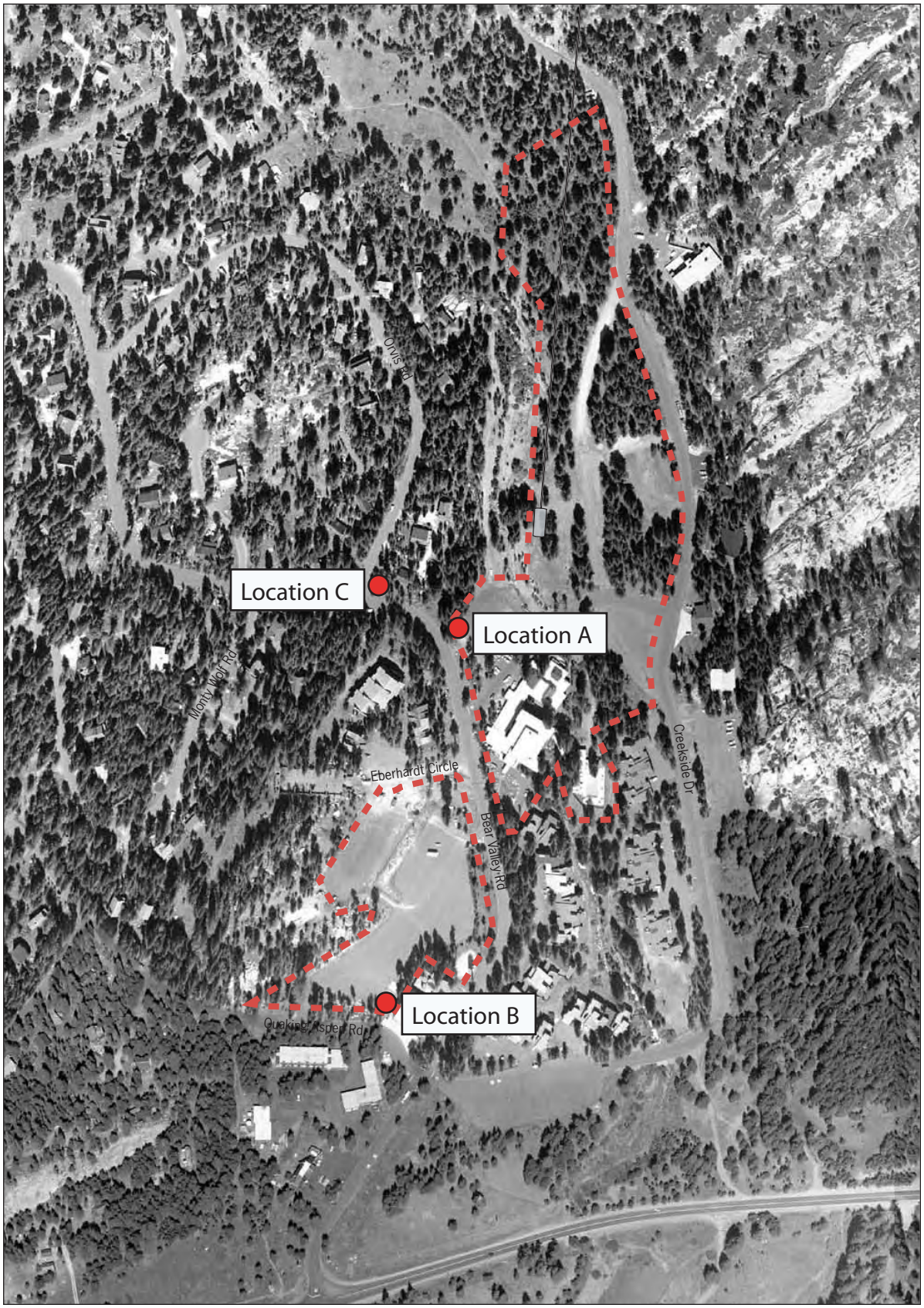
The noise measurements and observations indicate that most areas of Bear Valley are expected to be in compliance with County General Plan noise standards for residential

developments (shown in Table 3.12-1) at most times, except during peak use periods in areas immediately adjacent to transportation sources such as roads and snowmobile parking areas. Daily Ldn noise levels during the peak use periods would vary but can be expected to be as high as 68 dBA (the measured peak-hour noise level shown in Table 3.12-4 plus 3 dBA to account for the busiest days of the year) in areas immediately adjacent to snowmobile parking areas.

Snowmobiles

To characterize snowmobile noise, two noise meters were setup near the Lodge Lot snowmobile parking area (Location A). Measurements were taken on Saturday, March 31, 2007, from 11 a.m. to 4 p.m. during hard-packed snow conditions. According to anecdotal information provided by local residents, noise levels tend to be lower during soft-packed (i.e., new) snow conditions, with new snow acting as a dampener to reduce noise levels. As shown in Appendix J (Figure Noise-1), the noise levels increased between 2 p.m. and 4 p.m. as snowmobilers were leaving the parking area and returning home. By 4 p.m., approximately 65 percent of the snowmobiles originally in the parking lot at 11 a.m. were gone. From 11 a.m. to 4 p.m., one-hour Leq (or average noise levels) ranged from 58 to 65 dB and are assumed to represent noise levels for a typical weekend day. The noise levels are likely to be 2 to 3 dB higher than these levels during a busy holiday weekend and may occur for a longer period of time (e.g., 2 p.m. to 6 p.m.), while noise levels during typical weekdays are expected to be lower than the March 31, 2007, noise levels.

At Location A, one noise meter was set at five-minute intervals. As shown in Appendix J (Figures Noise-5 and Noise-6), background noise levels between 2 p.m. and 4 p.m. ranged from 40 to 50 dB, average noise levels ranged from 41 to 72 dB, and maximum noise levels reached as high as 90 dB when a snowmobile drove uphill approximately 25 feet from the noise meter.



Source: Bear Valley Village I and II, LLCs; Miller Environmental Consulting 2008

Figure 3.12-1
Noise Monitoring Locations

Table 3.12-4. Existing Noise Levels in Project Area

Location	Time Period	Noise Levels	Noise Sources and Observations
Location A: 25 feet from the center of the nearest snowmobile path at the edge of the Lodge Lot snowmobile parking area.	Saturday, March 31, 2007, 11 a.m.–4 p.m. (See Figures Noise-1- through Noise- 12 in Appendix J)	Continuous sampling: 5-minute sampling concurrent with 30-second sampling 1-hour Leq's: 58–65 dB 5-min Leq's: 41–72 dB 1-hour Lmax's: 81–90 dB 1-hour L90's: 44–46 dB	Long-term measurements do not identify specific noise sources. L90 background levels are quiet (44–46 dB).
Location A	March 31, 2007, 12:38 p.m.–12:46 p.m.	5-second sampling Leq's : 42–70 dB	Snowmobile pass-bys 70 dB and 68 dB. Shuttle bus idling 50 dB.
Location A	March 31, 2007, 2:12 p.m.–3:12 p.m.	5-second sampling Leq's : 42–84	Snowmobile pass-bys (dB): 70, 76, 73, 55, 63, 77, 78, 74, 83, 74, 84, 67, 80, 73, 71
Location A	Saturday, March 31, 2007, 4:15 p.m.	Sampling is complete	Most snowmobiles have left the parking area, only about 20 left in parking area. Peak travel is over.
Location B: At the property line, southwest of the Transportation Center.	Saturday, March 31, 2007, 1:42 p.m.–1:49 p.m.	5-second sampling Leq's : 42–63 dB	Some snowmobile activity. Trucks on Loop Road = 46 dB; cars starting up = 48 dB.
Location C: 25 feet from the center of the path leading uphill near corner of Bear Valley and Orvis Roads	Saturday, March 31, 2007, 3:18 p.m.–3:55 p.m.	5-second sampling Leq's: 42–73 dB	Snowmobile pass-bys (dB): 72, 73, 64, 72, 63, 62, 69, 60, 67

Another noise meter was set at 30-second intervals at Location A. As shown in Appendix J (Figures Noise-10 and Noise-11), average noise levels between 2 p.m. and 4 p.m. ranged from 41 to 82 dB. Figures Noise-10 and Noise-11 show that peak snowmobile-related noise levels above 70 dB typically lasted no more than 60 seconds. After parking and turning off the engine, or starting and driving away, snowmobiles ceased to be noticeable noise sources and noise levels returned to the background level.

Short-term noise measurements were also collected with concurrent observations at Locations A, B, and C with a noise meter set at five-second intervals. These noise measurements and observations are also shown in Table 3.12-4. The short-term measurements indicated that as snowmobiles drove by, snowmobile-related noise levels higher than 60 dB could occur for a period of five to 65 seconds (when multiple consecutive snowmobiles drove by), but on average would occur for less than 30 seconds. The noise levels of the individual pass-bys are recorded in Table 3.12-4. Some of the higher levels occurred when there were multiple snowmobiles driving near the same area at the same time.

Sensitive Receptors

Sensitive receptors in the project vicinity include the existing 53 units of the Bear Valley Lodge located in the project area, which will be demolished at the completion of Phase 3 or the commencement of Phase 4. Additional residential areas include the Creekside Condominiums immediately southeast and south of the project area and condominiums to the west and north. The Bear Valley School is approximately 175 feet east of the project area. In addition, the project would introduce new sensitive receptors (residences) to the project area. As a general rule, noise levels inside a standard constructed building tend to be 20 dB less than the noise levels outside. It would be safe to assume that buildings in Bear Valley are built beyond standard construction for weather purposes and that noise levels inside would be 25 dB less than the noise levels outside.

3.12.3 Impact Analysis

Methodology

Impacts were evaluated by measuring the existing noise levels in the area and determining the noise compatibility of the project. Traffic data and a Federal Highway Administration (FHWA) noise model were used to determine future impacts of traffic-related noise. The analysis considers the suitability of the project area for the proposed residential use and the effect of project noise upon other sensitive receptors in the area.

Levels of Significance

According to the California Environmental Quality Act (CEQA) Guidelines' Appendix G Environmental Checklist, adverse impacts to noise would be considered significant if the proposed project would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance
- Expose persons to or generate excessive groundborne vibration or noise levels
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- Expose people residing or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip

For transportation noise, an increase in noise levels of 5 dBA is considered significant where existing noise levels are less than 60 dBA Ldn (Federal Interagency Committee on Noise [FICON] 1992). In addition, an increase in noise of 3 dBA or more is considered significant for existing noise levels between 60 and 65 dBA Ldn, and an increase in noise by 1.5 dBA or more is considered significant for existing noise levels greater than 65 dBA Ldn. These criteria apply to existing residences only.

With temporary noise impacts (e.g., construction activities), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels.

For operational impacts, operational noise that would exceed the "normally acceptable" land use compatibility noise range of the Alpine County General Plan and Zoning Ordinance would be considered a significant noise impact. Therefore, exposure of project residents to noise levels exceeding 60 dBA Ldn would be considered a significant impact per the General Plan and Zoning Ordinance (Tables 3.12-1 and 3.12-2).

Impacts and Mitigation Measures

Impact N-1: Project construction would result in temporary noise impacts that could affect adjacent and project residences.

Project construction would occur over six phases and is estimated to last for approximately 10 years. Each phase would last for 18 months. Mass grading would occur at various locations within the 18-acre Village area (residences, amenities, and roads), with additional grading occurring where the Village Lift, ski runs, utility pipelines, roads, and other facilities are needed outside of the Village area. Noise generated by these activities could adversely affect nearby residents to the south, west, north, and southeast, as well as project residents during later construction phases.

Construction activity noise levels at and near the project area would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. The project would include reuse of some of the excavated material on-site. The remaining material would be hauled away in trucks to appropriate legal fill disposal sites using existing roads and highways. Table 3.12-5 shows typical noise levels during different construction stages, and Table 3.12-6 shows typical noise levels produced by various types of construction equipment.

In addition to the types of equipment listed in Table 3.12-6, construction of the Village Lift may also require the use of helicopters. Heavy-duty helicopters might be used to move foundation cages, concrete, and lift towers from the staging areas to locations inaccessible by land vehicles. Heavy-duty helicopters can be expected to generate noise levels of approximately 89 dBA at 200 feet (California Public Utilities Commission [CPUC] 2006).

Table 3.12-5. Typical Construction Noise Levels

Construction Phase	Noise Level (dBA Leq)
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

Notes: Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

dBA = A-weighted decibel; Leq = equivalent sound level

Source: EPA 1971

Table 3.12-6. Typical Noise Levels from Construction Equipment

Construction Equipment	Noise Level (dBA Leq at 50 ft)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85

Notes: dBA = A-weighted decibel; Leq = equivalent sound level

Source: Cunniff 1977

The major sources of noise generated by the batch plant would include processing equipment and mobile equipment. Processing equipment may include crushers, screens, conveyors, and a generator. Mobile equipment would likely include loaders and trucks. The batch plant can be expected to generate noise levels similar to those shown in Table 3.12-6.

Construction of the project would generate a significant amount of noise corresponding to the appropriate phase of building construction and the noise-generating equipment used during the 10 years of construction. The closest sensitive receptors are the existing 53 units of the Bear Valley Lodge located in the project area, which will be demolished at the completion of Phase 3 or the commencement of Phase 4. Additional residential areas include the Creekside Condominiums immediately southeast and south of the project area and condominiums to the west and north. Bear Valley School is approximately 175 feet east of the project area. Residents in early phases of the project would also be sensitive receptors from construction of later phases. Other sensitive

receptors in the project vicinity would be exposed to construction noise at incrementally lower levels.

Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA per doubling of distance. Existing residences could be as close as 30 to 40 feet from construction activities. Assuming an attenuation rate of 6 dBA per doubling of distance, the outside areas of the closest residences would temporarily experience maximum noise levels of up to 106 dB during excavation and 94 dB during the finishing stages. At a distance of 100 feet, maximum noise levels would be up to 95 dBA with pile-driving and 83 dBA during excavation and the finishing phase. The school would temporarily experience noise levels up to 91 dBA with pile-driving and 83 dBA during the finishing stages. Construction noise at these levels would be substantially greater than existing noise levels at adjacent residences and the school. Construction further from the project boundaries would have less impact on the nearby sensitive receptors, but would still generate noise levels considerably above the existing noise levels. During later stages of construction, construction noise could affect residents moving into earlier phases of the development, exposing them to high levels of temporary construction noise.

Construction activities would substantially increase ambient noise levels at noise-sensitive locations adjacent to the project area, albeit temporarily; therefore, construction noise would be considered disruptive to nearby residences and would be a significant impact.

Mitigation Measure N-1a: Limit construction to the hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and 5 p.m. Saturday.

The County will require the applicant to limit construction activities to the hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and 5 p.m. Saturday to avoid noise-sensitive hours of the day. No construction work shall be allowed on Sundays and federal holidays. This measure does not apply to construction activities that take place entirely within an enclosed and insulated building (including no open windows or doors). This requirement shall be identified on all grading plans and construction contracts. The County will include this noise limitation as a condition of all tentative subdivision map and conditional use permit (CUP) approvals.

Mitigation Measure N-1b: Locate portable but temporarily fixed construction equipment (such as temporary batch plants, compressors, and generators) and construction staging and parking areas as far from from existing residences as possible.

The County will require the applicant to identify locations of temporarily fixed construction equipment and proposed staging and parking areas on plans submitted for tentative map (TM) and/or CUP submittals that would involve construction activity, and shall assure that they are located as far away from existing residences as possible. The locations for the batch plant and parking areas shall be approved by the Alpine County Planning Department prior to approval of the TM and/or CUP. The approved locations shall be identified in construction contracts and drawings.

Mitigation Measure N-1c: Post signs at the construction site that include permitted construction days and hours, expected timeframe for construction, a day and evening

contact number for the job site, and a County contact number for complaints about construction noise.

The County will require the applicant to ensure signs are posted at the construction sites to specify permitted construction days and hours (7 a.m. to 7 p.m., Monday through Friday; 9 a.m. to 5 p.m., Saturday), expected timeframe for construction, and contact numbers for the contractor and County. The signs would help to facilitate rapid communication of any problems related to noise. Posting of the hours and duration would allow the adjacent residences to understand the length of the proposed construction phase and also the limits on activity each day and week. This measure shall be identified on grading plans and construction contracts.

Mitigation Measure N-1d: Implement "quiet" pile-driving technology and notify neighbors about the estimated duration of the pile-driving activity.

The County will require the applicant to implement technologies such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile-driving duration, unless the applicant provides documentation to the County from a geotechnical (or other qualified) engineer that such techniques are either not feasible or are not recommended from an engineering perspective. The applicant shall notify property owners within 300 feet of the project construction area about the estimated duration of the pile-driving at least 10 days in advance of the activity.

Mitigation Measure N-1e: Implement noise muffling technology to further reduce the impacts of construction related noise.

The County will require the applicant to implement the following technologies, unless the applicant provides documentation to the County that such techniques are not feasible, effective, or reasonably available.

- Muffle stationary noise sources and enclose them within temporary sheds, incorporate insulation barriers, or employ other measures to the extent feasible.
- Use equipment and trucks equipped with the best available noise control techniques (for example, improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).
- Ensure all construction equipment is properly maintained and operated and equipped with mufflers.
- Use hydraulically or electrically powered impact tools (such as jackhammers, pavement breakers, and rock drills) for project construction wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools shall be used where feasible. Quieter methods or tools, such as using drills rather than impact tools, shall be used whenever feasible.

Level of Significance After Mitigation: Significant and unavoidable because pile-driving would temporarily cause a temporary but substantial increase in noise levels that cannot feasibly be mitigated to less-than-significant levels. Other construction activities (i.e., helicopters, excavation, finishing activities) would also contribute to periodic substantial increases in noise in an area that has low ambient noise levels that cannot feasibly be mitigated to less-than-significant levels.

Impact N-2: Pile-driving for building foundations could cause cosmetic or structural damage to buildings within 50 feet of the activity.

As discussed in Section 3.14 (Soils), the project may require driven piles to support building foundations within the project area. Depending on the construction equipment used, groundborne vibrations can be perceptible within 30 to 100 feet. However, cosmetic or structural damage from pile-driving typically does not occur in buildings more than 50 feet from the location of the activity (Caltrans 2004). The only existing building located within 50 feet of a proposed building is the Creekside Condominium building located along Bear Valley Road directly south of the Bear Valley Lodge. If cosmetic or structural damage to this building were to be caused by pile-driving, this would be a significant impact.

Mitigation Measure N-2: Conduct crack survey before pile-driving activities that could cause damage to nearby structures.

The County will require the applicant to conduct a two-phase crack survey of the Creekside Condominium building located on Bear Valley Road directly south of the Bear Valley Lodge, if pile-driving is proposed within 50 feet of this building. The first phase of the survey shall include pre-construction photograph or video documentation of the interior and exterior of structural and cosmetic architectural features (e.g., walls, floors, driveways). All existing cracks shall be documented with sufficient detail for comparison after construction to determine whether actual vibration damage has occurred. The second phase of the crack survey shall include post-construction photograph or video documentation of the features evaluated during the first phase of the survey. If the survey indicates that cosmetic or structural damage has resulted from pile-driving, the County will hold the applicant financially responsible for the damage.

The applicant shall submit the pre-construction crack survey to the Alpine County Planning Department for review as part of any application submittal for CUP and/or TM approval for any phase that requires pile-driving within 50 feet of this Creekside Condominium building. The applicant shall submit the post-construction crack survey to the Alpine County Planning Department following cessation of pile-driving for the relevant phase. If the survey indicates that cosmetic or structural damage has resulted from the applicant's pile-driving, the County shall not issue an occupancy permit for the relevant phase until the applicant has demonstrated it has provided restitution to the owner of the damaged property.

Level of Significance After Mitigation: Less than significant because this mitigation measure would ensure the applicant provides funding or repairs for any cosmetic or structural damage caused by pile-driving.

Impact N-3: Project traffic would increase traffic noise levels in the project vicinity, and would substantially increase noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road at peak times.

Based on the traffic analysis prepared for the project (LSC Transportation Consultants, Inc. [LSC] 2008), the project would generate 2,423 net new daily vehicle trips in the project area over the course of a busy winter day, of which 230 trips would occur during the p.m. peak hour. On busy summer days, the project would generate 2,526 net new daily vehicle trips, of which 263 would occur during the p.m. peak hour. These trips would be distributed over the local street network and would affect roadside noise levels.

To assess the impact of p.m. peak hour project traffic on weekend summertime roadside noise levels when net new project trips would be the greatest, noise level predictions were made using the FHWA noise prediction model for those roadway segments most affected by project-related traffic and where noise-sensitive receptors are present. Table 3.12-7 shows traffic-noise modeling results (using traffic estimates prepared for this project) for receptors located at a distance of 50 feet from the roadway centerline. Project related noise increases at receptors located greater than 50 feet from the roadway centerline would likely be lower due to attenuation.

Project traffic would cause average noise levels on nearby roads during peak traffic hours to increase by 0.9 to 8.0 dBA and range from 48.7 dBA Leq to 64.7 dBA Leq (Table 3.12-7). As noted earlier, Ldn noise levels are typically within ±2 dBA of the peak-hour Leq under normal traffic conditions (Caltrans 1998). For the analysis of traffic impacts, the modeling results are presented as Leq and are considered as equivalent to the Ldn values for purposes of comparison to the significance criteria presented for transportation noise.

With the exception of the north/south segment of Creekside Drive~~ north of Quaking Aspen Road (i.e., north of the Creekside Drive Extension)~~, the increase in noise levels along project roadways would be minor (less than 5 dBA and negligible based on existing noise levels) and would not be considered noticeable at residences 50 feet or greater from the roadway centerline. Noise levels at residences along the north/south segment of Creekside Drive ~~north of Quaking Aspen Road and~~ south of No Name Road, future residences near Creekside Drive and north of No Name Road, and the Bear Valley School on Creekside Drive would experience peak-hour noise level increases of up to 8 dBA Leq (traffic volumes would increase from 33 trips to 206 trips during the p.m. peak hour). These peak-hour noise levels would likely occur during peak-use seasons and times, primarily a limited number of weekends in the summer and winter and during Friday and Sunday evenings. The Bear Valley School is not in session when p.m. peak hour traffic occurs (e.g., Friday and Sunday evenings). Noise levels at other times would be lower. Because noise levels along this segment would exceed the 5-dBA criterion in a location where noise levels are below 60 dBA Leq, traffic noise impacts on residences and school would be considered significant.

Level of Significance before Mitigation: Significant.

Although p.m. peak hour project-related traffic would cause a significant increase (8 dBA) in noise levels along the north/south segment of Creekside Drive~~ north of Quaking~~

~~Aspen Road~~, the resultant with project noise level (56.2 dBA) would remain below the County General Plan's recommended noise level of 60 dBA that is considered acceptable for residential outdoor activity areas (see Table 3.12-1) and with 20 to 25 dB of attenuation from the buildings, residential interior spaces would be expected to meet the 45 dB Ldn limit (see Table 3.12-1), and the school would be expected to meet the 45 dB Leq interior limit. For these reasons, mitigation is not proposed.

Level of Significance After Mitigation: Significant and unavoidable because noise level increases would be substantial; however, no feasible mitigation measures are available to reduce the impact.

Impact N-4: Changes to snowmobile circulation and parking areas would increase noise levels at some sensitive receptors in the project vicinity, and locating new residential uses near the Transportation Center snowmobile parking area would expose project residents and employees to excessive noise levels.

Changes in Snowmobile Circulation Patterns

As discussed in Section 3.10 (Snowmobile Circulation), if snowmobile access through the project area were no longer allowed, snowmobilers would take other travel routes between the east and west sides of town. The only alternate snowmobile route that is currently groomed follows Bear Valley Road around Bear Lake to Creekside Drive. Following this route, the distance between the Bear Valley Road closure and the Bear Valley School is about 2 miles. This route would increase snowmobile noise levels along Creekside Drive and the northern portion of Bear Valley Road (but would also reduce snowmobile traffic and noise on the southern portion of Bear Valley Road).

Table 3.12-7. Summertime Weekend Existing and Existing Plus Project Traffic-Related Noise Levels

Roadway Segment	Modeled P.M. Peak-Hour Noise Levels (dBA Leq)[a,b]			
	Existing	Existing + Project	Project-Related Increase[c]	Significant?[d]
SR 4 (east of Bear Valley Road)	62.4	63.4	1.0	No
SR 4 (west of Bear Valley Road)	62.8	64.7	1.9	No
Bear Valley Road (north of Quaking Aspen Road)	53.0	55.5	2.5	No
Bear Valley Road (south of Quaking Aspen Road)	54.3	55.9	1.6	No
Quaking Aspen Road (east of Bear Valley Road)	47.5	48.7	1.2	No
Quaking Aspen Road (west of Bear Valley Road)	49.5	50.4	0.9	No
Bear Valley Road (south of No Name Road)	53.1	54.4	1.3	No
No Name Road (east of Bear Valley Road)	51.7	53.4	1.7	No
Creekside Drive (north/south segment ~~of Quaking Aspen Road~~)	48.2	56.2	**8.0**	Yes

[a] Traffic noise levels were predicted using the FHWA roadway noise prediction model (FHWA-RD-77-108) based on traffic data obtained from the traffic study prepared for this project (LSC 2008). Predicted noise levels assume no natural or man-made shielding (e.g., vegetation, berms, walls, buildings).

[b] Distance from centerline of road is 15 meters (approximately 50 feet) for all modeled roadways.

[c] Numbers may not sum because of rounding.

[d] Considered significant if the incremental increase in noise is greater than 5 dBA Leq in a noise environment of 60 dBA CNEL or less, greater than 3 dBA Leq in a noise environment between 60 and 65 dBA CNEL, or greater than 1.5 dBA Leq in a noise environment greater than 65 dBA CNEL. Significant increases are indicated in bold numbers.

Source: Miller Environmental Consultants 2008

Rather than driving around Bear Lake, many snowmobilers would likely find shorter routes between the east and west sides of town. Expected shortcuts would include travel over common areas or trespassing across private property, especially in the area of Orvis Road and Schimke Road between Bear Valley Road and Open Space Parcel E. Existing snowmobile traffic on Orvis and Schimke roads consists primarily of local traffic. If snowmobile access through the project area were no longer allowed, more snowmobile traffic would be expected along these roads to access shortcuts to or from Open Space Parcel E. This would increase snowmobile noise levels near some homes. Another shortcut might include trespassing across Lots 231 and 232 between Bear Valley Road and Open Space Parcel E.

As discussed in Section 3.10 (Snowmobile Circulation), Mitigation Measure SNO-2a requires the County to re-establish the groomed snowmobile trail through Open Space Parcel E (Figure 3.10-1). This route would increase snowmobile noise levels near some homes along the western edge of Parcel E.

Changes in snowmobile circulation patterns would increase snowmobile pass-bys near some existing homes, as well as proposed Building 6, thereby increasing snowmobile noise levels in those locations. Based on the short-term noise measurements taken on Bear Valley Road and at the Lodge Lot parking area, the Leq (or average noise level) at some homes during the peak snowmobile-use hour could increase to a range of about 58 to 65 dBA on a typical weekend and could increase by an additional 2 to 3 dBA on a holiday weekend. Because Ldn noise levels are typically within ±2 dBA of the peak-hour Leq, the increased pass-bys near some homes could increase the Ldn above the County's transportation source noise limit of 60 dBA Ldn for outdoor activity areas. This would be a significant impact. As noted earlier, interior noise levels would be about 25 dBA lower than exterior noise levels and would remain below the County's threshold for interior residential spaces. It is also important to note that during the winter (when snowmobiles are in use), inclement weather and low temperatures substantially reduce outdoor use of residential properties. Therefore, most snowmobile noise observed from residential land uses would be heard from building interiors rather than exteriors.

New Snowmobile Parking Area West of Bear Valley Road

A new snowmobile parking ~~and loading~~ area on the west side of Bear Valley Road and a new loading area at the Bear Valley Road winter closure would relocate snowmobile noise from the Lodge Lot to the new parking area. The parking and loading areas would bring snowmobile parking and loading activity closer to some existing residences, especially the Sundowner Condominiums southwest of the proposed parking area and proposed Building 6. The new parking and loading areas would therefore increase snowmobile noise at these condominiums. The Sundowner Condominiums are oriented such that the new parking area would be adjacent to the end walls of the complex where there are fewer (and smaller) windows than the longer side walls. The loading area would be ~~adjacent to~~about 40 feet from the northeast corner of the building. The two end units would likely experience the most snowmobile-related noise. Most of the noise would occur during daylight hours and would only occur in the winter. The noise levels near the Sundowner Condominiums would likely be similar to noise levels near the existing snowmobile parking area at the Lodge Lot (see Location A measurements in Table 3.12-4).

The current noise levels near the Sundowner Condominiums are estimated to be about 59 dBA Ldn during the snowmobile season, based on its proximity to the Lodge Lot parking area. The new parking and loading areas would increase short-term maximum noise levels up to 90 dBA during periods of peak snowmobile activity at the parking and loading areas, with peak-hour noise levels of approximately 68 dBA Ldn. Noise levels at other times would be lower. Because noise levels at the new parking and loading areas would exceed the County's threshold of 60 dBA Ldn outside a residence, snowmobile noise impacts on residences near the new parking and loading areas would be considered significant. Interior noise levels would be about 25 dBA lower than exterior noise levels (i.e., 43 dBA Ldn), which is below the County's 45-dBA Ldn threshold for interior residential spaces. As discussed above, winter weather substantially reduces outdoor use of residential properties. Therefore, most snowmobile noise observed from residential land uses would be heard from building interiors rather than exteriors.

New Snowmobile Trailer Loading Area

The County's proposed snowmobile trailer loading area would be located about 500 feet from the nearest existing residences (to the west), about 500 feet from the Bear Valley School (to the southeast), and about 200 feet north of proposed Building 15. At these distances, the trailer loading area is not expected to substantially increase noise levels at these sensitive receptors.

Noise from Snowmobile Parking at Transportation Center

The proposed employee housing facility would be located in the northwest portion of the snowmobile parking area behind the Transportation Center, and Building 3 of the South Village would be located adjacent to this snowmobile parking area. This parking area receives less activity than the Lodge Lot. Therefore, noise levels at the proposed employee housing facility are a bit lower than those measured near the Lodge Lot. As shown in Appendix J (Figure Noise-1), the one-hour Leq (or average noise levels) at the Lodge Lot ranged from 58 to 65 dB between 11 a.m. to 4 p.m., and is assumed to represent noise levels for a typical weekend day.

These residences would be exposed to short-term maximum noise levels up to 90 dBA during periods of peak snowmobile activity at the parking area, with peak-hour noise levels of approximately 68 dBA Ldn. Noise levels at other times would be lower. Because noise levels at the parking area would exceed the County's threshold of 60 dBA Ldn outside a residence (i.e., the employee housing and Building 3), snowmobile noise impacts on these residences would be considered significant. Interior noise levels would be about 25 dBA lower than exterior noise levels (i.e., 43 dBA Ldn), which is below the County's 45-dBA Ldn threshold for interior residential spaces. As discussed above, winter weather substantially reduces outdoor use of residential properties. Therefore, most snowmobile noise observed from residential land uses would be heard from building interiors rather than exteriors.

Summary of Noise Impacts from Snowmobiles

In summary, snowmobile noise related to changed circulation patterns and the new parking and loading areas would exceed the County's exterior noise threshold at the Sundowner Condominiums and some single-family homes within the subdivision. Also, locating the employee housing facility and South Village residences in or adjacent to the snowmobile parking area behind the Transportation Center would expose these new residences to exterior noise levels that exceed County standards. This is a significant impact.

Although the U.S. Environmental Protection Agency (EPA) has adopted air quality emission standards for recreational vehicles, including snowmobiles, off-highway motorcycles, and ATVs, they have not adopted any noise regulations. Snowmobile manufacturers in some cases design snowmobiles that already meet voluntary noise standards for snowmobiles (EPA 2008). Snowmobile manufacturers are continuing to develop technology changes for new quieter machines that would reduce the noise impact over time (Price 2008).

Mitigation Measure N-4: Re-establish the 2006/2007 snowmobile trail through Open Space Parcel E and allow snowmobile access through the Lodge Lot to the trail.

Implement Mitigation Measures SNO-2a and SNO-2b.

Implementing this measure would reduce new snowmobile pass-by noise within the subdivision generated by snowmobilers seeking shorter routes between the east and west sides of town. The noise reduction measures included in SNO-2a (e.g., trenching the trail through the snow, creating a sound wall with snow, enforcing snowmobile noise restrictions) would also help reduce snowmobile noise at homes near the trail.

However, snowmobile noise would still cause exterior noise levels to exceed County standards for outdoor activity areas in other locations (e.g., Sundowner Condominiums, South Village, and possibly homes near Open Space Parcel E). In these locations, interior noise levels would be expected to meet the County's interior noise standard of 45 dB Ldn limit. For these reasons, additional mitigation is not proposed.

Level of Significance After Mitigation: Significant and unavoidable because, even with implementation of Mitigation Measure N-4, snowmobile noise levels would exceed the County's exterior noise limits at some locations, including the Sundowner Condominiums, the employee housing facility, the South Village, and possibly some homes near Open Space Parcel E.

Impact N-5 (Cumulative): Project traffic, in combination with cumulative project traffic, would substantially increase traffic noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road in 2027.

Project traffic combined with traffic from other approved or pending projects and anticipated growth in the vicinity would increase noise levels on roadways in the project vicinity in the year 2027 (assumed build-out year of all projects). To assess the effect of project traffic on roadside noise levels (at 50 feet from the centerline) for the year 2027, noise level projections were made using the FHWA noise prediction model (Table 3.12-8).

Without the project, cumulative traffic noise levels on roadways in the project vicinity would increase by 1.1 to 6.7 dBA from existing noise levels, resulting in noise levels ranging from 49.0 dBA Leq to 64.1 dBA Leq. As noted earlier, Ldn noise levels are typically within ±2 dBA of the peak-hour Leq under normal traffic conditions (Caltrans 1998). The increase in noise levels along most roads would be minor (less than 5 dBA and negligible based on existing noise levels); however, traffic noise along the north/south segment of Creekside Drive~~ north of Quaking Aspen Road (i.e., north of the Creekside Drive Extension)~~ would increase by 7 dBA Leq (from an existing level of 48.2 dBA to 55.0 dBA). The increase in traffic noise along the north/south segment of Creekside Drive ~~between Quaking Aspen and~~south of No Name Road~~s~~ would be noticeable to the existing homes along Creekside Drive. Although traffic and noise analyses were not conducted along Creekside Drive north of No Name Road, it can be assumed that the increase in traffic noise would be noticeable at future residences in this area and at the Bear Valley School. Because noise levels along this segment would exceed the 5-dBA criterion in a location where noise levels are below 60 dBA Leq,

impacts to existing and future residences and Bear Valley School along Creekside Drive from cumulative traffic noise without the project would be considered significant.

Cumulative traffic noise levels in year 2027 with the project would be further increased along Creekside Drive and would be considered significant. Cumulative 2027 traffic noise with the project along this roadway would increase to 56.7 dBA Leq, resulting in increased noise levels of 8.5 dBA Leq from existing. Because noise levels along this segment would exceed the 5-dBA criterion in a location where noise levels are below 60 dBA Leq, cumulative traffic noise impacts on residences would be considered significant. Project traffic would constitute a cumulatively considerable incremental contribution to this significant noise impact.

Table 3.12-8. Summertime Existing, Cumulative, and Cumulative Plus Project Traffic-Related Noise Levels

Roadway Segment	Modeled P.M. Peak-Hour Noise Levels (dBA Leq)[a,b]				
	Existing	Cumulative No Project 2027	Cumulative Increase (No Project)[c]	Cumulative + Project 2027	Project-Related Increase[c]
SR 4 (east of Bear Valley Road)	62.4	63.8	1.4	64.4	0.6
SR 4 (west of Bear Valley Road)	62.8	64.1	1.3	65.4	1.4
Bear Valley Road (north of Quaking Aspen Road)	53.0	55.2	2.2	56.4	1.2
Bear Valley Road (south of Quaking Aspen Road)	54.3	55.9	1.6	56.6	0.6
Quaking Aspen Road (east of Bear Valley Road)	47.5	49.0	1.4	48.7	-0.2
Quaking Aspen Road (west of Bear Valley Road)	49.5	51.3	1.8	51.5	0.2
Bear Valley Road (south of No Name Road)	53.1	54.2	1.1	55.4	1.1
No Name Road (east of Bear Valley Road)	51.7	53.1	1.5	54.8	1.6
Creekside Drive (north/south segment ~~of Quaking Aspen Road~~)	48.2	55.0	**6.7**	56.7	1.7

[a] Traffic noise levels were predicted using the FHWA roadway noise prediction model (FHWA-RD-77-108) based on traffic data obtained from the traffic study prepared for this project (LSC Transportation Consultants, Inc. 2008). Predicted noise levels assume no natural or man-made shielding (e.g., vegetation, berms, walls, buildings).

[b] Distance from centerline of road is 15 meters (approximately 50 feet) for all modeled roadways.

[c] Numbers may not sum because of rounding. Significant increases are indicated in bold numbers.

Source: Miller Environmental Consultants. 2008.

Level of Significance Before Mitigation: Significant.

Although project and cumulative traffic would cause a significant increase (8.5 dBA) in noise levels along the north/south segment of Creekside Drive ~~north of Quaking Aspen Road~~, the resultant project noise level (56.7 dBA) would remain below the County General Plan's recommended noise level of 60 dBA that is considered acceptable for residential outdoor activity areas (Table 3.12-1); with 20 to 25 dB of attenuation from the buildings, interior spaces would be expected to easily meet the 45 dB Ldn limit (Table 3.12-1). For these reasons, mitigation is not proposed.

Level of Significance After Mitigation: Significant and unavoidable because noise level increases would be substantial; however, no feasible mitigation measures are available to reduce the impact.

Significant and Unavoidable Impacts

Impact N-1: Project construction would result in temporary noise impacts that could affect adjacent and project residences.

Impact N-3: Project traffic would increase traffic noise levels in the project vicinity, and would substantially increase noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road at peak times.

Impact N-4: Changes to snowmobile circulation and parking areas would increase noise levels at some sensitive receptors in the project vicinity, and locating new residential uses near the Transportation Center snowmobile parking area would expose project residents and employees to excessive noise levels.

Impact N-5 (Cumulative): Project traffic, in combination with cumulative project traffic, would substantially increase traffic noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road in 2027.

3.13 RECREATION

This section evaluates impacts on summer recreation at Bear Lake from increased drawdown of lake levels caused by increased project demand for stored lake water, and increased recreational use of Bear Lake and its beach facilities by project residents and guests. Increased recreational use of snowmobiles on Bear Valley roads is evaluated in Section 3.10 (Snowmobile Circulation and Parking). All other impacts related to construction and operation of the Village Lift and the new ski runs are evaluated in other sections of the Environmental Impact Report (EIR).

The new ski runs connecting the ski area to the town would increase the number of skiers and expand the ability levels of the skiers (i.e., more novice skiers) using Bear Valley roads to return to the town or the Village Lift. As discussed in Section 3.10 (Snowmobile Circulation and Parking), snowmobiles commonly share Bear Valley roads and trails with skiers and pedestrians, including small children, yet collisions are uncommon. Few conflicts between snowmobiles and skiers/pedestrians occur now, and such conflicts are not expected to increase due to the increase in snowmobile ridership and skier activity (including more novice skiers) on County roads that would result from the project. This issue is not discussed further.

The Village Lift would add skier capacity to the ski area and is expected to increase use of the ski area. However, the lift would not cause or accelerate substantial physical deterioration of the ski area. The ski area is a professionally managed, fee-based facility. It is reasonable to assume that the ski area would invest a portion of the revenues generated by additional lift ticket sales toward maintenance and facility upgrades that would compensate for any deterioration of the ski area caused by increased use of the ski area. This issue is not evaluated in the EIR.

The project would increase recreational use of U.S. Forest Service (USFS) land, thereby increasing demand for patrol and law enforcement staff. Recreational activities around Bear Valley are related primarily to the abundant opportunities in the surrounding Stanislaus National Forest (SNF), including downhill and cross-country skiing, snowboarding, snowmobiling, off-highway motorcycle riding (i.e., dirt biking), mountain bicycling, and hiking. The project would increase recreational use of USFS land, including unauthorized summer use of the ski area when the facilities are closed and ski area staff is reduced. Unauthorized dirt and mountain biking has damaged ski area facilities, and increased visitation to Bear Valley generated by the project could increase this type of unauthorized activity. The project would also increase use of trails and backcountry on USFS land, increasing demand for patrols. Additional staff for safety patrols and law enforcement on USFS land, possibly by County Sheriff's Department staff, would effectively address this issue (SNF 2008).

As discussed in Impact PS-1, however, the need for increased staffing does not constitute a change to the physical environment and is therefore not considered further in the EIR. However, the County prepared a Fiscal Impact Analysis (FIA) for the Bear Valley Village project that evaluates the need for additional County staff to serve the project and whether tax revenues from the project over time would be sufficient to pay for additional staff to serve the project. The FIA is available for review on the County's website.

Summer use of the Village Lift is not proposed. The ski area has expressed a desire to use the Village Lift during the summer for mountain bike, hiking, and sight-seeing access at some point in the future. This would require prior approval and environmental review by the U.S. Forest Service (USFS) and modification of the ski area's special use permit to allow use of the Village Lift for these purposes. Because summer use of the Village Lift is not proposed, impacts related to summer use are not evaluated in the EIR.

3.13.1 Regulatory Setting

Bear Valley Residents Covenants, Conditions, and Restrictions

Bear Valley Residents, Inc. (BVRI) serves as the homeowners association for the subdivision. BVRI has jurisdiction to manage certain open space common areas within the subdivision that are subject to BVRI's adopted Covenants, Conditions, and Restrictions (CC&Rs). These CC&Rs establish rules governing the use of the common areas within the subdivision.

BVRI's jursdiction includes the Beach Common Area (beach) at Bear Lake. BVRI manages the beach for the exclusive use and enjoyment of BVRI association members and others who pay the association's user fees. Beach use is subject to the terms and conditions of the CC&Rs. The BVRI maintains the right to charge admission and other fees or to limit the number of guests of members who may use the beach.

3.13.2 Environmental Setting

Bear Valley is a mountain resort community surrounded by the Stanislaus National Forest. An abundance of recreational opportunities are available nearby. Winter recreation includes downhill skiing, cross-country skiing, snowmobiling, and snowshoeing. Summer recreation includes hiking, fishing, mountain and road bicycling, camping, boating, and swimming. Several lakes are located within 5 miles of Bear Valley that provide ample recreation for Bear Valley residents and visitors. These include Lake Alpine, Utica Reservoir, Union Reservoir, and Spicer Meadows Reservoir.

Bear Lake is a 15-acre man-made reservoir near the northern end of Bear Valley. Bear Lake is impounded by Reba Dam and outflows into Bear Creek when the dam is opened and water is released into the creek, typically in the fall and spring. The Lake Alpine Water Company (LAWC) operates Bear Lake for storage and withdrawal of domestic water supply. Bear Lake has a storage capacity of 360 acre-feet (AF), and LAWC holds water rights for ~~240~~ 460 AF of storage for municipal and recreational purposes. LAWC's ~~existing~~ water rights allow storage to occur from October 1 to ~~June~~ July 31. LAWC is allowed to withdraw a maximum of ~~140~~ 360 AF per year (AFY) of stored lake water (Diane Wagner Consulting 2008; SWRCB 2009).

Withdrawal of stored lake water causes drawdown (i.e., lowering of the lake level) starting in early July, when the lake is typically at its highest level, and ends in late November, when the lake is typically at its lowest level (Orvis 2008).

LAWC's historic water use for the 13-year period from 1995 through 2007 averages 113 AFY, although recent improvements in LAWC's water conservation practices reduced per-customer usage in 2007. A reduced level of per-customer water usage is expected to continue in the future (Diane Wagner Consulting 2008).

BVRI manages the beach facilities on the north shore of the lake. These facilities include imported sand, picnic tables, a volleyball net, trash cans, and portable toilets. No running water or electricity is available. Activities include swimming, volleyball, picnicking, sunbathing, and canoeing. The peak use season is about two months long, starting in early July and ending on Labor Day weekend (early September). The peak use days are weekends, especially around holidays. The lake's relatively cool water temperature limits the optimal swimming season to a one-month period around August. Drawdown from withdrawal of stored lake water does not impair recreational use of the lake. Beach use is officially limited to BVRI members, their guests, and others who pay the association's user fees. However, this restriction is rarely enforced (English 2008).

3.13.3 Impact Analysis

Methodology

Information about the Bear Lake beach facilities and effects of lake drawdown on recreation was developed through personal communications with BVRI representatives. Information about water storage, supply, and demand is based on the Bear Valley Village Water Supply Assessment (Appendix D; Diane Wagner Consulting 2008). Information about lake drawdown season is based on personal communications with LAWC representatives.

Levels of Significance

Adverse impacts related to recreation would be considered significant if the project would:

- Increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment
- Substantially impair recreational use of Bear Lake through drawdown of stored water due to increased water demand

Impacts and Mitigation Measures

Impact REC-1: The project would increase use of the Bear Lake beach facilities, but would not cause deterioration of the facilities.

The project would increase the number of residents and visitors using the Bear Lake beach facilities. Village property owners would not be required to join BVRI; however,

some of the new residents may choose to pay the BVRI association dues, thereby allowing them to use the beach. Increased use of the beach facilities by project residents and guests is not expected to cause or accelerate substantial physical deterioration of the beach facilities (English 2008). This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because the project would not cause or accelerate substantial physical deterioration of the beach facilities.

Impact REC-2: The project's increased water demand would increase drawdown of Bear Lake but would not substantially impair recreational use of the lake.

The project's water demand (and its effect on lake drawdown) would increase after each project phase becomes operational. In 2015, project demand would be about 78 AF per year (AFY) (a 70 percent increase over existing Bear Valley water use). At full build-out project demand would be about 139 AFY, representing a 120 percent increase over existing water use (Diane Wagner Consulting 2008). The project would therefore double the amount of water withdrawn from Bear Lake.

Lake drawdown starts in early July when the lake is typically at its highest level, and ends in late November. The lake's peak recreational use season starts in early July and ends in early September, thereby coinciding with the initial two months of the drawdown period. Drawdown does not impair recreational use of the lake, and increased drawdown caused by the project's water demand is not expected to substantially impair recreational use of the lake (English 2008). This is a less-than-significant impact.

Level of Significance Before Mitigation: Less than significant because lake drawdown caused by the project would not substantially impair recreational use of the lake.

Significant and Unavoidable Impacts

None.

3.14 SOILS

This section describes the subsurface soil characteristics of the North Village and Village Center project area, describes a potential impact related to liquefaction hazards, and recommends a mitigation measure to eliminate significant impacts related to liquefaction hazards. The discussion contained in this section is based upon the letter report titled *Preliminary Geotechnical Conclusions* (Condor Earth Technologies, Inc. 2006) (Appendix K).

As discussed in Section 3.0 (Introduction to the EIR), impacts related to seismic hazards, slope stability, avalanche hazards, expansive soils, lateral spreading, subsidence, and collapse would be less than significant. These issues are not discussed further in the Environmental Impact Report (EIR).

3.14.1 Regulatory Setting

The **International Building Code (IBC)** is a widely adopted model building code in the United States, and is the basis for the California Building Code. Appendix J of the IBC addresses grading activities, including construction within areas subject to liquefaction.

The **Alpine County General Plan** Conservation Element includes a policy requiring soils and geologic reports for all land development projects (Alpine County 2005a). The **Alpine County Building Code** (Ordinance 15.04.010) incorporates by reference the California Building Code to regulate grading.

Environmental Setting

The North Village and Village Center portion of the project area is located on the floor of Bear Valley. The topography is gently rolling and generally sloped toward Bear Creek, which runs through this portion of the project area. Condor Earth Technologies performed a subsurface geotechnical investigation of the North Village and Village Center in October 2005 that included 14 drilled borings and 11 excavated test pits. The investigation did not include the portion of the Village Center south of No Name Road and west of Bear Creek because the site is currently developed with the Bear Valley Lodge and Commercial Center. The investigation also did not include the South Village portion of the project area, which is currently used for County Parking Lots B and C. The following discussion is based on the results of this investigation.

The subsurface soil conditions in the central and southern portion of the project area near Bear Creek are generally different than those encountered in the remainder of the project area. Beneath most of the project area, the soil material from 1 to 3 feet below the ground surface (bgs) is native soil consisting of soft to very stiff and loose to medium dense silt and sandy silt with varying amounts of gravel and cobbles. These layers grade with depth to alluvial soils. The alluvial soils are typically loose to medium-dense sandy silt and silty sand to a depth of about 25 feet, and dense to very dense sand, and silty sand below this depth. Bedrock was encountered at depths of about 23 to 27 feet.

In the central and southern portion of the project area near Bear Creek, the upper layer of soil is fill consisting of medium-dense sand that extends to a depth of about 1 foot.

The soil layers encountered beneath this fill are medium-dense clayey sand, soft to medium-stiff clay, and loose to medium-dense sand. Lenses or interlayers of cobbles and boulders are present.

Groundwater was measured at depths of about 10 to 18.5 feet in the borings during drilling, which was performed in October 2005 following the summer dry season. Considering the project area is adjacent to Bear Creek, groundwater levels may rise higher than this level, possibly to about 2 feet bgs during the early spring when snow melts.

The central and southern portion of the project area includes potentially liquefiable soils. Liquefaction is a condition where a significant loss of strength and stiffness of soil occurs during earthquake shaking. Soil types susceptible to liquefaction include saturated, very loose to medium-dense sand with varying amounts of silt and silt with varying amounts of sand. This soil type occurs below the central and southern portion of the North Village and Village Center project area (Condor Earth Technologies, Inc. 2006).

3.14.2 Impact Analysis

Methodology

The impact analysis is based on site-specific subsurface soil conditions and preliminary conclusions from the preliminary geotechnical study for the project (Condor Earth Technologies, Inc. 2006).

Levels of Significance

Adverse impacts related to soils would be considered significant if the project would expose people or structures to impacts involving:

- A geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impacts and Mitigation Measures

Impact Soils-1: The project could expose people or structures to hazards related to liquefaction.

The central and southern portions of the project area include potentially liquefiable soils. Liquefaction is a condition where a significant loss of strength and stiffness of soil occur. Reconsolidation of soil following liquefaction could result in ground surface settlements and damage to buildings and improvements supported on shallow foundations. Because the uppermost liquefiable soil beneath the project area is relatively shallow, liquefaction could result in ground surface failures such as sand boils and fissures (Condor Earth Technologies, Inc. 2006).

Liquefaction could cause the ground surface to settle up to about 4 inches in the southern portion of the project area. The settlement potential generally decreases to the north, and there is negligible settlement potential in the north side of the project area. Because liquefaction-induced settlement depends on the total thickness of liquefiable soil, and this thickness varies, there is potential for differential settlement. Differential settlement from liquefaction in the central and southern portion of the project area could be up to about 2.5 inches in 30 horizontal feet. This amount of total and differential settlement is more than is usually tolerable for buildings supported on conventional spread footings.

The subsurface geotechnical investigation did not include the portion of the Village Center south of No Name Road and west of Bear Creek because the site is currently developed with the Bear Valley Lodge and Commercial Center. The investigation also did not include the South Village portion of the project area, which is currently used for County Parking Lots B and C. The potential for liquefaction hazards in these areas is therefore unknown.

In summary, the project could expose people or structures within the portion of the project area that was subject to the subsurface geotechnical investigations to a known hazard related to liquefaction. This is a significant impact. If the project were to expose people or structures to unkown liquifaction hazards within the portions of the project area that were not investigated, this would also be a significant impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measure Soils-1a: Perform subsurface geotechnical investigations.

The County will require the applicant to perform subsurface geothechnical investigations within the portions of the project area that were not previously investigated. Specifically, these areas shall include the South Village and the portion of the Village Center south of No Name Road and west of Bear Creek. The resulting investigation reports shall include recomendations for feasible engineering techniques to protect project structures from liquefaction hazards revealed during the investigation(s). As part of the application for conditional use permit (CUP) and/or tentative map (TM) approvals for any phase of development that would involve construction activity, the applicant shall submit the geotechnical investigation report(s) pertaining to the requested development phase.

Mitigation Measure Soils-1b: Implement proper engineering techniques to protect structures from liquefaction hazards.

The County will require the applicant to identify and implement adequate measures to ensure proper engineering techniques are included in the project to protect structures within the North Village and Village Center from liquefaction hazards based on recommendations from the preliminary geotechnical study (Condor Earth Technologies, Inc. 2006) or other qualified engineer as part of the application for CUP and/or TM approvals. The measures shall be approved by the County prior to approval of a CUP and/or TM that would involve construction activity for the North Village and Village Center.

Appropriate measures may include, but not be limited to the following:

- Excavation of liquefiable soil, backfilling the excavation with compacted soil, and constructing a mat foundation over the backfill
- Construction of deep foundations supported by driven or drilled piles
- Installation of rammed aggregate piers (RAPs) and using a mat foundation. RAPs are constructed by drilling an approximate 30-inch diameter hole beneath shallow foundations, and replacing the excavated soil with compacted aggregate fill.

If the subsurface geotechnical investigations performed pursuant to Mitigation Measure Soils-1a identify potential liquefaction hazards within other portions of the project area, the applicant shall also identify and implement adequate measures to ensure proper engineering techniques are included in the project to protect structures within those areas. These measures shall be based on the recommendations of the geotechnical study or other qualified engineering report as part of the application for CUP and/or TM approvals that would involve construction activity. These measures shall be approved by the County prior to approval of a CUP and/or TM for the relevant project phase.

Level of Significance After Mitigation: Less than significant because these mitigation measures would ensure proper engineering techniques are included in the project to protect buildings and the public from liquefaction hazards.

Significant and Unavoidable Impacts

None.

CHAPTER 4
CUMULATIVE IMPACTS

4.1 INTRODUCTION

This Environmental Impact Report (EIR) provides an analysis of cumulative impacts of the project, as required by California Environmental Quality Act (CEQA) Guidelines Section 15130. Cumulative impacts are defined in CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines Section 15355[b]).

Consistent with CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this EIR focuses on significant or potentially significant cumulative impacts. CEQA Guidelines Section 15130(b) provides, in pertinent part:

> The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:
>
> Either:
>
> (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
>
> (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

This cumulative impact analysis uses a combination of the list approach and the summary of projections approach, depending on the environmental topic being evaluated. The significance thresholds presented in Chapter 3 were used to assess

cumulative impacts of the project and related projects. Impacts of past projects are already built into the baseline for the project's impact analysis (see Chapter 3).

4.2 RELATED PROJECTS

Reasonably foreseeable probable future projects include the residential development expected to occur in Bear Valley through 2027 and reasonably foreseeable improvements at the ski area.

4.2.1 Bear Valley Projects

A list of approved and pending residential projects within Bear Valley was provided by the Alpine County Planning Department (Table 4-1). It is assumed that these projects would be built by the year 2027, which is consistent with the build-out year used for the cumulative traffic analysis provided in Section 3.9 (Transportation and Circulation). Based on the following list, development in Bear Valley (in addition to the project) would include approximately 381 residential units plus 10 second units for a total of 391 units.

Table 4-1. Current Approved or Pending Residential Projects

Project Name	Status	Use
Black Forest	Approved	45 multi-family dwelling units
Silver Mountain	Approved	96 multi-family dwelling units (over 4 phases)
Bearpaw Ridge	On Hold	40 single-family dwelling units proposed in most recent application; 102 multi-family dwelling units are the maximum allowed by zoning
Build-out of the Old Subdivision	Approved	22 single-family dwelling units, plus 2 second units
Build-out of the New Subdivision	Approved	99 single-family dwelling units, plus 8 second units
Build-out of Creekside	Approved	17 multi-family dwelling units

According to the *Market Analysis and Development Strategy for Bear Valley Village, Bear Valley, California* (Economics Research Associates 2006), a market exists for 50 to 60 dwelling units per year in the Bear Valley area. Over 20 years, this corresponds to 1,100 additional dwelling units.

As shown in Table 4-1, the approved and pending projects in Bear Valley (other than the project) would add 391 dwelling units to the area. In addition, the project would add a net of 491 for-sale Equivalent Dwelling Units (EDUs) (including the lock-off units), for a total of 882 units. These developments represent the build-out of Bear Valley north of State Route (SR) 4. Subtracting this total from the potential 20-year development absorption of 1,100 units, as many as 218 units could be absorbed by the market south of SR 4. It is important to note that the applicant is not proposing any development south of SR 4.

4.2.2 Bear Valley Ski Area

The ski area is currently in the process of requesting modification of its U.S. Forest Service (USFS) Special Use Permit (SUP) to allow several ski area improvements. In addition to the Village Lift and return ski runs that are included in the project, the ski area is also proposing a new restaurant and day lodge at the top of the mountain, expansion and remodel of the existing day lodge, a parking lot addition to allow for increased capacity, replacement of the existing Super Cub chair lift with a high-speed detachable quad chair lift, and widening or regrading of several existing ski runs.

4.3 CUMULATIVE IMPACTS AND MITIGATION MEASURES

This section discusses cumulative impacts expected to result from implementation of the proposed and related projects. Some of the projects' environmental effects would not contribute to cumulative impacts because the effects would be site-specific (i.e., project-specific) and would not contribute to any cumulative impacts. Examples include environmental effects related to land use, soils, and cultural resources. Cumulative impacts relating to transportation and circulation, air quality, and noise are discussed in their respective sections in Chapter 3.

4.3.1 Population and Housing

The Bear Valley Master Plan (BVMP) is the planning document for all development within Bear Valley. The BVMP area is the geographic scope of the area affected by cumulative impacts related to growth projections. Consistency with the BVMP is used to determine the significance of cumulative population and housing impacts. The BVMP plans for a total build-out of 2,052 units, which represents an addition of 1,621 residential units to Bear Valley's 431 existing units. The BVMP EIR estimated that build-out of the BVMP would increase Bear Valley's 1978 permanent population of 175 residents by about 431 residents, resulting in a total permanent population of around 600 residents. The BVMP area combined with nearby communities to the west represents the geographic area affected by cumulative impacts related to employment housing.

Cumulative Impact PHE-1: The project, in combination with other reasonably foreseeable projects in Bear Valley, would contribute to a cumulative increase in population and housing that is consistent with planned growth identified in the BVMP.

The project would add a net of 491 for-sale EDUs (including the lock-off units) plus a 50-person employee housing facility. As shown in Table 4-1, the approved and pending projects in Bear Valley would add 391 dwelling units to the area. Another 218 units could be constructed south of SR 4 within a reasonably foreseeable 20-year horizon. The proposed and related projects, therefore, would add 1,121 EDUs to Bear Valley by 2027, for a total of 1,552 units. Because these projects would include fewer residential units than the 2,052 units allowed in the BVMP, foreseeable development would be consistent with the planned housing growth identified in the BVMP. Therefore, the cumulative housing impact would be less than significant.

The approved and pending projects shown in Table 4-1 include 260 multi-family dwelling units and 131 single-family dwelling units. As discussed in Section 3.2 (Population, Housing, and Employment), Bear Valley's permanent occupancy rate for multi-family units is 0.6 percent. Bear Valley's single-family homes have a permanent occupancy rate of 24 percent. Applying these rates to the proposed and pending projects, these projects would generate about 33 new permanently occupied housing units. Applying Bear Valley's average household rate of two persons per unit, these projects would generate a new permanent population of 66 within Bear Valley. As discussed in Section 3.2, the project would directly generate about six new permanent residents. Assuming all 218 units south of SR 4 would be single-family units, foreseeable development south of SR 4 could generate another 105 permanent residents. The proposed and related project could therefore increase Bear Valley's population by about 177 residents. This is less than the 431 residents estimated in the BVMP EIR for full build-out of the BVMP.

Reasonably foreseeable population growth is therefore well within the planned population growth identified in the BVMP EIR for build-out of the BVMP. The cumulative population impact would be less than significant.

Level of Significance Before Mitigation: Less than significant because the cumulative increase in population and housing would fall within planning projections.

Cumulative Impact PHE-2: The project, in combination with other reasonably foreseeable projects in and near Bear Valley, could generate demand for employee housing in excess of available supply.

As discussed in Section 3.2, the project would generate new construction jobs and other new employment opportunities related to proposed or expanded commercial and ski area facilities. The related projects would also generate new construction jobs, and the ski area improvements would create new seasonal employment at the ski area. If cumulative demand for employee housing were to exceed the available supply, this would be a significant cumulative impact.

Level of Significance Before Mitigation: Significant.

Cumulative Mitigation Measure PHE-2: Develop an Employee Housing Implementation Plan.

Implement Mitigation Measure PHE-3.

Level of Significance After Mitigation: Less than significant because the plan would ensure adequate employee housing is available for each phase of project development, thereby reducing the project's contribution to this cumulative impact to a less-than-significant level.

4.3.2 Public Services

The geographic area potentially affected by cumulative impacts on public services includes the service area for the Bear Valley Public Safety Division of the Alpine County

Sheriff's Department, which generally corresponds to the town of Bear Valley and nearby portions of Alpine County, and the enrollment area for the Bear Valley Elementary and High schools.

Cumulative Impact PS-1: The project, in combination with other reasonably foreseeable projects in Bear Valley, would contribute to a cumulative increase in demand on local service providers, resulting in the need for new equipment and facilities.

As discussed in EIR Section 3.3 (Public Services), the increased visitation and population (i.e., new permanent residents and employees) generated by the project and other reasonably foreseeable projects in Bear Valley would increase the demand for police protection, fire prevention, emergency medical services, and schools. The corresponding service providers would likely require an increase in staffing, funding, and possibly facilities. The project would require new firefighting and emergency medical equipment. New elementary school students generated by the project could cause displacement of the existing high school classroom, requiring construction of a new high school facility. Additional residential development in Bear Valley would also increase the demand on these service providers, resulting in the need for additional equipment and facilities. Cumulative impacts on police protection, fire prevention, emergency medical services, and schools would be significant.

Level of Significance Before Mitigation: Significant.

Cumulative Mitigation Measure PS-1a: Provide funding for new firefighting equipment required to serve the project.

Implement Mitigation Measure PS-1a.

Cumulative Mitigation Measure PS-1b: Provide funding for new emergency medical equipment required to serve the project.

Implement Mitigation Measure PS-1b.

Cumulative Mitigation Measure PS-1c: Assess developer fees to help pay for additional facilities, or provide other methods for mitigating the impact in a manner acceptable to ACUSD.

Implement Mitigation Measure PS-3.

Level of Significance After Mitigation: Less than significant because the County would ensure adequate equipment is in place to serve each phase of development, equipment required to serve the project would be funded by the applicant; the payment of school impact fees is full and complete mitigation for the impacts on schools, and because alternative methods for mitigating this impact would need to meet the acceptance of ACUSD. This mitigation measure would reduce the project's contribution to this cumulative impact to a less-than-significant level.

4.3.3 Utilities and Service Systems

The geographic area potentially affected by cumulative impacts related to utilities includes the service areas of the Lake Alpine Water Company (LAWC) and the Bear Valley Water District (BVWD).

Cumulative Impact U-1: The project plus all reasonably foreseeable projects would create water demands that can be met by existing infrastructure ~~but cannot be met by existing~~ and water supply entitlements.

LAWC's water conveyance facilities provide adequate capacity to serve the project and other reasonably foreseeable projects (Diane Wagner Consulting 2008). No other water conveyance facilities would be required at this time. This is a less-than-significant impact.

Table 4.3-1 provides LAWC's estimated water demand through year 2030. These estimates include the project and other reasonably foreseeable projects, including Silver Mountain, Black Forest/High Camp, and Creekside. Cumulative water demand in 2030 would be 315 acre-feet per year (AFY) (Diane Wagner Consulting 2008). LAWC's water rights total 577 AFY, which would be sufficient to meet the cumulative water demand of 315 AFY. This is a less-than-significant impact.

~~If LAWC's pending water rights amendments are approved, LAWC's water rights would total 577 AFY, which would be sufficient to meet the cumulative water demand of 315 AFY. Based on LAWC's existing water rights, however, cumulative water demand for the project and other reasonably foreseeable projects would exceed its current water supply of 182 AFY sometime between 2010 and 2015. This is a significant impact.~~

Table 4-2. LAWC Projected Water Demand through Year 2030

Year	Without Project		Bear Valley Village Project	Total LAWC Water Demand (AFY)
	Water Service Customer	Water Demand (AFY)		
2008	500	125	0	125
2009	527	132	0	132
2010	554	139	14	153
2015	657	164	78	242
2020	672	168	139	307
2025	687	172	139	311
2030	702	176	139	315

Source: Diane Wagner Consulting 2008

Level of Significance Before Mitigation: ~~Significant~~ Less than significant because LAWC has sufficient water rights to meet cumulative water demand through the year 2030 and because LAWC's water conveyance facilities provide adequate capacity to serve the project and other reasonably foreseeable projects.

~~*Cumulative Mitigation Measure U-1: Provide proof of available water supply prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.*~~

~~Implement Mitigation Measure U-1.~~

~~**Level of Significance After Mitigation: Less than significant because project development would not occur without the verification of available water supply, thereby reducing the project's contribution to this cumulative impact to a less-than-significant level.**~~

Cumulative Impact U-2: The project plus all reasonably foreseeable projects would generate increased wastewater, resulting in potential exceedance of the sanitary sewer system capacity and exceedance of BVWD's wastewater disposal capacity.

BVWD's existing wastewater treatment facilities can accommodate wastewater generated by the proposed and related projects within the BVWD service area (BVWD 2008a).

The existing 8-inch pipelines within Bear Valley Road and Creekside Drive must be evaluated to determine if their capacity could accommodate peak wastewater flows from the project and other reasonably foreseeable projects. There is potential for the project and other reasonably foreseeable projects to exceed the capacity of existing sewer lines. This is a significant impact.

BVWD wastewater disposal facilities have the physical capacity to accommodate an additional 1,127 EDUs, and could therefore accommodate the 1,100 new EDUs expected to be added to the BVMP area over the next 20 years (including the project). However, this additional capacity is contingent on BVWD providing tertiary treatment by October 1, 2010. On September 11, 2008, the Regional Water Quality Control Board (RWQCB) granted an extension of its previous deadline of October 1, 2008. BVWD is currently pursuing an assessment district to finance the tertiary treatment project (RWQCB 2008). If BVWD is unable to provide tertiary treatment by October 1, 2010, no additional capacity would be available to serve the proposed or reasonably foreseeable projects. This is a significant cumulative impact.

~~However, authorized use of this additional capacity is contingent on BVWD upgrading to tertiary treatment by October 1, 2008, although BVWD has recently submitted a request to the Regional Water Quality Control Board (RWQCB) to extend this deadline until November 2009 (Ritchie 2008). BVWD is currently pursuing an assessment district to finance the tertiary treatment project and, according to BVWD, it is highly unlikely that these facilities would be constructed by October 1, 2008 (BVWD 2008a). In that situation, no additional capacity would be available to serve the proposed or reasonably foreseeable projects. This is a significant cumulative impact.~~

Level of Significance Before Mitigation: Significant.

Cumulative Mitigation Measure U-2a: Provide proof of available sanitary sewer pipeline capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

Implement Mitigation Measure U-2a.

Cumulative Mitigation Measure U-2b: Construct additional sanitary sewer system improvements if needed to serve the project.

Implement Mitigation Measure U-2b.

Cumulative Mitigation Measure U-2c: Provide proof of available wastewater disposal facility capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

Implement Mitigation Measure U-2c.

Cumulative Mitigation Measure U-2d: Require payment of fair-share funding for BVWD wastewater disposal facility improvements.

Implement Mitigation Measure U-2d.

Level of Significance After Mitigation: Less than significant because construction of additional project EDUs beyond the capacity of sanitary sewer and wastewater facilities would not occur, The applicant would construct any BVWD wastewater facility improvements needed to serve the project, and any significant impacts related to sanitary sewer and wastewater disposal facilities improvements would be mitigated. This would reduce the project's contribution to this cumulative impact to a less-than-significant level.

Cumulative Impact U-3: The project plus all reasonably foreseeable projects could contribute cumulatively to an exceedance of Waste Discharge Requirements (WDRs) for copper.

BVWD has no information to indicate that the project would cause exceedances of particular WDR water quality limits; however, copper is currently a contaminant of particular concern. Order No. R5-2005-0139 limits copper concentrations in BVWD's wastewater discharge to Bloods Creek to a monthly average of less than 0.95 micrograms per liter (µg/L) and a daily maximum of less than 1.9 µg/L. BVWD has measured copper concentrations in excess of these limits. BVWD is implementing corrosion control programs and analyzing the potable source water and wastewater copper concentrations to determine the cause of exceeding the limits (see scoping letter, BVWD 2007, Appendix D).

Wastewater generated by the proposed and related projects could also contain copper concentrations that would contribute cumulatively to exceedances of Order No. R5-2005-0139 limits. This would be a significant cumulative impact.

Level of Significance Before Mitigation: Significant.

Cumulative Mitigation Measure U-3: Minimize the use of copper water supply and wastewater pipes and fixtures.

Implement Mitigation Measure U-3.

Level of Significance After Mitigation: Using plastic and non-corrosive water conveyance lines would reduce the amount of copper introduced into the BVWD wastewater system by the proposed and related projects. However, BVWD has not yet determined the source of excess copper within its system. It cannot be concluded, therefore, that these measures would reduce the potential for the project to cause BVWD's facility to exceed its WDRs for copper. This cumulative impact remains significant and unavoidable.

4.3.4 Water Quality

The cumulative impact boundaries for water quality impacts encompass the Bear Creek and Bloods Creek watersheds, which drain to the North Fork Stanislaus River. Projects within the watershed could contribute cumulatively to impacts on water quality. The proposed development, the Village Lift, and the proposed ski runs returning to Bear Valley are all located in the Bear Creek/Stanislaus River watershed and are evaluated at a project level. The ski area's other proposed improvements ~~ski area improvements that are not evaluated as part of the project~~ are all located in the Mokelumne River watershed, rather than the Bear Creek/Stanislaus River watershed, and therefore would not contribute to cumulative water quality impacts. Only proposed and related projects in Bear Valley are considered in this analysis.

Cumulative Impact HWQ-1: The project, in combination with other reasonably foreseeable projects in Bear Valley, would result in a cumulative increase in construction and urban pollutants in downstream surface waters (Bear Creek, Bloods Creek, and the Stanislaus River).

Bear Valley drains into the North Fork Stanislaus River via Bear Creek and Bloods Creek. Development within Bear Valley would result in increased surface runoff, which could carry construction and urban pollutants to downstream surface waters. Increased pollutants could adversely affect water quality in Bear Creek, Bloods Creek, and the Stanislaus River. Therefore, cumulative impacts on surface water quality would be significant.

Level of Significance Before Mitigation: Significant

Cumulative Mitigation Measure HWQ-1a: Implement best management practices (BMPs) to control construction-related stormwater runoff, erosion, and sedimentation.

Implement Mitigation Measure HWQ-1.

Cumulative Mitigation Measure HWQ-1b: Implement Water Quality Control Measures

Implement Mitigation Measure HWQ-2.

Level of Significance After Mitigation: Implementation of construction BMPs and other water quality control measures would effectively minimize erosion and inadvertent releases of pollutants generated by the project and would protect downstream water quality from urban pollutants carried by project runoff. These

measures would therefore reduce the project's contribution to this cumulative impact to a less-than-significant level.

4.3.5 Biological Resources

The cumulative impact boundaries for biological resources encompass the town of Bear Valley and the ski area where similar habitats (conifer forest, chaparral, riparian, and wetland habitat) occur. Projects in Bear Valley and at the ski area could contribute cumulatively to impacts on biological resources.

Cumulative Impact BR-1: The project, in combination with other reasonably foreseeable projects, would result in a cumulative loss of habitat, including sensitive habitats such as riparian habitat and wetlands.

Construction activities in areas that contain conifer forests, chaparral, meadows, wetlands, and drainages would result in conversion of the habitats to developed uses, which would adversely affect wildlife that use the habitats and special status plants that may be present in the habitats. The project would result in the ~~loss~~ removal of approximately 10 acres of lodgepole pine forest, 9 acres of red fir forest, 4 acres of mixed conifer/huckleberry oak, 4 acres of montane chaparral, less than 1 acre of montane meadow, less than 1 acre of wetlands and drainages, and less than 30 acres of similar habitats throughout the proposed ski runs. USFS arborists and silviculturalists would identify trees to be removed for ski run improvement and habitat enhancement. Many of the trees would be selectively removed to thin small thickets of trees to enhance the growth and health of the stand and to remove diseased trees posing hazards to facilities and the recreational public from fire or falling limbs. Other projects in Bear Valley and at the ski area could result in conversion of similar habitats to development or ski-related uses, resulting in a cumulatively substantial loss of suitable foraging, nesting, and roosting habitat and possibly a net loss of wetlands. Therefore, cumulative impacts on habitats would be significant.

Level of Significance Before Mitigation: Significant

Cumulative Mitigation Measure BR-1: Avoid adverse impacts to sensitive habitats, and provide appropriate mitigation to offset unavoidable adverse impacts.

The County and the U.S. Forest Service (USFS) will ensure new development in Bear Valley and construction at the ski area comply with applicable biological regulations (i.e., Clean Water Act, Fish and Game Code), as required, and implement mitigation measures to avoid impacts to sensitive habitats such as wetlands and drainages, where feasible, and offset unavoidable impacts through habitat replacement or other measures. Impacts to waters of the U.S. would require proper authorization from the U.S. Army Corps of Engineers. A Streambed Alteration Agreement with California Department of Fish and Game (DFG) would be required for substantial impacts to drainages and adjacent riparian habitat. These regulatory agencies would identify appropriate mitigation, in coordination with the project proponents, to fully mitigate impacts to sensitive habitats. Typical mitigation would include replacing habitat, either through an on-site or off-site conservation easement or use of an existing mitigation bank; construction avoidance measures, such as using construction fencing around avoidance

areas; and implementing BMPs for erosion control (see Section 3.5 [Hydrology and Water Quality], Mitigation Measures HWQ-1 and HWQ-2) during construction.

The County will be responsible for ensuring its projects comply with applicable biological regulations as well as the adopted General Plan, as required, and implement appropriate mitigation measures to reduce impacts.

Level of Significance After Mitigation: This mitigation measure would be effective because impacts to sensitive habitats would be avoided where feasible and affected sensitive habitats would be replaced and compensated where avoidance is not feasible. In addition, BMPs included in wetland mitigation plans and Streambed Alteration Agreements would serve to reduce temporary impacts to wetland and riparian habitat by minimizing the likelihood of inadvertent discharges of sediment and pollutants. Implementation of this mitigation measure would reduce cumulative impacts to sensitive habitats to a less-than-significant level.

Cumulative Impact BR-2: The project, in combination with other reasonably foreseeable projects, would result in direct and indirect impacts on special status plants and wildlife, which could affect regional populations of the species.

Construction activities in areas that contain suitable habitats for special status plants and wildlife could result in adverse impacts on individuals, such as construction disturbance or removal of individual plants, which could affect regional populations of the species. The project could adversely affect special status plants, such as three-bracted onion and sub-alpine cryptantha, and special status wildlife, such as nesting raptors, nesting songbirds, and bats. Other development or construction in areas that contain suitable habitat or support known populations of these species would result in cumulatively substantial impacts on these species. Therefore, cumulative impacts on special status species would be significant.

Level of Significance Before Mitigation: Significant

Cumulative Mitigation Measure BR-2: Avoid adverse impacts on special status species, and provide appropriate mitigation to reduce direct and indirect impacts.

The County and USFS will ensure new development in Bear Valley and construction at the ski area comply with applicable biological regulations (i.e., federal and state Endangered Species Acts), as required, and implement mitigation measures to avoid impacts to special status species where feasible and offset unavoidable impacts through habitat replacement or other measures. For impacts to federally or state listed species, applicants may be required to consult with the U.S. Fish and Wildlife Service (USFWS) or CDFG and obtain incidental take permits. These regulatory agencies would identify appropriate mitigation, in coordination with the applicant, to fully mitigate impacts to special status species. Pre-construction surveys may be required for state and federally listed species, as well as other special status species considered under CEQA. Typical mitigation would include preserving habitat on-site or protecting off-site habitat through a conservation easement; construction avoidance measures, such as establishing buffers around active nest sites, limiting construction to the non-breeding period, or using

construction fencing around avoidance areas; and transplanting sensitive plant populations or relocating sensitive wildlife to a suitable off-site location.

The County will be responsible for ensuring its projects comply with applicable biological regulations and the adopted General Plan, as required, and implement appropriate mitigation measures to reduce impacts.

Level of Significance After Mitigation: This mitigation measure would be effective because impacts to special status species would be avoided where feasible and affected special status plants or wildlife would be relocated to suitable locations where avoidance is not feasible. Implementation of this mitigation measure would reduce cumulative impacts to special status species to a less-than-significant level.

4.3.6 Aesthetics

The cumulative impact boundary for aesthetics encompasses viewsheds that include the town of Bear Valley. The ski area modifications would not contribute to significant cumulative aesthetic impacts in viewsheds that do not also include Bear Valley.

Cumulative Impact A-1: The project would not contribute to a significant cumulative impact related to adverse effects on scenic vistas or degradation of the visual character or quality of Bear Valley.

Some reasonably foreseeable development in Bear Valley would be visible from SR 4 (especially development south of SR 4), and could adversely affect scenic vistas, including vistas from the highway. As discussed in Section 3.8 (Aesthetics), however, the project would not adversely affect any scenic vistas and would not be visually prominent from SR 4. The project would therefore not contribute to a significant cumulative impact on scenic vistas, including vistas from SR 4.

Continued development of Bear Valley would gradually and substantially change the scenic character of Bear Valley. The Village project would substantially change the visual character of central Bear Valley by creating a new core village. The entire Village would share a distinct architectural character that, considering the relative scale of the project and its location, would provide a prominent visual element to Bear Valley and would likely become the dominant visual element in town. As discussed in Section 3.8, however, the Village would not adversely affect the scenic character or quality of Bear Valley because the project would be designed with an architectural character intended to complement the natural surroundings. The project would therefore not contribute to a substantial cumulative degradation of the visual character or quality of Bear Valley.

Level of Significance Before Mitigation: Less than significant.

Cumulative Impact A-2: The project, in combination with other reasonably foreseeable projects, would introduce a substantial amount of new nighttime lighting to Bear Valley, and could result in a significant cumulative adverse effect on the visual character of the community at night.

Nighttime views of the project and other reasonably foreseeable development could include new exterior light sources for buildings, driveways, landscaping, signs, and public areas, and interior lighting visible through windows. These projects would therefore introduce a substantial amount of new nighttime lighting to Bear Valley, and could result in a significant cumulative adverse effect on the visual character of the community at night. This is a significant cumulative impact.

Level of Significance Before Mitigation: Significant.

Cumulative Mitigation Measure A-2: Implement an outdoor lighting plan for every project.

The County will ensure new development projects in Bear Valley implement an outdoor lighting plan. Prior to approval of an Improvement Plans/Grading Permit or other authorization to begin on site construction for any phase of development, the project proponent shall submit to the County a plan for outdoor lighting showing all proposed exterior lighting on the site, including all light sources for buildings, driveways, landscaping, signs, and public areas. All exterior lighting fixtures shall be full cutoff type and provide only the minimal amount of light necessary for safe pedestrian and vehicular access to the site and the dwelling units. Exterior lighting shall not cause glare beyond the boundaries of the site.

Significance Level After Mitigation: Less than significant because control of light sources would ensure minimal impacts to Bear Valley's nighttime visual character.

4.3.7 Recreation

The cumulative impact boundary for recreation includes Bear Lake, the ski area, and the abundant recreational opportunities in the surrounding Stanislaus National Forest (SNF).

The proposed project and build-out of the BVMP would increase recreational use of USFS land, thereby increasing demand for patrol and law enforcement staff. Recreational activities around Bear Valley are related primarily to the abundant opportunities in the surrounding Stanislaus National Forest, including downhill and cross-country skiing, snowboarding, snowmobiling, off-highway motorcycle riding (i.e., dirt biking), mountain bicycling, and hiking. These projects would increase recreational use of USFS land, including unauthorized summer use of the ski area when the facilities are closed and ski area staff is reduced. Unauthorized dirt and mountain biking has damaged ski area facilities, and increased visitation to Bear Valley generated by the proposed and related projects could increase this type of unauthorized activity. These projects would also increase use of trails and backcountry on USFS land, increasing demand for patrols. Additional staff for safety patrols and law enforcement on USFS land, possibly by County Sheriff's Department staff, would effectively address this issue (SNF 2008).

As discussed in Impact PS-1, however, the need for increased staffing does not constitute a change to the physical environment and is therefore not considered further in the EIR. However, the County prepared a Fiscal Impact Analysis (FIA) for the Bear Valley Village project that evaluates the need for additional County staff to serve the

project and whether tax revenues from the project over time would be sufficient to pay for additional staff to serve the project. The FIA is available for review on the County's website.

Cumulative Impact REC-1: The project, in combination with other reasonably foreseeable projects in Bear Valley, would increase use of the Bear Lake beach facilities, but would not cause deterioration of the facilities.

The increased population generated by the project and other reasonably foreseeable projects in Bear Valley would increase the number of people using the Bear Lake beach facilities. Bear Valley Residents, Inc. (BVRI) manages the beach for the exclusive use and enjoyment of BVRI association members and others who pay the association's user fees. BVRI maintains the right to charge admission and other fees or to limit the number of guests of members who may use the beach. BVRI can therefore manage use of the beach facilities to ensure the proposed and related projects do not cause or accelerate substantial physical deterioration of the beach facilities. This is a less-than-significant cumulative impact.

Level of Significance Before Mitigation: Less than significant because BVRI has the authority to ensure that the proposed and related projects do not cause or accelerate substantial physical deterioration of the beach facilities.

Cumulative Impact REC-2: Increased water demand from the proposed and related projects would increase drawdown of Bear Lake but would not substantially impair recreational use of the lake.

The project's water demand would be about 139 AFY, representing a 120 percent increase over existing water use. Water demand for foreseeable growth in Bear Valley would be about 176 AFY, for a combined total of about 315 AFY. This represents a 280 percent increase over existing water use (Diane Wagner Consulting 2008). The proposed and related projects would therefore nearly triple the amount of water withdrawn from Bear Lake.

Lake drawdown starts in early July when the lake is typically at its highest level, and ends in late November. The lake's peak recreational use season starts in early July and ends in early September, thereby coinciding with the initial two months of the drawdown period. Drawdown does not impair recreational use of the lake, and increased drawdown caused by the cumulative increase in water demand is not expected to substantially impair recreational use of the lake (English 2008). This is a less-than-significant cumulative impact.

Level of Significance Before Mitigation: Less than significant because lake drawdown caused by the proposed and related projects would not substantially impair recreational use of the lake.

Cumulative Impact REC-3: The Village Lift and ski runs plus the other ski area modifications would increase skier capacity but would not cause or accelerate substantial physical deterioration of the ski area.

The Village Lift would add skier capacity to the ski area and is expected to increase use of the ski area. The ski area is also proposing other modifications that could increase skier capacity, including expansion and remodel of the existing day lodge, a parking lot addition, replacement of the existing Super Cub chair lift with a high-speed detachable quad chair lift, and widening or regrading of several existing ski runs. These modifications, however, would not cause or accelerate substantial physical deterioration of the ski area. The ski area is a professionally managed, fee-based facility. It is reasonable to assume that the ski area would invest a portion of the revenues generated by additional lift ticket sales toward maintenance and facility upgrades that would compensate for any deterioration of the ski area caused by increased use of the ski area. This is a less-than-significant cumulative impact.

Level of Significance Before Mitigation: Less than significant because the proposed modifications would not cause or accelerate substantial physical deterioration of the ski area.

Significant and Unavoidable Impacts

Cumulative Impact U-3: The project plus all reasonably foreseeable projects could contribute cumulatively to an exceedance of Waste Discharge Requirements (WDRs) for copper.

CHAPTER 5
CLIMATE CHANGE

This chapter defines climate change and greenhouse gases (GHGs), presents the current legislation and programs to address climate change in California, analyzes potential impacts to climate change from the Bear Valley Village project, and provides mitigation measures to reduce GHG emissions.

5.1 INTRODUCTION

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer) (Environmental Protection Agency [EPA] 2007). Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun
- Natural processes within the climate system (e.g., changes in ocean circulation)
- Human activities that change the atmosphere's composition (e.g. through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification, etc.)
- Human activities, such as fossil fuel combustion, release photochemically important gases, known as GHGs. GHGs are effective in trapping infrared radiation which otherwise would have escaped the atmosphere, thereby warming the atmosphere (EPA 2007).

5.1.1 Greenhouse Gases

GHGs are any gas that absorbs infrared radiation in the atmosphere (EPA 2007). GHGs, as defined in Assembly Bill 32 (AB 32), include the following gases: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). A brief summary of each GHG is summarized below (EPA 2007):

Carbon Dioxide (CO2)

CO2 is a naturally occurring gas and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes (EPA 2007). It is the principal anthropogenic GHG that affects the Earth's radiative balance.

Methane (CH4)

CH4 is a hydrocarbon that is a GHG with a global warming potential most recently estimated at 23 times that of CO2. Methane is produced through anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes,

production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide (N2O)

N2O is a powerful greenhouse gas with a global warming potential of 296 times that of CO2. Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning.

Hydrofluorocarbons (HFCs)

Compounds introduced as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs, HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are powerful greenhouse gases with global warming potential ranging from 140 to 11,700 times that of CO2.

Perfluorocarbons (PFCs)

PFCs were introduced as alternatives, along with hydrofluorocarbons, to ozone-depleting substances. PFCs are also emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they are powerful GHGs with global warming potential ranging from 5,700 to 11,900 times that of CO2.

Sulfur Hexafluoride (SF6)

SF6 is a colorless gas soluble in alcohol and ether, slightly soluble in water, with a global warming potential 22,200 times that of CO2. A very powerful GHG used primarily in electrical transmission and distribution systems and as a dielectric in electronics.

5.1.2 Global Climate Change

A series of reports issued by the United Nations Intergovernmental Panel on Climate Change (UNIPCC) has synthesized the results of recent scientific studies of climate change (UNIPCC 2007a, 2007b, 2007c, 2007d). Key findings of these reports include the following:

- Global atmospheric concentrations of carbon dioxide, methane, and nitrous oxide have increased markedly as a result of human activities since 1750, and now far exceed pre-industrial levels. Global increases in carbon dioxide concentration are due primarily to fossil fuel use and land use change, and global increases in methane and nitrous oxide are due primarily to agriculture.
- Warming of the global climate due to GHGs is unequivocal, as evidenced by increases in air and water temperatures, widespread melting of snow and ice, and rising global average sea level. Most of the increase in global average

temperatures since the mid-twentieth century is very likely due to increases in GHGs from human activities. GHG emissions increased 70 percent between 1970 and 2004.

- Numerous long-term climate changes observed have included changes in arctic temperatures and ice, precipitation, ocean salinity, wind pattern, and the frequency of extreme weather events such as droughts, heavy precipitation, heat waves, and tropical cyclone intensity.
- Continued GHG emissions at current rates would cause further warming and climate change during the twenty-first century that would very likely be larger than that observed in the twentieth century.
- Climate change is expected to have adverse impacts on water resources, ecosystems, food and forest products, coastal systems and low-lying areas, urban areas, and public health. These impacts will vary regionally.

5.1.3 California GHG Emissions and Climate Change

In California, the main sources of GHG emissions are from the transportation and energy sectors. According to the California Air Resources Board (CARB) draft GHG emission inventory for the year 2004, 39 percent of GHG emissions result from transportation and 25 percent of GHG emissions result from electricity generation California produced 497 million metric tons of CO2 equivalent (MMtCO2e) in 2004 (CARB 2007). California produces about 2 percent of the world's GHG emissions.

The potential effects of future climate change on California resources include (California Climate Change Portal [CCCP] 2007):

- Air temperature: increases of 3 to 10.4 degrees Fahrenheit by the end of the century, depending on the aggressiveness of GHG emissions mitigation
- Sea level rise: 6 to 30 inches by the end of the century, depending on the aggressiveness of GHG emissions mitigation
- Water resources: reduced Sierra snowpack, reduced water supplies, increased water demands, changed flood hydrology
- Forests: changed forest composition, geographic range, and forest health and productivity
- Ecosystems: changed habitats, increased threats to certain endangered species
- Agriculture: changed crop yields, increased irrigation demands
- Public health: increased respiratory illness and weather-related mortality

5.2 CALIFORNIA CLIMATE CHANGE LEGISLATION AND PROGRAMS

5.2.1 Vehicle Climate Change Standards

With the passage of AB 1493 (Chapter 200, Statutes of 2002), California moved to the forefront of reducing vehicle climate change emissions. This bill required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light-duty

trucks. Regulations were adopted by CARB in September 2004. CARB analysis of this regulation indicates emissions savings of 1 MMtCO2e by 2010 and 30 (MMtCO2e) tons CO2 equivalent by 2020. For these standards to go into effect, EPA must approve a waiver of Clean Air Act requirements to allow California (and other states) motor vehicle standards to exceed federal standards; in December 2007, EPA declined to do so.

5.2.2 Assembly Bill 32

In September 2006, the Governor signed into law the California Global Warming Solutions Act of 2006 (AB 32, Health and Safety Code Secs. 38500 et seq.). This law requires CARB to design and implement emission limits, regulations, and other measures, such that statewide GHG emissions are reduced in a technologically feasible and cost-effective manner to 1990 levels by 2020 (representing a 25 percent reduction). The following summarizes the process and schedule for implementing AB 32:

- June 30, 2007: CARB publishes a list of discrete early action GHG emission reduction measures that can be implemented prior to the measures and limits to be adopted to meet the 2020 limit. On September 7, 2007, CARB released a list of additional early action measures and discrete early actions:
- January 1, 2008: CARB determines what the statewide GHG emissions level was in 1990, and approves a statewide GHG limit that is equivalent to that level.
- January 1, 2008: CARB adopts regulations requiring the reporting and verification of statewide GHG emissions.
- January 1, 2009: CARB adopts a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020.
- January 1, 2010: CARB adopts and enforces regulations to implement the GHG emission reduction measures identified on the early action list in 2007.
- January 1, 2011: CARB adopts regulations to achieve the required reduction of GHG emissions to 1990 levels by 2020.
- January 1, 2012: GHG emission limits and emission reduction measures adopted by January 1, 2011, become enforceable.

5.2.3 Senate Bill 1368

SB 1368 (Public Utilities Code Sections 8340 et seq.) is an AB 32 companion bill that was signed into law in 2006. It requires the California Public Utilities Commission (CPUC) to establish a GHG performance standard for baseload generation from investor-owned utilities, and the California Energy Commission (CEC) to establish a similar standard for publicly owned utilities. These standards may not exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The bill also requires all imported electricity provided to California to be generated from plants meeting CPUC and CEC standards.

5.2.4 Renewable Portfolio Standard Program

The CPUC and CEC coordinate the Renewable Portfolio Standard (RPS), which calls for more energy to come from clean, renewable sources such as wind and sun. In 2003, the Governor called for an acceleration of the RPS to 20 percent by 2010 rather than 2017; this goal was codified by SB 107 (Chapter 464, Statutes of 2006). In 2005, the Governor called for an acceleration of the RPS to 33 percent by 2020.

5.2.5 Senate Bill 97

The California Environmental Quality Act (CEQA) requires the Office of Planning and Research (OPR) to prepare and develop proposed guidelines for implementation of CEQA by public agencies. Accordingly, SB 97 (Chapter 185, Statutes of 2007) requires OPR to develop guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. The Resource Agency must certify and adopt those guidelines by January 10, 2010. Until these guidelines are adopted, there is no formal guidance on how to conduct climate change analyses in CEQA documents.

5.2.6 Governor's Executive Orders

Executive Order S-3-05 was signed in 2005. The Executive Order calls for a reduction of GHG emissions to 2000 levels by 2010, a reduction of GHG emissions to 1990 levels by 2020, and a reduction of GHG emissions to 80 percent below 1990 levels by 2050. The order directs the California Environmental Protection Agency (CalEPA) secretary to coordinate development and implementation of strategies to achieve the GHG reduction targets in conjunction with the secretary of Business, Transportation and Housing Agency, the secretary of the Department of Food and Agriculture, the secretary of the Resources Agency, the chairperson of CARB, the chairperson of the CEC, and the president of the CPUC.

CalEPA developed the Climate Action Team (CAT), which comprises representatives from the agencies listed above, to implement the strategies to reduce GHG emissions. The order also includes a reporting requirement for CalEPA to the governor and legislature. The first report was released in March 2006 (CalEPA 2006), and a report will be issued bi-annually in the future. CAT has also issued a report on proposed early actions to mitigate climate change in California (CAT 2007).

Executive Order S-1-07, the Low Carbon Fuel Standard (LCFS) (issued on January 18, 2007), calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. The executive order instructed CalEPA to coordinate activities between the University of California, the CEC, and other state agencies to develop and propose a draft compliance schedule to meet the 2020 target. Furthermore, the order directed CARB to consider initiating regulatory proceedings to establish and implement the LCFS. In response, CARB identified the LCFS as an early action item with a regulation to be adopted and implemented by 2010.

5.3 IMPACT ANALYSIS

5.3.1 Methodology

GHG emissions generated by the project's electricity consumption were estimated using emission factors from the California Climate Action Registry (CCAR) Report Protocol 2006 (CCAR 2007) (Appendix I). Indirect emissions from power plants that generate the electricity include CO2, CH4, and N20. CO2 equivalents (CO2e) are reported for emissions of CH4 and N20 based upon their warming potential as GHGs relative to the warming potential of CO2.

GHG emissions generated by construction equipment during the construction phase and by project vehicles and propane consumption for space heating after construction were estimated using the URBEMIS 2007 emissions model. The model was run using the Mountain Counties Air Basin (the nearest air basin available in URBEMIS 2007) because the model does not contain specific emission factors for the Great Basin Unified Air Pollution Control District. Input to URBEMIS 2007 included project-specific data provided in the project description (Appendix I).

The analyses considered both construction and operations emissions, although construction emissions would not be permanent emission sources. Construction emissions were found to be less than operational emissions.

Methodology Uncertainties

Several uncertainties affect the CO2 emissions estimates presented in this EIR:

- The analysis assumes today's CO2 emissions factors will apply in future years. The extent to which construction and operations emissions factors will change in the future is unknown. It is likely that AB 32 and other GHG regulatory programs will reduce at least some of these emissions factors.
- The analysis assumes all CO2 emissions associated with the project are "new."

However, some of these emissions would actually be "redistributed" from existing developments in other locations, but the extent of this redistribution is uncertain.

Although it is possible to calculate the project's incremental CO2 emissions, it is not possible to demonstrate that the project's relatively minor incremental contribution to global GHG emissions would contribute to global climate change effects. It is generally accepted that GHG impacts are exclusively cumulative impacts (CAPCOA 2008).

5.3.2 Criteria for Determining Significance

Specific significance criteria for GHG emissions have not been developed under CEQA. However, for this project, adverse impacts to climate change would be considered significant if the project would generate a substantial increase in GHG emissions relative to existing conditions.

Impacts and Mitigation Measures

Impact CC-1: Project construction would generate about 6,500 metric tons/year of CO2e over 11 years (average of about 600 metric tons/year of CO2e), and project operation would generate about 7,400 metric tons/year of CO2e.

The project includes several design features and components that could help reduce GHG emissions. The Village would be a mixed-use, multiple family, infill development. Such developments help support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods. The Village would also include pedestrian plazas that would encourage and facilitate walking between destinations. In addition, the Village Lift and continued ski shuttle bus service would help reduce personal vehicle trips between Bear Valley and the ski area.

The project would generate about 6,500 metric tons of CO2e during the 11-year construction period, and about 7,400 metric tons/year of CO2e from operations (including emissions from vehicle trips, snowmobile trips, space heating, fireplaces, and indirect emissions from use of electricity). California GHG emissions in 2004 were estimated to be 497 MMtCO2e per year (CARB 2007). The project represents a very small fraction of the state's GHG emissions. On an annual basis, project construction would represent .001 percent of the state emissions and annual operations of the project would represent .0015 percent of the state emissions.

Nevertheless, the project's incremental contributions to GHG emissions are considered cumulatively significant because the project would generate a substantial increase in GHG emissions relative to existing conditions.

Significance Level Before Mitigation: Significant.

Mitigation Measure CC-1: Prepare and implement a GHG Reduction Plan.

The County will require the applicant to prepare a GHG Reduction Plan for each phase of development describing feasible measures the applicant will incorporate into the project. The GHG Reduction Plan shall be submitted to the Alpine County Planning Department as part of the application for any ~~tentative map and/or~~ conditional use permit (CUP) approval. The plan shall describe the method for ensuring the measures will be incorporated into the subject phase of the project.

The California Attorney General's publication entitled *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level* (Department of Justice 2008) lists examples of measures that could be applied to a diverse range of projects. The following list includes mitigation measures that may be applicable to the Bear Valley Village project. Some of the mitigation measures on the following list might not be feasible for the project and therefore would not be included in the project. The Attorney General's publication includes other measures that may also be applicable to the project.

Energy Efficiency

- Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping, and sun screens to reduce energy use.
- Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.
- Install light-colored "cool" roofs, cool pavements, and strategically placed shade trees.
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems.
- Install light-emitting diodes (LEDs) for traffic, street, and other outdoor lighting.
- Limit the hours of operation of outdoor lighting.
- Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.
- Provide education on energy efficiency.

Renewable Energy

- Install solar or wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate buyers about existing incentives.
- Use combined heat and power in appropriate applications.

Water Conservation and Efficiency

- Create water-efficient landscapes.
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
- Design buildings to be water-efficient. Install water-efficient fixtures and appliances.
- Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.
- Restrict the use of water for cleaning outdoor surfaces and vehicles.
- Provide education to residents and guests about water conservation and available programs and incentives.

Solid Waste Measures

- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide storage areas for recyclables and green waste and adequate recycling containers located in public areas.
- Provide education and publicity about reducing waste and available recycling services.
- <u>Reuse building materials from the Bear Valley Lodge after demolition.</u>

Transportation and Motor Vehicles

- Limit idling time for commercial vehicles, including delivery and construction vehicles.
- Use low or zero-emission vehicles, including construction vehicles.
- Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation, including the ski area shuttle bus.

Significance Level after Mitigation: Significant and unavoidable because it is not possible to calculate the effectiveness of these mitigation measures in reducing GHG emissions. With mitigation, project GHG emissions would likely still be substantial compared to existing conditions.

Significant and Unavoidable Impacts

Impact CC-1: Project construction would generate about 6,500 metric tons/year of CO2e over 11 years (average of about 600 metric tons/year of CO2e), and project operation would generate about 7,400 metric tons/year of CO2e.

CHAPTER 6
ALTERNATIVES

6.1 INTRODUCTION

The analysis of alternatives is an important element of the Environmental Impact Report (EIR) process. California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) requires an evaluation of "…a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Alternatives are used to determine whether or not a variation of the project would reduce, or eliminate, significant project impacts within the basic framework of the objectives. The project objectives are to:

- Provide Bear Valley with ski-in/ski-out access to the Bear Valley Mountain Resort, both to improve the recreational experience of residents and visitors and to reduce traffic within Bear Valley and to the ski resort via State Route (SR) 4.
- Create a pedestrian-oriented Village that will serve as a gathering place and focal point for existing residents and visitors.
- Improve existing Bear Valley traffic patterns by providing all-weather parking and enhanced vehicular access to the Village for Bear Valley residents and guests as well as the project's residents and guests.
- Develop an infill project that is consistent with the planning guidelines, principles, uses, and densities of the existing 1978 Bear Valley Master Plan and relevant goals, policies, and guidelines contained in the Alpine County General Plan.
- Establish design guidelines consistent with both the natural surroundings and sustainable development concepts in alignment with the U.S. Green Building Council's Leadership in Energy and Environmental Design standards.
- Site the majority of buildings and improvements in areas already disturbed by existing development as a means of limiting impacts on the environment.

CEQA Guidelines Section 15126.6(f) specifies that the range of alternatives is governed by the "rule of reason," requiring evaluation of only those alternatives "necessary to permit a reasoned choice." Further, an environmental impact report (EIR) "…need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (CEQA Guidelines Section 15126.6[f][3]).

CEQA Guidelines Section 15126.6(e) requires that, among other alternatives, a "No Project" alternative be evaluated in comparison to the project. CEQA Guidelines Section 15126.6(e)(2) requires that the No Project analysis discuss "…what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." Accordingly, the No Project Alternative analyzed in this EIR discusses build-out of Village Center-1 (VC-1) and Village Center-2 (VC-2) consistent with the 1978 Bear Valley Master Plan (BVMP) and construction of the Village Lift.

CEQA Guidelines Section 15126.6(d) requires an EIR to discuss significant effects caused by the alternative, but permits the evaluation to be conducted in less detail than is done for the project. Potential environmental impacts for each alternative are provided in comparison to the project. The advantages and disadvantages of each alternative, compared with the project, are presented. Any significant impacts created exclusively by an alternative are also identified.

6.2 ALTERNATIVES CONSIDERED BUT REJECTED

CEQA Guidelines Section 15126.6(c) provides that an EIR "should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination." One such alternative is an alternative location for the project.

In determining whether alternative locations for the project need to be considered in an EIR, CEQA Guidelines Section 15126.6(f)(2)(A) states:

> The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

Most of the project's significant impacts are related to regional issues rather than site-specific issues. Regional issues include demand for employee housing, demand for emergency services and schools, demand for water and wastewater services, traffic volume on SR 4, demand for in-town parking, PM10 (particulate matter less than 10 microns) emissions, and snowmobile noise. Relocating the project elsewhere in Bear Valley is not likely to avoid or substantially lessen these impacts.

Site-specific issues include snowmobile travel across the project area, interference with existing oversnow emergency response procedures, impacts on biological resources, temporary closure of No Name Road, construction noise, increased traffic noise along Creekside Drive, nighttime lighting, and liquefaction hazards. EIR mitigation measures would reduce all these impacts to a less-than-significant level except construction and traffic noise. Regardless of its location, the project would generate substantial construction and traffic noise, although some off-site locations may be near fewer sensitive noise receptors.

CEQA Guidelines Section 15126.6(f)(1) further states that site suitability, economic viability, and availability of infrastructure can be used to judge the feasibility of alternatives. Important project objectives include providing Bear Valley with ski-in/ski-out access to the Bear Valley Mountain Resort, creating a pedestrian-oriented Village that will serve as a gathering place and focal point for existing residents and visitors, and developing an infill project that is consistent with the planning guidelines, principles, uses, and densities of the existing 1978 Bear Valley Master Plan. No other location exists that would feasibly meet all of these objectives.

No feasible alternative locations exist that would avoid or substantially lessen any of the significant effects of the project or would feasibly meet all the project objectives. Alternative locations are not considered further.

The County also considered an alternative that would facilitate snowmobile travel through the project area, provide snowmobile parking for emergency medical service personnel within the project area, and provide a short-term snowmobile loading area near the Bear Valley Road winter closure to replace the loading area that would be eliminated from the Lodge Lot. Under this alternative, project impacts PS-2 (interference with existing oversnow emergency response procedures) and SNO-2 (discontinuation of a snowmobile route between Bear Valley Road near the road closure and the east and northeast sides of town) would not occur. However, these two significant project impacts would be reduced to a less-than-significant level by mitigation measures recommended by the EIR. This alternative has therefore been eliminated from detailed consideration in the EIR because it would not avoid a significant environmental impact.

6.3 DESCRIPTION OF ALTERNATIVES EVALUATED IN THE EIR

6.3.1 No Project Alternative

Under the No Project Alternative, the VC-1 and VC-2 zones would be developed consistent with the 1978 BVMP. VC-1 allows 62 residential units with a total of 124 beds (two per unit). VC-2 allows 500 residential units with a total of 1,000 beds (two per unit). The BVMP allows for an undefined amount of commercial and retail uses within VC-1 and VC-2 and requires one parking space for each residential unit. County Parking Lots B and C are located within the Parking-3 (P-3) zone, which is designated for automobile parking and does not allow residential uses. The BVMP also includes a chair lift connecting Bear Valley to the ski area.

The No Project Alternative would therefore include construction of 562 two-bedroom units (each assumed to be equivalent to one Equivalent Dwelling Unit [EDU]) and 562 parking spaces within VC-1 and VC-2. This alternative is also assumed to include 21,410 square feet (sf) of retail, 9,000 sf of restaurant, and 28,411 sf of amenity space within VC-1 and VC-2 (the same amount as proposed for the project). This alternative would include 218 (63 percent) more EDUs within VC-1 and VC-2 than the project (562 units – 344 units = 218 units). To accommodate these additional units, the buildings would have more mass than the project buildings and would be taller and/or have a larger footprint than the project buildings.

No development would occur in County Parking Lots B and C; therefore, no employee housing facility would be built. Similar to the project, this alternative includes the Village Lift, the new (or modified) ski runs returning to Bear Valley, and all necessary internal and off-site infrastructure, including roads, ~~the Creekside Drive Extension,~~ utility lines, and a new snowmobile parking area on the west side of Bear Valley Road. The No Project Alternative would meet all of the project objectives except providing all-weather parking for Bear Valley residents and guests, because the parking structure would not be built at Lots B and C.

Impact Analysis

Similar to the project, this alternative includes the Village Lift and associated ski runs. All impacts related to these project features would be similar to the project and are not evaluated further.

Land Use

Land use impacts for this alternative would be similar to the project. This alternative would be consistent with the General Plan and BVMP land use designations and zoning for VC-1 and VC-2. Similar to the project, this alternative would result in a significant and unavoidable land use impact related to exposure of existing residential land uses to excessive exterior noise levels from the proposed snowmobile parking area west of Bear Valley Road. Unlike the project, however, this alternative would not include development of County Parking Lots B and C, and would not result in land use compatibility impacts related to noise from and restricted access to the snowmobile parking area behind the Transportation Center. Unlike the project, no development would occur in the P-3 zone (County Parking Lots B and C); therefore, no BVMP amendment would be needed.

Population, Housing, and Employment

This alternative would not include the employee housing facility, an important component of the County's overall strategy to ensure Bear Valley has adequate employee housing for proposed and future development.

The No Project Alternative would include more residences than the project, thereby increasing Bear Valley's population more than the project would. Similar to the project, however, the housing and population growth generated by this alternative would be consistent with the growth identified in the BVMP.

Public Services

Similar to the project, this alternative would result in additional demand for new firefighting and emergency medical service equipment, could interfere with existing oversnow emergency response procedures, and could indirectly generate enough new elementary school students to cause displacement of the existing high school classroom. Under this alternative, however, the demand for public services would be greater because more residences would be added to Bear Valley.

Utilities and Service Systems

This alternative would result in utilities impacts similar to the project, except that demand for utilities, including water supply and wastewater disposal, would be greater because more residences would be added to Bear Valley.

Hydrology and Water Quality

This alternative would result in hydrology and water quality impacts similar to the project. However, construction-related water quality impacts would be reduced because the South Village would not be constructed.

Biological Resources

This alternative would result in biological resource impacts similar to the project. However, this alternative could include more conversion of lodgepole pine forest and filling of ephemeral drainages within VC-1 and VC-2 to accommodate the higher residential density. Unlike the project, no lodgepole pine forest within the South Village project area would be removed under this alternative.

Cultural Resources

This alternative would result in similar impacts related to cultural and paleontological resources.

Aesthetics

The South Village is not included in this alternative. Views of the South Village area would continue to include Parking Lots B and C. Unlike the project, the South Village would not be visible from SR 4 or public viewpoints within Bear Valley, would not alter the visual character of the parking lot or Bear Valley, would not block views or cast shadows from off-site locations, and would not introduce new sources of nighttime lighting to Bear Valley. These are less-than-significant project impacts that would not occur under this alternative.

This alternative would include 218 (63 percent) more EDUs within VC-1 and VC-2 than the project. To accommodate these additional units, the buildings would have more mass than the project buildings and would be taller and/or have a larger footprint than the project buildings. Similar to the project, views of the North Village and Village Center from SR 4, where available, would appear visually consistent with other development, and would not be visually prominent from SR 4. Under this alternative, however, more of the North Village area would likely be developed to accommodate the additional units. Also, taller, more massive buildings would cast larger shadows, and the effect on the visual character of central Bear Valley would be more noticeable. Similar to the project, however, these impacts would be less than significant.

Transportation and Circulation

The No Project Alternative would result in traffic and parking impacts similar to the project with the following exceptions. This alternative would include more residences than the project, thereby increasing traffic and parking demand. Increased vehicle activity would exacerbate project impacts related to roadway level of service (LOS) on SR 4, unacceptable turning movements at SR 4 intersections, and increased demand for in-town parking. Under this alternative, construction-related traffic impacts generated by

the South Village would not occur; however, substantial construction traffic impacts would remain.

Snowmobile Circulation and Parking

Under this alternative, the employee housing facility would not be built. Therefore, the facility would not block snowmobile access from Quaking Aspen Road and would not eliminate part of the short-term storage area used by the Transportation Center. Therefore, this significant but mitigable project impact would not occur under the No Project Alternative. All other snowmobile circulation and parking impacts would be similar to the project.

Air Quality

This alternative would result in similar significant but mitigable air quality impacts to the project with the following differences. This alternative would require less grading and ground disturbance because it would not include the South Village. This alternative would therefore generate less fugitive dust (and less PM10) than the project. This alternative would include more residences than the project and would therefore generate more operational emissions.

Noise

The No Project Alternative would result in noise impacts similar to the project, with the following exceptions. This alternative would generate less construction noise than the project because it would not include the South Village or the employee housing facility. Therefore, noise-sensitive land uses near County Parking Lots B and C would be less affected by construction noise. The No Project Alternative would not include new residential land uses near the Transportation Center, thereby eliminating a significant unavoidable noise impact related to exterior noise levels generated by the snowmobile parking area behind the Transportation Center. This alternative would include more residences than the project and would therefore generate more traffic noise.

Recreation

Similar to the project, this alternative would result in less-than-significant impacts related to recreational use of Bear Lake.

Soils

Similar to the project, this alternative would result in significant but mitigable impacts related to liquefaction hazard.

Conclusion

Based on the above analyses, it can be concluded that the No Project Alternative would result in similar environmental impacts to the project with the following exceptions. The No Project Alternative would not include new residential land uses near the

Transportation Center, thereby eliminating a significant, unavoidable project impact related to exterior noise levels generated by the snowmobile parking area behind the Transportation Center.

This alternative would generate greater demand for wastewater disposal, water supply, and public services because more residences would be added to Bear Valley.

Because the South Village is not included in this alternative, views of the South Village area would continue to include Parking Lots B and C and would not alter the aesthetics of the South Village project area. This alternative would include 63 percent more EDUs within VC-1 and VC-2 than the project. To accommodate these additional units, the buildings would have more mass than the project buildings and would be taller and/or have a larger footprint than the project buildings. Therefore, the effect on the visual character of central Bear Valley would be more noticeable.

This alternative would not include the employee housing facility, an important component of the County's overall strategy to ensure Bear Valley has adequate employee housing for proposed and future development.

In summary, this alternative would reduce a significant, unavoidable exterior noise impact to a less-than-significant level. The No Project Alternative would meet all of the project objectives except providing all-weather parking for Bear Valley residents and guests, because the parking structure would not be built at Lots B and C.

6.3.2 No South Village Alternative

This alternative is being considered because it would reduce vehicle trips generated by the project, thereby reducing traffic impacts on the local road system; would reduce overall demand for public services and utilities; and would reduce demand for employee housing. The No South Village Alternative would meet all of the project objectives except providing all-weather parking for Bear Valley residents and guests, because the parking structure would not be built at Lots B and C.

Under the No South Village Alternative, the North Village and Village Center would be built as proposed, but the South Village would not be built. The proposed 50-person (three-story) employee housing facility would be built at County Parking Lot ~~B~~C, but the remainder of the parking lot would not be affected. This alternative would include a BVMP amendment allowing the employee housing facility to be built within the P-3 zone. Similar to the project, this alternative includes the Village Lift, the new (or modified) ski runs returning to Bear Valley, and all necessary internal and off-site infrastructure, including roads, and utility lines~~, and the Creekside Drive extension~~. This alternative also includes a new snowmobile parking area on the west side of Bear Valley Road.

This alternative would include 344 EDUs, 21,410 sf of retail, 9,000 sf of restaurant, 28,411 sf of amenity space, and 548 off-street parking spaces within the North Village and Village Center. A 50-person employee housing facility would be built at County Parking Lot ~~B~~C.

Impact Analysis

Similar to the project, this alternative includes the Village Lift and associated ski runs. All impacts related to these project features would be similar to the project and are not evaluated further.

Land Use

Land use impacts for this alternative would be similar to the project. This alternative would be consistent with the General Plan and BVMP land use designations and zoning for VC-1 and VC-2. The BVMP amendment for the employee housing facility would render this alternative consistent with BVMP land use designations and zoning for Parking Lots B and C. This alternative would result in physical land use conflicts similar to the project, except that noise from the snowmobile parking area behind the Transportation Center would not affect project residents of the South Village condominiums.

Population, Housing, and Employment

This alternative would include fewer residences than the project, thereby increasing Bear Valley's population by a smaller amount than the project. Similar to the project, however, the housing and population growth generated by this alternative would be consistent with the growth identified in the BVMP. This alternative would include the employee housing facility and would result in similar but slightly reduced impacts related to supply and demand for employee housing.

Public Services

Similar to the project, this alternative would result in additional demand for new firefighting and emergency medical service equipment, could interfere with existing oversnow emergency response procedures, and could indirectly generate enough new elementary school students to cause displacement of the existing high school classroom. Under this alternative, however, the demand for public services would be less because fewer residences and less commercial development would be added to Bear Valley.

Utilities and Service Systems

This alternative would result in utilities impacts similar to that of the project. However, demand for water supply and wastewater treatment and disposal would be less because 147 fewer residences and 4,200 sf less of commercial and amenity uses would be added to Bear Valley.

Hydrology and Water Quality

This alternative would result in hydrology and water quality impacts similar to the project. However, construction-related water quality impacts would be reduced because the South Village would not be constructed.

Biological Resources

This alternative would result in biological resource impacts similar to the project. However, less lodgepole pine forest within the South Village project area would be removed under this alternative because only the employee housing facility would be built at Parking Lot ~~B~~C.

Cultural Resources

This alternative would result in similar impacts related to cultural and paleontological resources.

Aesthetics

The South Village is not included in this alternative; however, the three-story employee housing facility would be built in the snowmobile parking area behind the Transportation Center. Views of the South Village area would continue to include Parking Lots B and C, but would also include the employee housing facility. Unlike the project, the South Village parking structure and mixed-use development would not be visible from SR 4 or public viewpoints within Bear Valley, would not alter the visual character of the parking lot or Bear Valley, would not block views or cast shadows from off-site locations, and would not introduce new sources of nighttime lighting to Bear Valley. These are less-than-significant project impacts that would not occur under this alternative.

Aesthetic impacts related to the North Village and Village Center would be similar to the project.

Transportation and Circulation

The No South Village Alternative would result in similar traffic impacts to the project with the following exceptions. The No South Village Alternative would reduce daily and peak hour automobile trips by about 32 percent (LSC 2008).

This alternative would result in fewer public parking spaces available to non-Bear Valley Village uses (following completion of all phases) than the project, and fewer spaces than are currently available. Under this alternative, a total of 548 off-street parking spaces would be required to serve Bear Valley Village land uses (not including the employee housing facility), along with at least seven on-street spaces to replace the loss of public parking spaces. An estimated 30 new on-street spaces would be provided. Without the employee housing facility, this alternative would generate a net increase of 23 spaces available to non-Bear Valley Village uses that would not be available under the project (LSC 2008). The employee housing facility, however, would generate demand for 25 parking spaces, leaving a deficit of two parking spaces. In addition, the employee

housing facility would displace existing spaces within Parking Lot ~~B~~C, further reducing the public parking spaces available in Bear Valley. This would result in a significant (but potentially mitigable) impact that would not occur under the project.

Snowmobile Circulation and Parking

This alternative would include fewer new residences, thereby generating a smaller increase in new snowmobile activity than the project. This alternative, however, would result in snowmobile circulation and parking impacts similar to the project.

Air Quality

This alternative would result in similar significant but mitigable air quality impacts to the project with the following differences. This alternative would require less grading and ground disturbance because it would not include the South Village. This alternative would therefore generate less fugitive dust (and less PM10) than the project. This alternative would generate one-third fewer automobile trips than the project and thus would generate fewer operational emissions.

Noise

This alternative would result in noise impacts similar to the project, with the following exceptions. This alternative would generate less construction noise than the project because it would not include the South Village, although it would include construction of the employee housing facility. Therefore, noise-sensitive land uses near County Parking Lots B and C would be less affected by construction noise. This alternative would generate one-third fewer automobile trips than the project and would therefore generate less traffic noise. Similar to the project, however, noise levels on Creekside Drive would likely exceed County noise standards, resulting in a significant, unavoidable impact. This alternative would not include new condominiums near the Transportation Center; therefore, none would be affected by noise from the snowmobile parking lot.

Recreation

Similar to the project, this alternative would result in less-than-significant impacts related to recreational use of Bear Lake.

Soils

Similar to the project, this alternative would result in significant but mitigable impacts related to liquefaction hazard in the North Village and Village Center project area.

Conclusions

Based on the above analyses, it can be concluded the No South Village Alternative would result in similar environmental impacts to the project with the following exceptions. The No South Village Alternative would not include new for-sale residential land uses

near the Transportation Center, thereby eliminating a significant, unavoidable project impact related to exterior noise levels generated by the snowmobile parking area behind the Transportation Center. Similar to the project, however, noise from this snowmobile parking area would exceed County exterior noise levels at the employee housing facility.

This alternative would generate less construction noise than the project because it would not include the South Village, although it would include construction of the employee housing facility. Therefore, noise-sensitive land uses near County Parking Lots B and C would be less affected by construction noise. This alternative would also generate less traffic noise. Similar to the project, however, noise levels on Creekside Drive would likely exceed County noise standards, resulting in a significant, unavoidable impact.

This alternative would generate less demand for wastewater disposal, water supply, and public services because fewer residences would be added to Bear Valley.

Views of the South Village area would continue to include Parking Lots B and C but would also include the employee housing facility.

This alternative would require less grading and ground disturbance, and would generate less fugitive dust (and less PM10) than the project. This alternative would include fewer residences and less retail/amenity space than the project and would therefore generate fewer operational emissions.

The No South Village Alternative would reduce daily and peak-hour automobile trips by about 32 percent. This alternative would result in fewer public parking spaces available to non-Bear Valley Village uses than the project, and fewer spaces than are currently available. This would result in a significant (but potentially mitigable) impact that would not occur under the project.

In summary, this alternative would reduce a significant, unavoidable exterior noise impact to a less-than-significant level and would result in a significant but potentially mitigable automobile parking impact that would not occur under the project. The No South Village Alternative would meet all of the project objectives except providing all-weather parking for Bear Valley residents and guests, because the parking structure would not be built at Lots B and C.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As shown by the previous analysis, the No South Village Alternative can be considered the environmentally superior alternative. Whereas this alternative would result in a significant but potentially mitigable impact related to parking supply that would not occur under the project, this alternative would eliminate a significant, unavoidable project impact related to exterior noise levels generated by the snowmobile parking area behind the Transportation Center; generate less construction noise at Parking Lots B and C; generate less traffic noise; generate less demand for wastewater disposal, water supply, and public services; generate less fugitive dust (and less PM10); generate fewer operational emissions; and generate one-third fewer vehicle trips than the project.

The No South Village Alternative, however, would not meet all of the project objectives. One project objective includes providing all-weather parking for Bear Valley residents and guests. The No South Village Alternative would not meet this objective because it would not include the all-weather parking structure proposed for the South Village. Under this alternative, Parking Lots B and C would remain uncovered surface parking lots. Another objective is to site most buildings and improvements in areas already disturbed by existing development as a means of limiting impacts on the environment. The South Village project area is mostly composed of parking lots. Under this alternative, the parking lots would remain.

Table 6-1 provides a summary of the project alternatives analyzed and their environmental advantages and disadvantages and indicates the environmentally superior alternative.

Table 6-1. Comparison of Alternatives to the Proposed Project

Proposed Project	No Project	No South Village Alternative
Description		
▪ 491 privately owned EDUs ▪ 50-person employee housing facility ▪ 64,000 sf of retail and amenity space ▪ 3 Villages ▪ BVMP Amendment to allow South Village ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ▪ On-site structure parking ▪ New County snowmobile parking area	▪ 562 privately owned units ▪ No employee housing facility ▪ 58,821 sf of retail and amenity space ▪ 2 Villages (no South Village) ▪ No BVMP Amendment ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ▪ On-site structure parking ▪ New County snowmobile parking area	▪ 344 privately owned EDUs ▪ 50-person employee housing facility 58,821 sf of retail and amenity space ▪ 2 Villages (no South Village) ▪ BVMP Amendment to allow employee housing facility ▪ Village Lift ▪ New or modified ski runs returning to Bear Valley ▪ All required on-site and off-site infrastructure ~~(including Creekside Drive extention)~~ ▪ On-site structure parking ▪ New County snowmobile parking area
Results of Analysis		
Advantages ▪ Includes employee housing facility ▪ Meets all project objectives Disadvantages ▪ Exterior noise levels at residences near snowmobile parking areas and Open Space Parcel E (SU) ▪ Other noise impacts (SU) ▪ Traffic impacts on SR 4 (SU)	Advantages ▪ Eliminates SU exterior noise impacts at South Village ▪ Less construction noise at Lots B and C Disadvantages ▪ No employee housing facility ▪ No all-weather public parking structure ▪ More demand for water and wastewater disposal ▪ Change to visual character of VC-1 and VC-2 is more noticeable ▪ Other impacts similar to project	Advantages ▪ Eliminates one SU exterior noise impact at South Village ▪ One-third fewer vehicle trips ▪ Less construction noise at Lots B and C ▪ Less traffic noise ▪ Less demand for water and wastewater disposal ▪ Less air pollutants emitted ▪ Includes employee housing facility Disadvantages ▪ Other impacts similar to project ▪ Fewer public parking spaces available

EDU = Equivalent Dwelling Unit; SU = Significant and unavoidable

Table 6-1. Comparison of Alternatives to the Proposed Project

Proposed Project	No Project	No South Village Alternative
Conclusions		
▪ Meets all project objectives	▪ Eliminates SU exterior noise impacts at South Village ▪ No all-weather public parking structure ▪ No employee housing facility ▪ More demand for utilities and services ▪ Does not meet all project objectives	▪ Environmentally superior alternative ▪ Does not meet all project objectives ▪ Eliminates one SU exterior noise impact at South Village ▪ Less demand for utilities and services ▪ Less traffic ▪ Fewer public parking spaces available ▪ Includes employee housing facility

EDU = Equivalent Dwelling Unit; SU = Significant and unavoidable

CHAPTER 7
OTHER SECTIONS REQUIRED BY CEQA

This section discusses the significant irreversible environmental changes, significant and unavoidable environmental impacts, and growth-inducing impacts, as required by the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Sec. 21100[b][2]). Significant irreversible environmental changes are the uses of nonrenewable resources during the initial and continued phases of a proposed project, which may be irreversible if a large commitment of these resources makes their removal, indirect removal, or non-use thereafter unlikely (PRC 15126.2[c]). Significant and unavoidable environmental impacts are significant impacts which can not be mitigated to a level of insignificance (CEQA 15126.2[b]). Growth-inducing impacts are the ways in which the project could foster economic or population growth, or the construction of additional housing either directly or indirectly, in the surrounding environment (PRC Sec. 15126.2[d]).

7.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Implementation of the project would result in an increased intensity of development, with the conversion of undeveloped property to a planned development with 491 Equivalent Dwelling Units (EDUs), plus commercial, retail, and employee housing uses. A variety of resources would be irretrievably committed for project construction and maintenance, including land, water, energy, construction materials, and human resources.

An increase in the intensity of land uses in the project area would result in an increase in regional energy consumption. Electricity would be provided by Pacific Gas and Electric (PG&E). Land uses in the project area would consume other energy sources such as gasoline and propane. These energy resource demands relate to initial project construction, transport of people and goods, electricity to run the Village Lift, and lighting and heating of buildings. Project construction would require the commitment of a variety of other nonrenewable natural resources, or natural resources that require a long time for renewal. These include lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Development of the project area to support residential and commercial uses may be regarded as a permanent and irreversible change. Although the project area is currently undeveloped, some portions may have been used historically by early settlers, and prehistorically by Native Americans. Project development would not convert the entire project area to residential and commercial land uses. Nevertheless, project development would essentially prohibit historic and prehistoric uses, and would permanently alter the visual character of the project area and Bear Valley.

Grading, utility extensions, new roadways, and construction of residences, commercial facilities, the Village Lift, and new ski runs would permanently alter the character of the project area to one that is developed with mountain resort uses. The project would commit future generations to similar uses in the project area.

7.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Impact LU-2: The project would create physical land use conflicts related to exterior noise levels generated by snowmobiles near existing and proposed residential land uses.

Impact U-3: The project could contribute to exceedance of WDRs for copper.

Impact TC-2: SR 4 would operate at unacceptable LOS levels between Moran Road East and Moran Road West and between Big Meadows and Moran Road East.

~~**Impact TC-5: The corner sight distance for the new Creekside Drive/SR 4 intersection would be less than the *Caltrans Highway Design Manual* guidelines.**~~

Impact TC-6~~8~~: The project would be inconsistent with three Regional Transportation Plan objectives.

Impact TC-8~~10~~: Construction activities within County roadways and temporary closure of No Name Road could reduce emergency access and response times.

~~**Impact TC-11 (Cumulative): The project and other reasonably foreseeable projects would cause Bear Valley Road/SR 4 and Creekside Drive/SR 4 turning movements to operate at an unacceptable LOS in 2027.Impact TC-13 (Cumulative): Increased traffic volumes at the Creekside Drive/SR 4 intersection as a result of the project and other reasonably foreseeable projects would meet guidelines warranting an eastbound SR 4 left-turn lane in 2027.**~~

Impact TC-11~~1~~4 (Cumulative): The project and other reasonably foreseeable projects would cause SR 4 to operate at unacceptable LOS levels in 2027.

Impact N-1: Project construction would result in temporary noise impacts that could affect adjacent and project residences.

Impact N-3: Project traffic would increase traffic noise levels in the project vicinity, and would substantially increase noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road at peak times.

Impact N-4: Changes to snowmobile circulation and parking areas would increase noise levels at some sensitive receptors in the project vicinity, and locating new residential uses near the Transportation Center snowmobile parking area would expose project residents and employees to excessive noise levels.

Impact N-5 (Cumulative): Project traffic, in combination with cumulative project traffic, would substantially increase traffic noise levels along the north/south segment of Creekside Drive ~~between Quaking Aspen Road and~~south of No Name Road in 2027.

Impact CC-1: Project construction would generate about 6,500 metric tons/year of CO2e over 11 years (average of about 600 metric tons/year of CO2e), and project operation would generate about 7,400 metric tons/year of CO2e.

7.3 GROWTH-INDUCING IMPACTS

7.3.1 Housing and Employment

The project would include the development of 491 for-sale EDUs and a net increase of 47,111 square feet (sf) of new retail, restaurant, and and amenity space. As discussed in Section 3.2 (Population, Housing, and Employment), the project would directly and indirectly increase Bear Valley's permanent population. Direct population growth would be generated and accommodated by the residential units proposed for the project. Indirect population growth would be generated by new permanent, construction, and seasonal employment opportunities created by the project. The proposed employee housing facility would accommodate some construction and seasonal workers generated by the project. Existing for-sale and rental housing stock would accommodate other workers. Some new workers would be residents of nearby foothill communities that would commute from their existing homes. If the project were to generate demand for worker housing in excess of the available supply, some additional housing facilities may need to be constructed.

The project can be considered growth-inducing because it fosters economic and population growth. However, housing and population growth directly induced by the project falls within the planned growth contemplated by the Bear Valley Master Plan (BVMP). Indirect growth induced by the project is also expected to fall within the projections of the BVMP, which plans for full build-out of Bear Valley. The environmental impacts of growth directly induced by the project are evaluated in Chapter 3 (Environmental Analysis). The cumulative environmental impacts of reasonably foreseeable growth in Bear Valley in the next 20 years (which would include combined growth directly and indirectly induced by the project) are evaluated in Chapter 4 (Cumulative Impacts).

7.3.2 Utilities Infrastructure

The project would include new sewer and water lines to serve the project. These lines would be limited to the project area and the immediate vicinity of the project area. The capacity of these utility lines has not been determined. They may be sized with some excess capacity to serve new development in Bear Valley and therefore be growth-inducing; however this growth is expected to be consistent with planned growth contemplated in the BVMP.

As discussed in Section 3.4 (Utilities and Service Systems), the project may need to increase the capacity of some sanitary sewer lines to serve the project. The sewer lines may be sized with some excess capacity to serve new development in Bear Valley and could therefore be growth-inducing; however, this growth is expected to be consistent with planned growth contemplated in the BVMP.

CHAPTER 8
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8.2 EIR PREPARERS

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Shelly Jeffords, *Planning Commission Secretary* ..... Secretary

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8.3 PERSONS CONSULTED

Alpine County

Terry Woodrow ..... County Supervisor
Robert Levy ..... Undersheriff
Rick ~~Stevens~~Stephens, Sgt. ..... Public Safety Supervisor
Denver Stoner ..... Public Safety Officer
Kathy Snyder ..... Emergency Medical Services Coordinator, West Slope
James Parsons ..... Alpine County Unified School District Supervisor
Greg Peterson ..... Alpine County CSA President

Bear Valley Transportation Center

Mike Denicola ..... Owner

CHAPTER 9
ACRONYMS

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACUSD	Alpine County Unified School District
ADA	Americans with Disabilities Act
AF	acre-feet
AFY	acre-feet per year
ANSI	American National Standards Institute
APCD	Air Pollution Control Districts
AQMD	Air Quality Management Districts
ARLCBMP	Arnold Rural Livable Community-Based Mobility Plan
ARMR	Archaeological Resource Management Reports
ARPA	Archaeological and Historic Preservation Act
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ATV	all-terrain vehicle
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
bgs	below the ground surface
BHHS	Bret Harte High School
BMP	best management practice
BVES	Bear Valley Elementary School
BVHS	Bear Valley High School
BVMP	Bear Valley Master Plan
BVRI	Bear Valley Residents, Inc.
BVWD	Bear Valley Water District
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CC&Rs	Covenants, Conditions, and Restrictions
CCAA	California Clean Air Act
CCAPCD	Calaveras County Air Pollution Control District
CCAR	California Climate Action Registry
CCCP	California Climate Change Portal
CCIC	Central California Information Center
CEC	California Energy Commission
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CH4	methane
CIWMB	California Integrated Waste Management Board
CMP	Corridor Management Plan
CNEL	community noise equivalent level
CO	carbon monoxide
CO2	carbon dioxide
CO2e	CO2 equivalents
CPUC	California Public Utilities Commission

CPVC	chlorinated polyvinyl chloride
CRHR	California Register of Historical Resources
CSQA	California Stormwater Quality Association
CTCP	Construction Traffic Control Plan
CUP	conditional use permit
CWA	Clean Water Act
cy	cubic yards
dB	decibel
dBA	A-weighted decibel
DFG	Department of Fish and Game
DOF	Department of Finance
DPH	Department of Public Health
DPM	Diesel Particulate Matter
DSOD	Division of Safety of Dams
DWR	California Department of Water Resources
EDCAQMD	El Dorado County Air Quality Management District
EDU	Equivalent Dwelling Unit
EHIP	Employee Housing Implementation Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	environmental factors
EMT	emergency medical technician
EPA	U.S. Environmental Protection Agency
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments
FHWA	Federal Highway Administration
FIA	Fiscal Impact Analysis
GBUAPCD	Great Basin Unified Air Pollution Control District
GHG	greenhouse gases
GIS	geographic information system
gpd	gallons per day
HC	hydrocarbons
HFC	hydrofluorocarbon
IBC	International Building Code
ITE	Institute of Transportation Engineers
K	Kindergarten
LAWC	Lake Alpine Water Company
LCFS	Low Carbon Fuel Standard
Ldn	average day-night 24-hour average sound level
LED	light-emitting diodes
Leq	the equivalent sound level over a given time period
LOS	loss of service
MCL	maximum contaminant level
MMtCO2e	million metric tons of CO2 equivalent
mph	miles per hour
msl	mean sea level
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NO2	nitrogen dioxide
NOP	Notice of Preparation
NOx	Nitrogen Oxides

NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSB	National Scenic Byway
OPR	Office of Planning and Research
P-3	Parking-3
PD	planned development
PEX	cross-linked polyvinyl chloride
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PMP	Parking Management Plan
POST	Peace Officer Standards and Training
ppm	parts per million
PRC	Public Resources Code
PVC	polyvinyl chloride
RAP	rammed aggregate pier
RIM	Road Impact Mitigation
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
RPW	Relatively Permanent Waterbody
RS	recreational site
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Soil Conservation Service (now NRCS)
SDWA	Safe Drinking Water Act
SEI	SEI Solid Waste Inc.
sf	square feet
SF6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SNF	Stanislaus National Forest
SR	State Route
SUP	Special Use Permit
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCO	Traffic Control Officer
TM	tentative map
TNW	Traditionally Navigable Waterbody
UCMP	University of California Museum of Paleontology
UNIPCC	United Nations Intergovernmental Panel on Climate Change
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VC-1	Village Center-1
VC-2	Village Center-2
VMT	vehicle miles traveled
WDR	Waste Discharge Requirements
WRCC	Western Regional Climate Center
WSA	Water Supply Assessment
WWTP	wastewater treatment plant


SWCA
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ORDINANCE NO. 704-13

APPROVING A COMPREHENSIVE DEVELOPMENT PLAN FOR THE BEAR VALLEY VILLAGE DEVELOPMENT PROJECT

WHEREAS, Bear Valley Village I LLC, Bear Valley Village II LLC has requested to change the 1978 Bear Valley Master Plan to allow for the proposed Bear Valley Village development project to be located within Bear Valley (Planning Case File No. 2006-35); and

WHEREAS, the Bear Valley Village project site is located within the Planned Development (PD) zoning district; and

WHEREAS, Section 18.28.010(B) of the Alpine County Code requires County approval of a comprehensive development plan for all areas within Planned Development zoning districts; and

WHEREAS, the 1978 Bear Valley Master Plan is the comprehensive development plan for Bear Valley Village development project site; and

WHEREAS, the proposed comprehensive development plan for the Bear Valley Village project has been processed as a change in zoning pursuant to Alpine County Code Chapter 18.84 and all other applicable laws; and,

WHEREAS, on August 27, 2009 and September 24, 2009 the Alpine County Planning Commission held a duly noticed public hearing and recommended approval of a comprehensive development plan for the Bear Valley Village project and on November 29, 2012 the Planning Commission reviewed a revised project application; and,

WHEREAS, on May 29, 2009 by Resolution No. 2009-28, the Board of Supervisors certified the Bear Valley Village Final Environmental Impact Report; and,

WHEREAS, on December 10, 2009 and December 18, 2012 the Alpine County Board of Supervisors held duly noticed public hearings pursuant to California Government Code Section 65090 to hear public testimony and receive evidence relative to the proposed comprehensive development plan for the Bear Valley Village development project; and,

WHEREAS, by separate resolution, the Board of Supervisors has adopted Proposed Findings of Fact and Statement of Overriding Considerations for the Bear Valley Village General Plan Amendment and Zoning Change in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, Sections 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations sections 15000 et seq.); and

WHEREAS, the Alpine County Board of Supervisors makes the following findings relative to the proposed change in zoning and development plan for the Bear Valley Village development project:

1. The amendment to the Alpine County General Plan for the project conforms to California Government Code 65300 in that the General Plan contains all of the required elements and is internally consistent.
2. The application is consistent with all the elements of the Alpine County General Plan and the 1978 Bear Valley Master Plan as follows:

    a. As intended by the Planned Development designation of the Alpine County General Plan, the Planned Development proposed under this amendment has been carefully planned and will be closely supervised to insure conformance with the Goals, Objectives and Policies of the General Plan and applicable laws. This will be accomplished through implementation of a Planned Development zoning document specific to the project that will clearly state the uses, development standards and public improvement requirements for the future development of the project site.

    b. The approved uses and density for the project are in conformance with the uses and density allowed in the 1978 Bear Valley Master Plan. The proposed project would allow 343 equivalent dwelling units (EDUs) across the entire project site. A total of approximately 63,456 square feet of non residential use which includes commercial and amenity uses are also proposed.

    c. The staff report prepared for the August 27, 2009 public hearing held by the Planning Commission includes a General Plan Conformance Matrix will demonstrates the project's conformance with the goals and policies contained within each element of the General Plan.

    d. With compliance with the conditions of approval for the project, which include all the mitigation measures identified in the Final Environmental Impact Report certified by the Board of Supervisors on May 29, 2009 and the Addendum to the Final Environmental Impact Report considered by the Board of Supervisors on December 18, 2012, the project is consistent with all elements of the Alpine County General Plan.

    e. The proposed amendments will be in harmony with the County Zoning Ordinance and all other applicable County ordinances. Conditions of approval will be imposed upon the project through Planned Development Zoning Designation that is part of this action; and future applications for conditional use permits, subdivision maps, improvement plans and building permits that will require the project to be in harmony with the County Zoning Ordinance and all other applicable County ordinances.

    f. The proposed amendment will enable a mixed use project that will include development controls, mitigation measures and conditions of approval that will insure that the project does not adversely affect public health, safety, peace, morals or the general welfare of the County and its people.

NOW, THEREFORE, BE IT ORDAINED, that the Board of Supervisors, County of Alpine, State of California, approves an amendment to the Alpine County Zoning Ordinance and approves a comprehensive development plan for the Bear Valley Village development project as

fully described in the Bear Valley Village Planned Development Zoning Designation attached hereto as Exhibit A. The Bear Valley Village Planned Development Designation shall supersede and replace the 1978 Bear Valley Master Plan as applied to the Bear Valley Village project site that is described in Exhibit A-1.

PASSED AND ADOPTED this 2nd day of January 2013 by the following vote:

AYES: Supervisors Jardine, Veatch, Woodrow and Sweeney

NOES: None

ABSENT: Supervisor Bennett

Henry C. Veatch, Chair, Board of Supervisors
County of Alpine, State of California

ATTEST:

Barbara Howard, County Clerk
& Ex Officio Clerk to the
Board of Supervisors,
By: Teola Tremayne,
Assistant County Clerk

APPROVED AS TO FORM:

Martin Fine, County Counsel

EXHIBIT A

ORDINANCE NO. 704-13

BEAR VALLEY VILLAGE
PLANNED DEVELOPMENT ZONING DESIGNATION

BEAR VALLEY VILLAGE

PLANNED DEVELOPMENT ZONING DESIGNATION

The Bear Valley Village Planned Development Zoning Designation (the "Designation") is hereby adopted on this 2nd day of January, 2013. This Designation is for certain real property located in the County as described in attached Exhibit A-1, hereinafter referred to as the Property.

This Designation establishes a development plan, zoning restrictions, improvement and infrastructure requirements, and conditions of approval applicable to the Property. This Designation shall run with the Property and be binding upon Bear Valley Village I LLC and Bear Valley Village II LLC (the Owner/Developer), their respective successors, representatives and assigns, all persons who may hereafter acquire an interest in the Property or any part thereof, and all persons who may operate a business within the property. All use and development of the property shall comply with the requirements as set forth in this Designation.

This Designation shall supersede and replace the 1978 Bear Valley Master Plan as applied to the Bear Valley Village project site that is described in Exhibit A-1. Where this Designation does not address a specific development standard or requirement, the applicable provisions of the Alpine County Code (Code) or applicable development standards adopted by Alpine County shall apply. Where the Designation addresses a specific development standard or requirement, the provisions of the Designation shall supersede the specific provisions of the Code and or other adopted development standards.

This designation is intended to complement and promote the following project objectives:

- Provide Bear Valley with ski-in/ski-out access to the Bear Valley Mountain Resort, both to improve the recreational experience of residents and visitors and to reduce traffic within Bear Valley and to the ski resort via State Route (SR) 4;
- Create a pedestrian-oriented Village that will serve as a gathering place and focal point for existing residents and visitors;
- Improve existing Bear Valley traffic patterns by providing all-weather parking and enhanced vehicular access to the Village for Bear Valley residents and guests as well as the project's residents and guests;
- Develop an infill project that is consistent with the planning guidelines, principles, uses, and densities of the existing 1978 Bear Valley Master Plan (BVMP) and relevant goals, policies, and guidelines contained in the Alpine County General Plan;
- Establish design guidelines consistent with both the natural surroundings and sustainable development concepts in alignment with the U.S. Green Building Council's Leadership in Energy and Environmental Design standards;
- Situate the majority of buildings and improvements in areas already disturbed by existing development as a means of limiting impacts on the environment.

A. DEVELOPMENT PLAN

The Development Plan, attached hereto as Exhibit A-2, establishes the general location of land uses and improvements allowed within the property. The property is divided into two areas as shown on Exhibit A-2: North Village and Village Center. Use and development of the Property shall be in substantial compliance with the Development Plan.

B. ZONING RESTRICTIONS

This designation and the attached exhibits fulfill the requirements for a development plan in conjunction with the Planned Development Zone pursuant to Code Section 18.28.010.B. The definitions of terms in this Designation shall be per the Alpine County Code, unless a specific term is defined in this Designation.

1. Conditional Use Permit(s) Required: A conditional use permit pursuant to Alpine County Code Section 18.76 (including as Section 18.76 may be amended in the future) shall be required prior to construction, erection or location of any of the following:
   a. Buildings 5-13 as shown on the Development Plan
   b. Outdoor amphitheater
   c. Concrete/asphalt batch plant
   d. Village lift

2. Allowable Uses: The allowable uses shall be as provided below.
   a. Residential Uses: Any of the following residential uses located within residential areas as designated in an approved conditional use permit for the building where the use is located;
      i. Multi-family residential units
      ii. "Lock off" residential units;
      iii. Employee housing units
      iv. Commercial lodging accommodations using multi-family and lock off residential units
   b. Commercial Uses. Any of the following commercial activities located within commercial areas as designated in an approved conditional use permit for the building or area where the use is located:
      i. Retail sales defined as any business having its primary function being the sale of merchandise directly to the end consumer
      ii. Recreation equipment rental and repair
      iii. Recreation guide services
      iv. Professional services defined as any business having its primary function being providing services directly to the end consumer. For purposes of this designation, day care is classified as a professional service.
      v. Retail food and beverage service, including sales of alcohol subject to applicable licensing requirements
   c. Amenity Uses: Ski lockers and locker rooms, indoor athletic/exercise facility, spa area, private and community meeting spaces, outdoor plaza areas and outdoor pools.
   d. Ski-related Uses and Improvements: Village lift, Village lift terminal/loading/unloading areas, ski return trails to the Village lift.
   e. Special events: As provided in this section, special events with up to 500 participants at one time may be conducted within commercial areas as designated

in an approved conditional use permit for the building or area where the use is located. Participants include all persons actively involved in the event as it occurs and all attendees of the event. The event must be conducted within the capacity of the venue where located without the need for any additional support such as law enforcement and/or emergency response personnel exceeding normal staffing levels; portable or supplemental power generation; portable toilets; and, parking areas in excess of what is available within existing public parking areas in Bear Valley. Such events shall be conducted in compliance with all applicable laws and regulations. Special events with more than 500 participants and/or which require additional support beyond that described herein shall only be allowed with approval of a special event permit pursuant to Section 18.78 of the Alpine County Code.

f. Outdoor amphitheater including seating areas and stage located in accordance with an approved conditional use permit.
g. Construction staging areas associated with development of allowable uses within Bear Valley Village.
h. Concrete/asphalt batch plant providing materials for construction of allowable uses within Bear Valley Village.
i. Accessory Uses. Uses that are incidental to and customarily associated with any of the uses listed in a-d above. Additionally, the following uses are considered accessory uses:
    i. Entertainment provided for the pleasure of patrons in conjunction with any of the uses listed in b and c above. This may include indoor and outdoor locations.
    ii. Temporary outdoor displays of merchandise, arts, crafts, educational materials, historic artifacts, tourist/visitor information, recreation equipment/recreation activity demonstrations or similar items.
j. Access, Parking Infrastructure and Utilities: Access drives, parking areas, water/sewer lines, underground utilities, propane tank areas, trash disposal/removal, recycling stations.
k. Uses not listed above: Uses not specifically listed above may be allowed upon a determination by the Alpine County Community Development Director that the use is similar in characteristics, extent and potential impact as any of the uses listed above. The decision of the Community Development Director may be appealed in accordance with Alpine County Code Section 18.88.

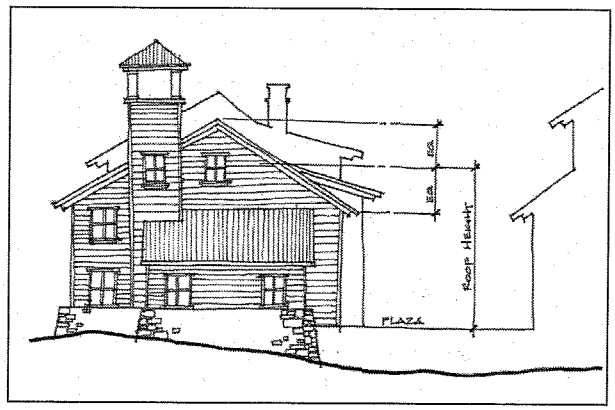
3. Maximum Permitted Density: Maximum permitted density shall be as summarized below and as specifically listed in Exhibit A-2, 12B attached hereto.

Area	Residential	Residential EDU[1]	Non Residential[2]
North Village	174,260 sq. ft.	129	2000 sq. ft.
Village Center	288,823 sq. ft.	214	61,546 sq. ft.
Total Villages	463083 sq. ft.	343	63,546 sq. ft.

4. Dimensional Limitations

a. Development Footprint – The maximum development footprint for each building shall be as listed in Exhibit A-2 12B. Development footprint is defined as the area encompassed by the building foundation and associated plaza areas, excluding building entrance structures (such as a porte cochere), driveways, paths, pool, pool decks.

b. Height Limitations – The majority of the Village is to be composed of three and four story buildings with some five-story heights permitted in selected areas and the massing of the buildings should step down at the ends for scale and transition. The range of story levels allowed shall be as described in Exhibit A-2, 12B.



Maximum Building Height for the Village shall not exceed 72 feet, exclusive of architectural appurtenances. Building height is determined by measuring from the plaza grade (defined as the top of the parking deck) to the midpoint of the nearest major roof on any exterior elevation. The roof midpoint is measured as half of the distance from the bottom of the roof fascia at the eave or rake to the top of the ridge, including if applicable any ridge vents. (See above illustration).

Architectural appurtenances are defined as chimneys, stairway or elevator overruns, mechanical and plumbing vents, lightning rods, tie-backs or any other

[1] EDU = Equivalent dwelling unit. 1 EDU = 1350 square feet of residential space
[2] Non Residential includes all indoor areas for commercial and amenity uses

roof penetration required for code compliance, fire protection and/or the proper ventilation of a building. Plumbing and mechanical penetrations shall be grouped within a chimney form or some other screened architectural enclosure. Allowable architectural appurtenances may exceed the height of the closest adjacent rooftop by a maximum of 10'- 0".

One signature architectural feature (such as a clock tower) for each Village – North Village and Village Center- may exceed its adjacent rooftop ridge height by 20'-0". Each signature feature shall have a floor area of less than 150 square feet.

c. Building Setbacks – The minimum building setback shall be 20 feet to the edge of right of way of all County roads. Other setback requirements may be established as part of the conditional use permit for each building.

5. Off-Street Parking Requirements:

Off-street parking spaces will be provided for each use as shown below.

a. Parking Spaces Required by Use

Use	Parking Spaces Required
Hotel/Lodging	1 space/guest room
Residential – Studio and 1-bedroom	1 space/unit
Residential – 2 bedroom	1.25 spaces/unit
Residential – 3 bedroom	1.50 spaces/unit
Residential – 3 bedroom w/ lock off	1.88 spaces/unit
Residential – 4 bedroom	1.75 spaces/unit
Restaurants	3.25 spaces/1000 sq. ft.[3]
Commercial & Retail	2.35 spaces/1000 sq. ft.[4]

b. Parking Area Dimensions: Parking area dimensions shall be as specified in the tables below.

MINIMUM PARKING STALL DIMENSIONS

Standard Stall		**Compact Stall**		
Length	Width	Length	Width	Height (applies to interior of entire structure)
18 feet clear, including bumper overhang	9 feet	16 feet, including bumper overhang	8 feet	8' 4"

[3] The total floor area is the within the inside of the exterior walls of all floors, having a minimum of five feet clearance, minus equipment rooms, air shafts, elevator shafts, stairwells, automobile parking areas, floor area which is designed and built to provide for storage, and other required means of egress.

[4] The definition of floor area is the same as described in footnote #3.

A minimum of eighty percent (80%) of the parking spaces within a surface parking area and/or covered parking garage shall be standard stalls. This may be reduced below 80% at the discretion of the County as part of the conditional use permit review for individual buildings, provided that there is a guarantee of valet parking service.

MINIMUM PARKING STALL AND PARKING LOT DIMENSIONS

One-Way Traffic and Single-Loaded Aisles

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	17 feet	13 feet	30 feet
45	19 feet	13 feet	32 feet
60	20 feet	16 feet	36 feet
75	20 feet	20 feet	40 feet
90	20 feet	22 feet	42 feet

One-Way Traffic and Double-Loaded Aisles

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	18 feet	13 feet	49 feet
45	19 feet	13 feet	51 feet
60	20 feet	16 feet	56 feet
75	20 feet	20 feet	60 feet
90	20 feet	22 feet	62 feet

Two-Way Traffic and Double-Loaded Aisles

Parking Angle (Degrees)	Stall Depth, with Bumper Overhang	Aisle Width (Travel Lane)	Total Bay Depth
30	18 feet	22 feet	58 feet
45	19 feet	22 feet	58 feet
60	20 feet	22 feet	62 feet
75	20 feet	22 feet	62 feet
90	20 feet	22 feet	62 feet

1. Bumper Overhang Areas: A maximum of two feet of the parking stall depth may be landscaped with low-growing, hearty materials in lieu of paving, allowing a two-foot bumper overhang while maintaining the required parking dimensions. A two-foot bumper overhang is also allowed over an adjacent sidewalk if a minimum clear distance of four feet is maintained on the sidewalk at all times.

2. Parallel parking spaces: Parallel parking spaces shall have a minimum width of 8 feet and a minimum length of 22 feet. Aisle widths shall be 12 feet for one-way traffic and 22 feet for two-way traffic in areas with parallel parking.

6. Architectural Design Guidelines

The owner/developer has prepared architectural design guidelines ("guidelines") that address a range of design issues. The guidelines are attached as an exhibit this designation for reference (Exhibit A-3). They are not enforceable by the County, except where other sections of this designation contain specific requirements that are enforceable under the provisions of this designation (building height, setback and parking requirements as examples). Otherwise the guidelines shall be administered and enforced in accordance with the rules and regulations as set out in the Bear Valley Village Master Association documents that are not part of this designation.

C. IMPROVEMENTS AND INFRASTRUCTURE

All improvements shall be designed and constructed in accordance with applicable local, state and federal requirements. All required permits and approvals shall be obtained from the appropriate regulatory agency prior to construction. Construction of improvements shall also be in full compliance with Chapter 17.28 of the Alpine County Code.

1. Water Supply System

Domestic water supply for the project shall be provided through the Lake Alpine Water Company system. The owner/developer shall be responsible for installation of infrastructure necessary to provide water to the project in accordance with the requirements of the Lake Alpine Water Company and in a manner consistent with all approved tentative and final subdivision maps, improvement plans, conditional use permits and mitigation measures for the project.

2. Wastewater Treatment System

Wastewater treatment collection and treatment for the project shall be provided through the Bear Valley Water District system. The owner/developer shall be responsible for installation of infrastructure necessary to provide wastewater treatment for the project in accordance with the requirements of the Bear Valley Water District and in a manner consistent with all approved tentative and final subdivision maps, improvement plans, conditional use permits and mitigation measures for the project.

3. Storm Water and Drainage Control

A storm water and drainage control system consistent with the proposed tentative map, improvement plan, description as submitted with the project application, all applicable conditions or approval and all applicable mitigation measures shall be installed by the Owner/Developer. Except as may be specifically allowed by the County in the approval of a tentative subdivision map for all or any portion of the project, the design and construction of the storm water and drainage control system shall meet all applicable County standards. Storm water and drainage control associated with connections to the state highway system shall meet all the requirements of Caltrans.

4. Propane Gas Distribution

A propane gas storage and distribution system for the project as shown on the improvement plan and as described in the project application shall be installed by the Owner/Developer. The design, construction and operation of the system shall meet all the applicable requirements of the National Fire Protection Association standards and the Uniform Building Code, and all regulations administered by the California Public Utilities Commission pursuant to propane distribution.

5. Utilities

In addition to the improvements and infrastructure listed in this Section C, the Owner/Developer shall install telephone and electrical service capable of serving the entire project area. Other utilities such as cable or satellite TV distribution, fiber optic or other telecommunication lines may also be installed. All of these utilities shall be installed underground in accordance with Chapter 13.20 of the Alpine County Code.

D. MITIGATION MEASURES AND CONDITIONS OF APPROVAL

Development of the project shall fully comply with all mitigation measures included in the Final Environmental Impact Report (FEIR) as certified by the Board of Supervisors on May 29, 2009, and in the Addendum to the FEIR as considered by the Board of Supervisors on December 18, 2012. These mitigation measures are included as conditions of approval and are specifically listed in Exhibit A-4. Conditions of approval that are separate and in addition to the mitigation measures included in the FEIR are also listed in Exhibit A-4. Development of the project shall fully comply with these conditions of approval.

E. VARIANCES

The County's process for considering variances to zoning standards will apply to any proposal to vary from the development standards as stated herein except where a specific ability to modify a development standard without a variance is stated herein. Chapter 18.80 of County Code shall apply to all variance actions.

F. APPEALS AND CLARIFICATIONS/INTERPRETATIONS

Appeals of any decision of a county official or official county body with respect to this designation shall be made in accordance with Chapter 18.88 of the Alpine County Code, including any amendments thereof. Requests for special clarifications or interpretations of any provisions of this designation shall be made in accordance with Chapter 18.88 of the Alpine County Code, including any amendments thereof.

G. AMENDMENTS

Amendments to this Planned Development Designation shall be processed in accordance with Section 18.28.090 of the Alpine County Code, including any amendments to this section.

H. BINDING EFFECT AND ENFORCEMENT

This Planned Development Designation shall run with the Property and be binding upon the Owner/Developer, their respective successors, representatives and assigns, all persons who may hereafter acquire an interest in the Property or any part thereof, and all persons who may operate a business within the property. Enforcement of the provisions of this Designation shall be in accordance with Chapter 18.92 of the Alpine County Code, including any amendments thereof. The County may withhold approval of any or all conditional use permits, special event permits, tentative subdivision maps, tentative parcel maps, final subdivision maps, final parcel maps, or the issuance of any or all grading or building permits or occupancy permits applied for on the Property, until such breach has been remedied; provided, however, that the County shall not take affirmative action on account of such breach until it shall have first notified the Owner/Developer in writing and afforded the Owner/Developer a reasonable opportunity to remedy the same.

BEAR VALLEY VILLAGE
PLANNED DEVELOPMENT ZONING DESIGNATION

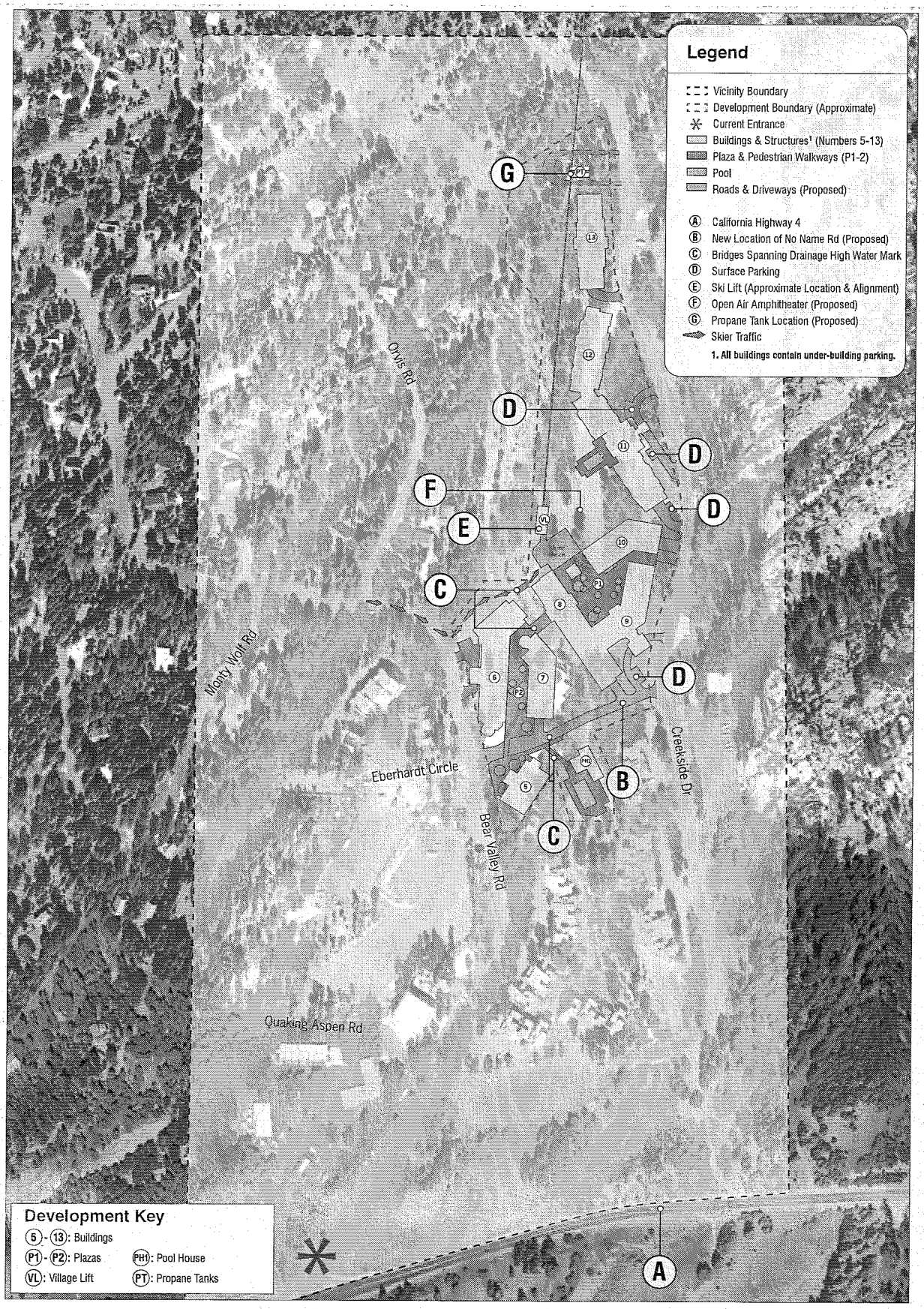
EXHIBIT A-1: PROPERTY DESCRIPTION

APN(s): 005-470-055, 005-470-056, 005-640-001, 005-640-002, 005-640-003, 005-640-004, 005-640-005, 005-640-006

BEAR VALLEY VILLAGE
PLANNED DEVELOPMENT ZONING DESIGNATION

EXHIBIT A-2: DEVELOPMENT PLAN

Bear Valley Village Proposed Master Plan



General Plan Amendment & Zone Change Application —
Bear Valley California
Preliminary Master Plan, Revised November 21st 2012

1"=250'

0 50 100 150 250' 500'

BEAR VALLEY VILLAGE
PLANNED DEVELOPMENT ZONING DESIGNATION

EXHIBIT A-3: ARCHITECTURAL DESIGN GUIDELINES

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INTRODUCTION

The Bear Valley Village will be developed as a master planned, multi-season resort community located within Northern California's Sierra Nevada mountain range. The site itself is located within Alpine County and surrounded by National Forest Service land. As such, the village's site surroundings, climate, and sensitive mountain environment are all paramount considerations to appropriate building design. The Design Guidelines for Bear Valley Village articulate the vision of the master developer and outline the design requirements for the community's residential and commercial structures in order to preserve the area's unique attributes and characteristics.

In order to assure that the development of Bear Valley Village is in keeping with these Guidelines, a Design Review Committee (DRC) will be established to administer these Guidelines. The structure and operation of the DRC is to be defined by the Master Association Documents.

These Guidelines serve to encourage architecture that is reflective of the natural setting within the larger Bear Valley community. Building design shall be used to enhance the visitors' experience through consideration of: spatial sequence, scale, and the use of materials which compliment the outdoor environment, reflect a special sense of place and give a cohesive identity to the resort components.

The images used in the guidelines are to help illustrate the concepts described and do not necessarily represent conditions present in Bear Valley Village.

In using these Guidelines and in the development of the design of individual structures, respective developers, architects and builders shall strive for:

- Compatibility with the site layout and building massing set forth in the approved Bear Valley Village Master Plan and EIR.

- Indoor and outdoor spaces that reflect and enhance the mountain setting.

- Architecture for the individual buildings that adheres to the design objectives and development themes established for each development parcel. In general, this shall include a compatible palette of building materials and contextual relationships between building forms and design elements. The buildings should reflect differences in individual use, functional needs and location within the village, but share a unified image so that each building is recognized as part of the master planned whole.

- Functional design which address issues of public circulation, back-of-house service functions and snow safety.

Importantly, new development should strive to create a cohesive resort environment. This objective goes beyond basic forms and a prescribed palette of materials; it requires special attention to design motifs and detailing in order to reflect the natural setting.

Key design themes for the village include:

- *A Relationship with the Natural Environment*

The Bear Valley Village site is an extraordinary location surrounded by forested slopes, natural granite rock outcroppings and highland meadows. These existing natural and topographic features of the site should provide inspiration for the forms and features of the new Bear Valley Village. The trees, rock outcroppings, creek, and other natural attributes of the site are important to the community and should be retained when possible. The architectural forms should be simple and authentic, recalling the natural forms and color palette of the area. These guidelines encourage landscaping with indigenous planting materials that emphasize the local character of the site.

- *Appropriate Scale and Detail*

The footprint and physical massing of the new village buildings should relate to a human scale. The village's public spaces, likewise, should be actively programmed and geared toward the pedestrian. The village should be designed around communal interaction and activities. Ground floor areas and commercial storefronts require special attention and architectural detail in order to animate the

streetscape. Lighting, signage, planting, and plaza furniture contribute to a delightful pedestrian experience, providing surprise and discovery.

- *Honest Structural Expression and Building Materials*

The exterior of the buildings at Bear Valley Village should reflect the surrounding natural landscape. A building's structural system should be visible when appropriate. Materials should draw from nature, such as stone and wood; and should be used in a manner that will blend with the natural surroundings. Indigenous materials should be used when possible. Timber and stone, in particular should be used to express a structural purpose in lieu of a purely decorative or applied approach. Likewise, building materials should be consistent between the interior and exterior.

- *Sustainable Design*

The unspoiled environment surrounding Bear Valley calls for a design approach that embraces sustainable design and environmental responsibility. New construction should incorporate the latest green products and technologies to the degree they are economically feasible. Examples include green strategies that reduce energy use, including building wall, window and roofing systems. Renewable and recycled materials should be utilized where appropriate. Water conservation, retention and erosion control measures should be implemented as part of an overall plan to minimize immediate site and long-term impacts to the environment.

- *Snow Country Design Considerations*

California's Sierra-Nevada mountain range is well known for the quantity and high moisture content of its snow. Snow country design considerations therefore are particularly important at Bear Valley, where ice and snow can be formidable forces of nature. These forces are critical in shaping the buildings and developing their exterior components and architectural details.

In general, the buildings should be designed to keep the snow on the roof in order to add insulation value to the structures and protect against damage inflicted by sliding snow. People should be protected from snow and falling ice. Roof elements should be used to protect entries. Building forms should additionally incorporate protective arcades, porches, and covered decks as needed. Snow and ice melted walkways and snow storage areas should be carefully considered in order to maintain safe passage and emergency access while balancing operation and energy requirements.

1.0 PURPOSE OF THE GUIDELINES

The Bear Valley Village Master Plan consists of residential, retail, recreational and parking facilities to be constructed over a period of time. The plan has been carefully conceived as a mixed-use village tailored specifically to accentuate the mountain topography and the many natural qualities the site offers. Roads, driveways, buildings, plazas, bridges, pathways, parking and other improvements have been designed and located to optimize views, provide convenient skier access to the new Village Lift, and minimize snow impacts. In particular the majority of structures planned for the Village will be constructed over under-building parking garages to minimize the view of cars and to provide for snow-free parking areas centrally located beneath the residential and retail areas of the Village.

The Master Plan has been designed in accordance with regulations and planning requirements for Alpine County, the State of California and the U.S. Forest Service and has undergone an extensive review process as part of the site's development requirements. All designs must adhere to the approved Bear Valley Village Master Plan, which establishes a foundation for the program, building type and uses, lot boundaries, development layout, individual building footprints within the Bear Valley Village, conceptual exterior elevations and massing studies for individual buildings, primary access points, and general relationships to the ski mountain. In addition, all development is subject to applicable local, state and national codes and regulations. The Master Plan is not meant to limit creative solutions for site planning, landscape, and architecture within Bear Valley Village, but rather to provide the aesthetic and regulatory framework within which all development shall take place.

The following Design Guidelines, in association with the Master Plan documentation, set a framework to encourage a project whose high quality is consistent with each phase related to an overall design theme. The Guidelines are to be used by the developers of Bear Valley Village and its representatives, developers or their successors, architects, Alpine County staff members and other design or construction facilitators.

In themselves, the Guidelines will assist only in setting general themes and unifying the various types of structures within the area. In order to be truly effective, the Guidelines must be enforced and interpreted by the DRC, as well as incorporated and possibly expanded by designers who understand and are sensitive to the overall spirit of the Master Plan.

1.1 SETBACKS

Building Setbacks have been established for each of the lots in order to ensure a balance between buildings and the natural setting while still providing flexibility in building configuration and location relative to trees, waterways, and site topography. These Building Setbacks are designed to maximize the attributes of the Master Plan and reinforce the design vision for Bear Valley Village by prescribing the configuration, massing, and form of individual buildings within the overall composition of the Village. As defined in the Master Plan, the building setbacks have allowed for a 20 feet snow removal and storage setback along the majority of County roads.

All buildings, structures, and parking must be located within the Building Setback. Additional features such as driveways, decks, architectural appurtenances, and other site improvements may be located outside the Building Setback, but only with the prior approval of the Design Review Committee (DRC). As part of the review process, the DRC will take into consideration the views and privacy of neighboring lots, topography, drainage, wetlands, vegetation, sun exposure, and any other physical features of the site.

1.2 BUILDING APPURTENANCES

In addition to the footprints outlined in the Master Plan documents, a variety of building appurtenances are anticipated to be included in the final building designs. Within reason and subject to other applicable codes, these may extend beyond the footprint areas outlined in the Master Plan.

Acceptable appurtenances include but are not necessarily limited to:

- Architectural Elements;
- Roof Overhangs, Brackets and Bracing;
- Commercial or Residential Awnings;
- Covered Balconies;
- Non-enclosed Grade Level Arcades not exceeding 15'0" in height;
- Information and Retail kiosks not exceeding an eave height of 15'0";
- Flagpoles, Banners, Lighting and Signage;
- Open Porte Cochere Structures;

- Pool and Spa Pavilions, including screened mechanical equipment;
- Bow or bay windows not exceeding 5'0" in depth measured perpendicular to the primary facade plane;
- Outdoor play areas, stages, amphitheaters, fire pits and barbecue facilities.

1.3 FLEXIBILITY WITHIN THE GUIDELINES

As with any project built over time, minor changes in the massing and footprints of a particular building may be required due to changes in circumstance and the need to retain some development flexibility. Such changes, however, must fall within the spirit of these Guidelines and be generally consistent with the building footprints established in the Bear Valley Village Master Plan.

The design of some buildings and structures may require more design flexibility once issues such as topography, site drainage, preferred view orientations, and relationships to neighboring buildings, the Village Lift, pedestrian routes, and roads are studied in greater detail.

Any proposed deviations in building footprints or massing must be at the discretion of the DRC. Some of the criteria that the DRC may use in determining whether a deviation is warranted for a site include:

- If the proposed design and/or deviation contributes to the Village in a positive way.
- If the proposed deviation from the approved building footprint and/or massing is required to maximize the particular building site.
- If the proposed design and/or deviation is beneficial to the site in terms of retaining natural site characteristics and/or limiting disturbance to the site's existing topography and vegetation.
- If the proposed design retains and reinforces views from adjacent properties and public spaces.
- If the proposed design contributes to the skyline of the Village in a positive way.
- If the proposed design defines, contains, and provides continuity to exterior public spaces such as pedestrian streets, plazas, and arcades.

Regardless of whether or not all the criteria for a deviation has been met by an Applicant, the final decision to authorize any such deviation is up to the discretion of the DRC.

2.0 SITE DESIGN, LANDSCAPING, STREETSCAPE & SIGNAGE

2.1 IMAGE OF A COMMUNITY

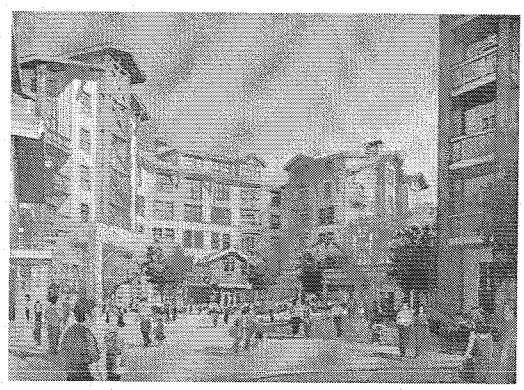
Residents and guests will experience Bear Valley Village within the context of its natural, mountain setting. Due to the existing stands of trees, the visual impact of the village will be limited to the overall building massing and roof forms. The objective is relatively simple and uncomplicated building forms, relating to site specific characteristics and subtle undulation of the topography.

Important site design elements contemplated by the master plan include:

- *Portals:* Portals provide the front door to the Village and its public spaces, and often form a visitor's first impression. As the portal serves a welcoming function, its size is particularly important. Openings that are too large can leave a pedestrian feeling "lost" within the passage, while portal openings that are too small may result in the feeling of being "squeezed" or "closed-in." Buildings that act as portals should consider the human scale through the use of appropriately-sized and detailed entry canopies, doors, windows, and/or other architectural features.

Buildings can form welcoming portals.

- *Edges:* While portals create doorways, edges define the village boundaries. This is also known as the village's communal "street-wall." Individual building wall planes are significant in this role. The form, massing and overall heights of the buildings forms the village's primary pedestrian corridor. Additionally, the building walls will impact the impression of the Village from the street. Vertical wall planes at these buildings should form a distinct street-wall while providing ties with natural features and outside vistas.

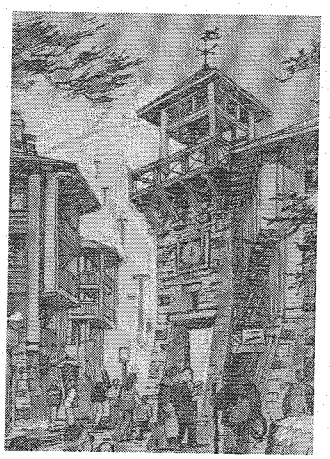


Building walls can act as edges or street-walls, while the outdoors spaces they surround represent negative spaces.

- *Negative Space:* As buildings represent positive space "takers", the outdoor spaces that are created by the surrounding buildings, comprise the "negative spaces" that are as important, if not more so, to the success of the village and its pedestrian experience. Such spaces include the village's vehicular and pedestrian passageways, public plazas, as well as other gathering spaces. Edges are once again vital, as they define the outdoor spaces and provide their backdrop. Buildings that define negative space should incorporate major entries and additional design elements that help animate and reinforce the value of the outdoor space. In addition, the sense of containment should be reinforced through mass at the corners of public spaces, and visually continuous floor patterns around the enclosing walls that allow the eye to perceive the physical containment of the space.

- *Village Landmarks:* Village landmarks can help create an overall "sense of place" for Bear Valley Village and also help orient pedestrians within the Village. Memorable landmark structures are designed to highlight the specifics of a particular place. Landmarks are unique and cannot be easily duplicated. They are visible from numerous locations and also can help orient a visitor. Such icons are an important part of the village experience as they form memories of Bear Valley. Landmarks are the "Kodak moment" locations that signify the defining attributes of a particular location. The best landmarks, moreover, tend to incorporate a function or fulfill or commemorate a specific activity or period of time.

  A successful landmark must be clearly discernable against the backdrop of the Village and should not have to compete with secondary features. This sense of hierarchy should extend down through secondary elements within the Village. Clock tower, sculptures, and an outdoor fire pit are examples of elements that can be used to underscore hierarchy while creating layers of richness and multiple opportunities for discovery.



Landmarks help orient pedestrians.

2.2 BUILDING SITING

Building siting must result in an integration of open spaces and adjacent buildings. Relationships between building footprints and outdoor spaces have been established in the Master Plan in order to foster a pedestrian scale. Buildings should relate to each other with respect to eave heights, materials, public walkways, outdoor activity spaces and their association with the natural terrain.

In general, building footprints, setbacks, and open spaces shall follow the approved Master Plan documents submitted for the General Plan and Zone

Change Application. Minor changes that respond to phasing needs or internal marketing requirements may be allowed providing that the applicant can demonstrate that the total building volume, as outlined in the Master Plan documents, has not been altered significantly.

2.3 PEDESTRIAN ACCESS, CIRCULATION AND STAIRS

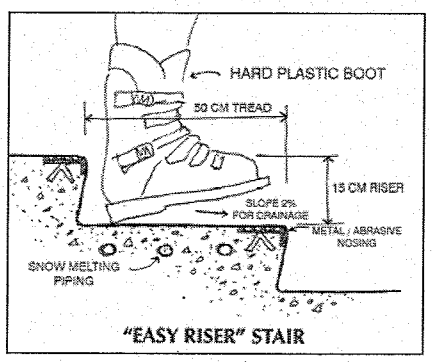
Pedestrian access to and from the Village and circulation within the Village are primary design consideration within the Bear Valley Village Master Plan. The pedestrian walkways and outdoor spaces represent the primary circulation space within the village and are conceived to provide direct links between various lodging, commercial and recreational functions. The Village's walkways, bridges, stairways, and ramps are the connective elements that will enable pedestrian traffic to flow easily throughout the Village.

Pedestrian walkways should include focal points along their route, where appropriate. These may include both natural elements, such as Bear Creek, natural rock formations, or single or groves of trees. Man-made elements may include railings, walkway surfaces, artwork, and plaza furniture.

Commercial shop fronts and retail frontage are an important element in energizing the pedestrian experience through the Village. Shop fronts provide an opportunity to encourage artist expression, individual creativity, and to animate the adjacent public spaces. The purpose of these regulations is to create a cohesive village through the pedestrian streets, rather than encouraging an urban feel to the development.

At Bear Valley Village, the Pedestrian walkways may be constructed of asphalt, concrete, brick or stone pavers, and/or colored or stained concrete (with or without texture). The accessibility of pedestrian walkways must be considered in determining the materials, widths, and maximum grades along the route. Secondary paths outside of required accessible routes may be constructed of stepping stones or cobbles set into the landscape, crushed rock, or wood chips. Pedestrian walkways must be designed to adequately accommodate the anticipated resort traffic during both the winter and summer seasons. Some pedestrian walkways and plaza surfaces may be required to serve as emergency access. These shall be designed in accordance with code and Alpine County requirements.

Stairways and ramps should be minimized where possible. When required they should be designed to accommodate the changes in topography on the site without creating a psychological barrier from the low to the high end. In general, skiers with ski boots find stairways difficult to navigate. Exterior stairs shall be designed to accommodate ski boots, by minimizing riser height and maximizing the width of the tread. A six inch rise to a sixteen to eighteen inch tread is ideal. Acceptable materials for stairs and ramps include colored or stained concrete (with or without texture), stone or concrete pavers set over a concrete sub-base, or brick as an accent material. Slip resistant treads and stairway nosings should also be incorporated.



Exterior stairs should easily handle ski boots.

2.4 PEDESTRIAN STREETS

A key element to the success of Bear Valley Village will be the quality of the pedestrian experience created within the Village. Pedestrian streets allow for movement within the Village and provide exposure to the various activities, shops and restaurants. Animated pedestrian streets are therefore an important design element, as they add vitality to the overall resort experience.

The scale of a pedestrian street is primarily determined by its ratio of height to width. Streets that are too wide (relative to height) do not inspire movement or side-to-side window shopping. Many of the wonderful pedestrian streets in Europe are no more than 15'-0" wide. Streets, on the other hand, that are too narrow constrict circulation flow, may not meet emergency standards and block sunlight from the walkways below.

While the quality of a pedestrian street is difficult to quantify in terms of an absolute rule or scale, width to height ratios from 1/3:1 to 1/2:1 are recommended for Bear Valley Village. For instance, a building façade is about 60'-0" high, a desirable street width would typically be 20 to 30 feet.

In addition, minor building elements are also important in creating a successful street filled with interest at a human scale. Lower height arcades, shop fronts, bay windows, signage etc, may extend into the street width in order to provide variety and visual interest.

2.5 PUBLIC PLAZAS

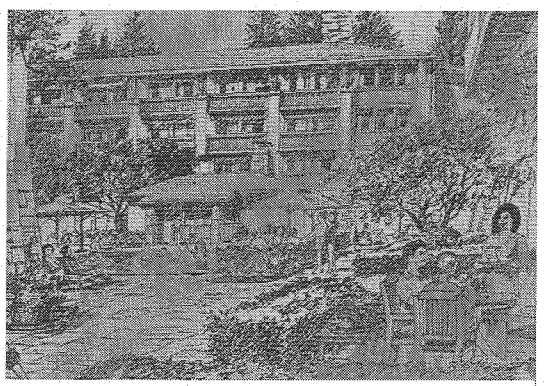
The design details of the primary pedestrian plazas will set the standard for the secondary walkways and public open plazas. Therefore, it is important that the village's primary pedestrian plazas be appropriately scaled and inviting places, a "center stage" for the village that encourages social interaction and people watching. Paving materials, patterns and colors define the overall limits and should be compatible with the adjacent building facades and architectural details. In order to be properly read as an "outdoor room," a plaza should be well defined by the building edges or street walls. The planned arcades and snow melted pathways will define primary circulation routes and encourage travel through the plazas and along the entire length of the village plan.

Plaza materials may include stone, brick or concrete pavers, concrete (stained or colored, with or without texture) and stone cobbles at accent areas. Additionally, the plaza should be zoned for a variety of active and passive uses. Artwork, landscaping, boulders or rock formations, lighting, plaza furniture and seating areas should be considered and well incorporated into the final plaza design.

2.6 PUBLIC AND PRIVATE SPACES

The clear articulation of public vs. private spaces is also an important design consideration. Defining boundaries help inform and orient residents and visitors alike. They also help define scale and can link and separate the variety of village amenities.

Public spaces include the village's primary roads, pedestrian plazas, and open air amphitheater. Here, solid walls, continuous planting or other such physical or visual barriers should be avoided. Large openings and windows and other means of "transparency" are also encouraged.



Terraces and pools provide semi private and semi public spaces.

Private spaces include areas where access is limited to individuals with ownership or membership interests. These include the residential entry ways as well as access or spaces adjacent to private residences or clubs. In these spaces, care should be taken to maximize separation and a sense of security and retreat while maintaining an appropriate response to the community as a whole.

Between the public and private spaces, there are also village areas that may be semi public or private. These may include areas such as restaurant terraces, certain building lobbies, and various outdoor amenities. These spaces offer

additional opportunities to provide clear articulation. Small grade changes, planters, seat-walls, changes in paving materials, for example, should be used to zone individual spaces while further augmenting the village's character.

2.7 PATIOS, DECKS AND TERRACES

Patios, decks and terraces should be visually compatible with their adjacent buildings and outdoor public spaces. They should also be shaped appropriately for their location and function. Organic, free-flowing forms are appropriate where nature is encouraged into the village composition. More formal or defined forms are appropriate adjacent to the public streets and plaza spaces.

Acceptable materials for patios and terraces include natural slate, granite, and sandstone pavers, colored concrete or brick pavers (at accent areas), stamped and stained concrete, and similar high-quality materials. Snow storage and proper drainage shall also be taken into account. Metal, redwood and/or cedar decks will be considered where appropriate. The DRC may also consider synthetic materials depending on their quality, track record and aesthetic appearance.

2.8 SITE WALLS, FENCES AND GATES

The walls, fences, and gates within Bear Valley Village are to be designed as extensions of either the landscape or of adjacent buildings through form, material, texture, and color. Spaces can be defined using rock walls, engineered retaining walls, decorative fences, safety fences, privacy fences, and utility screening designed to complement and tie into the overall Bear Valley Village design theme. Large, indigenous boulders are encouraged within the landscape and paved public areas. In order to reinforce the naturalized appearance of the site, boulders should be embedded into its surrounding surface. To maintain an authentic appearance as hand-placed, load-bearing structures, the height of boulder walls should not exceed 4 feet.

Engineered retaining walls should be designed to have some design quality beyond raw concrete. Such walls may be battered, faced with stone, or board formed. Stone faced walls should match the stone on the adjacent buildings or be otherwise indigenous to the site. The wall profiles should also follow the natural contours of the land with the ends tied back into the site, rather than ending abruptly. The use of boulder walls should be encouraged whenever the landscaping should appear natural. Stone retaining walls are required to be designed by a professional engineer and in many cases will be backed by structural concrete walls. Railroad ties and/or pressure treated timbers may be used for retaining in secondary locations. Prefabricated systems such as precast block wall systems are limited to non-critical locations such as access roads,

loading areas, or areas outside of public view. They should not be used for landscape walls, site walls attached to buildings, or pedestrian plaza areas.

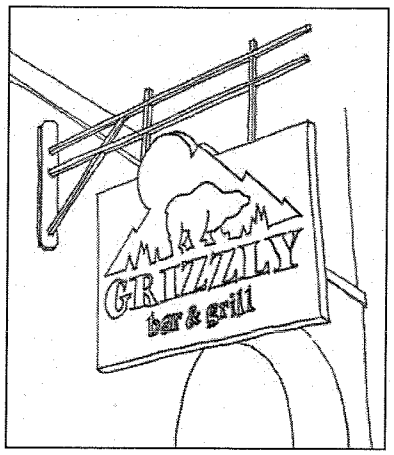
Fences are to be designed to act as extensions of adjacent buildings. Materials and construction should be of high quality and compatible with adjacent buildings. Appropriate materials include wood, painted metal, brick, and/or stone veneer. Fences and gates should be used to enclose service areas, outdoor pools and play areas as required for safety reasons. They are not to be used to define property boundaries within the village.

2.9 GENERAL SIGNAGE

In order to unify new development within Bear Valley Village, as well as orient and define place, site signage guidelines shall be prepared for all identification, directional and advertising signs. Lighting for signs should be kept to a minimum and used only as required to present information in a clear, safe manner. In addition, some site signage may need to be designed and located to remain clearly visible above the snowline in landscape areas subject to the accumulation of snow.

Retail Signage

Retail signage solutions that are creative and unique are an important component to establishing a successful commercial village. Signage is to be scaled to the space where the sign is to be located and to promote creative and interesting solutions that are appropriate for each individual business in terms of form, detailing, graphics, and color. Their size should be neither overwhelming nor diminutive to the pedestrian. Signs shall be custom crafted of wood and/or metal in order to add interest and individuality to the operation. Especially at arcade locations, the Guidelines encourage signage mounted perpendicular to the plane of the primary retail facade. Vitrines, bow, bay or other window types used for advertising or show purposes are also encouraged. Signage lighting should be kept to the minimum necessary for unhampered visibility. Digital, flashing, and 'product' signs are not to be used, as they are not in keeping with the feel of the village that the guidelines are seeking to achieve. Neon signs in some limited creative applications may be considered by the DRC.



Retail signage adds interest and individuality.

2.10 LANDSCAPING AND PLANTING

A major distinguishing characteristic of Bear Valley is its spectacular mountain setting. The following landscape and planting guidelines have been established to reinforce the site's natural environment. The emphasis should be on native landscape and plant materials throughout the development.

The design of buildings and their surrounding landscape shall be an integrated process so that indoor spaces relate to the outdoors spaces and the Bear Valley environment, topography and climate. As the link between the structured and the natural environment, landscaping offers the opportunity to add its dimension to the visitor's experience.

Design recommendations for landscaping and plant materials include;

- The design for buildings, access roads, on-grade terraces or patios, utilities, and other such improvements should consider any trees of significance that may exist on the site, with consideration given to their preservation.
- Efforts to protect existing trees should be implemented, including the construction of tree wells, feeding, pruning and root aeration. Direction from an arborist should be obtained when appropriate.
- On site riparian or wetland areas should be protected from construction activity and should be kept outside the Area of Disturbance.
- Ground covers and wildflower mixes should be consistent with those found naturally within the Sierras and Bear Valley.
- Large specimen trees and shrubs that engage the architecture should be used in areas of the site that are highly visible, helping to soften the architectural massing and blend the building into the site.
- Outside of the pedestrian streets, landscaping should blend with the surrounding environment by use of native plants and boulders.
- Landscaping should follow the natural groupings of native plants. Overly complex plantings are not reflective of the natural environment.
- Decorative, non-native planting may be appropriate in some areas as feature planting. Well maintained drought tolerant grasses may be used around buildings where appropriate.

In addition to planting material, all landscape proposals should incorporate the following considerations:

- Planting shall reinforce vistas and not block important views from the building itself or surrounding buildings.
- The Landscape plan should consider the need for providing color for the different seasons.
- Use planting material to enrich building facades and screen service zones and other unsightly areas or equipment.
- Planting areas should be designed to anticipate and handle snow storage requirements.
- Vines and shrubs with invasive roots or branch systems that might damage or destroy the structures or outdoor plazas should be avoided.
- Planting and landscaping recommendations are provided in the Bear Valley Village Master Plan.

2.11 GRADING AND DRAINAGE

Grading within the village boundaries should work to blend the buildings and their site improvements into the existing site topography, giving the site an appearance consistent with the natural landforms. The most aesthetically pleasing developments are those that minimize grading disturbances and carefully work around and incorporate the site's unique existing features, such as significant trees, rock outcroppings, and view corridors. Slopes that exceed 2:1 must incorporate retaining or boulder walls. The finished grading of buildings and other structures should be tied to the natural drainage patterns of the site, ensuring the proper direction of surface runoff around buildings and other structures. This approach will help prevent the use of riprap walls, box drains, and concrete culverts that can detract from the site's natural appearance.

Runoff from impervious surfaces, such as roofs and paved areas, should be directed to either natural or improved drainage courses or dispersed into vegetated and shallow retention areas. New drainage courses, if needed, should be designed to appear as natural drainage ways and headwalls for bridges and culverts should be board formed or faced with stone. Erosion control measures and site stabilization are necessary; recommendations are provided in the Bear Valley Village Master Plan.

2.12 WASTE STORAGE AND REMOVAL

The unique natural location, density of development, and the potential proximity of pedestrians to the service areas of buildings requires that all buildings within Bear Valley Village adhere to a waste management plan which addresses how best to store, remove and treat waste generated within the Village. Control of litter, odors, and screening of waste areas are to be addressed to minimize the impact on the environment.

Waste management systems should be of the closed variety in order to minimize smells and leakage that could escape between collection points.

The recycling of plastics, glass, tin, fiber, and cardboard, as well as the disposal of fry oil, must be addressed and managed as part of any such plan. At a minimum all solid waste must be collected and transported and the method or way selected must ensure public safety, protect against contamination, liter, odors, and unsightly blemishes.

Each building should be designed to include adequate recycling facilities including collection, storage and removal areas. Refuse collection and circulation are not to impede pedestrian circulation zones.

3.0 PARKING, ENTRY AND DROP-OFF REQUIREMENTS

3.1 SPACE REQUIREMENTS

The Bear Valley Village Master Plan has been carefully designed to provide for an adequate amount of drop-off and parking for residents, guests, visitors and employees. The parking requirements for Bear Valley Village will be satisfied by structured parking garages below the village buildings in addition to outdoor surface parking spaces.

The overriding objective is to promote a pedestrian friendly environment, where vehicular requirements are subordinate to the setting and village experience. Indoor and surface parking spaces typically should be 9'-0" by 18'-0," with accessible parking spaces as required by code. A limited number of parking spaces may be provided which are smaller than the typical space for compact car parking. Columns may intrude into the parking space if they can accommodate vehicle door openings.

Parking space requirements within the village are as follows:

- Hotel and/or Lodge units – 1.0 parking space per guest room
- Studio and 1-Bedroom – 1.0 parking space per residential unit
- 2-Bedroom – 1.25 parking spaces per residential unit
- 3-Bedroom – 1.50 parking spaces per residential unit
- 3-Bedroom with Lock-off – 1.88 parking spaces per residential unit
- 4-Bedroom – 1.75 parking spaces per residential unit
- Restaurants – 3.25 parking spaces per 1,000 sq. ft.
- Commercial/Retail Space – 2.35 parking spaces per 1,000 sq. ft.

Site parking computations that result in fractions of spaces shall be rounded up.

3.2 PARKING STRUCTURE GUIDELINES

The individual lodging buildings planned for the village are to be located over parking garages that in many cases lie within a potential flood plane. Additionally, the building and the garage facilities will be dependent on each other for structural support and the passage of utility ducts, piping and power lines, etc. The garage designer has allocated expected live and dead loads to designated columns and provided for the penetration and extension of all utility systems. In a similar fashion, building design must provide for vertical exhaust ducts and other required chases from the garage. This interdependence is a factor that must be respected by all involved in the building process.

Specific attention should be paid to:

- Well-defined entryways with adequate standing space for ingress/egress. Drive aisles shall be typically 24'-0" clear with a minimum of 20'-0" clear; structural columns must be inset beyond the drive aisle by a minimum of 3'-0" on either side;

- Clearly defined areas for residential and daytime guests, as well as vans, shuttles and oversize vehicles.

- Adequate lighting and ventilation.

- Well defined, obvious locations for stairs and elevators giving access to both public functions and private building interiors.

- Adequate drainage and water proofing inside the garage and at all perimeter locations.

Within the Bear Valley Village parking garage floor to floor heights ideally should be more generous than in a standard parking garage. Sport utility vehicles and pedestrians loaded with skis require additional headroom to maneuver, load and unload. As a result, parking structures within the village shall have a typical clear height of 8'-4", with a minimum clear height of 7'-6", in order to accommodate large vehicles with ski racks. Care should be taken to ensure that piping and other utilities do not drop below the minimum ceiling height.

The intent of the Master Plan is to minimize the visual impact of the garages by concealing their bulk to the degree possible. In order to achieve this end, important design considerations shall include blending any exposed garage side walls with building walls and/or incorporating landscaped berms. As contemplated in the Master Plan, the garage roofs will be used as landscaped, open spaces and pedestrian plazas.

3.3 DROP-OFF AREAS AND EMERGENCY SERVICE ZONES

Drop-off areas, delivery and emergency service zones are anticipated in the master plan to serve the village as required. The following additional design criteria have been established for all driveways and vehicles access points for Bear Valley Village.

- Uncovered driveways and other vehicle access points shall not exceed 5% grade within the first 20 feet of an adjacent roadway, and shall not exceed 8% thereafter;

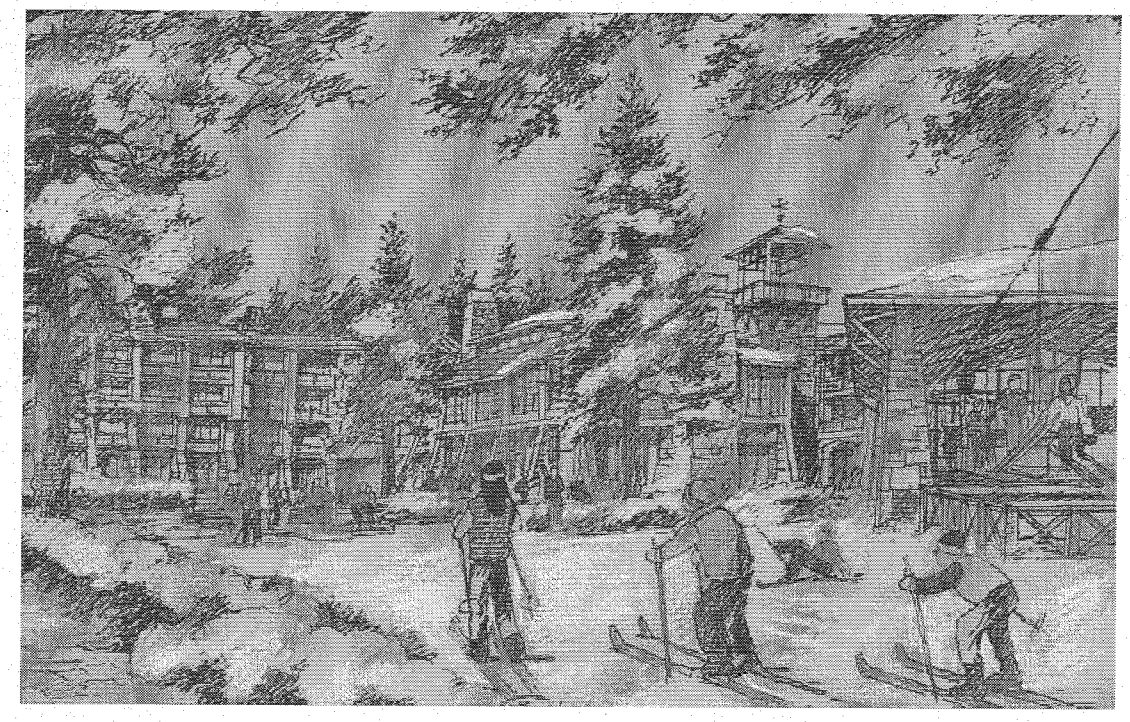
- Heated (snow-melted) driveways are required for uncovered access points with slopes greater than 10% and emergency circulation areas where plowing and snow removal will be difficult;

- Due to the high amount of snowfall at Bear Valley, driveways shall be designed to accommodate snow removal and snow storage. Parking garages and surface parking areas shall be designed to consider snow shed from adjacent structures in order to prevent injury to residents and damage to automobiles;

- Driveway materials may include asphalt, colored concrete, cobbles and/or stone or brick pavers. Pavers and concrete shall be integrally-colored in muted earth tones.

- One-way access drives into the village parking garages shall be a minimum of 12 feet wide, and two-way drives shall be a minimum of 24 feet.

4.0 ARCHITECTURAL GUIDELINES



The architectural guidelines for the Bear Valley Village are designed to address each building's relationship to the overall scale and design character of the community. A diversity of expression is to be embraced for the various building uses, which may be expressed through variety of detail and color, the composition of windows and doors, and the placement of additive or subtractive elements such as decks or balconies, dormers, bay windows, and chimneys. The collective result of these guidelines will create visual harmony between neighboring properties and within the Bear Valley Village community.

4.1 GENERAL OBJECTIVES

The village architecture should strive to draw its inspiration from the site. The buildings should reinforce the natural topography and respond to the site's unique features including the creek, existing vegetation, natural drainage, vistas and view corridors, as well as sun, snow and wind orientation. The Village architecture shall strive to be sensitive to the site and promote a sense of harmony within their natural setting.

With respect to individual buildings, the Guidelines seek to create a community with materials and massing which will stand up to the mountain climate, survive the

seasonal changes in temperature and exposure to moisture, yet result in a unity and appropriateness in architectural form which will give owners and visitors a memorable experience.

4.2 BUILDING ENVELOPE AND MASSING

Building heights shall step up from roadways, the pedestrian walkways and public plazas. Generally the highest portions are in the middle of a building and the lower portions are at the ends. High roofs that abruptly stop, forming tall expanses of walls, are to be avoided. Roofs should provide varied profiles with additive roof forms and a varied roofscape, rather than ridges with continuous unbroken lengths The overall building volumes shall be broken up and stepped both in plan and elevation. This requires significant shifts in building volumes as opposed to additive or subtractive building elements such as balconies or bay windows.

Buildings shall be sited, massed and given heights that generally conform to the approved Bear Valley Village Master Plan documents and applicable governmental codes. Building footprints shall generally conform to the boundaries established in the Master Plan. Any proposal to change building envelopes, heights, or massing must demonstrate that the resultant patterns are comparable to those shown in the Master Plan. The roof steps, for example, are a significant design element that cannot be substantively changed without demonstrating that any alternate design has no additional adverse massing and/or shadow impacts.

4.3 BUILDING COMPOSITION

All buildings shall have exterior elevations, roofs and details that are consistent in their architectural treatment. Special care should be given to proportion, human scale and contextual relationships. The Guidelines recognize the need for repetitive architectural elements (for example, bay windows, balconies, fenestration patterns) in order to establish an overall architectural consistency. However, excessive repetition without vertical and horizontal counterpoint will not be allowed. This is intended to further reduce building scale and enliven the building facades.

- Repetitive architectural features used to establish a coherent architectural theme shall be relieved of monotony by some combination of the following: 1), changes in visible cladding materials; 2), horizontal and vertical breaks in the architectural system (e.g., the elimination of repetitive bay windows or covered balconies at lower levels); 3), a fenestration system with varied patterns and window sizes; and 4), anomalous breaks in the roof line.

- Entries shall be covered to provide snow and rain protection in the winter or spring, and sun protection in the summer. Entries also represent a key opportunity to add design distinction to buildings.

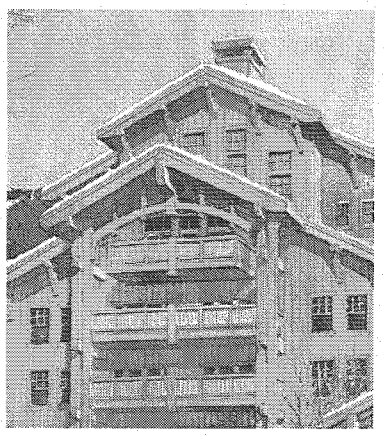
- The exposure of structural elements such as rafter ends or porch columns is encouraged. These elements shall appear substantial and their spacing shall be in proportion to the size of the elements. Decorative and structural truss work is also encouraged to add shadow and depth to building facades.

4.4 DECKS, BALCONIES AND GUARDRAILS

Exterior decks, balconies and guardrails provide an opportunity to articulate the exterior wall planes, and to add unique and crafted designs to the main walls of the building as well as the primary and secondary elevation features. Exterior decks and balconies can be used to reduce a building's overall massing, to introduce screened rooms within a building and to provide unique spaces for experiencing and enjoying the natural setting of Bear Valley.

They should be designed as integral extensions or recesses of the building and typically protected from the elements. When designing water management systems, such as weep holes and scuppers, they are to be located so as to not shed onto pedestrian traffic below.

The supporting structure for balconies is to match or compliment the overall design. Guardrails should be designed to blend with the building as well as match the character of the building. Consider using railings that are semi-transparent rather than solid, in order to allow views and the sun into the building and to add interest to building elevations. The use of modern railing not in keeping with the design aesthetic is discouraged.

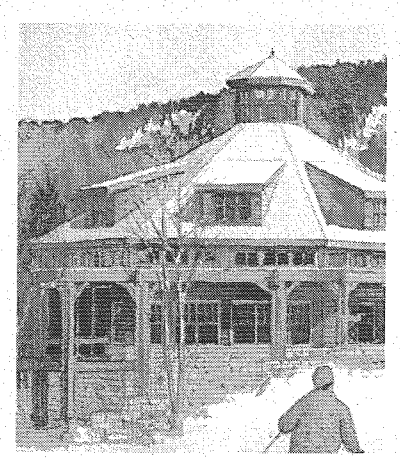


Balconies reduce a building's mass and should be protected from the elements.

4.5 STRUCTURAL EXPRESSION

The architecture of the Bear Valley region and the Sierra Nevada Mountains is based on authentic, straight forward structural expression. Indigenous and natural materials like local stone, timber and log, and metal with natural finishes and colors, and simple forms, structures, and detailing that reflect a simple structural approach should be used to help establish a structural expression for Bear Valley Village.

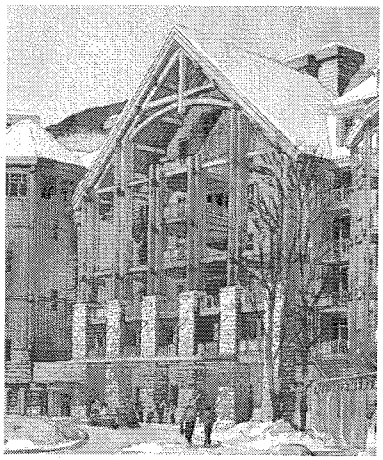
- *Stone* should be used to reflect their support capacity rather than just as surface decoration. They should be used at building bases, their size and placement indicative of their use as a massive bearing material. Stone should be indigenous to the area and be of sufficient scale to complement the mass of the building. Stonework should be laid with horizontal coursing, and should avoid the appearance of a veneer or faux stone.



Stone base used to suggest its load bearing capacity.

- *Timber structural elements* should be used to create a simple and rational structural system. Elements such as columns, beams, trusses, brackets, purlins, and rafters may be used on the exterior and interior of buildings to lend an authenticity of expression to the building structure. Care should be taken to provide visual continuity of the structural expression that is recognizable from the roof down through the timber members, and into the base of the building, to convey logically and orderly how the load bearing demands are transferred from the roof to the foundation. Heavy beams landing above large window openings without an expressed header and other visual representations that may appear illogical should be avoided.

  Timbers should also be sized according to the loading bearing needs required, with deeper members at longer spans and a clear hierarchy of primary, secondary, and lesser structural elements. Cantilevered floor levels, balconies, and roof overhangs provide prime opportunities to design timber structural elements in rational and artistic ways.



Timbers used in a structural, authentic manner.

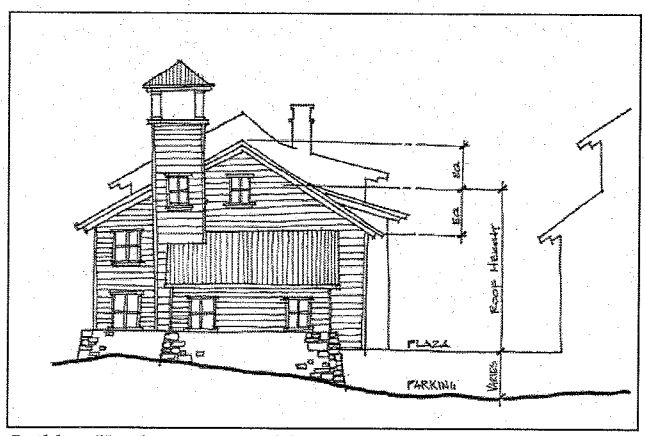
- *Metal detailing* used at column bases, column caps, and connecting plates should be sized to appear to meet the structural demand that is required. Creating undersized decorative connections with little substance should be avoided.

4.6 BUILDING HEIGHT

Building heights are a key component in creating a successful pedestrian scale and a comfortable scale for Bear Valley Village at all levels of perception. In order to ensure an appropriate scale for the Village, Buildings must meet the requirements for Building Height defined below. The height and mass of buildings that directly interact with significant outdoor public spaces should be more restricted than the height and mass for areas or portions of buildings not related to either these outdoor areas or in less sensitive areas.

The majority of the Village is to be composed of three and four story buildings with some five-story heights permitted in selected areas and the massing of the buildings should step down at the ends for scale and transition.

Building Height for the Village is determined by measuring from the plaza grade (defined as the top of the parking deck) to the midpoint of the nearest major roof on any exterior elevation. The roof midpoint is measured as half of the distance from the bottom of the roof fascia at the eave or rake to the top of the ridge, including if applicable any ridge vents.



Building Height as measured from the plaza grade.

Buildings should not exceed a building height of 72 feet, exclusive of architectural appurtenances.

Architectural appurtenances are defined as chimneys, stairway or elevator overruns, mechanical and plumbing vents, lightning rods, tie-backs or any other roof penetration required for code compliance, fire protection and/or the proper ventilation of a building. Plumbing and mechanical penetrations shall be grouped within a chimney forms or some other screened architectural enclosure. Allowable architectural appurtenances may exceed the height of the closest adjacent rooftop by a maximum of 10'- 0". Within the Bear Valley Village, one signature architectural feature per building (such as a clock tower) may exceed its adjacent rooftop ridge height by 20'-0". Each signature feature shall have a floor area of less than 150 square feet.

4.7 ROOFSCAPES

Bear Valley is known for its prodigious snowfall. In some years total snowfall has been known to exceed 50' in depth. Design of Building roof forms is of paramount importance not only for aesthetic reasons but for safety and practical reasons.

Roofs are conceived as dominant building elements, visible from all sides. They shall be designed to create a sense of shelter. Visible rooftop mechanical units and other HVAC related protrusions through the roof are not acceptable for both aesthetic and snow country considerations. All reasonable steps shall be taken to hide, screen and/or incorporate into the roofscape design all HVAC related encumbrances. Boxed-in chimney forms, appropriately designed cupolas and louvered gables are examples of acceptable solutions.

Roofs shall incorporate the following features:

- Open-gabled roofs; some hip, shed and flat roof forms may be used if complimentary to the open-gables.
- Exposed rafter ends at typical overhangs.
- Fascias built up of more than one overlapping member.
- Projected roof beams and/or open truss gable ends to provide individual expression within the overall theme.
- Roof pitches that range to a maximum of 5 feet in 12 feet; flat roofs should slope a minimum of 1/4" per foot. Decorative elements may incorporate steeper pitches.
- Dormers or other rooftop elements that enhance the roof forms. Gabled, shed or "flat" style dormers may be used for windows or where ventilating openings for mechanical equipment is required.

Varied, animated roofscape that steps with the topography.

Retail Roofs

Roofs over commercial areas, individual shop fronts and other retail areas should be designed to control rain, snow and ice, and to direct runoff away from pedestrian ways. Roof elements relating directly to the shop fronts can play a major role in the retail image conveyed, and the form, scale and texture can all contribute to providing a protective welcoming impression on the Public.

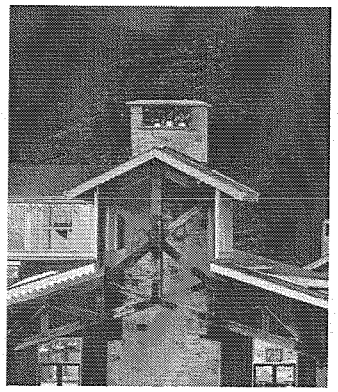
Roofs may be designed as shed, gable, hip, barrel, or other curved forms. Roof forms may also be supported by expressed structural components that add interest and creativity to the roofscape at the pedestrian level. Consideration must be given to the choice of roofing materials used on commercial shop fronts occurring below primary roofs. Damage to these roof finishes as a result of avalanching snow and/or ice from above must be avoided. Roofs covering the entrance of commercial shop fronts may be flat, but only if they are finished in high quality materials that are complementary to the entire roofscape. Other materials including natural slate, concrete or composite tiles which emulate slate, architectural-grade composite asphalt shingles, or metal with a natural patina, such as copper or terne metal may be used, similar to the primary and secondary roofs in the Village. Materials such as pre-finished metal roof panels or shingles, glass or Plexiglas may be used, but their use and approval are at the discretion of the DRC. Heated metal roof systems at roof eaves and valleys, as well as heated gutters are highly encouraged to help in managing rain and snow shed.

4.8 CHIMNEYS, FLUES, AND ROOF VENTS

Chimneys will play a central role in the overall roofscape of Bear Valley Village and should reinforce the idea of "hearth and home" common to the area's mountain heritage. Additionally chimneys should add to the visual rhythm or texture of a building façade. They should be topped with simple crafted chimney caps in either stone, brick or metal and help add to the artist impression of Bear Valley Village.

For snow country considerations, chimneys should be located at ridge or rake locations. All chimneys, flues, and roof vents must be designed and located to prevent damage due to snow sliding and snow creep. Height of chimney elements may be varied to create interesting snow covered roofscapes.

When feasible all fireplace flues, including other large flues, and mechanical vents should be concealed and consolidated with chimney-type enclosures.



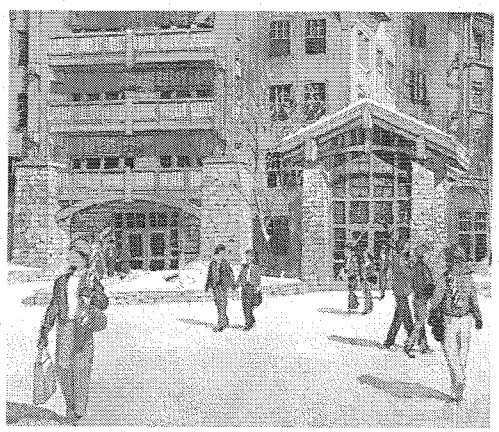
Chimneys add interest to the building architecture.

4.9 BUILDING OPENINGS

Openings are an important expression of the building's relationship to human functions and uses. They are much more than just access points and view areas, they are the elements that tie together exterior walls, help animate adjacent public spaces, and provide the interface between the interior and exterior spaces of a building. As such special care should be taken to ensure that windows and doors are well-designed, scaled and proportioned in a manner that is appropriate to the building form. Windows and doors that are unusual in shape or located in arbitrary ways can distract or appear self-conscious. Conversely, openings that are only placed at very controlled locations can produce a formality that is not characteristic of Bear Valley.

Entries should be designed to serve as welcoming portals and a respite from the elements, particularly falling snow and ice. Doors that serve as the primary entrance to buildings should relate to the building's interior and be appropriately scaled and detailed. Doors, in particular, can express the personality of the building. They shall be built up of stiles, rails and panels, and may be carved with designs appropriate to Bear Valley. Simple designs are preferred.

Windows provide a vital connection between the interior and the outdoor mountain setting characteristic of Bear Valley. Windows should be sized and proportioned in relation to the exterior materials that surround them. Traditional window divisions can be used to reduce the impact of large planes of glass. Window lights should have simple square or vertical proportions. Repetitive grids or geometric patterns and horizontally-proportioned windows should be avoided.



Well proportioned windows help animate adjacent public spaces.

When divided lights are used, they should appear authentic, using true divided lights or spacers designed to mimic the look of a true divided light.

Windows within stone walls should be designed to acknowledge the mass and weight of these walls and should be narrower in size than windows within other exterior wall materials. Deep headers or arches of stone or timber can also be used to express mass and detailed so as to provide visual interest. Larger windows may be designed within stone walls when the spans are subdivided by appropriately-sized vertical supports that carry deep stone or timber headers.

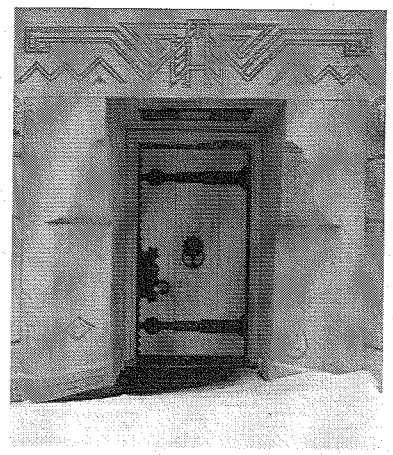
Window and door frames shall be wood, metal or metal-clad in approved colors.

Glass shall be clear or lightly tinted and must be set in manufactured glazing stops or otherwise concealed sealants. Low emission, high altitude insulated glazing is recommended. Reflective glass is not allowed.

Retail Openings

The doors and windows of commercial shop fronts should serve to encourage pedestrians to enter within, add visual interest, and clearly express the individual personality of each shop. This can be achieved through an increased transparency between the public way and the retail space, or by providing visual interest to the space that will serve to draw the customer into the shop. Transparent shop windows shall be placed at least 30 inches above walkways and shall be divided to reflect a pedestrian or human scale. Door openings shall be recessed so that no doors project beyond the face of the storefront when opened. Stock commercial storefront and doorway assemblies will not be allowed. Likewise, standard storefronts and related signage by retail chains are discouraged.

- *Doors* should be scaled according to the functional needs of the shop but may be oversized to relate to the public space they are fronting, and reinforce the perception of a portal from the public to the semi-public domain. The storefront fenestration provides a great opportunity to instill a creative, artistic sensibility to the shop with the use of varying materials, finishes and colors.



Doors add visual interest while expressing a store's personality.

- *Windows* also provide an opportunity to animate and energize the adjacent public way by utilization of unique sizes, proportions, patterns and finishes, as well as incorporating various glazing types to add creative, eye catching detail. Etched glass, seeded glass, colored glass, and other types of decorative glazing should be considered. Mirror glass, highly reflective glazing, over repetitive grids, and geometric window patterns are not to be used. Materials that may be used include wood, wood with metal cladding, or store front systems with finishes that are factory-applied. Divided lights are to be true divided lights or appear to be true divided lights by incorporating internal spacer bars between glass panes.

4.10 EXTERIOR MATERIALS AND COLORS

Exterior wall materials shall draw upon a set of materials consistent with those traditionally used in the Sierra Nevada, i.e. wood, metal, stone and brick masonry.

In addition to design and contract documents, color samples must be submitted to the DRC for review and approval.

The use of exterior colors provides an opportunity to establish the visual tone for the buildings of Bear Valley Village. Colors that feature the natural tones of the environment, including those found in the soils, rocks, and vegetation, should be utilized to help blend the development into the natural surroundings.

The Guidelines encourage stone colors that are muted hues of natural gray and brownish-gray.

Wood Siding and Trim should be finished with either a transparent or semi-transparent stain that is reflective of the site's natural landscape and geology. Opaque or solid-body stains on natural woods are discouraged, though may be required on cement-based products. Stains tones are to be reminiscent of weathered and natural colors, such as russet, muted or gray tan, and subtle browns. Accents painted in rich and deep tones, like dark green, maroon and gold, can be used in limited quantities to accent specific areas or trim.

Door and Window colors should be used as a way to accent these unique parts of the building form. Colors should reflect the hues in both the wood stain and wood paint used on exterior walls, but may be darker tones to create visual interest. Colors for metal-clad doors and windows can match the colors of exterior walls or be of an accent color that complements the exterior wall, but still relate to the natural colors of the site.

Roof colors will be perceived as a major unifying factor from many viewpoints and should consist of a combination of natural hues. Roofing materials should have an appearance of weathering, with texture and variation in tone. The colors for asphalt and composite shingles can also match the natural stone as well as the colors of the surrounding forest. Acceptable colors include muted greens, gray-greens, and browns infused with ochre and russet. Solid-bodies of colors of a uniform hue are to be avoided. Roofing materials with a proven record of service in high mountain locations, and have surface textures that help hold the snow cover. Feature roofs at architectural appurtenances may utilize metal roofing.

If used, copper may not patina in a relatively pollution free mountain environment. Painted metal roofing materials should match the appearance of natural metal. Finishes that are shiny and industrial in appearance are not allowed.

All exposed metals shall be painted to match adjacent wall or trim colors. Plumbing vents shall be grouped, carried to peaks and painted to match roofing.

Retail Areas

Exterior walls that frame commercial shop fronts and retail spaces act as the primary interface between public and semi-public areas of the plaza and provide an opportunity to offer pedestrians a variety of personalized experiences throughout the Village.

Exterior colors for walls, roofs, and fenestration at the storefronts should generally be complementary to the overall colors of the Village, though the palette may be more varied and intense than the colors employed elsewhere, to accent the special personality and artistry of the retail spaces. Interesting and unexpected colors can add life to the storefronts, though overly flashy and trendy colors will not age well and should be avoided.

Well chosen materials and colors for retail areas add life and identity to storefronts.

- *Retail Materials* — Commercial shop fronts should use natural, authentic materials such as indigenous stone, timber and metal with natural finishes and colors that are sympathetic to the design of the Village. Structural elements such as timber or metal should reflect a rational structure, but may be expressed, organized and detailed in more imaginative and unexpected ways. Groupings of timbers or metal members, expressed as unique shapes and finished with interesting colors may be used to create a more animated façade and contribute to the atmosphere and interest at the retail level.

- *Masonry* should be used in ways that are complementary to the building exterior wall. Stone may be of the same type used elsewhere, such as weathered granite, quartzitic sandstone, or slate, and may be laid in patterns that reflect the shop's design aesthetic. Mosaic patterns are not allowed.

- *Other materials,* such as cut stone, solid metals or metal panels and siding, and distinctive types of wood or timbers may be used if their use is appropriate to the shop's function and design, complementary to the architecture of the building, add interest to special retail areas, and help express the personality of individual shops.

- *Wood shakes and shingles, wood siding, and chinked timbers* may be used if they are clearly associated with a specific function of the commercial shop front.

- *Timber-framed elements* with large expanses of glazing may be appropriate functionally as well as aesthetically, if they help animate the retail level. The use of stucco or exposed concrete in limited areas may be appropriate, subject to the discretion and approval of the DRC.

4.11 MISCELLANEOUS STRUCTURES

Open Structures or Outdoor Space Enclosures: Garden trellises, posts, pergolas and fencing shall be used to reduce apparent building bulk and extend the buildings into the outdoors.

Arcades: In snow country, arcades provide shelter from bad weather and protect pedestrians from sliding snow. Additionally, they can provide pedestrian friendly elements that modulate scale and provide a "base" to the massing. Arcades may be designed of stone, masonry, painted wood or metal.

Service Structures: Service structures shall be located away from primary visitor entrances and be screened from direct views. Transformers and other building equipment shall be placed underground, within service structure or screened by vegetation and/or fencing.

4.12 UTILITIES AND EXTERIOR EQUIPMENT

Utilities and exterior equipment including metering devices, gas service lines, propane tanks, transformers and air conditioning units should be screened from public view within the Village. They should be painted to match the color of adjacent walls or roofs and screened to mitigate sound pollution whenever possible. The use of window-mounted air conditioning units and other types of units is not allowed.

Utilities that are wall-mounted should be screened to the degree approved by utility companies, with either landscaping or materials that are similar to those used on exterior walls. All screening materials must comply with the guidelines for Walls, Fences and Gates.

Site and building utilities should be placed underground within service structures, wherever possible. Propane needs for the Village will be met with underground propane tanks. Site utilities that serve Bear Valley Village should be located to minimize grading and the removal of trees, installed underground and aligned to follow driveways, pathways, and other areas of disturbance. In instances where it may be necessary to construct long runs through wooded areas, utilities should be aligned to include changes in direction to interrupt cuts that are visually imposing.

The use of satellite dishes or any other exterior equipment must be documented and submitted to the DRC for review and approval in addition to other required approvals.

4.13 EXTERIOR LIGHTING

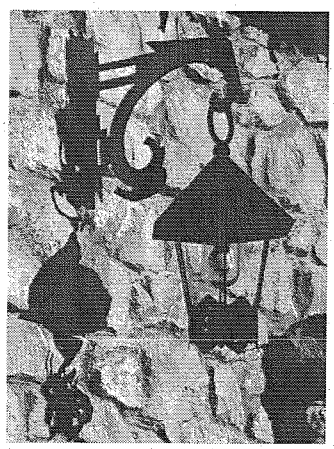
An important natural amenity of Bear Valley is the clear night sky. One aspect of maintaining the pristine mountain environment is to consider the design and placement of light sources. Exterior lighting must at a minimum adhere to the quantity and brightness (lamp wattage) requirements for safety and egress, as identified by the local fire and life safety codes. High quality materials, in colors and finishes that are complementary to metal work in the Village, should be used in providing exterior lighting fixtures. Lighting should be scaled appropriately to the architecture that surrounds it and for the purpose its use is intended. Additionally light sources for all light fixtures should be completely contained within the fixture (cutoff luminaries) and shielded or not visible from off-site.

Site Lighting

Exterior lighting shall not be installed where its direct source is visible from neighboring properties, or where it produces excessive glare to pedestrian or vehicular traffic. Where feasible and desired, pedestrian paths to be traveled at night should be illuminated with low sidewalk lights or bollard-type path lights enclosed in stone, metal or wood structures. Pathway and other intermittent use lighting fixtures should be no more than 10 feet high, unless higher fixtures are needed due to snow depth considerations.

Retail Lighting

Successful lighting of the commercial shop fronts will welcome passerby and provide adequate illumination to promote the product within, while still providing a subdued level of light at the pedestrian street. Lighting should not overwhelm the pedestrian plaza or reduce the significance of the nighttime sky. Lighting for all commercial shop fronts should provide, at a minimum, an adequate amount to light both the contents of the retail frontage and safe passage along the shop front. Light fixtures may be designed to reflect the personality of individual shops and should complement the architectural character of Bear Valley Village.



Light fixtures should be expressive of the store's personality.

4.14 ENERGY AND CLIMATE CONSIDERATIONS

Green building principles including energy efficiency, sustainability and the use of recycled materials is encouraged for all buildings within Bear Valley Village. Accreditation requirements for certification such as LEED (U.S. Green Building Council Leadership in Energy and Environmental Design rating system), or programs like Energy Star (U.S. Environmental Protection Agency and the U.S. Department of Energy management program and rating system) should be considered in addition to any local and state guidelines or regulations that may apply including CA Title 24. At a minimum all mechanical and energy systems are required to meet the requirements of CA Title 24, Part 6 of the California Code of Regulations (California's Energy Efficiency Standards for Residential and Nonresidential Buildings).

The following considerations represent standard practice in Snow Country locations. Passive solar design is encouraged but should not dictate design.

- When possible, take advantage of a footprint's east-west orientation where solar radiation can be controlled.
- Employ overhangs and covered porches (particularly at south facing facades) to protect from summer sun/heat yet allow the winter sun to penetrate.
- Protect north facing facades and wind exposed walls with berms, air locks and/or evergreen trees. Use air lock vestibules to reduce heating costs.
- Locate major entries and/or public activity zones in southeast to southwest locations where winter sun will help animate the spaces and melt ice/snow.
- Establish and preserve sunny paved areas for sitting and outside dining, particularly between noon and 3 PM on winter days.
- Building Designers shall incorporate methods to reduce fuel use for heating, cooling and lighting through the use of fuel-efficient heating systems, adequate insulation, thermal pane windows, etc. For roofing assemblies, the Guidelines encourage a minimum insulation value equal to R-50.

5.0 SNOW COUNTRY CONSIDERATIONS

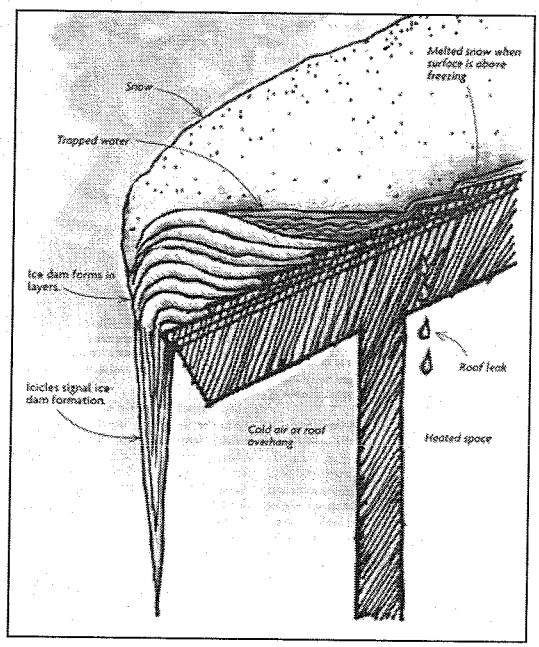
5.1 SLIDING SNOW

Given the significant average annual snowfall in Bear Valley, the building forms for the new buildings should derive from a common-sense attitude toward the forces of nature, including snow and ice. Particularly important are covered arcades and covered entries that protect pedestrian travel paths from sliding snow or falling ice. In new pedestrian areas, building bases must be resistant to damage caused by sliding snow or falling ice.

Roof pitches greater than 5 feet in 12 feet require careful consideration in order to prevent snow accumulation and sliding that can injure individuals, destroy private property and create unnecessary maintenance headaches. Unprotected roof pitches should slope away from parking, roadways, service zones and accessible public areas. Snow fences and snow guards, flat roof sections[1] and/or arcades shall additionally be utilized as necessary to provide adequate snow protection.

Gabled roof forms are encouraged at entries as they protect from both sliding snow and annoying drips. Gabled dormers, however, create unnecessary valley conditions which can create significant snow build-up, flashing and related leakage problems. In order to minimize these problems, the Guidelines encourage simple roof forms, the elimination of unnecessary valleys and the use of flat vs. gabled dormers when possible.

In order to minimize sliding snow, use of high friction roofing materials such as asphalt shingles is recommended. Metal roofs are not recommended due to their relative lack of friction which can encourage snow sliding. Standing seam metal roof systems can additionally be damaged by creep or sliding snow.



Ice dam formation.

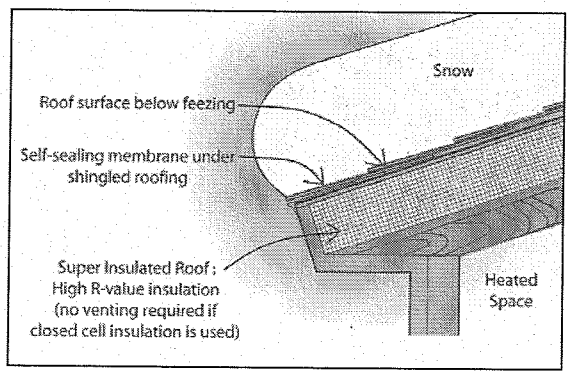
5.2 ICE DAMS

In addition to sliding, ice dams can create serious problems including roof leaks and the formation of potentially hazardous icicles. Ice dams form when snowmelt runs down a roof surface over a heated space, then hits the roof overhang, which is below freezing. The ice blocks the runoff, forcing it to

[1] A "flat" roof section should have a minimum positive slope of 1/4 inch per foot and drain toward a warm wall and away from pedestrians where possible.

back up under shingles and roofing felt, and eventually into the building. To prevent leaks, in general, the Guidelines recommend the use of self-sealing rubberized membranes under the selected roofing material.

To prevent falling ice and damage at the eaves/gutters, the Guidelines recommend heavy insulation to minimize melting and/or heated roof edges. The use of a super insulated roof assembly is effective in minimizing the formation of ice dams, keeping the roof cold with thick layers of rigid insulation atop the rafters that prevents the interior heating from melting snow on the roof.



Super insulated roof configuration.

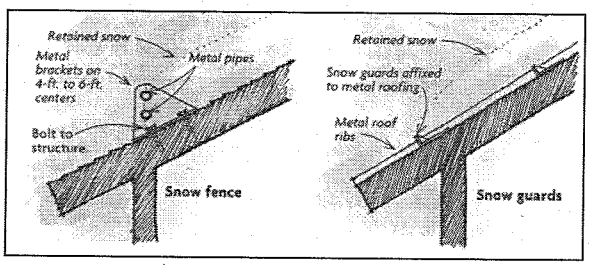
5.3 SNOW LOADING

Roofs shall be engineered to handle the maximum possible snow load in accordance with standard engineering practice and all applicable codes.

5.4 SNOW CLIPS AND FENCES

Although the roof forms of the buildings within Bear Valley Village represent the primary method for managing snow, additional systems, including snow guards, snow fences and snow clips, can help prevent snow slides by giving the snow a toehold near the edge of the roof. Heated eave systems, gutters, downspouts, and flashing should be used to further ensure safety to people and property. Snow fences may be made of timber or log members and should match the wood used on the building.

Heated gutters and downspouts may also be used as part of a well-functioning roof system. Gutter systems must be designed to prevent them from being destroyed by sliding snow.



Snow fences and snow guards can help prevent snow slides.

5.5 SNOW MELT SYSTEMS

Heated outdoor terracing and walkways can:

- Help eliminate slippery conditions for pedestrians (thereby reducing potential liability).

- Create outdoor activity zones.
- Reduce snow removal and maintenance.
- Prevent surface deterioration due to extreme freeze thaw cycles.

The downside is that heated walks can consume a considerable amount of energy; thereby undermining conservation efforts and increasing operation costs.

Where heated walkways are desirable (for example, the plaza areas where snow build-up is a problem), the Guidelines recommend using a sand or concrete system utilizing glycol/water filled polybutylene piping. A slip resistant surface is also important. For instance, a heated exposed aggregate surface, when wet, is less slippery than a broom finished concrete surface and does not suffer from the spalling characteristic of unheated areas. Pavers over glycol/water filled polybutylene piping have also been used successfully in resort areas, although the thickness of the paver can adversely affect heat transmission and, thus, the melting capacity of the surface.

6.0 APPLICATION OF THE GUIDELINES

6.1 CONSTRUCTION MANAGEMENT

All construction programs shall be compatible with Alpine County regulations and shall be administered by the DRC in accordance with the rules and regulations as set out in the Bear Valley Village Master Association Documents. No significant changes in plans or materials previously approved may be undertaken without approval by the DRC. In addition to the DRC, contract documents shall be submitted for approval to the Alpine County Planning, Building and other departments, as required, for all necessary permits or authorizations. Once begun, construction must be completed with expedition, strictly in accordance with the approved plan.

The area of disturbance for construction should be kept to a minimum and limited whenever possible to the immediate areas around the building excavation, in order to maintain existing natural landforms, drainages, vegetation, and other site characteristics, such as large trees. Some allowances will be required due to the practicality of the construction process, including accessibility. Fencing should be used to delineate and enclose all areas of disturbance.

A Construction Management Plan that clearly identifies the Area of Disturbance, construction parking, temporary buildings, fencing, signage, tree protection, erosion control measures, and other construction related items must be submitted and approved by the DRC prior to the start of construction.

Recommendations and criteria for construction activities are necessary and are addressed in the Bear Valley Village Master Plan. To verify the progress of all building projects and compliance with the required approvals, the DRC or its representative(s) may visit and monitor construction activity over its duration.

Please note the following:

- Every developer or his/her general contractor shall give written communication to the DRC and adjacent neighbors regarding the proposed and ongoing construction schedule and possible construction related inconveniences.

- Every general contractor shall provide a detailed plan of the construction site, including all proposed staging areas. The plan area shall be protected with unobtrusive snow fencing or other barricades prior to the commencement of construction.

- Construction trailers, fences and temporary structures shall be approved by the DRC before their erection.

- Best Management Practices (BMPs) measures are to be followed as outlined in the Bear Valley Village Master Plan.
- Excavation materials shall be removed to approved and regulated sites.
- Proper soil stabilization, re-vegetation and water control must be utilized during and subsequent to construction to minimize soil erosion and provide dust abatement.
- Daily cleanup of the construction site is mandatory. Trash and debris removal are the contractor's responsibility.
- Contractors shall comply with Alpine County's guidelines regarding noise and hours of construction and equipment operation. Materials, tools, equipment and construction trailers shall only be located in the approved staging area(s).
- Temporary self-contained chemical toilet facilities must be provided during construction. Toilets should be screened from public view.
- Upon completion of the building, the structure shall receive final review and approval by the DRC before a certificate of occupancy may be issued.

BEAR VALLEY VILLAGE
PLANNED DEVELOPMENT ZONING DESIGNATION

EXHIBIT A-4: MITIGATION MEASURES/CONDITIONS OF APPROVAL

Bear Valley Village Conditions of Approval/Mitigation Measures

Development of the project shall fully comply with all mitigation measures included in the Final Environmental Impact Report (FEIR) as certified by the Board of Supervisors on May 29, 2009, and in the Addendum as considered by the Board of Supervisors on December 18, 2012. These mitigation measures are included as conditions of approval and are specifically listed in this exhibit. For convenience, they have been renumbered as conditions of approval (e.g. Condition #1 is Mitigation Measure PHE-3/PHE-4). Conditions of approval that are separate and in addition to the mitigation measures included in the FEIR are also listed in this exhibit. Development of the project shall fully comply with these conditions of approval.

The County is also adopting findings under Public Resources Code section 21081, and a Mitigation Monitoring and Reporting Program ("MMRP") for the project. The findings and MMRP also adopt and require the project to carry out the mitigation measures listed in the findings and MMRP. These conditions of approval, the findings and the MMRP are intended to parallel one another, and to commit the project to the same set of mitigation measures. To the extent there are any discrepancies in the mitigation measures set forth in these documents, these discrepancies are inadvertent. In that event, the most stringent formulation of the mitigation measures shall apply.

1. Mitigation Measure PHE-3 & PHE-4: Develop an Employee Housing Implementation Plan.

The County will require the applicant to develop an Employee Housing Implementation Plan (EHIP) that ensures adequate employee housing is available to serve each phase of the project, including construction phases. The plan shall document the existing seasonal and permanent employee housing supply, estimate the number of new seasonal and permanent jobs that would be generated by each phase of development (including sheriff deputies), estimate the demand for employee housing needed for each phase of development, and describe whether the demand would exceed employee housing supplies. The plan shall describe feasible measures to be implemented by the applicant to ensure adequate employee housing is available for each phase of the project, including construction. Such measures may include but shall not be limited to:

- Construction of an employee housing facility
- Establishment of an employee rental housing placement program that matches employees with rooms or houses available for rent in or near Bear Valley
- Rental or purchase of existing housing in or near Bear Valley to be leased or provided to project employees

The EHIP shall be submitted to the Alpine County Planning Department for review and approval as part of the application for the first conditional use permit (CUP) for the project. An updated EHIP shall be submitted with each successive CUP application to the County Planning Department for review and acceptance prior to approval of the requested CUP.

If at a later date the applicant were to propose building an employee housing facility in an alternate location to meet the requirements of Mitigation Measure PHE-3, the County would perform subsequent environmental analysis in accordance with CEQA.

2. Mitigation Measure PS-1a: Provide funding for new firefighting equipment required to serve the project.

Prior to County approval of any CUP for the project, the County will require the applicant to provide documentation to the Planning Department that it has coordinated with the Bear Valley Public Safety Supervisor to determine the equipment levels required to serve each new phase of development. New equipment required to serve the project may include, but is not limited to, a ladder truck or hydraulic platform (snorkel) truck to serve buildings taller than 30 feet. The demand for new fire equipment may be reduced by incorporating fire-suppressing design and building materials into the project, or by reducing building height. To accommodate the demand for additional work space generated by the project, the sheriff and fire station building could be modified to allow for use of the second floor by installing an elevator to provide access to persons of all physical challenges in compliance with ADA. Other needed modifications include interior improvements for offices and retrofitting to accommodate the new fire equipment required for the project, Other equipment needed to serve the project may include emergency service communication equipment or facilities.

The applicant shall provide to the County the required funding needed for each development phase prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for that phase. When determining the amount of funding required for each project phase, the County will consider the conclusions of its FIA for the Bear Valley Village project and will ensure that all mitigation imposed on the project is roughly proportional to the project's impact. The County will ensure adequate equipment is in place to serve each phase of development prior to occupancy.

This mitigation measure is partly needed to mitigate the impacts of cumulative growth. As a result, the applicant would be eligible for reimbursement of equipment costs to implement this mitigation measure in excess of its fair share. A method of reimbursement shall be established by the County, which may include an executed agreement between the County and the applicant that is consistent with state law.

3. Mitigation Measure PS-1b: Provide funding for new emergency medical equipment required to serve the project.

Prior to County approval of any CUP for the project, the County will require the applicant to provide documentation to the Planning Department that it has coordinated with the Bear Valley Public Safety Supervisor to determine the equipment levels required to serve the portion of the project subject to the requested approval.

Equipment required to serve the project may include emergency medical vehicles (including oversnow vehicles) and emergency medical supplies. If the County determines that tax revenues from the project over time are not sufficient to pay for additional equipment to serve the project, the County will require the applicant to provide the equipment (or funding for the equipment) to serve the portion of the project subject to the requested approval as a condition of the approval.

This mitigation measure is partly needed to mitigate the impacts of cumulative growth. As a result, the applicant would be eligible for reimbursement of equipment costs to implement this mitigation measure in excess of its fair share. A method of

reimbursement shall be established by the County, which may include an executed agreement between the County and the applicant that is consistent with State law.

4. Mitigation Measure PS-3: Assess developer fees to help pay for additional facilities, or provide other methods for mitigating the impact in a manner acceptable to ACUSD.

ACUSD can assess developer fees for the project to help pay for additional facilities needed to serve new students generated by the project. ACUSD can assess these fees at a maximum rate of $2.97 per square foot of assessable space for residential development and $0.47 per square foot for commercial or industrial development as specified in Government Code Section 65995. These fees constitute the exclusive means of both "considering" and "mitigating" school facilities impacts of projects and are "deemed to provide full and complete school facilities mitigation" (Government Code Section 65996[a][h]). Alpine County will collect these fees from the applicant on behalf of the ACUSD before approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for any project phase.

The applicant may propose alternative methods that accomplish needed mitigation to the satisfaction of ACUSD. Alternative methods may include provision of school facilities by the applicant within the Village project. Such facilities would be required to meet California state standards for construction of new school facilities. Any alternative method for mitigating school impacts would need to be acceptable to ACUSD. The applicant would be required to provide documentation of ACUSD's acceptance of alternative mitigation measure upon submittal of any application for a CUP.

5. Mitigation Measure U-2a: Provide proof of available sanitary sewer pipeline capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

As part of the submittal for each CUP, the County will require the applicant to provide documentation to the Planning Department that BVWD has sanitary sewer line capacity available to meet the demand for the requested phase.

6. Mitigation Measure U-2b: Construct additional sanitary sewer system improvements if needed to serve the project.

BVWD can and should require the applicant to construct any improvements to BVWD sanitary sewer system necessary to serve the project. Improvement may include replacing existing pipelines with larger diameter pipelines. The applicant may be eligible for reimbursement of construction costs to implement this mitigation measure in excess of its fair share.

BVWD would perform California Environmental Quality Act (CEQA) review for any sanitary sewer system projects that have not already been evaluated under CEQA, and be required to adopt feasible mitigation measures for any significant impacts.

7. Mitigation Measure U-2c: Provide proof of available wastewater disposal facility capacity prior to County approval of conditional use permits for each construction phase.

As part of the submittal for each CUP, the County will require the applicant to provide documentation to the Planning Department that BVWD has wastewater disposal capacity available to meet the demand for the requested phase. The County will not approve any development phase without such documentation. Proof of wastewater disposal availability shall include documentation from BVWD stating that wastewater disposal capacity can meet wastewater disposal demands for the portion of the project subject to the requested CUP. Several alternatives may be available to BVWD for increasing its disposal capacity to accommodate wastewater generated by the project.

Any improvements to BVWD facilities would need to be carried out by BVWD or their assignees. Improvements to BVWD facilities, therefore, would not be considered County projects and would be subject to BVWD's oversight and approval authority. BVWD can and should verify the effectiveness of these or other wastewater facility improvements after their implementation and before quantifying the wastewater capacity increase derived from the improvements. In addition, BVWD would serve as lead agency under CEQA and would perform CEQA review for any wastewater disposal projects subject to CEQA, and would be required to adopt feasible mitigation measures for any significant impacts.

- Lining of the Diversion Ditch. One feasible method of increasing disposal capacity involves lining the earthen cutoff diversion ditch that runs along the southeast side of BVWD's polishing reservoir. According to a memorandum prepared by engineering consultant MWH, re-grading and lining this earthen ditch would improve the performance of the ditch by 60 percent, increasing BVWD's wastewater disposal capacity by 264 SFE's (MHW 2011). When combined with BVWD's disposal capacity that is currently available for the project (223 SFEs), this improvement would increase BVWD's total wastewater disposal capacity available to the project to an estimated 487 SFEs (223 SFEs + 264 SFEs = 487 SFEs). This would be sufficient to accommodate all 385 SFEs of wastewater that would be generated by the project.

- Grading of the Diversion Ditch. According to the MWH memorandum, re-grading the cutoff diversion ditch would increase BVWD's disposal capacity by up to 130 SFEs (MWH 2011). When combined with BVWD's disposal capacity that is currently available for the project (223 SFEs), this improvement would increase BVWD's total wastewater disposal capacity available to the project to an estimated 353 SFEs (223 SFEs + 130 SFEs = 353 SFEs). Because this capacity would not be sufficient to accommodate all 385 SFEs of wastewater that would be generated by the project, this alternative may need to be combined with other alternative solutions for increasing BVWD's disposal capacity.

- Additional Spray Fields. Adding spray fields to increase the amount of land discharge of treated wastewater would increase BVWD's disposal capacity. According to BVWD, the addition of approximately 52 acres of spray fields would provide BVWD with 650 additional SFEs, which would be sufficient to accommodate build-out of the entire BVWD service area, including the project (BVWD 2011).

- Other Options. Other options for increasing BVWD's wastewater disposal capacity may include planting hydrophytic vegetation such as pasture grasses, willows, or aspens in the spray fields to increase transpiration; or installation of

subsurface irrigation fixtures to extend the length of the disposal season when snow covers the ground and spraying is not feasible.

BVWD would perform project-level CEQA review for any wastewater disposal projects that have not already been evaluated under CEQA, and would be required to adopt feasible mitigation measures for any significant impacts. ***8. Mitigation Measure U-2d: Fair-share funding for BVWD wastewater disposal facility improvements.***

BVWD can and should require the applicant to provide fair-share funding for any improvements to BVWD wastewater disposal facilities (i.e., post-treatment) necessary to serve the project. These improvements could include expansion of the disposal facilities to accommodate the increase in wastewater generated by the project.

In order to be implemented, the costs of the wastewater disposal facilities improvements would need to be determined, and the project's fair share calculated. Payment of these costs should be required by BVWD prior to issuance of sewer connection permits for the project. BVWD would perform CEQA review for any wastewater disposal projects that have not already been evaluated under CEQA, and would be required to adopt feasible mitigation measures for any significant impacts.

9. Mitigation Measure U-3: Minimize the use of copper water supply and wastewater pipes and fixtures.

The County will require the applicant to minimize use of water supply and wastewater pipes and fixtures that contain copper. To the degree allowed by the California Plumbing Code, the applicant shall specify non-copper plumbing materials on building plans submitted to the County Building Department for review and approval. Non-copper plumbing materials for water supply may include chlorinated polyvinyl chloride (CPVC) and cross-linked polyethylene (PEX). Non-copper plumbing materials for wastewater disposal may include cast iron and polyvinyl chloride (PVC). All plumbing pipes, fixtures, and materials shall conform with the California Plumbing Code and shall be subject to review and approval by the County Building Department.

The use of copper pipe shall be allowed if the applicant demonstrates any one of the following:

- Copper piping would not result in exceedence of BVWD's water quality limits for copper
- The water flowing through the copper piping would not contribute to elevated copper concentrations in BVWD wastewater
- The source of elevated copper concentrations is identified and addressed and BVWD concludes that copper piping would not affect these elevated concentrations
- Further testing shows that copper concentrations in BVWD wastewater meets the water quality standards for copper.

BVWD can and should require the applicant to use non-corrosive sewer pipeline materials when constructing sewer collection lines.

10. Mitigation Measure HWQ-1: Implement BMPs to control construction-related stormwater runoff, erosion, and sedimentation.

As part of the submittal for each discretionary entitlement request that would involve construction activity (i.e., conditional use permit [CUP] and/or tentative map [TM]), the County will require the applicant to provide construction staging plans for the requested phase of construction to the County Public Works Department. Such plans shall, at a minimum, include the following provisions to reduce construction-generated erosion and minimize potential adverse construction impacts on water quality in Bear Creek, its tributaries, and downstream surface waters:

- The limiting of site disturbance for all construction associated with the proposed activity or phase of construction and the methods of limiting site disturbance adjacent to these areas
- Limit site disturbance such as clearing, grubbing, and grading to between May 1 and October 15, unless special authorization is provided by the County
- No heavy construction equipment shall operate within 100 feet of any creek during periods when soils are saturated from rain or snowmelt
- No heavy construction equipment shall operate within 100 feet of any creek unless temporary BMPs are installed to ensure that such operation does not result in any discharge of pollutants to the drainage whatsoever
- Temporary measures for controlling seasonal runoff and stormwater flows from the construction area, including all staging areas and any other area where site disturbance will occur during construction
- Protect exposed soil during the spring and summer construction season from erosion caused by thunderstorms, focusing particular attention on areas near Bear Creek and wetland habitat
- Locations of stockpiles for excavated materials and the method of stabilizing stockpiles in order to reduce the potential for soil erosion
- Locations of all staging areas for construction offices, equipment, and construction materials and the methods of limiting site disturbance adjacent to these areas
- Identification of all trees, drainages, and wetland areas within 25 feet of all areas subject to construction activity or used as a construction staging area and the method of isolating or protecting these features so that they are not disturbed except where disturbance or removal of the identified feature is specifically allowed by the project approvals

Prior to County approval of a TM and/or CUP for any phase that would involve construction activity, the County will require the applicant to provide proof of coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity from the Central Valley RWQCB. The SWPPP will identify the sources of sediment and other pollutants on site and ensure the reduction of such pollutants in stormwater discharged from the site. The SWPPP will include an Erosion and Sedimentation Control Plan and provide descriptions of BMPs selected to control erosion, sediment discharge, and other pollutant sources during construction. Appropriate BMPs will be implemented throughout the duration of construction activities.

Typical BMPs may include the following:

- Use temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) in disturbed areas, and ensure no disturbed surfaces are left without erosion control measures in place during the winter and spring months.
- Retain sediment on-site by a system of sediment basins, traps, or other appropriate measures.
- Develop a spill prevention and countermeasure plan to identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site.
- Schedule construction activities to minimize land disturbance during peak runoff periods and restrict to the immediate area required for construction.
- Implement soil conservation practices to reduce erosion during spring and summer runoff, and retain existing vegetation where possible.
- Control surface water runoff by directing flowing water away from critical areas and by reducing runoff velocity; use diversion structures such as terraces, dikes, and ditches to collect and direct runoff water around vulnerable areas to prepared drainage outlets; use surface roughening, berms, check dams, hay bales, or similar devices to reduce runoff velocity and erosion.
- Contain sediment when conditions are too extreme for treatment by surface protection; use temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins to detain runoff water long enough for sediment particles to settle out; store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.
- Store and treat topsoil removed during construction as an important resource, and place berms around topsoil stockpiles to prevent runoff during storm events.
- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.
- Revegetate disturbed areas after completion of construction activities.

To reduce construction-generated erosion and minimize potential adverse water quality impacts from construction of its proposed snowmobile parking and trailer loading areas, the County shall also develop and implement a SWPPP that includes BMPs.

11. Mitigation Measure HWQ-2: Implement Water Quality Control Measures

Prior to any site disturbance associated with any phase of construction, the applicant shall obtain approval of improvement plans for that phase of construction from the County Public Works Department. Such phased improvement plans shall, at a minimum, include the following provisions to reduce erosion and minimize potential adverse impacts on water quality in Bear Creek and downstream surface waters:

- Permanent sediment control structures designed to achieve a minimum 80 percent reduction in sediment load leaving the site and to comply with the design standards contained in the Alpine County Subdivision Ordinance and any other applicable ordinances or standards addressing site grading, erosion control, or drainage that may be adopted by Alpine County.

- Permanent drainage control structures which prevent non-point source runoff from directly entering the natural drainage courses or wetland areas within or adjacent to the site.
- A water quality control program identifying stormwater BMPs to incorporate into project design and manage urban runoff. Monitoring of stormwater runoff may be required to ensure surface water quality in downstream drainages is not substantially affected by the project.

A variety of stormwater BMPs is available for managing urban runoff. Stormwater BMPs are most effective when implemented as part of a comprehensive stormwater management program that includes proper selection, design, construction, inspection, and maintenance measures. Stormwater BMPs can be grouped into two broad categories: structural and non-structural. *Structural* BMPs are used to treat the stormwater at either the point of generation or the point of discharge to the stormwater sewer system or to receiving waters. *Non-structural* BMPs include a range of pollution prevention, education, institutional, management, and development practices designed to limit the conversion of rainfall to runoff and to prevent pollutants from entering runoff at the source of runoff generation. Table 3.5-2 provides a summary of a variety of commonly used structural and nonstructural stormwater BMPs.

Typical BMPs for Managing Post-construction Urban Runoff

BMP	Purpose
General community outreach	Increase public awareness of the need to and how to control non-point source pollution
Constructed wetland basin or water quality basin	Permanent or temporary storage for regulating downstream releases to reduce pollutant discharge
Catch basin cleaning	Capture and remove sediment and debris such as trash and leaf litter
Commercial and retail space: good housekeeping	Reduce pollutants in runoff by using porous pavement or modular paving systems for vehicle parking lots, limit exposure of materials and equipment to rainfall, clean up spills, use dry cleanup techniques instead of wet techniques, and limit direct runoff of rooftops to storm drains
Pesticide/herbicide use	Reduce the amount of pesticides that are carried by urban runoff through education and using alternatives to pesticides, such as an integrated pest management program and insecticide soap or natural bacteria
Street cleaning program	Remove a significant portion of pollutants contributed from streets and parking lots
Filtration systems	Remove constituents found in runoff
Vegetated systems (biofilters)	Convey and treat either shallow flow (swales) or sheetflow (filter strips) runoff
Minimize directly connected impervious surfaces	Reduce amount of surface area directly connected to the storm drainage system by minimizing or eliminating traditional curbs and gutters
Pervious paving	Reduce stormwater runoff by allowing snowmelt and rainfall to infiltrate the ground

12. Mitigation Measure BR-2a: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the Village, the Village Lift, and SR 4 improvements in compliance with the Clean Water Act and Alpine County General Plan to achieve no net loss.

The County will require the applicant to implement a wetland mitigation plan to achieve no net loss of wetland functions and values. The applicant shall conduct a waters of the U.S. delineation for the SR 4 improvement portion of the project area and submit it to the USACE for formal verification. Further, the applicant shall submit the waters of the U.S. Primary Delineation prepared by Jones and Stokes for the Village and Village Lift project areas to USACE for verification. Estimated impacts to waters of the U.S. shall be refined based on the verified delineation and specific grading plans. Proof of verification of the waters of the U.S. delineation by the USACE for each phase of development shall be submitted to the County as part of the discretionary permit application (tentative map [TM] and/or conditional use permit [CUP]) for each phase of development that would involve construction activity. The applicant will be responsible for obtaining a Clean Water Act Section 404 permit if required and implementing a wetland mitigation plan to offset the loss of impacts to jurisdictional waters.

A wetland mitigation plan that mitigates impacts caused by a particular phase of development shall be provided to the County prior to approval of a CUP for that phase. The wetland mitigation plan shall include measures to avoid direct impacts to jurisdictional resources wherever possible, discuss compensatory mitigation measures for permanent impacts, and describe mitigation measures for temporary impacts. Within the Village Lift alignment, chair lift towers and supporting structures shall be designed to avoid wetlands and ephemeral drainages if feasible. Permanent impacts to waters of the U.S. will require compensatory mitigation to ensure no net loss of aquatic functions or values. For direct impacts that cannot be avoided, mitigation measures may include on-site restoration of wetlands or off-site mitigation through creating or restoring off-site wetlands.

The wetland mitigation plan shall also include measures to avoid or minimize temporary impacts to jurisdictional waters. These measures may include best management practices (BMPs) for erosion control (see Section 3.5 [Hydrology and Water Quality] and Mitigation Measures HWQ-1 and HWQ-2) as well as measures to maintain normal downstream flows and minimize flooding to the maximum extent practicable. Temporary fills shall be placed in a manner that will not be eroded by expected high flows, and they shall be removed in their entirety following construction. All temporarily affected areas shall be returned to pre-construction elevations and conditions, including revegetating, as appropriate.

13. Mitigation Measure BR-2b: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the proposed ski runs to achieve no net loss.

The USFS can and should require the applicant for the installation of the proposed ski runs to conduct a waters of the U.S. delineation for USFS land within the ski run alignments and implement measures during ski run design and construction to achieve no net loss of wetland functions and values. The results of the delineation shall be submitted to the USACE for formal verification. Ski runs shall be designed to avoid direct impacts to jurisdictional resources wherever possible. To achieve no net loss, the USFS can and should require mitigation measures to minimize temporary impacts, as well as compensatory mitigation for permanent impacts, if any will occur as a result of ski run improvements. [Note to County: applicant for ski trails may not be the "applicant" for BVV.]

Prior to granting approval for use of County owned open space/common area for the ski runs on non USFS lands, the County will require the implementation of a wetland mitigation plan to achieve no net loss of wetland functions and values for portions of the ski runs outside of USFS land. There shall be a formal delineation of portions of the ski runs outside of USFS land for waters of the U.S. and submittal a Preliminary Delineation to the USACE for verification. Specific direct impacts to jurisdictional waters shall be calculated based on the proposed ski run alignments and the verified delineation. Proof of verification of the waters of the U.S. delineation by the USACE shall be required prior to the County granting approval for the ski runs. A Clean Water Act Section 404 authorization shall be obtained and if required and the requestor shall implement a wetland mitigation plan to offset the loss of impacts to jurisdictional waters.

A wetland mitigation plan that mitigates impacts caused by ski run improvements outside USFS land shall be provided to the County prior to the County granting approval for the ski runs. The wetland mitigation plan shall include measures to avoid direct impacts to jurisdictional resources wherever possible, discuss compensatory mitigation measures for permanent impacts, and describe mitigation measures for temporary impacts. New ski runs shall be aligned to avoid wetlands and other jurisdictional waters wherever possible. Permanent impacts to waters of the U.S. will require compensatory mitigation to ensure no net loss of aquatic functions or values. For direct impacts that cannot be avoided, mitigation measures may include on-site restoration of wetlands or off-site mitigation through creating or restoring off-site wetlands. The wetland mitigation plan shall also include measures to avoid or minimize temporary impacts to jurisdictional waters.

14. Mitigation Measure BR-2c: Comply with terms of a Streambed Alteration Agreement and implement best management practices during construction.

The County will require the applicant to notify the CDFG of any activities outside of USFS land that could adversely affect fish and wildlife resources associated with construction activities in drainages on-site or in downstream drainages (i.e., North Fork Stanislaus River). A notification package for a Streambed Alteration Agreement shall be submitted to CDFG prior to project construction activities that may affect these resources. The CDFG will determine if the project requires a Streambed Alteration Agreement and will issue a draft agreement to the applicant, if necessary. The applicant will be required to comply with terms of the agreement and implement measures to avoid, minimize, or compensate for impacts to drainages and wetlands that could adversely affect fish and wildlife. These measures may include best management practices (BMPs) for erosion control (see Section 3.5 [Hydrology and Water Quality], Mitigation Measures HWQ-1 and HWQ-2), compensatory mitigation for impacts to wetlands and drainages (Mitigation Measure BR-2a), and minimization of activities during the wet season. Proof of compliance with the terms of the Streambed Alteration Agreement shall be provided to the County prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction.

The USFS can and should require the applicant to submit a notification package for a Streambed Alteration Agreement to the CDFG for activities on USFS land that could adversely affect fish and wildlife resources associated with construction in drainages on-site or in downstream drainages. The applicant shall comply with terms of the agreement and implement measures to avoid, minimize, or compensate for impacts to drainages and wetlands that could adversely affect fish and wildlife.

15. Mitigation Measure BR-2d: Implement a wetland mitigation plan for permanent impacts to wetlands and water features related to the County snowmobile parking and trailer loading areas.

The County shall conduct a formal waters of the U.S. delineation for the proposed snowmobile parking area and trailer loading area and shall submit the results to the USACE for verification. If waters of the U.S. are present that would be affected by development of the parking and loading areas, the County shall implement a wetland mitigation plan to achieve no net loss of wetland functions and values. The County shall first consider using snow as fill material in the snowmobile parking area rather than earth.

The mitigation plan shall include measures to minimize temporary impacts and return affected areas to pre-construction conditions, where possible. Permanent impacts would require compensatory mitigation to ensure no net loss of aquatic functions or values (see Mitigation Measure BR-2a above).

The County shall also comply with the terms of a Streambed Alteration Agreement, if required by the CDFG. A notification package for a Streambed Alteration Agreement shall be submitted to CDFG if impacts to fish and wildlife resources in downstream or project area drainages are anticipated. The CDFG will determine if the project requires a Streambed Alteration Agreement and will issue a draft agreement to the County if necessary. Specific requirements may include BMPs for erosion control, implementation of compensatory mitigation, and minimization of activities during the wet season.

16. Mitigation Measure BR-3a: Avoid direct take of special status plant species during construction activities for the ski runs and snowmobile trailer loading area.

The USFS can and should require the applicant for the installation of the proposed ski runs to conduct focused surveys for special status plants within the ski run alignments on USFS land and implement measures during ski run design and construction to avoid and minimize impacts to individuals and local populations. Surveys shall focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and shall occur during the appropriate blooming period for the species.

Prior to granting approval for use of County owned open space/common area for the ski runs on non USFS lands, the County will require focused surveys for special status plants within the portions of the ski run alignments outside USFS land and implement measures during ski run design and construction to avoid and minimize impacts to individuals and local populations. The surveys shall be conducted within the ski run alignments to assess potential direct impacts and determine if a local population exists on-site that would be affected by ski run construction. Surveys shall focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and should occur during the appropriate blooming period for the species. The focused surveys will be required prior to County approval of the ski runs. The surveys shall be conducted by a qualified botanist during the appropriate blooming period for each species (July to August) in accordance with CDFG's *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (CDFG 2000).

Prior to constructing the snowmobile trailer loading area, the County will conduct focused surveys for special status plants within the portions of the loading area outside the Village Lift alignment to assess potential direct impacts and determine if a local population exists on-site that would be affected by loading area construction. The County will implement measures during the loading area design and construction to avoid and minimize impacts to individuals and local populations. Surveys shall focus on species listed in the Plant Survey Report (Basey 2007) as having the potential to occur within the greater project area and should occur during the appropriate blooming period for the species. The surveys shall be conducted by a qualified botanist during the appropriate blooming period for each species (July to August) in accordance with CDFG's *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities* (CDFG 2000).

If the results of the surveys determine that no special status plant species exist within the ski run alignments or snowmobile trailer loading area, then no further measures are necessary.

If the survey determines that special status plant species exist within the project area, the survey shall evaluate the potential for modifying the ski run alignments (or trailer loading area) to avoid populations or individuals of special status plants. The survey shall also include individual or population counts and an assessment of the potential to relocate individuals. A CDFG-approved restoration plan shall also be provided to the County prior to County approval for the ski runs, and the County will prepare such a plan prior to construction of the trailer loading area. Relevant provisions of the restoration plan (e.g., a clearly marked 50-foot "no-disturbance" buffer around individuals or populations) shall be included in the grading and construction plans.

17. Mitigation Measure BR-3b: Implement a restoration plan for the loss of special status plants.

If any special status plant species would be directly affected by construction activities outside USFS land, the County will require the applicant to prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of the plants. The plan shall discuss the ability to relocate individuals (transplant) to suitable habitat in the project area or a designated off-site area that would be preserved. If individuals cannot be transplanted, they shall be replaced through artificial propagation or seed transfer of plant materials from the project area to a designated restoration site. The ratio of replacement to loss shall exceed a 1:1 ratio (based on number of individuals and in coordination with CDFG) for all species and shall replace the quality of the habitat affected by the project. The restoration plan shall also describe site selection criteria, propagation methods, irrigation, installation designs, maintenance procedures, monitoring guidelines, success criteria, and a project timeline.

If transplanting or replacing plants is not determined to be feasible, the County will require the applicant to provide off-site mitigation by protecting suitable habitats that support populations of special status plants. The size and location of the acquisition will vary depending upon the results of the focused survey and the type, condition, extent and rarity of the habitat and species, and must be approved by CDFG.

The CDFG-approved restoration plan shall be provided to the County prior to approval of Improvement Plans/Grading Permit or other authorization to begin on site construction for any phase affecting special status plants.

If any special status plant species would be directly affected by snowmobile trailer loading area construction activities, the County will prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of special status plants within the trailer loading area.

The USFS can and should require the applicant to prepare and implement a restoration plan, in coordination with CDFG, to compensate for take of special status plants within the ski run alignments on USFS land.

18. Mitigation Measure BR-6: Avoid impacts to raptor and other protected bird nest sites during construction activities.

The County will require the applicant to conduct pre-construction nest surveys in the portions of the applicant's proposed project area (and surrounding 100–500 feet) located outside USFS land within 30 days prior to grading, vegetation removal, or other ground-disturbing construction activities when those activities would occur during the breeding season for birds (March 1 to August 31).

The County shall conduct pre-construction nest surveys in the snowmobile loading area (and surrounding 100–500 feet) located outside USFS land within 30 days prior to grading, vegetation removal, or other ground-disturbing construction activities when those activities would occur during the breeding season for birds (March 1 to August 31).

The surveys will be conducted by a qualified biologist to identify and locate active nests of raptors and migratory and resident songbirds. Surveys shall be limited to suitable habitat within the project area and surrounding 100-foot buffer for songbirds; raptor surveys will be limited to suitable habitat within the project area and surrounding 500 feet. Trees containing active nests shall be removed during the non-nesting season (September through February). If no active nests are found during the pre-construction surveys, no further measures relating to nest disturbances would be necessary.

All active nest sites identified during field surveys shall be flagged, and a "no-disturbance" buffer shall be established around the nest site using bright-colored flagging, stakes, and other means necessary to inform construction crews to avoid the area. The surveying biologist shall determine the appropriate size for the buffer in consultation with CDFG, and shall be based on the nesting species, its sensitivity to disturbance, and the expected types of disturbance. Construction activities shall be directed away from the nest site until the young have fledged or as determined appropriate by a qualified biologist or the CDFG.

The USFS can and should require the applicant to conduct pre-construction nest surveys within the ski run alignments and along the Village lift alignment on USFS land and implement measures during ski run and chair lift construction to avoid and minimize impacts to nesting birds, including construction outside of the breeding period or use of no-construction buffers.

19. Mitigation Measure BR-7: Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.

The County will require the applicant to conduct pre-construction bat surveys in the applicant's proposed project areas subject to disturbance and outside USFS land within 30 days prior to construction activities that would occur during the reproductive period for bats (April 1 to October 31).

The County shall conduct pre-construction bat surveys in the snowmobile trailer loading area 30 days prior to construction activities that would occur during the reproductive period for bats (April 1 to October 31).

The surveys will be conducted by a qualified biologist to identify and locate active roost sites of special status bats. The survey shall include suitable habitat in the project area and a 100-foot buffer and should focus on large trees and snags that would be removed within the project area. If no active roost sites are found during the pre-construction surveys, no further measures relating to roost disturbances would be necessary.

All active maternity roost sites identified during field surveys shall be flagged, and a 100-foot "no-disturbance" buffer shall be established around the site using bright-colored flagging, stakes, and other means necessary to inform construction crews to avoid the sites. Construction activities shall be directed away from the roost site until the young are capable of flying or as determined appropriate by a qualified biologist or the CDFG. For active day-roost sites, bats shall be excluded from or otherwise removed from the trees or structures prior to removal or demolition. For bats that must be relocated due to project activities, the applicant and/or County shall coordinate with CDFG, and a qualified biologist in possession of an applicable CDFG Memorandum of Understanding shall remove and relocate the roosting bats prior to construction activities within 100 feet of the roost site.

Construction crews will also be informed about the identification and regulatory protections of the pallid bat.

The USFS can and should require the applicant to conduct pre-construction surveys within the ski run and Village Lift alignments on USFS land and implement measures during ski run and chair lift construction to avoid and minimize impacts to pallid bat, including construction outside of the breeding period, use of no-construction buffers, exclusion measures, or relocation by a qualified biologist.

20. Mitigation Measure BR-9a: Avoid impacts to raptor and other protected bird nest sites during construction activities.

Implement Mitigation Measure BR-6.

21. Mitigation Measure BR-9b: Conduct pre-construction surveys, and avoid or minimize impacts to roosting pallid bats and their young during construction.

Implement Mitigation Measure BR-7.

22. Mitigation Measure CR-1: Implement construction monitoring by a qualified archaeologist for the protection of known cultural resources.

The County will require a qualified archaeologist who meets the Secretary of the Interior's Standards for archaeologists (National Park Service 1983) to monitor ground-disturbing activities in native sediments/soils within 100 feet of sites CA-ALP-100 and CA-ALP-138. Construction work within stockpile and/or fill material does not require monitoring. The monitor shall be empowered to temporarily halt construction in the immediate vicinity of a discovery while it is evaluated for significance. Construction activities could continue in other areas. If the discovery proves to be significant, the following measures shall be implemented. Preservation is the preferred treatment, but if preservation is not feasible by such measures as avoidance, incorporation within open space or conservation easement, or capping beneath a layer of sterile soil, data recovery through excavation may be required (PRC Section 21083.2, Section 21084.1; CEQA Guidelines Section 15126.4[b][3]). The qualified archaeologist shall prepare a data recovery plan, to be approved by the Alpine County Planning Department (and any other relevant regulatory agencies [e.g., USACE if the resource is located within its area of potential effect]) prior to the start of any archaeological excavation. The technical report detailing the results of the data recovery shall be submitted to the Alpine County Planning Department; Bear Valley Village I and II, LLC; the CCIC; and any relevant regulatory agency. At the conclusion of archaeological monitoring, a monitoring report shall be prepared and submitted to the Alpine County Planning Department; Bear Valley Village I and II, LLC; the CCIC; and any relevant regulatory agency.

23. Mitigation Measure CR-2a: Conduct a pre-construction survey for cultural resources and ensure adequate recordation, protection, or recovery of any significant resources.

The County will require the applicant to obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of its proposed project area outside USFS land that was not surveyed in October 2006 and July 2007 prior to initiation of ground-disturbing activities. The unsurveyed areas generally refer to the portions of the proposed ski runs located outside USFS land.

The County shall obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of the snowmobile trailer loading area that was not surveyed for the Village Lift in October 2006 and July 2007 (e.g., less than 0.1 acre) prior to initiation of ground-disturbing activities.

The pedestrian survey shall be conducted in compliance with Section 106 requirements of the NHPA (36 CFR 800) and CEQA requirements (14 CCR 15064.5 and PRC 21083.2) and in accordance with the standards set by the Secretary of the Interior. After completion of the surveys, the qualified archaeologist shall complete a technical report documenting the results of all work, and any cultural resources identified during the survey shall be formally recorded on Department of Parks and Recreation series 523 forms. The report shall meet the Secretary of Interior's Standards and Guidelines and follow the Office of Historic Preservation's ARMR guidelines (*Archaeological Resource Management Reports: Recommended Contents and Format*). The report shall include assessment of the significance of any newly identified resources, and recommend appropriate procedures to either further investigate or mitigate adverse impacts in conformance with the protocols set forth in Section 106 and PRC Section 5097.98.

The applicant shall submit a copy of the technical report for its proposed project area as part of any application for a tentative map (TM) and/or conditional use permit (CUP) that would involve construction activity for any portion of the project area that has not been surveyed. The applicant shall include on all grading plans and construction contracts notation of the discovery measures (see below) that would be implemented if cultural resources are discovered during project implementation.

The USFS can and should require the applicant to obtain a qualified professional archaeologist to complete an intensive-level pedestrian survey of the portion of the project area on USFS land that was not surveyed in October 2006 and July 2007 prior to initiation of ground-disturbing activities.

24. Mitigation Measure CR-2b: Implement inadvertent discovery measures for the protection of cultural resources, including human remains.

The County will require the applicant to include on all grading plans and construction contracts for work outside USFS land notation of the following cultural resource discovery measures that shall be implemented if cultural resources are discovered during project implementation.

If cultural resources, including human remains, are discovered during construction or earth-disturbing activities without an archaeological monitor present, the applicant or County shall halt all activities within 100 feet of the find until a qualified professional archaeologist can evaluate it. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to either further investigate or mitigate adverse impacts on the resources encountered in consultation with the relevant regulatory agencies and/or in conformance with the protocols set forth in PRC Section 5097.98. Any human remains and associated funerary objects encountered during construction shall be treated in accordance with the California Health and Safety Code Section 7050.5 if on private land and in accordance with the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001-3013), and implementing regulations at 43 CFR 10.4 if on federal land.

The USFS can and should require the applicant to include on all grading plans and construction contracts for work on USFS land notation of the cultural resource discovery measures described above.

25. Mitigation Measure CR-3: Incorporate bedrock mortar into relocated fireplace or place in interpretive exhibit.

The bedrock mortar in the existing fireplace should not be destroyed but should be incorporated into the project in a way that guarantees public enjoyment and appreciation of this type of grinding tool, such as at an outdoor exhibit within the new Village with interpretive signage to explain its function and association with indigenous Californians.

26. Mitigation Measure CR-4: Implement inadvertent discovery measures for the protection of paleontological resources.

The County will require the applicant to include on all grading plans and construction contracts for work outside USFS land notation of the following paleontological resource discovery measures that shall be implemented if such resources are discovered during

project implementation. The County shall include these measures on all grading plans and construction contracts for the snowmobile parking and trailer loading areas.

If paleontological resources are discovered during construction, the applicant or County shall halt all activities in the immediate vicinity of the find until a qualified professional paleontologist can evaluate it. The paleontologist shall examine the resources, assess their significance, and recommend appropriate procedures to either further investigate or mitigate adverse impacts on the resources encountered in conformance with CEQA statutes and guidelines for the protection of paleontological resources. Mitigation measures may include salvage of macrofossils, sampling of sediments for microfossils, and curation. Once mitigation measures are complete, the paleontologist shall prepare a technical report detailing the results of the recovery to be filed with the Alpine County Planning Department; Bear Valley Village I and II, LLC; and any relevant regulatory agency.

The USFS can and should require the applicant to include on all grading plans and construction contracts for work on USFS land notation of the paleontological resource discovery measures described above.

27. Mitigation Measure A-4: Implement a lighting plan for every development phase.

As part of the application submittal for a conditional use permit (CUP) for each phase of development, the project proponent shall submit to the County a plan for outdoor lighting (and interior lighting sources visible from off-site locations) showing all proposed exterior lighting (and interior lighting sources visible from off-site locations) on the site, including all light sources for buildings, driveways, landscaping, signs, parking structures, commercial windows, and public areas. All exterior lighting fixtures shall be full cutoff type and provide only the minimal amount of light necessary for safe pedestrian and vehicular access to the site and the dwelling units. All interior lighting sources visible from off-site locations should be shielded in a manner that precludes light sources from shining directly toward the sky. Project lighting shall not cause glare beyond the boundaries of the site.

28. Mitigation Measure TC-2: Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.

Passing Lanes

The traffic study prepared by LSC determined that construction of 8.8 miles of climbing or passing lanes on SR 4 between Moran Road East (on the eastern edge of Arnold) and Big Trees Road (in Murphys) would allow SR 4 to operate at LOS "C" or better, thereby reducing this impact to a less-than-significant level. One mile of passing lane would mitigate an existing deficiency; therefore, the project would be responsible for 7.8 miles. Constructing 7.8 miles of climbing or passing lanes, however, would be financially infeasible for the project. Based on average costs for SR 4 projects included in the Calaveras County 2007 Regional Transportation Plan (LSC 2007), and adjusting for terrain, a unit cost of $630,000 per mile (2007 dollars) is estimated, which equals $645,000 per mile in 2008 dollars. For 7.8 miles of additional lanes, the total construction cost for the applicant would be $5 million (2008 dollars), which equates to more than $10,000 per privately owned Equivalent Dwelling Unit (EDU) and would render these

improvements infeasible (refer to *Feasibility of Funding SR 4 Widening* memo in Appendix G).

The environmental consequences of constructing 8.8 miles of climbing or passing lanes in this area may also be undesirable. For example, widening of SR 4 could adversely affect sensitive habitats (e.g., wetland and riparian) or other environmental resources along the roadside. In addition, widening the highway between central Arnold and Moran Road East could alter the scenic character of a 1-mile section of SR 4 that has been designated a state scenic highway and holds National Scenic Byway (NSB) status. For these reasons, neither Alpine County nor Calaveras County supports constructing 8.8 miles of climbing or passing lanes to mitigate this impact. Calaveras County indicated its opposition to these passing lanes during two meetings with Alpine County in June and August 2008, and in written correspondence to Alpine County dated June 30, 2008 (Appendix G).

Calaveras County Road Impact Mitigation Fee Program

This impact is located entirely within Calaveras County. Therefore, Alpine County considered whether requiring the applicant to pay into the Calaveras County Road Impact Mitigation (RIM) Fee program would mitigate the project's LOS impact on SR 4. Under this program, Calaveras County imposes RIM fees on development projects throughout Calaveras County, and is used to fund a variety of improvements both on and off of the state highway system. If the RIM fee rates are applied to the proposed project, a total fee of roughly $1.2 million is identified. However, few projects within the project impact area are slated to be funded by the RIM. Payment of Calaveras RIM fees would therefore not effectively mitigate project impacts.

SR 4 Improvement Projects in Arnold and Murphys

Alpine County will require the applicant to provide fair-share funding of roadway improvements along SR 4 in Arnold and Murphys that will offset project impacts on SR 4.

The Arnold Rural Livable Community-Based Mobility Plan (ARLCBMP) was completed in June 2008 for the Calaveras Council of Governments. The ARLCBMP provides a strategy to enhance overall mobility conditions in the Arnold area was based upon an extensive public input process (Calaveras Council of Governments 2008). The following projects identified in the ARLCBMP are directly associated with traffic volumes along SR 4:

- The Meadowmont Gateway project includes constructing a roundabout at the intersection of SR 4 and Fir Drive in Arnold to reduce the speed of vehicles entering Arnold from the west.
- The Eastern Gateway project in the eastern portion of Arnold along SR 4 is a traffic calming project that would include a raised intersection, alerting drivers that they have entered the community of Arnold and may need to reduce their speed.
- Constructing intersection improvements at the SR 4/Blagen Road/Dunbar Road/Henry Street intersection complex would reduce congestion and improve traffic flow between SR 4 and county roads in the eastern portion of Arnold.

- The Meadowmont Roadway Infrastructure Improvement project includes constructing raised roadway medians, sidewalks, striped crosswalks, and curb enhancements along SR 4 located between Fir Drive and Country Club Drive.
- The SR 4 Sidewalk Implementation project includes constructing sidewalks along the eastbound travel lane of SR 4 between Country Club Drive and Sierra Pine Way. These sidewalks would provide a safe route for pedestrians to travel and would provide an opportunity for travel between commercial shopping areas.
- The SR 4 Infrastructure Improvements project (Applewood Center to Meadowview Road) includes various roadway infrastructure improvements along SR 4 between Applewood Center and the eastern intersection of Meadowview Road and SR 4. The roadway improvements would include raised roadway medians, sidewalks, and striped crosswalks to provide a safe route for pedestrians and bicyclists to travel and enhance the pedestrian and bicycle amenities in Arnold.
- The SR 4 Infrastructure Improvements project (Meadowview Road to Manual Road) includes roadway medians, sidewalks, curb extensions, and striped crosswalks. The roadway improvements would improve both vehicular and pedestrian/bicycle transportation gaps by providing a more balanced transportation network and would increase the bicycle and pedestrian amenities throughout town.
- The SR 4 Infrastructure Improvements project (Pine Drive to Lilac Drive) would include striped crosswalks, sidewalks, raised medians, and curb extensions to help improve resident mobility in town by creating a recognized space for pedestrians. In addition, the raised medians and sidewalks would reduce the tendency to speed by narrowing the travel lanes.
- The SR 4 Infrastructure Improvements project (Manual Road to Henry Street) would include striped crosswalks, sidewalks, raised medians, and curb extensions.

Alpine County will also require the applicant to provide fair share funding to widen and re-stripe SR 4 to provide a three lane cross-section from the vicinity of Main Street to Apple Blossom Drive in Murphys. This project would improve traffic flow at the SR 4 intersections with Main Street, Williams Street, and Apple Blossom Drive and also has the benefit of providing a two-way left-turn lane to serve other public streets and commercial driveways. This project is consistent with the Murphys Circulation, Pedestrian, Bicycling, and Parking Study (LSC 2002), which calls for a consistent center turn lane along SR 4 through Murphys. Total length of widening (including the tapers at both ends) would be 4,705 feet, or roughly 0.9 mile (see *Draft Bear Valley Village SR 4 Mitigation Plan* dated August 8, 2008, in EIR Appendix G for more details on this project).

The projects listed above are consistent with recent planning studies prepared for the Calaveras Council of Governments, including the ARLCBMP (Calaveras Council of Governments 2008), the Draft Calaveras County Bicycle Master Plan (Alta Planning and Design 2007a), the Draft Calaveras County Pedestrian Master Plan (Alta Planning and Design 2007b), and the Murphys Circulation, Pedestrian, Bicycling, and Parking Study (LSC 2002).

Project Costs

Estimated costs for the projects in Arnold are based upon those presented in the ARLCBMP. The consultant that developed these costs, however, indicates that the costs presented in that document are strictly construction cost estimates, and do not include the costs necessary for design and engineering. To estimate the actual funding that would be needed to implement the projects, the construction costs were increased by 30 percent. These projects in the Arnold area are estimated to require $12,998,700 in construction, design, and engineering costs (2008 dollars).

An estimate of total costs associated with the Murphys turn lanes is provided in the *Draft Bear Valley Village SR 4 Mitigation Plan* (EIR Appendix G). Including project design and engineering costs, the total cost of this combined project is estimated to equal $845,000 (2008 dollars). Total costs for all mitigation projects equal $13,843,700.

Cost Allocation

The proportion of total costs attributable to the Bear Valley Village project was determined based on the proportion of total impacts associated with the project. As discussed in the *Draft Bear Valley Village SR 4 Mitigation Plan* (EIR Appendix G), the proportion of total growth in summer traffic along SR 4 generated by Bear Valley Village ranges from 28 percent at the east end of Arnold to 20 percent in Murphys. In winter, this proportion ranges from 26 percent to 17 percent.

Multiplying the total project costs by the associated proportion of total future growth in traffic volumes yields the proportion of costs potentially allocated to Bear Valley Village. Summing across all projects yields a total cost potentially attributable to Bear Valley Village of $3,002,400.

Reflecting the fact that there are other potential funding sources available for roadway projects (state and federal programs), impact fee programs typically are not designed to fully fund roadway project using impact fees, particularly along state highways. The Calaveras County RIM fee program allocates 25 percent of costs for projects on state highways to the fee program. Applying this same reduction factor to the impact fees imposed on Bear Valley Village for improvements along SR 4 in Calaveras County results in total fees of $750,600 to be provided upon full build-out of Bear Valley Village. This amount does not take into account reductions in total fees associated with the elimination of the South Village.

Funding Mechanism

Alpine County will impose the required traffic mitigation fees using an impact fee of $1.132 per sf imposed on project lodging/residential land uses ($1.132/sf × 463,083 sf = $524,210. Improvements to SR 4 in Calaveras County could adversely affect sensitive habitat (e.g., streams, wetlands) and cultural resources, and construction of the improvements could result in temporary traffic, water quality, soil, or noise impacts. SR 4 improvements are subject to review, approval, and subsequent environmental review pursuant to CEQA by Caltrans and Calaveras County. Alpine County will hold the collected funds in escrow until the improvements are approved by Caltrans District 10 and are programmed by Calaveras County. This will allow Calaveras County (or Caltrans) to draw on these funds when they are needed to construct the improvements.

As an alternative to implementing Mitigation Measure TC-2, provide funding in accordance with Condition of Approval (COA) number 65 set forth below. The payments set forth in COA 65 are in excess of the project's "fair share" for improvements along the SR4 corridor, as calculated in the FEIR. The applicant has agreed to provide such additional funding in lieu of implementing Mitigation Measure TC-2.

Mitigation Measure TC-2 was developed in 2008, at the time the traffic study for the project was prepared. The County has received no information to indicate that the improvements recommended in the traffic study, and the costs associated with those measures, are invalid. During the intervening years, traffic levels have generally been static or declined as a result of the economic downturn, and costs associated with road improvements have not changed significantly. The calculations set forth above therefore continue to represent the best available information regarding the project's fair-share funding for traffic improvements.

In addition, Mitigation Measure TC-2 was developed for the project as originally proposed, rather than the down-sized project that the applicant is now proposing. As a result of the smaller size of the project, the project's contribution to traffic impacts on SR 4 will be proportionately lower. Because the project's traffic impact fee is expressed in terms of cost per square foot of development, the fees paid by the project will also be scaled to correspond to the project. The per-square-foot fee therefore represents an exaction that is roughly proportional to the project's traffic impacts.

29. Mitigation Measure TC-5: Prepare a Parking Management Plan for Bear Valley.

The County will require the applicant to prepare a Parking Management Plan (PMP) for the Village area of Bear Valley for each development phase. An updated PMP shall be submitted with each conditional use permit (CUP) application to the County Planning Department for review and acceptance prior to approval of the requested CUP.

The purpose of the PMP will be to establish methods to control parking within Bear Valley to ensure the Village Lift does not reduce existing parking availability for existing users. The PMP will include specific actions to be implemented by the applicant (at the applicant's expense) and may suggest actions for the County to implement. The PMP will include a schedule for implementation that ensures adequate parking will be available during each phase of project development. In no way shall the actions be designed to limit Village Lift access to specific users (such as residents or lodging guests of the Bear Valley area) or to deny equal access to the lift. However, public access to the Village Lift may be limited indirectly by limited public parking availability on busy days.

Actions to be considered for inclusion in the PMP may include, but shall not be limited to:

- **Parking Surveys:** The applicant will conduct a survey of persons parking in the Village public parking areas on peak ski days. The survey will be conducted for a minimum of six days per year (selected to represent the days of greatest skier activity) from 8 a.m. to 1 p.m. Using a minimum of two surveyors, driver destinations will be identified either through direct questioning or through observation. These surveyors will also record total parking counts in each available parking area on an hourly basis, as well as whether active parking enforcement is in effect. These surveys will be required until two years after completion of any new development phases of Bear Valley Village.

- **Annual Parking Management Report:** An annual parking management report will be prepared by the applicant and provided to Alpine County by May 1 of each year that surveys are required. This report will present the collected data regarding parking demand and the number of parked cars associated with the Village Lift, and will also identify any proposed changes in parking management for the next ski season.
- **Parking Permits:** Permits will be made available (possibly using a reservation system) to Bear Valley homeowners and employees. Daily permits will also be made available to local businesses (not located within the Bear Valley Village development) for the vehicles of their customers.
- **Parking Signs:** The County may post signs stating "Permit Parking Only" in public parking areas and authorize an ordinance to allow enforcement of this restriction. Specific dates for the ski season may be defined and included on the signs. Also, a limited time of enforcement may be considered (restricting parking between 8 a.m. and 3 p.m. on weekends and holidays may be sufficient to address the skier parking issues). Recommended sign locations include: Bear Valley Road north of Quaking Aspen Road, No Name Road, Creekside Drive, Lots B and C, Lot A (near the community center), and South Lot. All signs will be located so that at least one sign is visible from all restricted parking spaces. Signs will also be posted by the applicant to direct Bear Valley Village residents to appropriate private parking.
- **Parking Enforcement:** The PMP will describe methods and funding sources to enforce parking restrictions as necessary to address periods of potential parking shortages. Enforcement personnel will only issue tickets for vehicles parked without a valid permit for more than 15 minutes to allow drivers an opportunity to obtain a day permit.
- **Parking Attendants:** Parking attendants may be used during peak demand periods to maximize parking capacity (e.g., double-parking) of public parking areas.
- **Satellite Parking:** Overflow parking may be provided at remote satellite parking locations during peak demand periods. Ski area shuttle buses may serve the satellite parking locations, carrying skiers to the ski area and carrying homeowners and visitors to town.

30. Mitigation Measure TC-6a: Provide bicycle storage facilities within Bear Valley Village.

The County will require the applicant to include safe and secure bicycle storage facilities within Bear Valley Village. Storage facilities may include bike racks where bicyclists can lock their bikes, or bike lockers for Village residents and guests. Bike storage facilities shall be shown on plans for each development phase submitted as part of any CUP application.

31. Mitigation Measure TC-6b: Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.

Implement Mitigation Measures TC-2 and TC-11. (See also COA 65.)

32. Mitigation Measure TC-7: Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.

The County will require the applicant to prepare a Construction Traffic Control Plan (CTCP) for each development phase. An updated CTCP shall be submitted with each application for any TM and/or CUP approval that would involve construction activity to the County Public Works and Planning departments for review and acceptance prior to approval of the requested TM/CUP. Each such TM and/or CUP will include conditions requiring the applicant to update the CTCP prior to commencement of each year of construction activity and submit it to the County Public Works and Planning departments for review and acceptance.

At a minimum, the plan shall address truck haul routes, truck turning movements, traffic control signage, parking supply, bicycle and pedestrian traffic, on-site circulation and staging areas, and monitoring of the in-place traffic controls.

Actions to be considered for inclusion in the CTCP may include, but shall not be limited to:

- **Provide public outreach for construction activities:** The applicant would post public notices of construction activities along affected roadways one week prior to construction. The applicant would also provide written notice to property owners along affected roadways one week prior to construction or closures.
- **Identify a temporary automobile circulation route** for the period when No Name Road is closed for construction.
- **Place steel plates over open trenches in roadways** at the end of each workday to restore full vehicle access to all residents.
- **Limit daily construction equipment traffic** by staging heavy construction equipment and vehicles on the project site at the end of each workday, rather than removing them, to the degree possible. Construction staging areas would be included on improvement and grading plans in a location acceptable to the County.
- **Provide replacement public parking spaces** to ensure an adequate seasonal parking supply, including parking needed for the Bear Valley Music Festival. During the winter ski season, provide parking equal to the number of spaces lost

to public use because of construction staging and access restrictions, two-way winter traffic on town roadways, and removal of the Lodge Lot.

- **Provide pedestrian routes** between the event/festival venues and Lots B and C that are as direct as possible given construction site access restrictions.
- **Design temporary roadways and intersections** so that all emergency response vehicles would be accommodated.
- **Direct construction traffic** that could access construction sites from either Bear Valley Road or Creekside Drive to use Creekside Drive.

In addition, Alpine County will modify the County Code to temporarily allow two-way traffic on Bear Valley Road and Creekside Drive while No Name Road is closed for relocation.

33. Mitigation Measure TC-8: Prepare a Construction Traffic Control Plan for review and approval by Alpine County prior to commencement of each year of construction.

Implement Mitigation Measure TC-7.

34. Mitigation Measure TC-11: Contribute traffic mitigation fees to reduce SR 4 traffic congestion in Arnold and Murphys generated by the project.

The traffic study prepared by LSC determined that construction of approximately 29.5 miles of climbing or passing lanes on SR 4 between Bear Valley and Angels Camp would allow SR 4 to operate at LOS "C" or better, thereby reducing this cumulative impact to a less-than-significant level. Approximately 27.7 miles of additional travel lanes along SR 4 would be required to mitigate this cumulative impact even if the project were not built. The project's contribution would therefore be 1.8 miles (29.5 – 27.2 = 1.8).

Such passing lanes, however, are neither programmed nor funded by Caltrans or Calaveras County. The passing lanes are not programmed in the Calaveras County 2007 RTP (LSC 2007) or the 2006 Alpine/Amador/Calaveras Tri-County Regional Transportation Improvement Program (Alpine County 2005c). Based on average costs for other projects included in the Calaveras County RTP and adjusting for terrain, a unit cost of $630,000 per mile (2007 dollars) is estimated, equal to $645,000 per mile in 2008 dollars. For 29.5 miles of additional lanes, total construction cost is estimated to be $19 million. The project's fair share can be estimated by considering the proportion of total future growth in traffic generated by the project. This varies from 35 percent (closest to Bear Valley) to 10 percent (in Arnold). Applying the proportion for each roadway segment to the total cost of additional travel lanes in each link, the total allocated cost to the applicant would be about $4 million. If the applicant were to provide the $4 million, Caltrans and the Calaveras Council of Governments (and possibly others, as part of the three-county coalition with Alpine and Amador Counties) would be faced with identifying the remaining $15 million. The current Calaveras RTP does not include plans for substantial widening of SR 4 east of Angels Camp. The RTP does include some programmed improvements along SR 4 between Bear Valley and SR 49, including curve corrections near Arnold and near the entrance to Calaveras Big Trees State Park, and some additional turn lanes. These projects, however, would not significantly address the need for additional passing or climbing lanes. State Transportation Improvement Program (STIP) funds are already fully allocated for projects such as the Angels Camp Bypass and improvements of SR 4 west of Angels Camp. The likelihood of raising $15

million of additional funds from non-applicant sources is extremely low. This would require substantial re-allocation of highway funds (both those controlled directly by the state and those controlled by Calaveras Council of Governments) away from other projects to address this specific deficiency.

The environmental consequences of constructing 29.5 miles of climbing or passing lanes in this area may also be undesirable. For example, widening of SR 4 could adversely affect sensitive habitats (e.g., wetland and riparian) or other environmental resources along the roadside. In addition, widening the highway between central Arnold and Bear Valley could alter the scenic character of a 25-mile section of SR 4 that has been designated a state scenic highway and holds NSB status, including the section of SR 4 passing through Calaveras Big Trees State Park. For these reasons, neither Alpine County nor Calaveras County supports constructing 29.5 miles of climbing or passing lanes to mitigate this impact. Calaveras County indicated its opposition to these passing lanes during two meetings with Alpine County in June and August 2008, and in written correspondence to Alpine County dated June 30, 2008 (Appendix G).

This impact is located entirely within Calaveras County. Therefore, Alpine County considered whether requiring the applicant to pay into the Calaveras County Road Impact Mitigation (RIM) Fee program would mitigate the project's LOS impact on SR 4. Under this program, Calaveras County imposes RIM fees on development projects throughout Calaveras County, and is used to fund a variety of improvements both on and off of the state highway system. If the RIM fee rates are applied to the proposed project, a total fee of roughly $1.2 million is identified. However, few projects within the project impact area are slated to be funded by the RIM. Payment of Calaveras RIM fees, therefore, would not effectively mitigate project impacts.

Therefore, Alpine County will require the applicant to implement Mitigation Measure TC-2 as mitigation for cumulative impacts on SR 4. In addition, Calaveras County can and should require projects within their jurisdiction to mitigate their contributions to this significant cumulative impact on SR 4.

Improvements to SR 4 in Calaveras County are subject to review, approval, and subsequent environmental review pursuant to CEQA by Caltrans and Calaveras County.

As an alternative to implementing Mitigation Measure TC-11, provide funding in accordance with COA number 65 set forth below. The payments set forth in COA 65 are in excess of the project's "fair share" for improvements along the SR4 corridor, as calculated in the FEIR. The applicant has agreed to provide such additional funding in lieu of implementing Mitigation Measure TC-11.

35. Mitigation Measure SNO-2a: Re-establish the 2006/2007 snowmobile trail between Bear Valley Road and Creekside Drive through Open Space Parcel E.

Alpine County and applicant shall implement the recommendations of the Bear Valley Snowmobile Committee to re-establish the 2006/2007 snowmobile trail between Bear Valley Road and Creekside Drive through Open Space Parcel E. Full implementation includes the following actions by the County:

1. Adjust the alignment of the trail to stay within the County owned Open Space Parcel E and not encroach onto or travel across any private property (except the area now used for the Lodge Lot snowmobile parking area).
2. When practical given snow depths and snow conditions, use trail grooming techniques such as trenching the trail through the snow or creating a sound wall with snow to reduce noise impacts to surrounding properties.
3. Provide the County Sheriff officers with equipment to monitor travel speeds and sound generated by snowmobiles.
4. Request that the Sheriff's office actively monitor and enforce applicable requirements, including existing state and federal noise limits for snowmobiles. More restrictive local regulation of sound levels is not recommended.
5. Reconstitute the committee in 2010 to evaluate trail use and the effectiveness of the noise reduction measures, and to make further recommendations as necessary.

The County will ensure the route will be available for public use prior to County approval of conditional use permit (CUP) and/or tentative map (TM) approvals for any construction phase of the Bear Valley Village project.

36. Mitigation Measure SNO-2b: Allow snowmobile access through the Lodge Lot to access the groomed snowmobile route to be re-established through Open Space Parcel E.

The County will require the applicant to allow snowmobiles to travel through the northern most portion of the area now used as the Lodge Lot snowmobile parking area to access the groomed snowmobile route to be re-established through Open Space Parcel E.

37. Mitigation Measure AQ-2a: Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas.

The County shall require the applicant to prepare a construction pollutant reduction plan that implements the mitigation measures listed below, including those recommended by the GBUAPCD to reduce air emissions from short-term construction. The applicant shall submit the construction pollutant reduction plan to the County as part of the discretionary permit application (tentative map [TM] and/or conditional use permit [CUP]) that would involve construction activity for each phase of development.

Reasonable precautions shall be taken to prevent visible particulate matter from being airborne, under normal wind conditions, beyond the property from which the emission originates. Reasonable precautions include, but are not limited to:

- Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces that can give rise to airborne dusts;

- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate contaminant methods shall be used during such handling operations;
- Use of water, chemicals, chuting, venting, or other precautions to prevent particulate matter from becoming airborne in handling dusty materials to open stockpiles and mobile equipment; and
- Maintenance of roadways in a clean condition.

38. Mitigation Measure AQ-2b: Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.

The County shall require the applicant to implement the following mitigation measures, including those recommended by the *California Stormwater Best Management Practices Handbook* to reduce short-term construction emissions from the temporary batch plant:

- Temporary batch plants shall be managed to comply with AQMD Statewide Registration Program and/or local AQMD Portable Equipment Registration requirements
- Locate temporary batch plants downwind of existing developments whenever possible
- Placement of access roads shall be planned to mitigate water and air quality impacts
- Filter, contain, and/or suppress particulate matter to eliminate visible emissions beyond the property line while the equipment is being operated

The applicant shall demonstrate compliance with these measures as part of the discretionary permit application (TM and/or CUP) that would involve construction activity for each phase of development.

39. Mitigation Measure AQ-3: Ensure the number of wood-burning fireplaces does not exceed the maximum number allowed by the GBUAPCD.

The County will require the applicant to coordinate with the GBUAPCD to ensure the project does not exceed the number of wood-burning fireplaces allowed under Rule 431. As part of the CUP for each phase of development, the applicant shall submit documentation from the GBUAPCD to the County indicating the maximum number of wood-burning fireplaces allowed for that phase or, alternatively, for the entire project.

40. Mitigation Measure AQ-6a: Comply with GBUAPCD Rule 401 to reduce construction pollutants through water application, stabilizing exposed soil, and periodic cleaning of paved areas.

Implement Mitigation Measure AQ-2a.

41. Mitigation Measure AQ-6b: Reduce temporary batch plant construction pollutants through proper siting and control and use of equipment, materials, and waste products.

Implement Mitigation Measure AQ-2b.

42. Mitigation Measure N-1a: Limit construction to the hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and 5 p.m. Saturday.

The County will require the applicant to limit construction activities to the hours between 7 a.m. and 7 p.m. Monday through Friday, and 9 a.m. and 5 p.m. Saturday to avoid noise-sensitive hours of the day. No construction work shall be allowed on Sundays and federal holidays. This measure does not apply to construction activities that take place entirely within an enclosed and insulated building (including no open windows or doors). This requirement shall be identified on all grading plans and construction contracts. The County will include this noise limitation as a condition of all tentative subdivision map and conditional use permit (CUP) approvals.

43. Mitigation Measure N-1b: Locate portable but temporarily fixed construction equipment (such as temporary batch plants, compressors, and generators) and construction staging and parking areas as far from existing residences as possible.

The County will require the applicant to identify locations of temporarily fixed construction equipment and proposed staging and parking areas on plans submitted for tentative map (TM) and/or CUP submittals that would involve construction activity, and shall assure that they are located as far away from existing residences as possible. The locations for the batch plant and parking areas shall be approved by the Alpine County Planning Department prior to approval of the TM and/or CUP. The approved locations shall be identified in construction contracts and drawings.

44. Mitigation Measure N-1c: Post signs at the construction site that include permitted construction days and hours, expected timeframe for construction, a day and evening contact number for the job site, and a County contact number for complaints about construction noise.

The County will require the applicant to ensure signs are posted at the construction sites to specify permitted construction days and hours (7 a.m. to 7 p.m., Monday through Friday; 9 a.m. to 5 p.m., Saturday), expected timeframe for construction, and contact numbers for the contractor and County. The signs would help to facilitate rapid communication of any problems related to noise. Posting of the hours and duration would allow the adjacent residences to understand the length of the proposed construction phase and also the limits on activity each day and week. This measure shall be identified on grading plans and construction contracts.

45. Mitigation Measure N-1d: Implement "quiet" pile-driving technology and notify neighbors about the estimated duration of the pile-driving activity.

The County will require the applicant to implement technologies such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile-driving duration, unless the applicant provides documentation to the County from a geotechnical (or other qualified) engineer that such techniques are either not feasible or are not recommended from an engineering perspective. The applicant shall notify property owners within 300 feet of the project construction area about the estimated duration of the pile-driving at least 10 days in advance of the activity.

Mitigation Measure N-1e: Implement noise muffling technology to further reduce the impacts of construction related noise.

The County will require the applicant to implement the following technologies, unless the applicant provides documentation to the County that such techniques are not feasible, effective, or reasonably available.

- Muffle stationary noise sources and enclose them within temporary sheds, incorporate insulation barriers, or employ other measures to the extent feasible.
- Use equipment and trucks equipped with the best available noise control techniques (for example, improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).
- Ensure all construction equipment is properly maintained and operated and equipped with mufflers.

Use hydraulically or electrically powered impact tools (such as jackhammers, pavement breakers, and rock drills) for project construction wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools shall be used where feasible. Quieter methods or tools, such as using drills rather than impact tools, shall be used whenever feasible.

46. Mitigation Measure N-2: Conduct crack survey before pile-driving activities that could cause damage to nearby structures.

The County will require the applicant to conduct a two-phase crack survey of the Creekside Condominium building located on Bear Valley Road directly south of the Bear Valley Lodge, if pile-driving is proposed within 50 feet of this building. The first phase of the survey shall include pre-construction photograph or video documentation of the interior and exterior of structural and cosmetic architectural features (e.g., walls, floors, driveways). All existing cracks shall be documented with sufficient detail for comparison after construction to determine whether actual vibration damage has occurred. The second phase of the crack survey shall include post-construction photograph or video documentation of the features evaluated during the first phase of the survey. If the survey indicates that cosmetic or structural damage has resulted from pile-driving, the County will hold the applicant financially responsible for the damage.

The applicant shall submit the pre-construction crack survey to the Alpine County Planning Department for review as part of any application submittal for CUP and/or TM approval for any phase that requires pile-driving within 50 feet of this Creekside Condominium building. The applicant shall submit the post-construction crack survey to the Alpine County Planning Department following cessation of pile-driving for the relevant phase. If the survey indicates that cosmetic or structural damage has resulted from the applicant's pile-driving, the County shall not issue an occupancy permit for the relevant phase until the applicant has demonstrated it has provided restitution to the owner of the damaged property.

47. Mitigation Measure N-4: Re-establish the 2006/2007 snowmobile trail through Open Space Parcel E and allow snowmobile access through the Lodge Lot to the trail.

Implement Mitigation Measures SNO-2a and SNO-2b.

48. Mitigation Measure Soils-1a: Perform subsurface geotechnical investigations.

The County will require the applicant to perform subsurface geothechnical investigations within the portions of the project area that were not previously investigated. Specifically, these areas shall include the portion of the Village Center south of No Name Road and west of Bear Creek. The resulting investigation reports shall include recommendations for feasible engineering techniques to protect project structures from liquefaction hazards revealed during the investigation(s). As part of the application for conditional use permit (CUP) and/or tentative map (TM) approvals for any phase of development that would involve construction activity, the applicant shall submit the geotechnical investigation report(s) pertaining to the requested development phase.

49. Mitigation Measure Soils-1b: Implement proper engineering techniques to protect structures from liquefaction hazards.

The County will require the applicant to identify and implement adequate measures to ensure proper engineering techniques are included in the project to protect structures within the North Village and Village Center from liquefaction hazards based on recommendations from the preliminary geotechnical study (Condor Earth Technologies, Inc. 2006) or other qualified engineer as part of the application for CUP and/or TM approvals. The measures shall be approved by the County prior to approval of a CUP and/or TM that would involve construction activity for the North Village and Village Center.

Appropriate measures may include, but not be limited to the following:

- Excavation of liquefiable soil, backfilling the excavation with compacted soil, and constructing a mat foundation over the backfill
- Construction of deep foundations supported by driven or drilled piles
- Installation of rammed aggregate piers (RAPs) and using a mat foundation. RAPs are constructed by drilling an approximate 30-inch diameter hole beneath shallow foundations, and replacing the excavated soil with compacted aggregate fill.

If the subsurface geotechnical investigations performed pursuant to Mitigation Measure Soils-1a identify potential liquefaction hazards within other portions of the project area, the applicant shall also identify and implement adequate measures to ensure proper engineering techniques are included in the project to protect structures within those areas. These measures shall be based on the recommendations of the geotechnical study or other qualified engineering report as part of the application for CUP and/or TM approvals that would involve construction activity. These measures shall be approved by the County prior to approval of a CUP and/or TM for the relevant project phase.

50. Cumulative Mitigation Measure PHE-2: Develop an Employee Housing Implementation Plan.

Implement Mitigation Measure PHE-3.

51. Cumulative Mitigation Measure PS-1a: Provide funding for new firefighting equipment required to serve the project.

Implement Mitigation Measure PS-1a.

52. Cumulative Mitigation Measure PS-1b: Provide funding for new emergency medical equipment required to serve the project.

Implement Mitigation Measure PS-1b.

53. Cumulative Mitigation Measure PS-1c: Assess developer fees to help pay for additional facilities, or provide other methods for mitigating the impact in a manner acceptable to ACUSD.

Implement Mitigation Measure PS-3.

54. Cumulative Mitigation Measure U-2a: Provide proof of available sanitary sewer pipeline capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

Implement Mitigation Measure U-2a.

55. Cumulative Mitigation Measure U-2b: Construct additional sanitary sewer system improvements if needed to serve the project.

Implement Mitigation Measure U-2b.

56. Cumulative Mitigation Measure U-2c: Provide proof of available wastewater disposal facility capacity prior to County approval of tentative subdivision maps and/or conditional use permits for each construction phase.

Implement Mitigation Measure U-2c.

57. Cumulative Mitigation Measure U-2d: Require payment of fair-share funding for BVWD wastewater disposal facility improvements.

Implement Mitigation Measure U-2d.

58. Cumulative Mitigation Measure U-3: Minimize the use of copper water supply and wastewater pipes and fixtures.

Implement Mitigation Measure U-3.

59. Cumulative Mitigation Measure HWQ-1a: Implement best management practices (BMPs) to control construction-related stormwater runoff, erosion, and sedimentation.

Implement Mitigation Measure HWQ-1.

60. Cumulative Mitigation Measure HWQ-1b: Implement Water Quality Control Measures

Implement Mitigation Measure HWQ-2.

61. Cumulative Mitigation Measure BR-1: Avoid adverse impacts to sensitive habitats, and provide appropriate mitigation to offset unavoidable adverse impacts.

The County and the U.S. Forest Service (USFS) will ensure new development in Bear Valley and construction at the ski area comply with applicable biological regulations (i.e., Clean Water Act, Fish and Game Code), as required, and implement mitigation measures to avoid impacts to sensitive habitats such as wetlands and drainages, where

feasible, and offset unavoidable impacts through habitat replacement or other measures. Impacts to waters of the U.S. would require proper authorization from the U.S. Army Corps of Engineers. A Streambed Alteration Agreement with California Department of Fish and Game (DFG) would be required for substantial impacts to drainages and adjacent riparian habitat. These regulatory agencies would identify appropriate mitigation, in coordination with the project proponents, to fully mitigate impacts to sensitive habitats. Typical mitigation would include replacing habitat, either through an on-site or off-site conservation easement or use of an existing mitigation bank; construction avoidance measures, such as using construction fencing around avoidance areas; and implementing BMPs for erosion control (see Section 3.5 [Hydrology and Water Quality], Mitigation Measures HWQ-1 and HWQ-2) during construction.

The County will be responsible for ensuring its projects comply with applicable biological regulations as well as the adopted General Plan, as required, and implement appropriate mitigation measures to reduce impacts.

62. Cumulative Mitigation Measure BR-2: Avoid adverse impacts on special status species, and provide appropriate mitigation to reduce direct and indirect impacts.

The County and USFS will ensure new development in Bear Valley and construction at the ski area comply with applicable biological regulations (i.e., federal and state Endangered Species Acts), as required, and implement mitigation measures to avoid impacts to special status species where feasible and offset unavoidable impacts through habitat replacement or other measures. For impacts to federally or state listed species, applicants may be required to consult with the U.S. Fish and Wildlife Service (USFWS) or CDFG and obtain incidental take permits. These regulatory agencies would identify appropriate mitigation, in coordination with the applicant, to fully mitigate impacts to special status species. Pre-construction surveys may be required for state and federally listed species, as well as other special status species considered under CEQA. Typical mitigation would include preserving habitat on-site or protecting off-site habitat through a conservation easement; construction avoidance measures, such as establishing buffers around active nest sites, limiting construction to the non-breeding period, or using construction fencing around avoidance areas; and transplanting sensitive plant populations or relocating sensitive wildlife to a suitable off-site location.

The County will be responsible for ensuring its projects comply with applicable biological regulations and the adopted General Plan, as required, and implement appropriate mitigation measures to reduce impacts.

63. Cumulative Mitigation Measure A-2: Implement an outdoor lighting plan for every project.

The County will ensure new development projects in Bear Valley implement an outdoor lighting plan. Prior to approval of an Improvement Plans/Grading Permit or other authorization to begin on site construction for any phase of development, the project proponent shall submit to the County a plan for outdoor lighting showing all proposed exterior lighting on the site, including all light sources for buildings, driveways, landscaping, signs, and public areas. All exterior lighting fixtures shall be full cutoff type and provide only the minimal amount of light necessary for safe pedestrian and vehicular access to the site and the dwelling units. Exterior lighting shall not cause glare beyond the boundaries of the site.

64. Mitigation Measure CC-1: Prepare and implement a GHG Reduction Plan.

The applicant shall prepare a GHG Reduction Plan for each phase of development describing feasible measures the applicant will incorporate into the project for construction activities and operation to ensure consistency with the GHG-reduction targets established in Executive Order S-3-05 and AB 32. The GHG Reduction Plan shall be submitted to the Alpine County Planning Department as part of the application for any conditional use permit approval. The plan shall describe the method for ensuring the measures will be incorporated into the subject phase of the project and shall quantitatively demonstrate how the project will help the State of California achieve its year 2020 goal of a 29-percent reduction in GHG emissions, as compared to Business as Usual, for the subject phase. The applicant has prepared a GHG Reduction Plan, which has been submitted as an Additional Condition of Approval.

The California Attorney General's publication entitled *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level* (Department of Justice 2008) lists examples of measures that could be applied to a diverse range of projects. The following list includes mitigation measures that may be applicable to the Bear Valley Village project. Some of the mitigation measures on the following list might not be feasible for the project and therefore would not be included in the project. The Attorney General's publication includes other measures that may also be applicable to the project.

Energy Efficiency

- Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping, and sun screens to reduce energy use.
- Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.
- Install light-colored "cool" roofs, cool pavements, and strategically placed shade trees.
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems.
- Install light-emitting diodes (LEDs) for traffic, street, and other outdoor lighting.
- Limit the hours of operation of outdoor lighting.
- Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.
- Provide education on energy efficiency.

Renewable Energy

- Install solar or wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate buyers about existing incentives.
- Use combined heat and power in appropriate applications.

Water Conservation and Efficiency

- Create water-efficient landscapes.
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
- Design buildings to be water-efficient. Install water-efficient fixtures and appliances.
- Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.
- Restrict the use of water for cleaning outdoor surfaces and vehicles.
- Provide education to residents and guests about water conservation and available programs and incentives.

Solid Waste Measures

- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide storage areas for recyclables and green waste and adequate recycling containers located in public areas.
- Provide education and publicity about reducing waste and available recycling services.
- Reuse building materials from the Bear Valley Lodge after demolition.

Transportation and Motor Vehicles

- Limit idling time for commercial vehicles, including delivery and construction vehicles.
- Use low or zero-emission vehicles, including construction vehicles.
- Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation, including the ski area shuttle bus.

ADDITIONAL CONDITIONS OF APPROVAL

Conditions of approval listed below are separate and in addition to the mitigation measures included in the FEIR. Development of the project shall fully comply with these conditions of approval.

65. Highway 4 Project Funding

COAs 28 and 34 (mitigation measures TC-2 and TC-11) require the applicant to make certain fair-share payments for regional traffic improvements. The County has engaged in further consultations with Calaveras County, Calaveras County Council of Governments, and Caltrans. Based on those consultations, the applicant has proposed to provide additional funding for regional traffic improvements. The funding proposed by the applicant is in excess of the fair share calculations set forth in COAs 28 and 34. Based on these consultations, and the applicant's consent to providing additional

funding, the applicant shall provide the funding required by this condition of approval. This condition of approval shall substitute for the payments required by COAs 28 and 34.

The project applicant will provide $2,975,000 in funding for future improvements to Highway 4 west of Bear Valley per the funding schedule indicated below. The schedule relies on the economic viability of the project in light of other obligations of the project to provide up front funding for necessary infrastructure in Bear Valley, the Village Lift and early project components. The full funding amount shall be provided in increments that are tied to actual development of the project. It is anticipated that development thresholds or milestones will trigger payments.

Details for providing this funding and agreements among the agencies will be consistent with TC-2: Alpine County will hold the collected funds in escrow until the improvements are approved by Caltrans District 10 and are programmed by Calaveras County. This will allow Calaveras County (or Caltrans) to draw on these funds when they are needed to construct the improvements. This condition shall supersede and replace mitigation measure TC-2 and TC-11/condition of approval #28 and #34, but it does not supersede the applicant's voluntary funding of $73,260 to the 'Wagon Trail Realignment' project on SR 4 (see COA 66). The following concepts are incorporated to guide implementation of this condition:

- Funding payment schedule for SR 4 improvements:

Number of units in application	Fees per unit	Dollars generated
0 to 50	$1,700	$85,000
51 to 100	$3,000	$150,000
Milestone payment (100th unit)		$200,000
101 to 200	$4,000	$400,000
Milestone payment (200th unit)		$250,000
200 to 300	$5,000	$500,000
Milestone payment (300th unit)		$250,000
300 to 490	$6,000	$1,140,000
	TOTAL	$2,975,000

- Projects to be funded per the above schedule shall be located along Highway 4 between the Alpine County line and Angles Camp.

- Fees per unit are due concurrent with issuance of a building permit for construction of the unit.

- Milestone payments for the 100th, 200th and 300th units are due concurrent with the final occupancy approval granted for the respective unit.

Alpine and Calaveras Counties and CCOG are engaged in discussions to reach agreement regarding the specific projects along the SR4 corridor to which this funding will be directed. The funding generated by this condition of approval shall be dispersed in accordance with such agreement.

COA 65 was developed for the project as originally proposed, rather than the down-sized project that the applicant is now proposing. As a result of the smaller size of the project, the project's contribution to traffic impacts on SR 4 will be proportionately lower. Because the fee schedule in this COA 65 is based on the number of units constructed, the fees paid by the project will also be scaled to correspond to the reduced size of the project. The per-unit fee therefore represents an exaction that is roughly proportional to the project's traffic impacts.

66. Funding for Improvements to SR 4 west of SR 49 intersection.

Although not required by the traffic study, the applicant has voluntarily agreed to provide funding for improvements to SR 4 in Calaveras County west of SR 49. In accordance with this commitment, the applicant shall pay a fee of $198 per residential unit for specific improvements on SR 4 west of SR 49. These improvements consist of two potential projects: the *Wagon Trail Realignment* project and the *Passing Lanes between the Stanislaus County Line and West of Reeds Turnpike* project identified in the Calaveras County RIM program. The Wagon Trail project is the higher priority to receive funding identified in this condition. The passing lanes will only receive funds if the Wagon Trail project does not occur.

67. Pine Marten and Fisher Impacts

To address commenters' concerns regarding the project's impact on habitat, the applicant has agreed to implement the following COA. If trees or vegetation that provide potential denning habitat for the marten or fisher will be removed during the denning season, then project applicant shall retain a qualified biologist approved by the County to conduct focused preconstruction surveys for active dens of martens and fishers. These surveys shall be conducted within 30 days of the onset of each construction phase of the project, initiated during or extending into the denning season. Such preconstruction surveys for active dens of martens and fishers shall be conducted within 500 feet of active construction areas within the Bear Valley Village project area, including the ski lift line and return ski run areas as they cross non-USFS land. If an active den for either species is located during the preconstruction surveys, then the applicant shall notify the County. Construction shall be delayed within a ¼ mile of the den to avoid disturbance until the den is no longer active. The ¼ mile-buffer may be reduced through consultation with the County and the qualified biologist if the County determines that, based on site specific conditions, a lesser buffer will still protect the active den from disturbance from construction activities. The County may consult with DFG and/or USFWS in implementing these requirements.

The Bear Valley Mountain Resort is seeking approval to construct ski runs on US Forest Service (USFS) lands which will cross County land. In conjunction with that license, the USFS is developing appropriate conditions to address active marten/fisher dens. In the event USFS adopts additional or more stringent measures in connection with its approval of ski runs on USFS land, those measures shall also apply to all project-related construction activities located on land within County jurisdiction.

68. Donate $50,000 to Wildlife Conservation Board. To address commenters' concerns regarding the project's impact on habitat, the applicant has proposed to donate $50,000 to the California Wildlife Conservation Board (WCB). At the applicant's request,

the County agrees to adopt a condition of approval incorporating this proposal into the project. The donation shall be made in two installments. The first installment of $25,000 will be paid to WCB upon issuance of the Conditional Use Permit for the 100th unit of the project. The second installment of $25,000 will be paid upon issuance of the Conditional Use Permit for the 200th unit. The donation shall be made to WCB in order to provide funding for the acquisition of a conservation easement or other interest in land in Alpine or Calaveras Counties, in consultations with CDFG.

69. GHG Reduction Plan. In order to implement COA 64 (mitigation measure CC-1), the applicant has prepared a GHG Reduction Plan. (See AECOM, Greenhouse Gas Reduction Plan Prepared for the Bear Valley Village Project, prepared for Alpine County (revised February 10, 2010).) The applicant proposes to implement the GHG Reduction Plan, as modified to reflect the reduced size of the project, as set forth in a letter to the County dated December 8, 2012 (attached). The County accepts the GHG Reduction Plan as satisfying COA 64 and mitigation measure CC-1. The applicant shall carry out the measures set forth in the GHG Reduction Plan, as modified in the December 8, 2012, letter.

Exhibit C

10.8.2008

READ THIS!

Attached is the 1978 Bear Valley Master Plan adopted by the Alpine County Board of Supervisors on February 9, 1979. This is a digitized copy of the original document. The digital copy was provided to the Alpine County Planning Department by a third party. Pages may be missing or misplaced. Alpine County does not guarantee the completeness or accuracy of this digital document. If you wish to review a hard copy of the Master Plan one is available at the Alpine County Community Development Department and the Bear Valley Library. If you have any questions related to the 1978 Bear Valley Master Plan please contact the Alpine County Community Development Department at 530.694.1878 or 530.694.2140 (after 10/14/2008).

Zach Wood
Planner
Alpine County Community Development

MASTER PLAN

BEAR VALLEY CALIFORNIA

NORTH

SCALE 1"=400'

LEGEND

- SINGLE FAMILY, DETACHED
- LOW-MEDIUM DENSITY MULTI-FAMILY
- VILLAGE CENTER
- PARKING
- TRANSPORTATION CENTER
- * 200 FT. BUILDING SETBACK LINE (SEE PAGE 57 FINAL EIR)
- ( ) NUMBER OF LIVING UNITS OR AUTO SPACES

REC-4
MF-12 (113)
MF-11 (12)
SF-2
BEAR LAKE
REC-3
SF-4 (26)
MF-10 (45)
MF-9 (30)
COMMUNITY CENTER
SF-2
CS-2
200' BSBL
SF-3 (8)
SF-6 (13)
VC-2 (500)
CS-1
MF-8 (12)
MF-1
VC-1
P-1 (500 AUTOS)
(500 AUTOS) P-3
(100) MF-5
EMPLOYEE HOUSING
C-1
MF-3
CS-3
MF-4
C-3
C-2
(500 AUTOS) P-2
OFF SITE PARKING
SF-1
STATE HIGHWAY 4
SENSITIVE AREA
P-4 (500 AUTOS)
CS-10
TENNIS
REC-1
CORPORATION YARD & VEHICLE IMPOUND (2 Ac. APPROX.)
FACILITY
MF-14 (34)
STABLES & ARENA
REC 2
MF-18 (59)
MF-15 (54)
SF-5 (44)
CS-11
MF-16 (112)
MF-17b (187)
CS-12
RECREATION AREA
MF-16
ALPINE CO.
CALAVERAS CO.

CHAIRMAN, ALPINE COUNTY PLANNING COMMISSION

REV. NO.	DESCRIPTION	DATE
1	ADDED UNIT DENSITIES & SIGNATURE LINE	2-12-79

OCT. 78

REV. 12-14-78

PROJECT SUMMARY

BEAR VALLEY DEVELOPMENT PLAN

ALPINE COUNTY
PLANNING DEPARTMENT
P. O. Box 107
MARKLEEVILLE, CA 96120

General Development Plan
North Side

Single Family Parcel	Acreage	Density	Units	Beds 6/Unit	Cars 2/Unit
SF 1	52.8	1.1	59	354	118
SF 2	200.0	1.9	389	2334	778
SF 3	6.9	1.1	8	48	16
SF 4	33.1	1.4	45	270	90
SF 5	12.7	2.0	26	156	52
SF 11	6.2	1.6	10	60	20
Sub-Total	311.7		537	3222	1074

Multi Family Parcel	Acreage	Density	Units	Beds 4/Unit	Cars 1.5/Unit
MF 1	.7	22.8	16	64	24
MF 2	3.9	15.4	60	240	90
MF 3	4.1	17.6	72	288	108
MF 4	.7	28.6	20	80	30
MF 5	10.4	19.2	200	800	300
MF 6	.5	24.0	12	48	18
MF 7	-	-	-	-	-
MF 8	-	-	-	-	-
MF 9	3.5	8.6	30	120	45
MF 10	3.8	11.8	45	180	68
MF 11	2.5	12.0	30	120	45
Sub-Total	30.1		485	1940	728

Village Center	Acreage	Density	Units	Beds 2/Unit	Cars 1/Unit
VC 1	2.5	-	62	124	62
VC 2	15.2	-	500	1000	500
Sub-Total	17.7		562	1124	562

Commercial	Acreage	Density	Units	Beds 2/Unit	Cars 1/Unit
C 1	.1	-	14	28	14
C 2	.7	-	-	-	-
Sub-Total	.8		14	28	14

North Side Total					
	360.3		1598	6314	2378
80% Occupancy				5051	1902

South Side

Single family Parcel	Acreage	Density	Units	Beds 6/Unit	Cars 2/Unit
SF 6	13.8	1.8	25	150	50
SF 7	20.4	2.5	50	300	100
SF 8	22.0	1.0	22	132	44
SF 9	39.4		44	264	88
SF 10 *	27.5	-	1	6	2
Sub-Total	123.1		142	852	284

Multi Family Parcel	Acreage	Density	Units	Beds	Cars
MF 12	4.6	7.4	34	136	51
MF 13	4.1	13.2	54	216	81
MF 14	3.9	15.9	62	248	93
MF 15	8.9	13.7	122	488	183
MF 16	3.0	13.3	40	160	60
Sub-Total	24.5	12.7	312	1248	468
Southside Total	147.6		454	2100	752
80% Occupancy				1680	602
General Development Plan Total	508		2052	8414	3130
80% Occupancy				6731	2504

Community Services

CS1	P.G.& E Substation	0.3 acres
CS2	Elementary School	2.9
CS3	Maintenance Center	1.6
CS4	Sheriff & Fire Station	0.4
CS5	Pacific Telephone	0.2
CS6	Maintenance Yard	0.4
CS7	Short Term Parking	0.9
CS8	Off-Site Parking	5.0
CS10	Heliport	2.0
CS11	School	5.9
CS12	Sewage Treatment	127.6

Recreation

ec1	Tennis Facility	13.6
Rec2	Stables and Arena	3.3
Rec3	Homeowner's Center	2.2
Rec4	Beach - Picnic Area	2.1

* Not a part of this project

General Development Plan
North Side Off-Site Parking Requirements

Single Family Parcel	Acreage	Density	Units	Beds 6/Unit	Cars 2/Unit
SF 1	52.8	1.1	59	354	118
SF 2	200.0	1.9	389	2334	778
SF 3	6.9	1.1	8	48	16
SF 4	31.1	1.4	45	270	90
SF 5	12.7	2.0	26	156	52
SF 11	6.2	1.6	10	60	20
Sub-Total	309.7		537	3222	1074

Multi Family Parcel	Acreage	Density	Units	Beds 4/Unit	Cars 1.5/Unit
MF 9	3.5	8.6	30	120	45
MF 10	3.8	11.8	45	180	68
MF 11	2.5	12.0	30	120	45
Sub-Total	9.8		105	420	158
North Side Total	319.5		642	3642	1232
80% Occupancy				2913	986

South Side Off-Site Parking Requirements

Single Family Parcel	Acreage	Density	Units	Beds 6/Unit	Cars 2/Unit
SF 6	13.8	1.8	25	150	50
SF 7	20.4	2.5	50	300	100
SF 8	22.0	1.0	22	132	44
SF 9	39.4		44	264	88
SF 10	27.5		1	6	2
Sub-Total	123.1		142	852	284
80% Occupancy				682	227
Total GDP	442.6		784	4494	1516
80% Occupancy				3595	1213

* Total Off-Site Parking Spaces Required 80% Occupancy

COUNTY OF ALPINE

DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR

BEAR VALLEY MASTER PLAN

SUBMITTED

JUNE 29, 1978

OWNER

BEAR VALLEY POLICY COMMITTEE
% Perry Walther
P.O. Box 1135
Bear Valley, California 95223
(209) 753-2327

WRITERS OF DRAFT E.I.R.

Justin F. Barber
Western Planning & Research
3440 Pine Ridge Lane
Auburn, CA 95603
(916) 823-1209

Eugene Weatherby
Gretzinger & Weatherby Inc.
8 Court Street
Jackson, CA 95642
(209) 223-0381

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APPENDIX

PROJECT DESCRIPTION

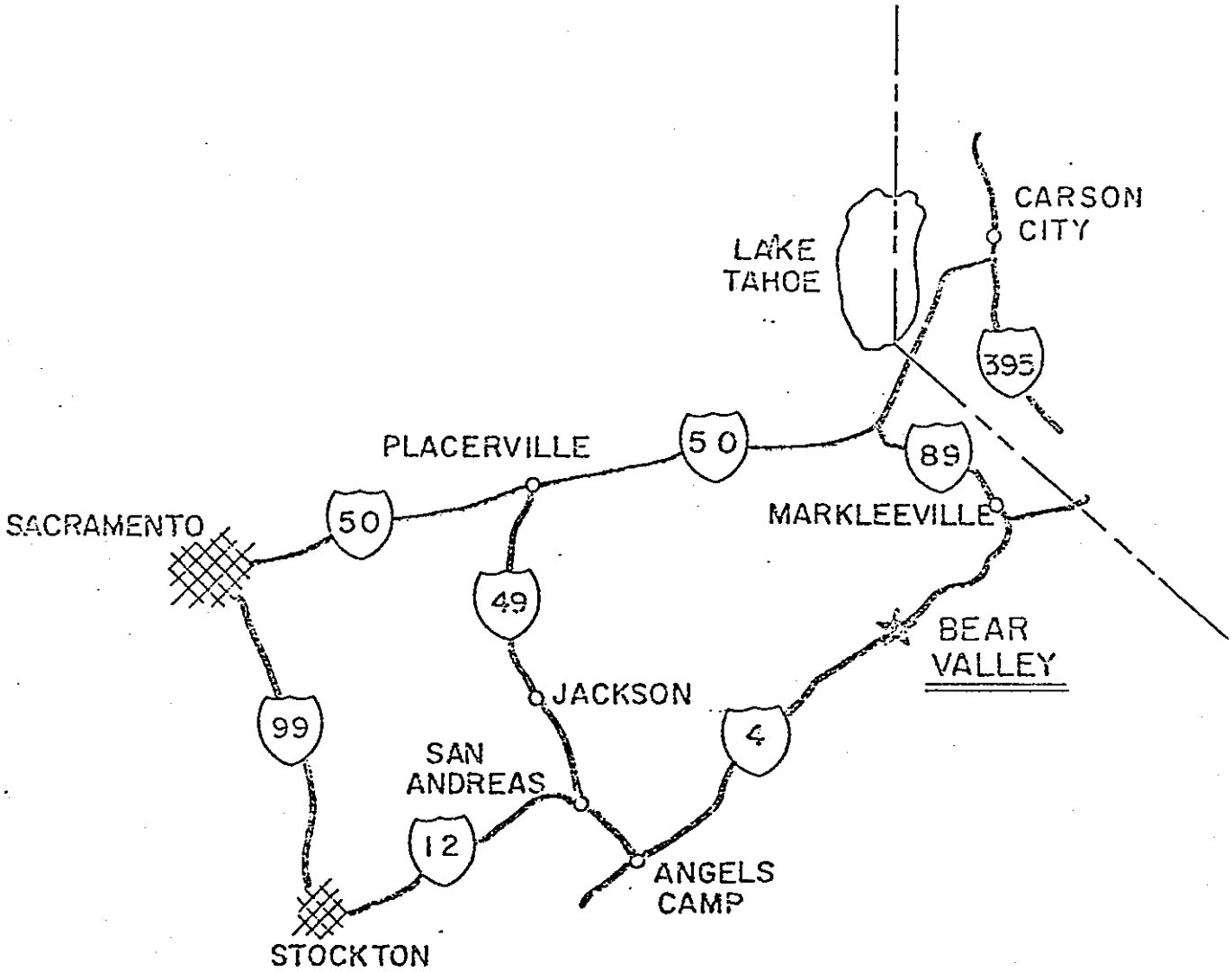
This project consists of modifications and enlargement of an existing approved plan for residential, commercial, and recreational uses in the Central Sierra. It is located at Bear Valley on State Highway 4 in Alpine County, as shown on the Location Map following this page.

Part of the development authorized under the approved plan has already been constructed. A summary of the completed structures follows.

Single-family homes	±200 units
Condominiums and apartments	148 units
Lodge rooms (two lodges)	75 rooms
Commercial floor area	± 26,000 sq. ft.

The development also contains a gasoline station, transportation center, elementary school, fire station, post office, sheriff's office, sewage treatment plant and substations for electric power (P.G.&E.) and telephone (Pacific Bell). Existing recreational facilities include a small stable, airstrip, and six tennis courts. About 300 vacant lots exist within the developed portion of Bear Valley. The present community occupies about half* of an 870 acre privately-owned site surrounded by the Stanislaus National Forest.

* 421 acres (includes developed area, lake, sewer plant area)



LOCATION MAP

The balance of the site (the project) is proposed for development as shown on the site plan in the pocket following the location map. The project includes the following elements:

1) 230 single-family residential lots on 155 acres
2) 1,149 lodging, condominium or apartment units* on 63.6 acres.
3) Expansion of the commercial floor space by 125,000 square feet
4) Parking in accordance with the following standards:

Land Use	Off-Street Parking Required
Single-family dwelling	two spaces per unit
Apartments, condominiums	1.5 spaces per unit
Lodge or hotel units	1.0 spaces per unit

5) Additional community facilities including expansion of sewer systems, water systems, and roadways
6) Ski lifts for recreation and transportation to Mt. Reba
7) Expanded recreational facilities: heliport, equestrian center, 26 tennis courts, a visitor's and homeowners' center, and lakeside picnic facilities.
8) Open space reservations on environmentally sensitive areas

* Actually: 849 condo/apt units; 300 lodge units

PROCEDURAL MATTERS

Several steps are required in order to secure approval of the proposals mentioned on the preceeding page.

1) This Environmental Impact Report and the subsequent input it generates must be finalized by Alpine County.

2) P.D. zoning on the south side of Highway 4 must be expanded to include the entire area proposed for development.

3) A Conditional Use Permit will be required for each subsequent development upon a finding that it is in conformity with the Planned Development Master Plan.

4) Subsequent approvals by other governmental agencies will have to be obtained prior to development of some of the proposals in the project. These agencies include: U.S. Forest Service; State Department of Transportation; fire and utility districts. Private approvals or agreements are also required with Mt. Reba; P.G.&E. and the telephone company before development can proceed.

GEOLOGY

Setting*

The project overlies three geologic formations: exposed pyroclastic (volcanic rock), granite, and a shallow layer of glacial alluvium mixed with stream deposits and slope wash. The distribution of these formations is shown on the Geology Map following this page.

The major geological formation is granitic, composed predominantely of coarse-grained granodiorite and porphyritic quartz monzonite, but including granite, quartz diorite, and diorite. Approximately half of the Bear Valley planning area is alluvium consisting of unconsolidated, poorly sorted stream deposits of clay to boulder size and locally including lake and colluvial deposits.

A glacial moraine of unconsolidated, unsorted glacial debris ranging in size from clay to blocks is located in the development area southeast of Bear Lake. A formation consisting of andesite mudflows, tuffs, and associated stream sediments lies between Mt. Reba and Bear Valley and extends into the development area. A similar formation is found on the hill at the southeast corner of the Bear Valley area.

During the past hundred years, Alpine County has been subjected to minor earthquakes and secondary impacts** A fairly hard series of shocks having a magnitude of 5.5 and intensity

*Source: Calif. Division of Mines and Geology, Sacramento Sheet and subreferences

**Source: Alpine County Unit of the Central Sierra Planning Council General Plan: Seismic Safety

of VI (modified Mercalli units) was felt near Markleeville in December, 1942. However, the seismic safety element map for the central Sierra planning area indicates that all faults are located north and east of the study area at a distance greater than fifteen miles with earthquake epicenters concentrated along the northern and eastern boundaries of the County. The potential for fault displacement from seismic activity in the Bear Valley area is thus negligible.

The Seismic Safety Element of the Central Sierra Planning Organization indicates that the project site is in an area where moderate damage may be expected from earthquake secondary impacts. It lists probable maximum earthquake intensities which could be felt here of VII or VIII on the modified Mercalli scale. The effects of an earthquake of the above magnitude are described hereunder.

VII Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D,* including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments - CFR). Some cracks in masonry C.** Waves on ponds; water turbid with mud. Small slides and caving in along sand and gravel banks. Large bells ring. Concrete irrigation ditches damaged.

* Masonry D: Poor workmanship & mortar, and weak materials like adobe
** Masonry C: Good workmanship & mortar, unreinforced

VIII Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A.* Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down. Loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Cracks in wet ground on steep slopes.

Impacts

Since no major earthmoving activities are contemplated in the proposed project, no significant adverse impacts are expected to be imposed on the geologic character of the area. The project site includes seismically sensitive areas such as rock falls and wet meadows, where the impacts due to earthquake shaking would be greatest.

As described in more detail in the forthcoming section on Drainage and Flood Control, the majority of the proposed lodge, apartment, and condominium units are located within the predicted floodway of Bear Lake in the event of dam failure.**

* Masonry A: Good workmanship & mortar, reinforced, designed to resist lateral forces

** See Drainage & Flood Control Map

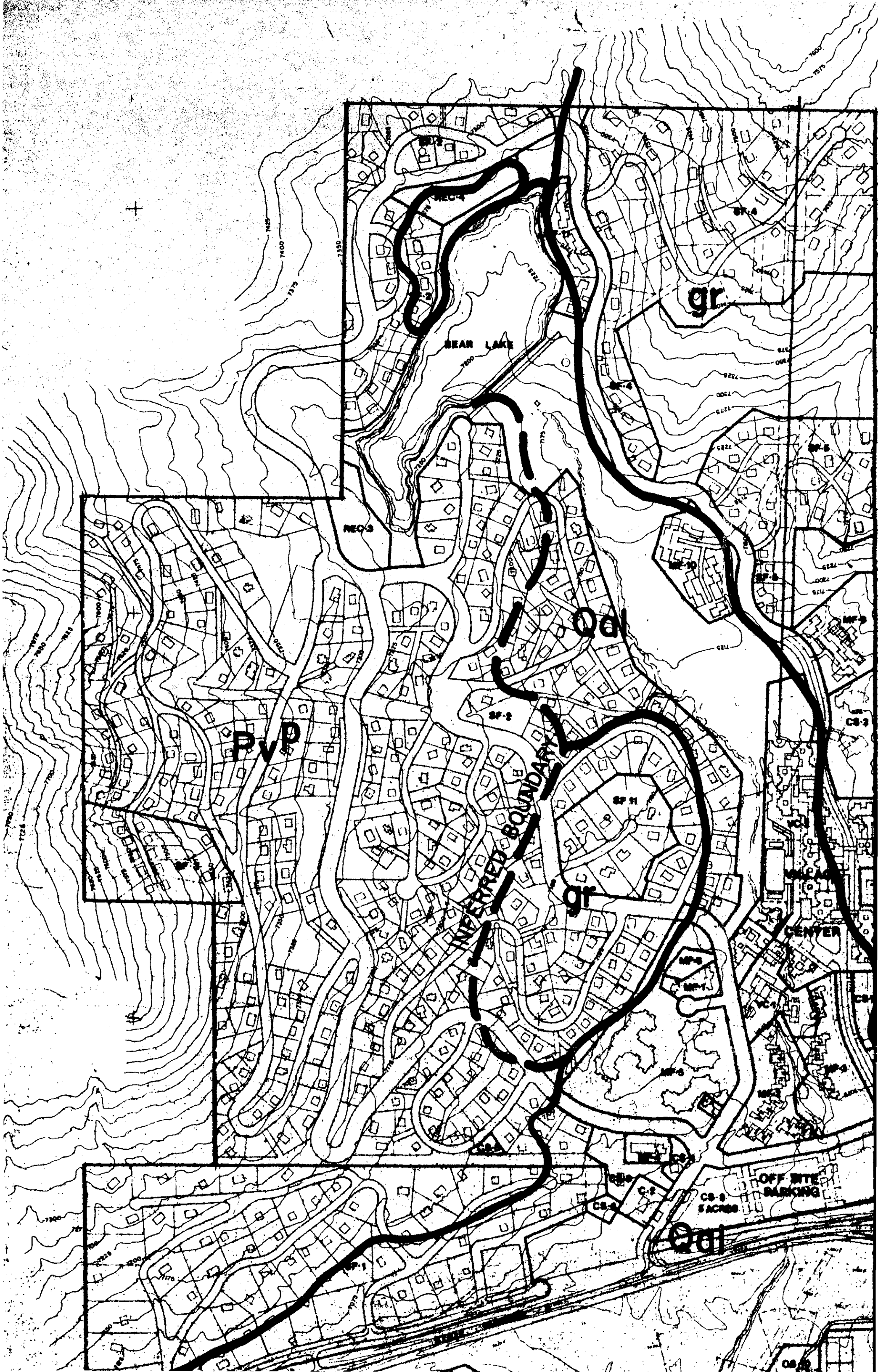
Mitigations

All structures will be designed to meet requirements of the Uniform Building Code with regard to earthquake safety.

The more seismically sensitive lands in the planning area would remain in open space.

It is suggested that the as-built plans of the dam be reviewed by the water district to determine if the dam would withstand seismic shaking of intensity VIII (Mercalli scale), before actual development is approved in the village area.

(This mitigation as of this writing has already taken place as the Division of Dam Safety has reviewed all state-size dams in the State of California as to their seismic safety.)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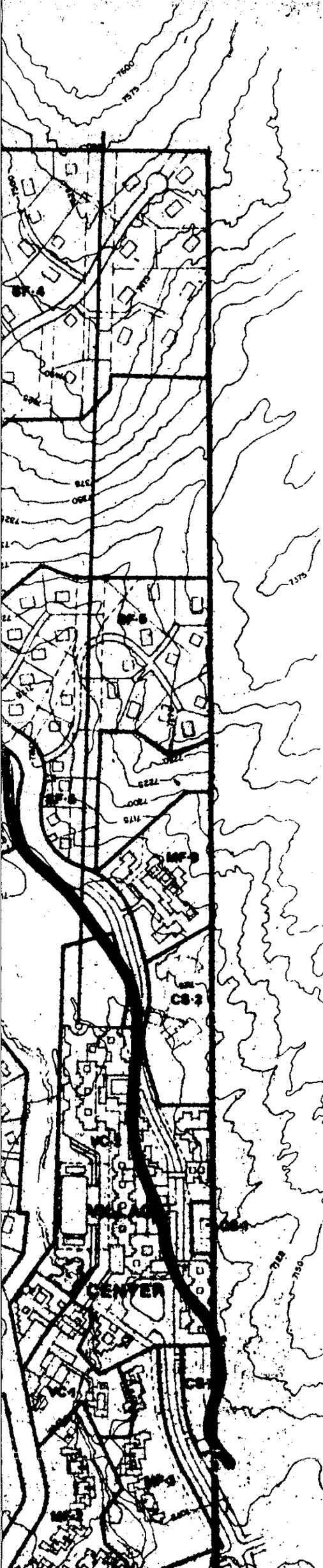
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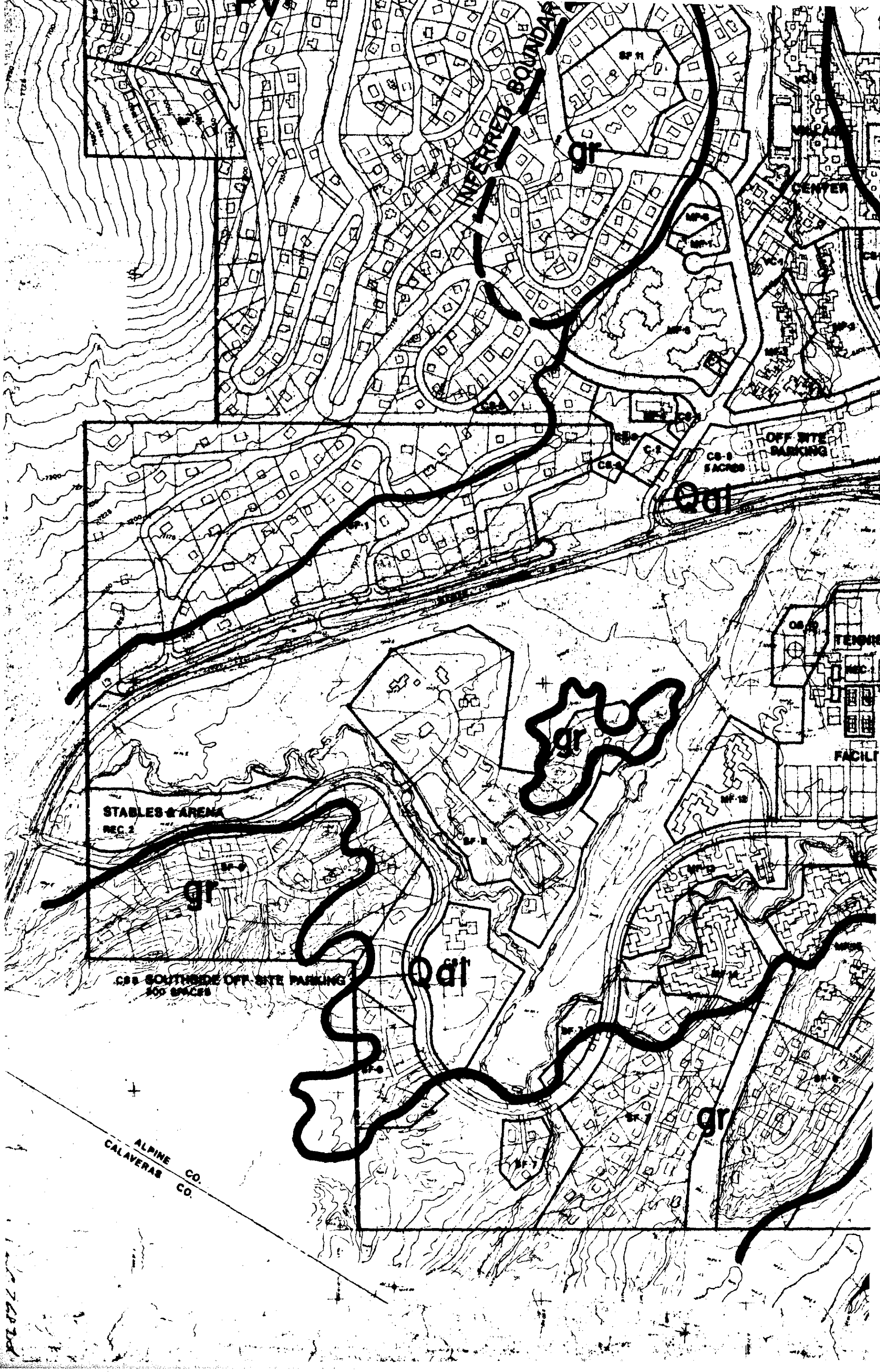
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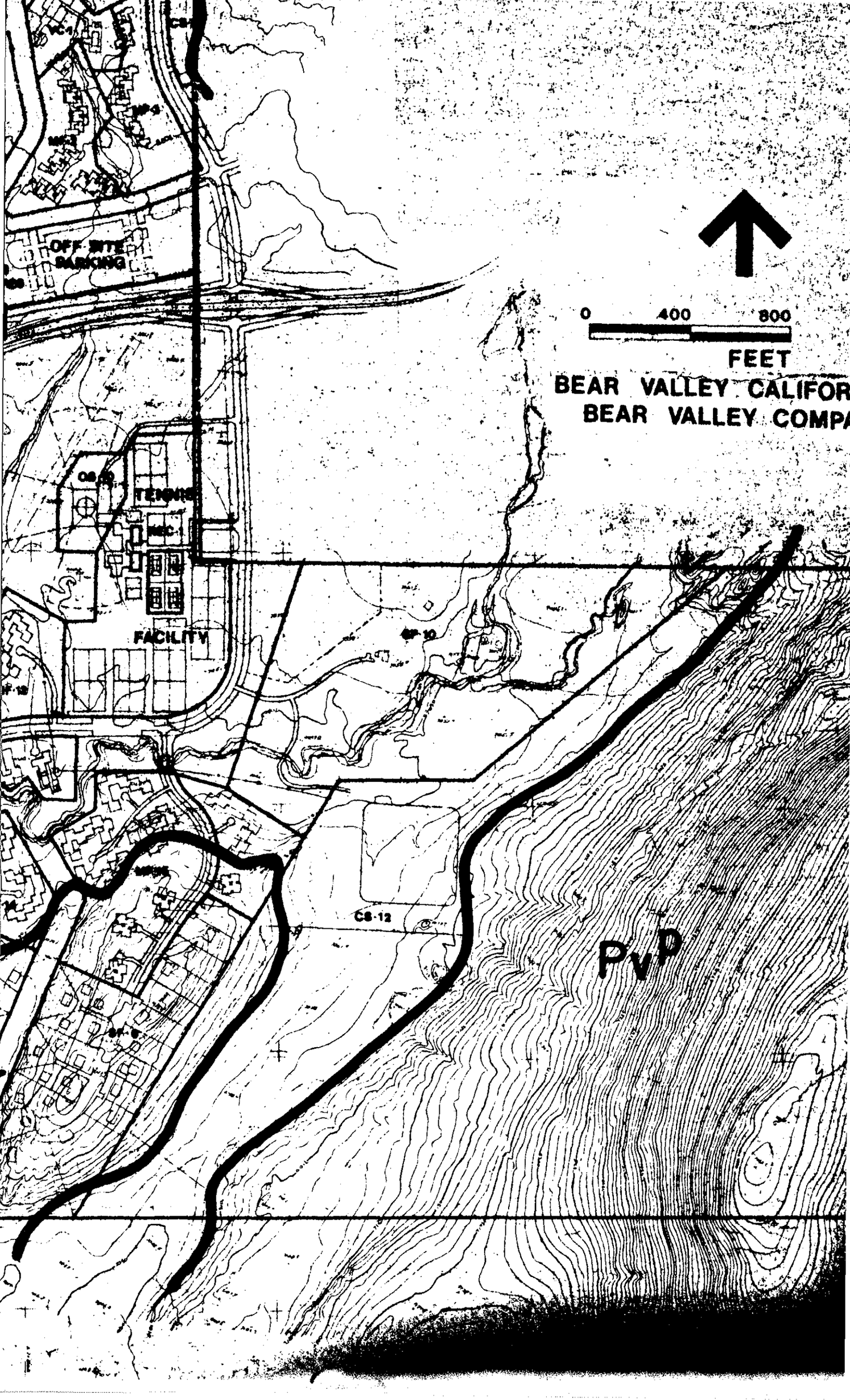
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SOILS

Setting

In general, soils in the Bear Valley area are residual podzolic soils of good depth, which are usually erosive when vegetation cover is disturbed. They range from Class VI to Class VIII according to the U.S. Department of Agriculture Land Capability Classification. Class VI soils overlie older terraces and upland areas, with dense clay subsoils resting on moderately consolidated or consolidated materials. Class VII soils are on upland areas underlain by hard ingeous bedrock, and Class VIII soils are on upland areas underlain by consolidated sedimentary rocks.

In Bear Valley, some of the steep slopes are overlain by soils derived from volcanic materials, which are unstable and susceptible to erosion and drainage problems. Soil profiles show a surface layer of loose brown silty and sandy soils, with moderate to considerable organic content and occasional cobbles. Subsurface soils are clayey, silty sand and sandy silt with considerable gravel and cobbles. Bedrock depths are variable.

The flatlands have a combination of soils derived from volcanic and granitic materials. Surface soils horizons are moist-to-saturated, moderately organic brown silty sand. They are approximately six feet deep and are moderately compressible. They are highly erodible, poorly drained, and generally have a

poor bearing capacity. Subsoils consist of sands and gravels that are increasingly dense with depth.

Impacts

Construction of roads, buildings and recreational facilities will cause disturbance to soils within the area.

Construction equipment will cause dust which will be transmitted to adjacent areas. Many areas disturbed will cause erosion to start and siltation of local gulches and streams thereby affecting water quality during heavy storm runoff particularly if no seasonal limit is established for construction. Consolidation of some soils will occur in the immediate vicinity of roads, walkways and building pads.

Mitigations

Water will be used as a dust pallative in and around all construction activities.

All disturbed soil affected by the construction will be reseeded using native grass seed. Application for best germination and growth will be as recommended by the Department of Agriculture.

Areas with slopes exceeding 25% will be set aside for either green belts or larger parcels with each parcel created having a building site on either solid granite or flatter slopes. Some erosion will take place regardless of the care involved.

Where streambanks are disturbed, rip-rap will be placed to minimize erosion. Siltation basins will be placed at appropriate locations along drainage ways.

Consolidation of soil around trees and plants not removed by construction cannot be avoided, but should be minimized by careful placement of structures.

Seasonal limits should be placed on all construction activities involving earthwork. Suggested limits are: June 15 through October 15.

Earthwork which has not been reseeded or otherwise protected by October 15th shall be "winterized" by one or more of the following:

a) Cover exposed earth with straw

b) Construct basins for silt retention

c) Conduct runoff through forest litter via sheet flow

Prior to reseeding all smooth or compacted surfaces shall be scarified or roughened.

DRAINAGE AND FLOOD CONTROL

Setting

Bear Valley contains a tributary drainage system which feeds into the North Fork of the Stanislaus River. In the northern part of the valley, individual drainages flow into Bear Lake, a 17-acre man-made reservoir used for recreation, open space, and domestic water supply. Outflow is carried through Bear Creek southward through a narrow valley that contains the existing village center, under Highway 4, and through a meadow where it is joined by Grouse Creek flowing from the northwest. The combined streams then join Bloods Creek. Three miles south of the project boundary, Bloods Creek empties into the North Fork of the Stanislaus River.

Bear Creek exhibits flow characteristics typical of Sierra streams with the exception that seasonal releases are regulated at the dam site. Peak discharges occur in May and early June as a function of snow runoff within the basin. Flows decrease in the summer and reach a minimum during autumn when groundwater accounts for a major source of supply to the creek. Flows during the winter months vary considerably depending on temperature.

Bear Lake has a capacity of 240 AF. Inundation Potential Map, following this page, shows the inundation patterns which

would result if Bear Lake Dam were to break and Bear Creek to flood. In general, flood waters could cover the entire open valley through which Bear Creek flows, as well as the meadow south of the Highway.

Impacts

Due to the nature of the area with heavy snowfalls sudden changes in temperature can cause flooding and over topping of creek banks. Flooding can cause minor earth slides with possible damage to adjacent structures, roadways and residents. The village center would be an obstruction to free flow and could create a backwater of about two feet higher than that which would occur if the buildings were not constructed. Due to scale the map cannot show the difference with or without the buildings.

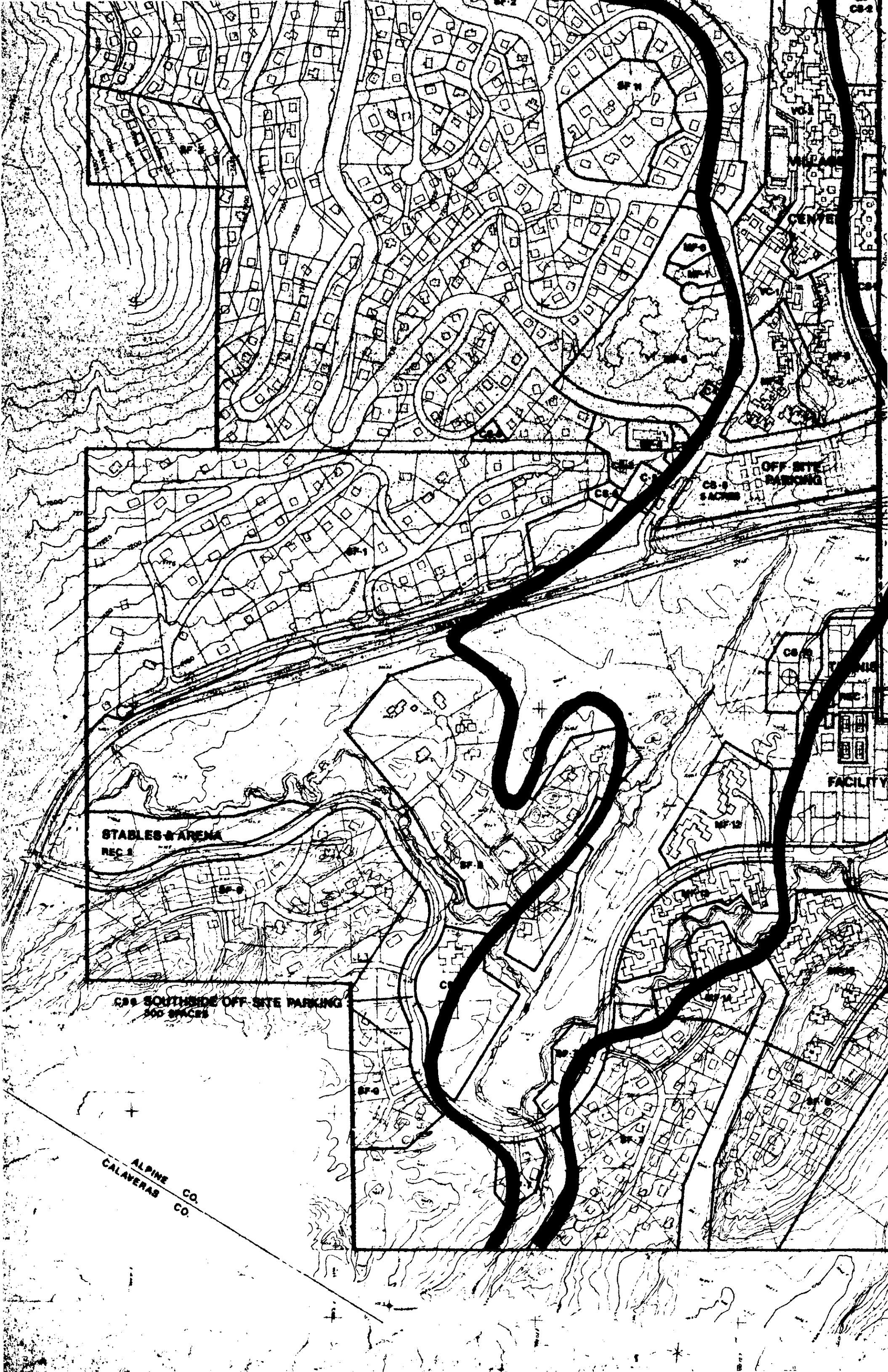
Possible loss of life and property damage could occur if Bear Lake Dam were to suddenly break and give away. The most serious damage would occur in and around the Village Center. Minor flooding would occur from State Highway 4 to the south boundary of the property. The initial wave at the Village Center could occur in about 2½ minutes and at the State Highway 2 minutes later. Three minutes later the wave would be beyond the end of the airport and be discharging out the southern edge of the area.

Mitigations

There is no mitigation to rapid snowmelt as nature will take its course.

Dam failure will be closly monitored as the State of California - Division of Dam Safety has one of the best in-sepction programs in the world. Annual inspections are made by Dam Safety personnel with immediate follow-up in case of problems. The local water system operator visually inspects the dam and area daily and during springtime and spring thaw maintains the reservoir at a lower than full-safe elevation.

No living quarters should be allowed at ground level and commerical space should be limited to no more than 100 lineal feet of wall measured at right angle to the direction of water flow.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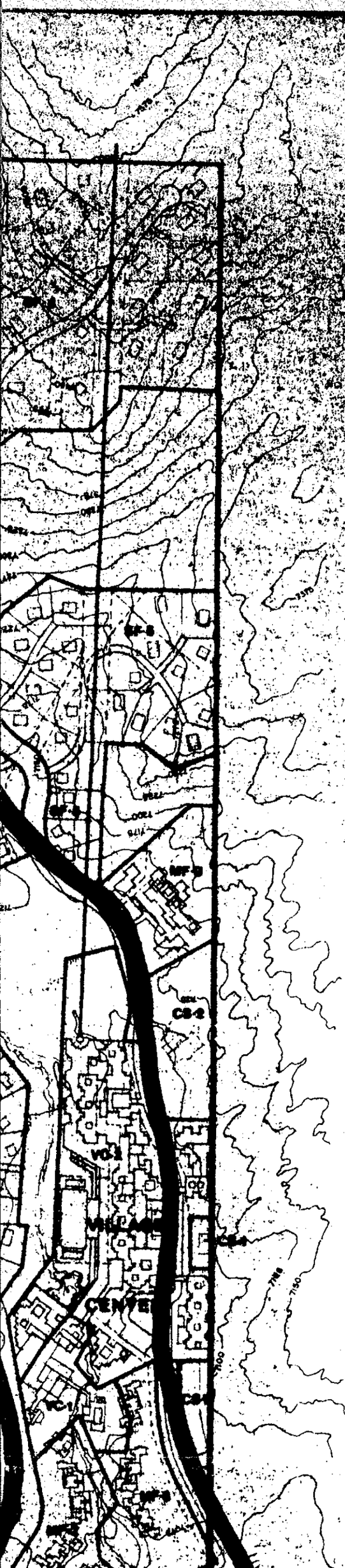
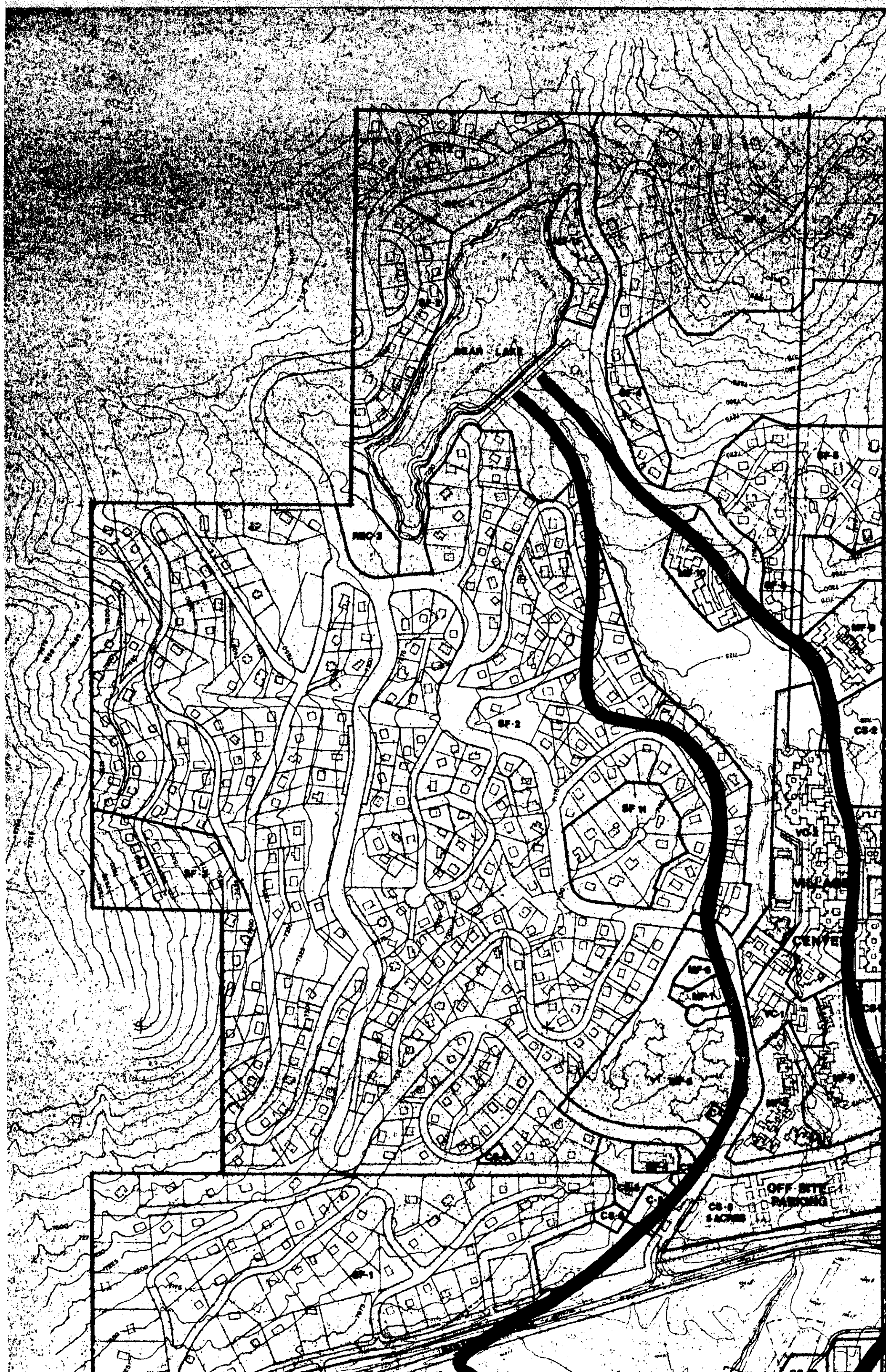


INUNDATION POTENTIAL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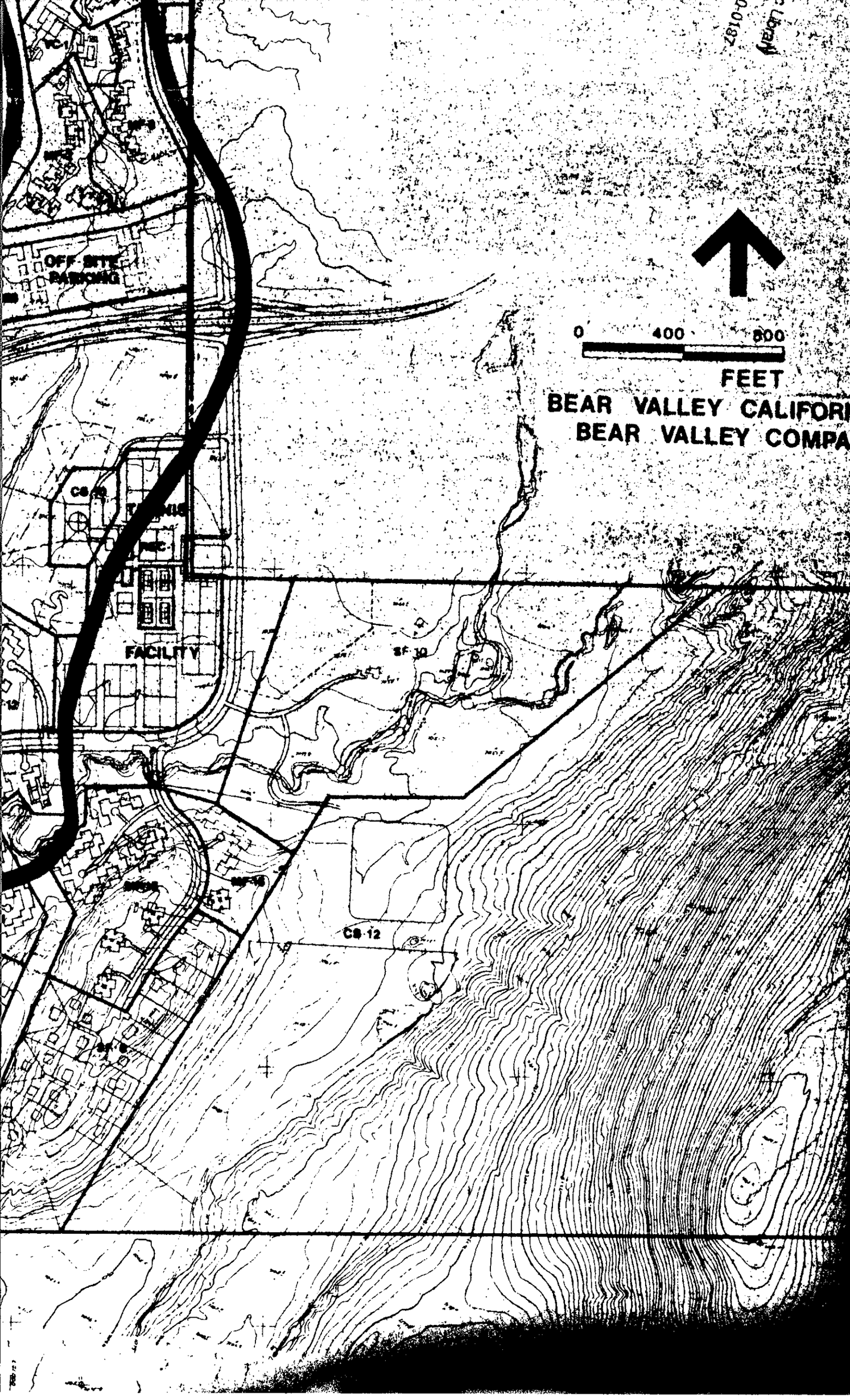
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VEGETATION

Setting

The distribution of vegetative communities in the Bear Valley area is shown on the map following this page. They include coniferous forest, meadows, barren areas, and riparian zones.

The coniferous forest is the predominant community in Bear Valley. Here the following conifers are dominant, comprising at least 95% of the overstory:

Mountain Hemlock	Western White Pine
Whitebark Pine	Lodgepole Pine
White Fir	Western Juniper
Red Fir	Jeffrey Pine

Grasses and shrubs are found as understory in the less dense stands of coniferous forest. They include:

Currents	Ceanothus
Gooseberries	Manzanita
Ragwort	

The meadows are a fragile community where a delicate balance exists between groundwater level, vegetative cover, and wildlife. Vegetative types found in the meadows include perennial grasses, annual grasses, sedges, rushes, broad-leafed herbs, and wildflowers.

Species found in the meadows in Bear Valley may include:

Tufted Hair Grass	Corn Lily
Bent Grass	Pickleweed
Meadow Barley	Cattails
Slender Oat	Elephant's Head
Soft Chess	Bracken
	Wooley Mules-Ears

Vegetation is limited in the barren areas due to lack of soil development. Some pockets of shallow soil exist within such areas and support stunted trees, Huckleberry Oak, Pinemat Manzanita, and a variety of grasses and herbs which are common in the surrounding vegetative communities.

The riparian community consists of vegetation confined closely to streams, lakes or their immediate vicinity. Characteristic species found here include:

Willows	Alumroot
Mountain Alder	Reedgrass
Aspen	Tufted Hair Grass

In Bear Valley, the climate has the greatest influence on growing conditions. The area is characterized by low mean temperatures with moderate to high precipitation, mostly in the form of snow. These two factors result in a very short growing season which makes restoration of vegetation after disturbance difficult, costly, and lengthy. The frost-free period in the area is estimated at 70 consecutive days per year.

Impacts

Native vegetation would be removed on approximately 28% of the project site with development. Approximately 85%-90% of the area which would be disturbed is covered by an intermediate density coniferous forest with 10-80% tree canopy closure. The project may cause the removal of up to 500 trees with diameter at breast height greater than 12". The remaining area which would be disturbed is open meadow.

The introduction of more people into the area, with development of the proposed project, would have an impact on vegetation retained within the development and vegetation in the surrounding Stanislaus National Forest.

Public use of vegetated areas could cause soil compaction which could in turn decrease infiltration of water to plant's root systems. Soil compaction and decreased availability of water could weaken plants and reduce their resistance to insects and disease. An increase in snowmobile use may be expected with the proposed development. Snowmobiles compact the snow which causes uneven melting in the spring. This is detrimental to vegetative cover and, in the more extreme cases of snowmobile over-use, scars are left in the vegetative cover underlying snowmobile trails.

Exotic vegetation may be brought into the area by new and existing residents for landscaping. This could introduce insect and disease hosts and organisms that might upset the balance of

Derivation: 80% of the multi-family & village areas could be affected or 80% x 63.6 acres = 51 acres
30% of the single family area could be affected or 30% x 155 = 47 acres.
Major roads, winter parking and tennis courts = 25 acres
This adds up to 123 acres out of 149 in the project or 27.6%.

native plants in the area. Maintenance of the new species could result in the artificial use of nutrients and water, which could create secondary impacts on surrounding vegetation.

Controlled burning, by residents of the proposed project, as a means of eliminating vegetative debris and litter could cause loss of soil stabilizing vegetation locally.

Construction of the proposed project may have a detrimental effect on vegetation retained within the development. Fills or paved areas may be placed over the root zones of trees which adjoin roads, parking lots, or structures. This practice could weaken such trees and make them more susceptible to disease and insect attack. Fills, grading, paving and building could change soil moisture conditions (i.e., a deep cut will lower surrounding moisture and a deep fill could raise moisture content), thereby altering water availability to surrounding plants. These types of activities (roads, etc.) usually increase runoff and reduce groundwater recharge, even though the ground is totally saturated during spring thaw.

Vegetation adjoining winter parking areas or roadways cleared in the winter will suffer from the impacts of snow removal, i.e., pushing, stacking, blowing and the use of sand and salt.

Mitigations

An effort should be made to limit the extent of vegetation disturbance within the proposed development. This could be accomplished, in part, with careful selection of building sites in order to preserve large conifers. Further mitigation to decrease the disturbed area could consist of concentrating more

living units into condominiums rather than planning for single-family lots spread throughout the area.

Sand and salt should be discontinued by County Service Area No. 1 in its snow program.

The impacts on vegetation associated with increased public use of the area should be mitigated in the following ways:

1) Well-marked hiking trails should be provided throughout the development and surrounding National Forest to limit the extent of soil compaction due to foot traffic. Railings should be built along the most environmentally sensitive portions of the trails, such as the meadows, to restrict wandering into these areas.

2) Snowmobile use throughout the development and the surrounding National Forest should be strictly limited to uncleared existing roads and well-marked snowmobile trails.

3) Enforcement of these trail regulations should be the responsibility of U.S.F.S. personnel and local police.

4) Information pamphlets should be developed and distributed to property owners and visitors advising them as to the environmental dangers and prohibitions via deed restrictions of leaving marked trails and walking through environmentally sensitive areas, and importing exotic plants for landscaping into Bear Valley.

5) Burning of vegetative debris should be limited to locations selected by the U.S. Forest Service and conducted only at approved times of the year.

Adverse impacts on vegetation due to construction of the proposed project should be mitigated in the following ways:

1) Groundwater recharge should be encouraged through the installation of leach trenches adjacent to developed areas (buildings, parking lots, roads). This would help mitigate the effect of loss of water availability for plants.

2) Prompt revegetation of disturbed areas should be a required condition for each phase of development. The water district has been fairly successful in revegetation of soils effected by trenching with use of a mixture of Blando Bromgrass, Wimmera Ryegrass, and Pubscent Wheatgrass which was recommended by the U.S. Forest Service.* Their practices should be used with prescriptions designed for each situation. This includes terracing, mulching, storage and respread of litter, fertilizing, seeding, planting and irrigation.

Each subsequent use permit for a development proposal should be accompanied by its own revegetation plan including, but not limited to, the foregoing elements. Grasses and forbes should receive first consideration in revegetation, while shrubs and trees should be selected for specific effects.

* See Appendix for specific mix

3) Development plans to be considered later, as the market warrants, should, if approved, be conditioned upon the following limits:

a. Cut and fill slopes should be limited to 4:1 within 50' of significant timber stands (i.e., where the density of trees 6" in diameter and over is greater than 200/acre.

b. Depth of cut in any meadow area should not exceed 3'.

c. Proximity of development (roads, parking lots, buildings) to existing trees which are left standing for ornamental effects should be no closer than the dripline.

Other mitigation measures to lessen the impact on surrounding vegetation should include the following:

1) Trees felled in clearing may be disposed of by cutting to cordwood-size for use by project residents so long as they are not infested by pine beetle.

2) County Service Area No. 1 should provide for an inspection of the forest cover at least every two years by a professional forester. This may result in periodic harvest of diseased, beetle-infested or dying trees to maintain a healthy forest stand.

3) Prohibition of importation of exotic vegetation has already been included in the design standards of the proposed development.


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CS-1
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C-2
M
STATE HIGHWAY
CS-10
TENNIS
REC-1
FACILITY
M
MF-12
STABLES & ARENA
REC 2
SF-6
Rx
Rx
Rx
Rx
CS-11
M
CS SOUTHSIDE OFF-SITE
300 SPACES
SF-6
Rx
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Rx
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Rx
CO.
CO.
SPRING MOVEMENT

VEGETATION

LEGEND:

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RIPARIAN AREA

CONIFEROUS FOREST

M — MEADOW

DEER MIGRATION ROUTES

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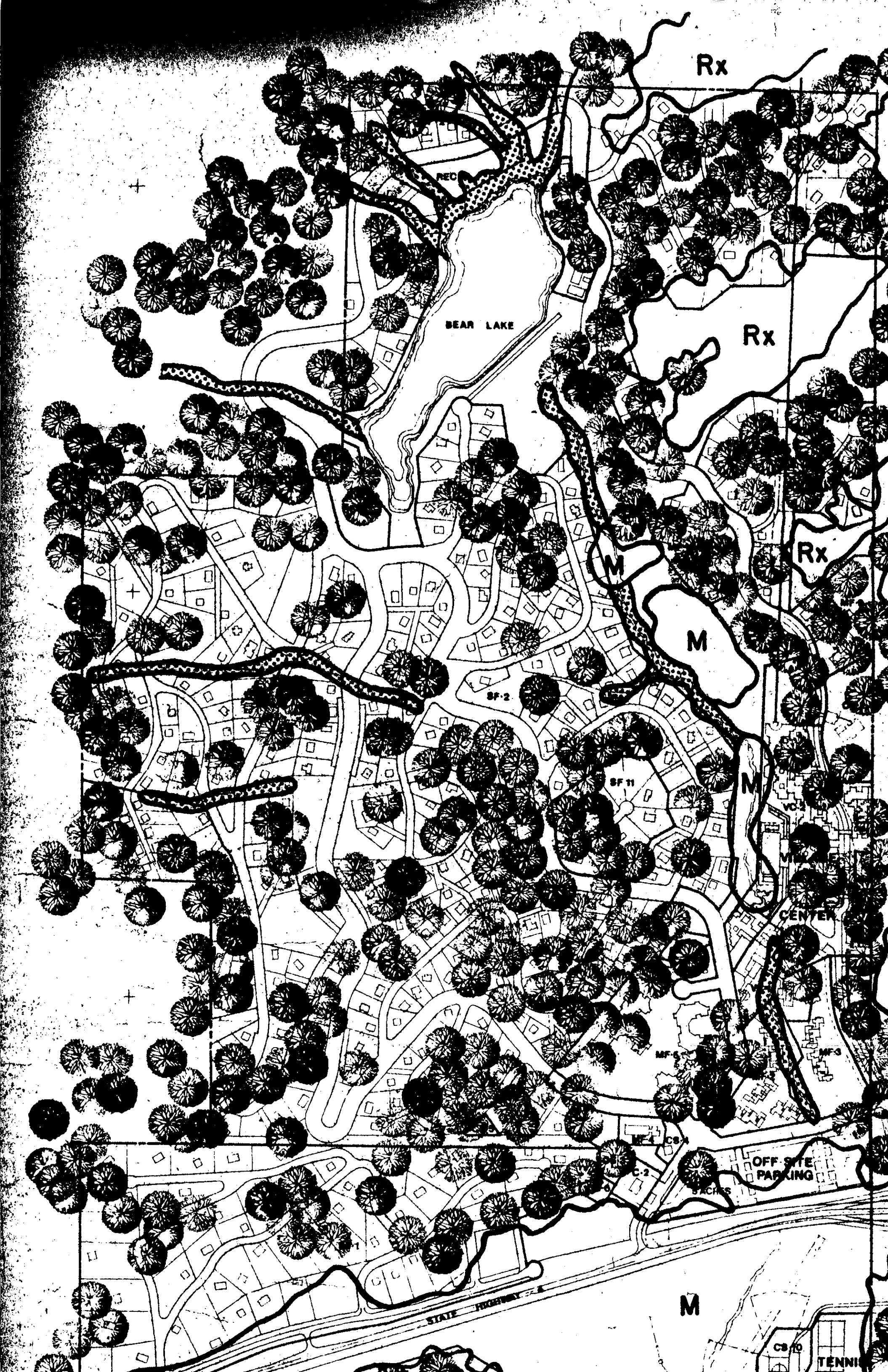
SCALE IN FEET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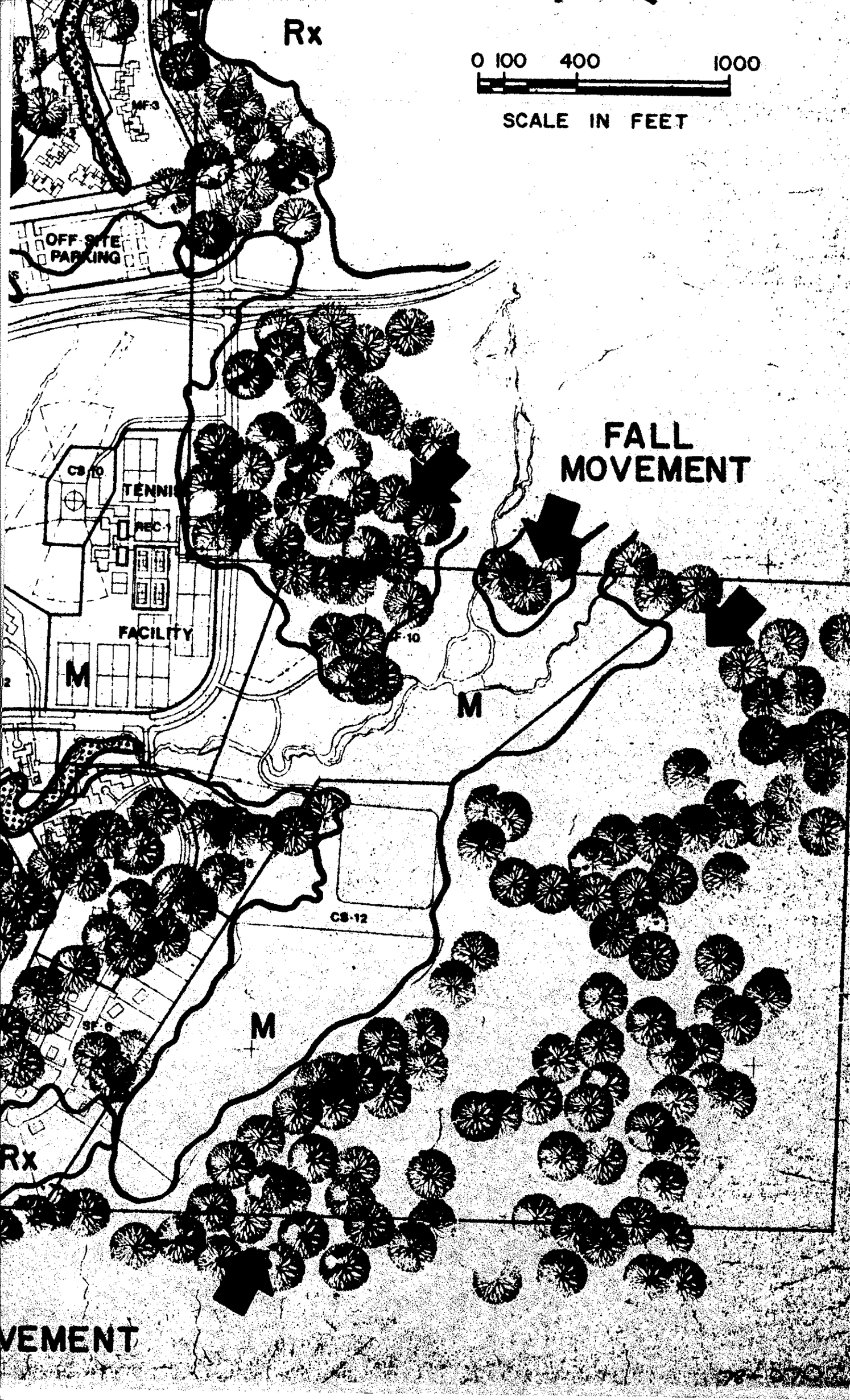
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FIRE HAZARD

Setting

The area is presently protected by the Bear Valley Volunteer Fire Department, which presently has three trucks, two with 500 gpm pumping capacity and the other on loan from the State at 1000 gpm pumping capacity. There are 10 volunteers all who reside in the Bear Valley area.

The fire station is located adjacent to the sheriff's office on Bear Valley Road just off State Highway 4. Response time to fire at the extremities of the project area are estimated at 5 minutes*in the summer and 20 to 30*in winter with over the snow fire equipment.

Fire hazard is high to severe during summer and early fall as conditions get extremely dry. Adjacent properties are entirely public lands and public trespass is common.

Impacts

Increased population will increase the potential number of fires as will the value of the losses increase.

On the other hand, the project will increase fire fighting capability in areas now unaccessible. This will be accomplished by constructing access roads and installing water systems complete with fire hydrants in accordance with PUC requirements. (PUC General Order #103).

* Source: Ted Merry - Fire Chief

Mitigations

Conditions of approval for each subdivision, commercial area or condominium project should give assurance that fire hydrants and water system will be installed to meet the requirements of General Order #103 and the local fire department. General Order #103 establishes the fire flows and the local fire department should establish by ordinance the type, location and spacing of hydrants. (See Fire Protection - Page 78)

WILDLIFE

Setting

Wildlife in the Bear Valley Area can be categorized according to habitat type which corresponds to vegetative community.

The coniferous forest habitat supports the following birds and mammals:

Pygmy Owl
Spotted Owl
Great Grey Owl
Woodpeckers
Flycatchers
Steller's Jay
Mountain Chickadee
Kinglets
Warblers

Badgers
Snowshoe Rabbit
Belding Ground Squirrel

Chipmunks
Grey Squirrel
Red Squirrel
Porcupine
Marten
Wolverine
Coyote

Black-tailed Deer
Deer
Black Bear
Mountain Lion
Bobcat

The meadow habitat supports:

Coyote
Black-tailed Deer
Black Bear (forage)
Yellow-Bellied Marmot
Long-tailed Meadow Mouse
White-footed Mouse
Deer Mouse
Mountain Pocket Gopher
Western Garter Snake
Western Rattlesnake

Many birds (summer visitants)
Pacific Tree Frogs
Lepidoptera spp.
Hymenoptera spp.
Snowshoe Rabbit
Badgers

The barren, rocky area habitat supports:

Rock Wren
Bushy-tailed Wood Rat
Cottontail
Western Fence Lizard
Sagebrush Lizard

North Alligator Lizard
Western Rattlesnake
Mountain Gopher
Pika
Yellow-bellied Marmot

and provides dens for:

Coyote
Fox
Raccoon
Marten

The riparian habitat supports:

Flycatcher	Cottontail
Gold Finches	Mice
Song Sparrow	Raccoon
Shrews	Frogs and other amphibians

Black bear and mountain lion both have low capability for withstanding disturbance to their natural habitats, but deer can tolerate some such disturbance. The small mammals which exist in the Bear Valley Area can all tolerate some disturbance to their habitat. The grey squirrel, however, has a narrowly restricted habitat and so is more vulnerable to disturbances than those which can survive in several different types of habitat. Wolverine are the medium-sized mammals that are intolerant of habitat disturbance. Marten may increase as indicated at Kirkwood. The birds that would be most affacted by human disturbances are the species that are limited exclusively to a single type of habitat. About 1/8 of the bird species in the Bear Valley Area reside in the single habitat type provided by the meadows.

The southern part of Bear Valley is known to include the migration route of the "Railroad Flat Deer Herd", composed of California mule deer. Each fall, this herd moves down from the higher elevations and passes through Bear Valley on its way to

winter browsing areas along the Stanislaus River (North Fork). The following spring, the same herd returns through the valley to higher meadows. The actual route taken by the deer is not a well-defined trail, but a general area that includes territory within the proposed development. Deer migration routes are shown on the preceeding Vegetation Map.

Bear Lake contains regularly-stocked Rainbow Trout and several other species of fish and consequently provides substantial sport fishing opportunities. The summer streams flowing through Bear Valley have Brown Trout, Eastern Brook Trout, as well as several minnow species, but these fish are limited in number and size due to lack of food and regulated stream flows.

Among rare and endangered wildlife species, the wolverine, the southern bald eagle and the American peregrin falcon are known to exist in the general vicinity of the project site, although none have actually been seen in Bear Valley. The cliffs above Bear Valley may be a habitat for nesting for American peregrine falcons.

Mountain lions, which could be considered a "unique" species, have been sighted in Bear Valley and Mt. Reba. Unique species are defined in the 1973 Rare and Threatened Species Act as not endangered, but having considerable local or national interest.

Impacts

A task force of the Tahoe National Forest evaluated the susceptibility of wildlife to environmental disturbances. Three ratings were used to show differing degrees of susceptibility to disturbance:

H = High capability to withstand the disturbance. Most species in this category showed little or no response to the disturbance.

M = The species can tolerate the disturbance, but the population trend turns downward. Most species receiving this rating responded unfavorably to the disturbance but could adjust; the exceptors were species having territorial traits.

L = Low capability to withstand disturbance. Most species in this category react; population trend is downward.

The following chart, which shows the reaction level of each wildlife category to types of disturbance, was adapted from the Tahoe study and would be indicative of impacts which might be expected in Bear Valley.

TYPE OF DISTURBANCE	WILDLIFE CATEGORY			
	LARGE MAMMALS	SMALL MAMMALS	MEDIUM-SIZED MAMMALS	BIRDS
Surface soil compaction, clearing and grading	L	M	L	M
Noise, population concentration	L	M	L	M
Insect and disease control; use of chemicals	H	M	M	L
Controlled burning	L	L	L	H

Most of the area which would be disturbed by the proposed development is coniferous forest habitat. Wildlife that cannot tolerate disturbance to their habitat, and that live in the coniferous forests in the general vicinity of Bear Valley are marten, wolverine, and grey squirrel. These mammals would be hardest hit by development of the proposed project. The meadow habitat would be disturbed to a lesser degree with development of the proposed project. Wildlife that cannot tolerate disturbance to their habitat, and that utilize the meadow habitats

in the general vicinity of Bear Valley are black bear, mountain lion, and many species of birds. These would be impacted to a lesser degree with development of the proposed project.

The exact effect of the proposed project on the Railroad Flat Deer herd migration has not been determined, however, residential development within the migration route is expected to disturb the herd to some extent. This meadow would be surrounded by houses, schools and condominiums with development of the proposed project.

Changes in stream channels, flow, and sedimentation could affect fish populations downstream from the project site.

In general, the overall effect of development of the proposed project would be a reduction in all animal and bird species in the immediate vicinity of the development. Hardest hit would be the large and medium-sized mammals.

Mitigations

1) Meadows and riparian zones should be avoided insofar as development of buildings, roads and parking lots are concerned. This would preserve areas of significant wildlife habitat and food production.

2) Since game is so dependent on habitat, the recommended mitigations in the Vegetation Section should be underscored (i.e., minimal cuts and fills, protection of root zones of trees, immediate revegetation of disturbed areas, etc.).

3) Under ALTERNATIVES, herein, a plan with more concentration of units, i.e., more apartments and condominiums as opposed to single-family lots is also studied. It concentrates human impacts (noise, paving, etc.) into a smaller area, thus preserving habitat, etc.

4) It is suggested that the property owners' association establish contact with the California Department of Fish and Game and request that they perform regular studies of wildlife populations in the vicinity of the development. The Department of Fish and Game should then inform residents of measures to be taken to correct undesirable trends.

5) Improvement of deer browse in the retained meadow and riparian zones should be a condition of new development.

6) Development should be limited in the area defined as deer migration routes. The establishment of the previously suggested trails and railings should be prohibited from crossing the deer migration routes.

AIR QUALITY

Setting

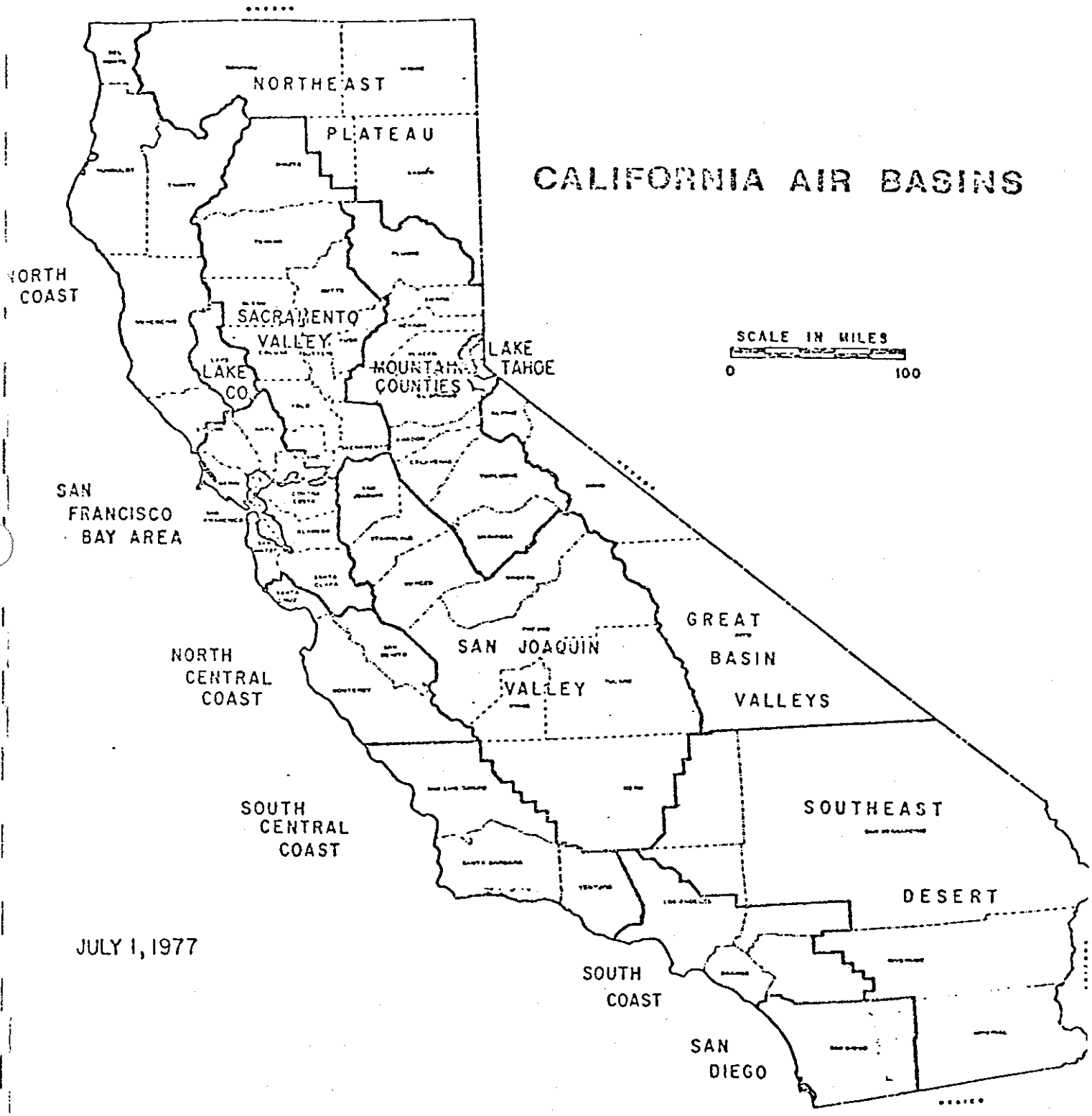
Politically, Bear Valley lies within the Great Basin Valleys Air Basin, as shown on the map following this page. The Great Basin Valleys Air Basin is part of the Great Basin, which includes the eastern portion of California (south of Tahoe), southeastern Oregon, Nevada, western Utah and the Mojave Desert. However, Bear Valley's location, on the western slope of the Sierras, makes the area's air quality more directly related to that of the California "Mountain Counties" Air Basin, which includes all the mountain counties from Mariposa north to Plumas.

Summer temperatures at Bear Valley range from a daytime average maximum of 73°F, to a nightime average minimum of 41°F. There are usually 70 frost-free days per year. Summer winds are usually light in the Bear Valley area. Air circulation patterns are strongly affected by terrain and consequently, are very complex. Inversions are normally shallow due to the good air drainage conditions to the southwest and prevailing westerly winds at this altitude (7000 ft.).

Winter temperatures at Bear Valley range from average daily highs of about 38°F. to average lows of 12°F.

In the winter, Bear Valley is in an area of moderate to heavy incidence of storms which result in moderate to heavy snowfall. Mean annual snowfall is about 445 inches. Occasionally,

FIGURE 1


CALIFORNIA AIR BASINS
NORTHEAST
PLATEAU
NORTH
COAST
SACRAMENTO
VALLEY
LAKE
CO
MOUNTAIN
COUNTIES
LAKE
TAHOE
SCALE IN MILES
0
100
SAN
FRANCISCO
BAY AREA
NORTH
CENTRAL
COAST
SAN JOAQUIN
VALLEY
GREAT
BASIN
VALLEYS
SOUTH
CENTRAL
COAST
SOUTHEAST
DESERT
SOUTH
COAST
SAN
DIEGO
JULY 1, 1977

a warm winter storm will cross the area from the southwest with temperatures at this altitude greater than freezing, and the precipitation will fall as rain. Annual record mean precipitation is about 48".

The favorable air drainage conditions toward the southwest from Bear Valley, the infrequent nature of calms in the area, and the distance from metropolitan areas, makes the air pollution potential at Bear Valley low. However, the results of increasing tourism in the area contributes further to vehicular pollutant emissions.

Regulatory agencies with jurisdiction over the area's air quality are the State Air Resources Board, and the Alpine County Air Pollution Control Board (a function served in this case by the County Board of Supervisors). The State and Federal governments have established ambient air quality standards which these agencies use in monitoring air quality. The California and Federal Air Quality standards are summarized in the table following this page.

No air quality measurements have been taken in the immediate vicinity of Bear Valley. The U.S. Forest Service will perform air quality studies in the immediate future, however, to determine if the expansion of the ski potential (hence vehicular trips, parking, etc.) is warranted at Mt. Reba. Their studies are expected to show that air quality is generally good in the are regardless of the skiers. At Kirkwood Meadows, approximately 16 miles north

TABLE V.38. AMBIENT AIR QUALITY STANDARDS APPLICABLE IN CALIFORNIA

Pollutant	Averaging Time	California Standards Concentration	Federal Standards Primary	Federal Standards Secondary
Photochemical Oxidants (Corrected for NO_2)	1 hour	0.10 ppm	0.08 ppm	Same as Primary Std.
Carbon Monoxide	12 hours 8 hours 1 hour	10 ppm - 40 ppm	- 9 ppm 35 ppm	Same as Primary Standards
Nitrogen Dioxide	Annual Average 1 hour	- 0.25 ppm	0.05 ppm -	Same as Primary Std.
Sulfur Dioxide	Annual Average 24 hours 3 hours 1 hour	- 0.04 ppm - 0.5 ppm	0.03 ppm 0.14 ppm - -	0.02 ppm 0.10 ppm 0.5 ppm -
Suspended Particulate Matter	Annual Geometric Mean 24 hours	60 mg/m^3 100 mg/m^3	75 mg/m^3 260 mg/m^3	60 mg/m^3 150 mg/m^3
Lead (Particulate)	30 day average	1.5 mg/m^3	-	-
Hydrogen Sulfide	1 hour	0.03 ppm	-	-
Hydrocarbons (corrected for Methane)	3 hours (6-9 a.m.)	-	0.24 ppm	Same as Primary Standard
Visibility Reducing Particles	1 Observation	Visibility to less than 10 miles when the relative humidity is less than 70%.	-	-

of Bear Valley, the following data was recorded in preparation for the "Kirkwood Meadows Ski Development, Air Quality Report."

"Particulates. High volume sampler measurements of particulates were made at both of the Kirkwood Meadow meteorological sites. There was little particulate matter in the air during the winter. The summertime levels ranged from 16 micrograms per cubic meter to 98.9 micrograms per cubic meter. The high value is close to the California Standard of 100 micrograms per cubic meter for a 24-hour averaging time. This value and other high levels were associated with locally raised dust caused by construction activity."

No measurements were made of carbon monoxide, hydrocarbons, nitrogen dioxide, sulfur or lead concentrations at Kirkwood Meadows.

Impacts

Activities associated with construction of the proposed project could degrade air quality locally. Dust, created in earthmoving activities and the removal of vegetation, would increase suspended particulate matter. The operation of construction and earthmoving equipment would increase vehicular emissions on the project site.

Secondary impacts on air quality with development of the proposed project are related to the influx of residents and tourists which the project would create. Projected emissions

from motor vehicles in the study area are estimated from vehicle miles traveled (VMT) projections.

During the summer, at full occupancy, residents of the proposed development are anticipated to generate approximately 40,500 vehicle miles travel per day.* According to tables A.3.B. and A.3.15. from Report Number ARB/EP-76001 of the California Air Resources Board, the emission rates for composite light duty passenger vehicles in 1977 was:

4.3 grams per mile of hydrocarbons

26.2 grams per mile of carbon monoxide

2.6 grams per mile of oxides of nitrogen

.13 grams per mile of SO_2 and SO_x

The increase in emissions from motor vehicles in the summertime, with completion of the proposed development, is therefore anticipated to be:

.19 tons/day of hydrocarbons

1.17 tons/day of carbon monoxide

* Basis:

Single-family units - 7 trips/day x 231 units	=	1617 trips/day
Condominiums - 5 trips/day x 649 units	=	3245 trips/day
Lodge - 4 trips/day x 500 units	=	2000 trips/day
TOTAL		6862 trips/day
20% westbound on Hwy. 4	=	1372 trips/day
20% eastbound on Hwy. 4	=	1372 trips/day
60% internal, shopping, recreational, other	=	4116 trips/day

Westbound, average trip length above 3,000' elevation = 22 miles x 1372 trips/day = 30,184 VMT/day

Eastbound, average trip length = 3 miles x 1372 trips/day = 4116 VMT/day

Internal, average trip length = 1.5 miles x 4116 trips/day = 6174 VMT/day

TOTAL VMT/DAY = 40,474

.12 tons/day of oxides of nitrogen

.006 tons/day of SO_2 and SO_x

During the winter, vehicle emissions would be generated by regular passenger vehicles and over-the-snow vehicles.

At full occupancy, residents of the proposed development are anticipated to generate approximately 29,300 vehicle miles traveled per day* by regular passenger vehicles. The increase in emissions from regular motor vehicles in the wintertime, with completion of the proposed development, is therefore anticipated to be:

.14 tons/day of hydrocarbons

.85 tons/day of carbon monoxide

.08 tons/day of oxides of nitrogen

.004 tons/day of SO_2 and SO_x

*Basis:

Single-family units - 4 trips/day x 231 units	=	924 trips/day
Condominiums - 3 trips/day x 649 units	=	1947 trips/day
Lodge - 3 trips/day x 500 units	=	1500 trips/day
TOTAL		4371 trips/day
50% Mt. Reba	=	2185 trips/day
20% westbound on Hwy 4	=	874 trips/day
30% internal, shopping, visiting, other	=	1311 trips/day

Mt. Reba average trip length = 4 mi x 2185 trips/day = 8740 VMT/day

Westbound on Hwy. 4, average trip length above 3000' elevation = 22 miles x 874 trips/day = 19,228 VMT/day

Internal, average trip length = 1.0 miles x 1311 trips/day = 1311 VMT/day

TOTAL VMT/DAY = 29,279

Residents of zones 1, 2, and 3 of the proposed development, as defined in the Transportation Section, are anticipated to generate approximately 1060 vehicle miles traveled per day* by snowmobiles.

Assuming snowmobiles generate approximately 8% of the emissions per vehicle mile as regular vehicles, the emission rates would be:

.344 grams per mile of hydrocarbons

2.096 grams per mile of carbon monoxide

.208 grams per mile of oxides of nitrogen

.010 grams per mile of SO_2 and SO_x

The increase in emissions from snowmobile use with completion of the proposed development is therefore anticipated to be:

.0004 tons/day of hydrocarbons

.002 tons/day of carbon monoxide

.0002 tons/day of oxides of nitrogen

< .0001 tons/day of SO_2 and SO_x

* Basis:

Single-family units - 4 trips/day x 94 units	=	376 trips/day
Condominiums - 3 trips/day x 110 units	=	330 trips/day
TOTAL TRIPS PER DAY		706
Average trip length 1.5 miles x 706 trips/day	=	1059 VMT/day

At the high altitudes of Bear Valley, automobile efficiency is reduced, resulting in an increase in emissions. Tons per day of pollutants, as projected, may be slightly higher than that which would actually be expected due to this loss in efficiency.

A degradation in local air quality is also expected with the increase in wood fires which can be expected with development of the proposed project.

Carbon monoxide modeling for the project site reveals projected roadside, local, and regional concentrations of carbon monoxide resulting from development of the proposed project. These projections are based upon emissions from winter traffic flows and fireplace burning. Computation sheets and project impact summary forms are in the Appendix of this report. As can be seen from the summary form, the highest 8-hour averaging time concentration occurs on a local basis. Concentration of carbon monoxide has been projected at 1.68 ppm.* This falls well below the Federal Standard of 9 ppm. The highest 1-hour averaging time concentration occurs on a roadside basis. This concentration has been projected at 5.94 ppm.** This falls well below the State and Federal Standards of 40 ppm and 35 ppm respectively.

* $\frac{1955\ \mu g/m^3 \times .02404}{28} = 1.68$ ppm

** $\frac{6918\ \mu g/m^3 \times .02404}{28} = 5.94$ ppm

Mitigations

The increase in suspended particulate matter anticipated with construction should be minimized by the use of water trucks in construction sites for dust suppression.

The continued implementation of emission standards for internal combustion engines should help mitigate any adverse effects on air quality which may result from development of the proposed project.

Strategies to reduce automobile emissions by reducing the number of trips by private automobiles should be encouraged in this area. This would help to mitigate any cumulative adverse effects on air quality in this area from the proposed development. Strategies should include implementation of a bikeway plan and the creation of bike paths within the proposed development. These paths could be used as cross-country ski trails in the winter, while uncleared roads could be designated for snowmobile use.

A shuttlebus system could be implemented throughout the development. In the summer, it would primarily provide transportation to the village center and the recreational areas from the residential portions of the development. In the wintertime, it would provide access to the parking lots, village center, and ski lift along all cleared roads. A shuttlebus system such as this could be operated and maintained by the County Services Area. If fees were charged for use of the shuttlebus, to help mitigate the costs of operation, these should be low enough to encourage widespread use.

More efficient wood burning stoves should be encouraged over the use of fireplaces, particularly in the condominium developments.

WATER QUALITY

Setting

Various studies of the water supply and distribution systems have been conducted in Bear Valley. In the course of the investigations, the consultants have found that Bear Valley has a relatively clean watershed upstream of its springs and reservoirs and is sparsely inhabited.

Bacteriological records at that time met drinking water standards. Based on current EPA regulations Bear Lake exceeds the secondary standards for both Iron and Manganese. Secondary Standards may be objectionable but are not generally hazardous to health. There is some local contamination due to the chemical composition of indigenous soils and bedrock and from livestock. Some areas of the development are served by septic tanks. Bear Valley Water District Ordinances require all new homes to be connected to the sewer system and all existing homes to be connected by 1980. All of the area is now capable of being served by the sewage treatment plant.

The quality of water related to suspended solids in Alpine County is excellent as a result of low erosion activity and that the surface water quality is excellent, having less than 110 mg/l of dissolved solids. This compares favorably with the State Health Department and Environmental Protection Agency standards for drinking water under which the maximum concentration for total dissolved solids is 500 mg/l. Ironically

in 1971 the springs had the highest concentration of 72 mg/l while the lake and streams had 46 mg/l. The limited water quality data for Bear Valley show that composite constituents sampled, are well below the established standards for drinking water. This is not to be taken that water can be consumed.

Impacts

New construction can cause erosion and siltation to accelerate thereby decreasing the water quality.

Areas denuded of soil cover could be a source of dust and eventually being washed to local streams and gulches.

Runoff from parking areas, streets and roof drains will carry pollutants to the stream and will cause a decrease in water quality.

The mere presence of people to the basin can decrease water quality depending upon their activities.

Mitigations

Construction activities will be required to use water as a dust palative and maintain moisture in the ground to minimize blowing dust.

Following any construction all disturbed areas to be planted with native grasses and drainage facilities installed to minimize erosion and potential siltation.

Where possible roofs should be constructed using natural woods eliminating contact between weather and oil or tarred roofing products. Drains should be used, where possible, to eliminate ground splatter and erosion. Concrete or native rock energy dissapators could be used along all drip lines to minimize erosion.

Sand traps and leaching beds should be constructed to accept runoff from each parking area. Sand traps should be able to accept and store 20 cubic feet of sand without overflowing into leach fields. Fields should be a minimum of 25 feet long and 2 feet wide.

NOISE

Setting

Traffic is the largest contributer to noise levels in Bear Valley. The section herein on Air Quality states that the average daily traffic (A.D.T.) on State Highway 4 is 1600 vehicles west of Bear Valley and 1950 vehicles at the Mt. Reba turnoff. Peak hourly traffic was reported as 190 and 160 respectively for these locations.

Assuming a 50 mph speed and a peak hour flow along Highway 4 at Bear Valley of 180 vehicles, sound level readings of 73 dBA* 100' from the roadway** can be expected.

Traffic volumes within the existing development are estimated at about 1500 vehicles per day in the vicinity of the service station and would, under summer conditions, produce about 65 dB(A)at a distance of 100' from the roadway. Sound level measurements taken 50' from the lodge entry road on April 20, 1978 in mid-afternoon yeilded 48 L_{10}dB. This was during an abnormally low use day.

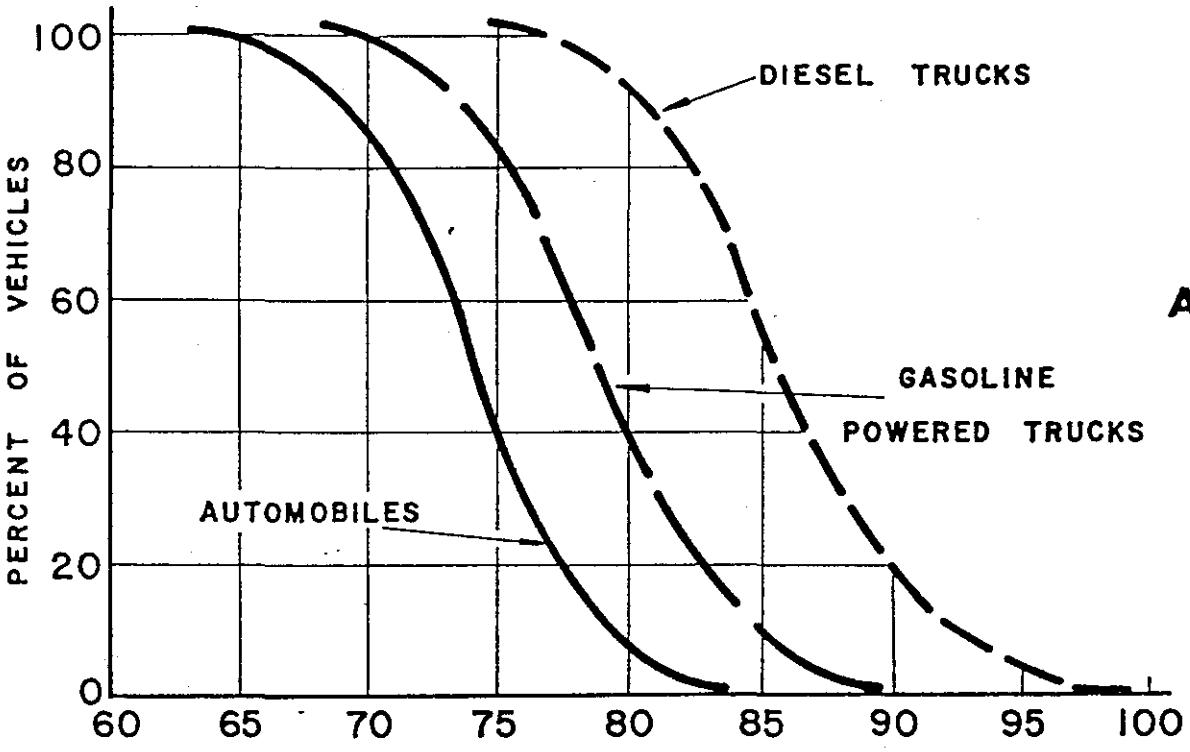
Alpine County has adopted a "Noise Element" as a part of its General Plan. The following are excerpts from this plan.

* Sound intensity expressed in decibels and weighed to conform with the human ear.

** See chart following this page

CUMULATIVE DISTRIBUTION OF HIGHWAY VEHICLES VERSUS NOISE LEVEL

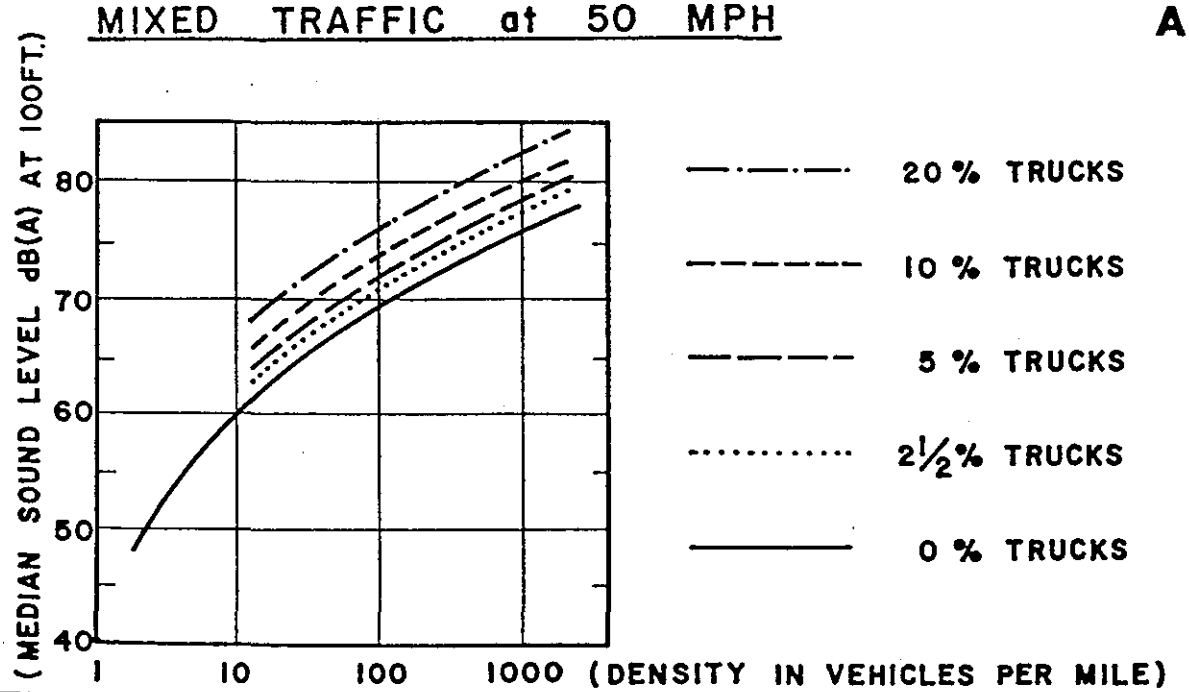
EXHIBITS A-2, 3



A-2

MEDIAN NOISE LEVEL ESTIMATES OF MIXED TRAFFIC at 50 MPH

A-3



"The intensity of sound, or noise, as detectable by the human ear, is measured in "decibel" units. For purposes of this element, the A-weighted decible unit, DB(A), as registered on commercial sound level meters, is used in relation to surface noises."

"1. Highway Design Standards. The following is a summary of Federal standards for use in the design of roads and highways which are applicable with minor variations in California, and which are proposed element guides. (Ref: U.S. DOT PPM 90-2, Feb. 8, 1973, Appendix B-4)."

Land Use Category	Design Noise Level - L_{10}
A. Unique and unusual tracts of land in which serenity and quiet are of extraordinary significance and preservation of those qualities is essential if the area is to continue to serve its intended purpose.	60 dBA (Exterior)
B. Residential areas, schools, churches, libraries, hospitals, and so forth.	70 dBA (Exterior)
C. Other developed land not included in (A) and (B) and generally constituted by urbanized business or industrialized areas.	75 dBA (Exterior)
D. Special condition sites, areas, or activities. The design noise level should be established, based on the merit of the specific case and an analysis of the acceptable level.	(Exterior or Interior)

"2. Land Use Classification Standards. The following standards are proposed as generally desirable ambient exterior noise level guides to be used together with other basic plan elements and in the future planning and location of noise-sensitive land uses and developments in relation to noise generating uses and facilities."

Land Use Classification		Desired Ambient Level, dBA
Residential, rural-suburban:	10 PM to 7 AM	40-45
	7 AM to 10 PM	45-50
Residential, suburban:	10 PM to 7 AM	45-50
	7 AM to 10 PM	50-55
Residential, low density urban:	10 PM to 7 AM	50-55
	7 AM to 10 PM	55-60
Residential, med/high density:	10 PM to 7 AM	55-60
	7 AM to 10 PM	60-65
Commercial zones, districts:	10 PM to 7 AM	65
	7 AM to 10 PM	70
Industrial zones, districts:	24 hours	75

"The above standards are intended to be applied with careful attention to the particular City or County area conditions, such as size and nature of development and expansion area, mixture of uses and spacing of mixed uses, present ambient levels, etc."

"The following are summarized noise level standards established by the Department of Housing and Urban Development for residential mortgaging estimates, construction projects and new housing."

General External Exposures, dBA	*NEF ZONES, Airport Environs
1. Unacceptable:	
a. Exceeds 80, 60 min. per 24 hours	Greater than 40*
b. Exceeds 75, 8 hours per 24 hours	

* Noise Exposure Forecast

2. Discretionary, Normally Unacceptable:

a. Exceeds 65, 8 hours per 24 hours	Between 30* & 40*
b. Loud repetetive sounds on site	

3. Discretionary, Normally Acceptable:

a. Does not exceed 65 more than 8 hours per 24 hours	Less than 30*

4. Acceptable:

a. Does not exceed 45 more than 30 minutes per 24 hours	Less than 30*

"Because the foregoing HUD standards also apply to FHA financing of residential housing, they must be given particular attention and be related closely to the preceeding land use classification standards if and when a local jurisdiction considers application of non-transportation noise regulations."

The foregoing discussion applies primarily to summer conditions. In the winter, when snow is on the ground, the chief noise source is the snowmobile used for over-the-snow transportation. In the village area, however, the auto is still the largest source of noise.

Impacts

Traffic volumes anticipated when the proposed development is built out (about 20 years) have been estimated at 6,500 vehicles per day**on Highway 4. Assuming a peak hour of 12%, or 780 vehicles, noise levels would increase to 77 dBA at a distance of 100' from the roadway as shown by the table referred to earlier. This level is greater than that recommended in the Noise Element of the Alpine County General Plan for the proposed land use.

* Noise Exposure Forecast
** Assumes 5% growth and complete buildout of Bear Valley

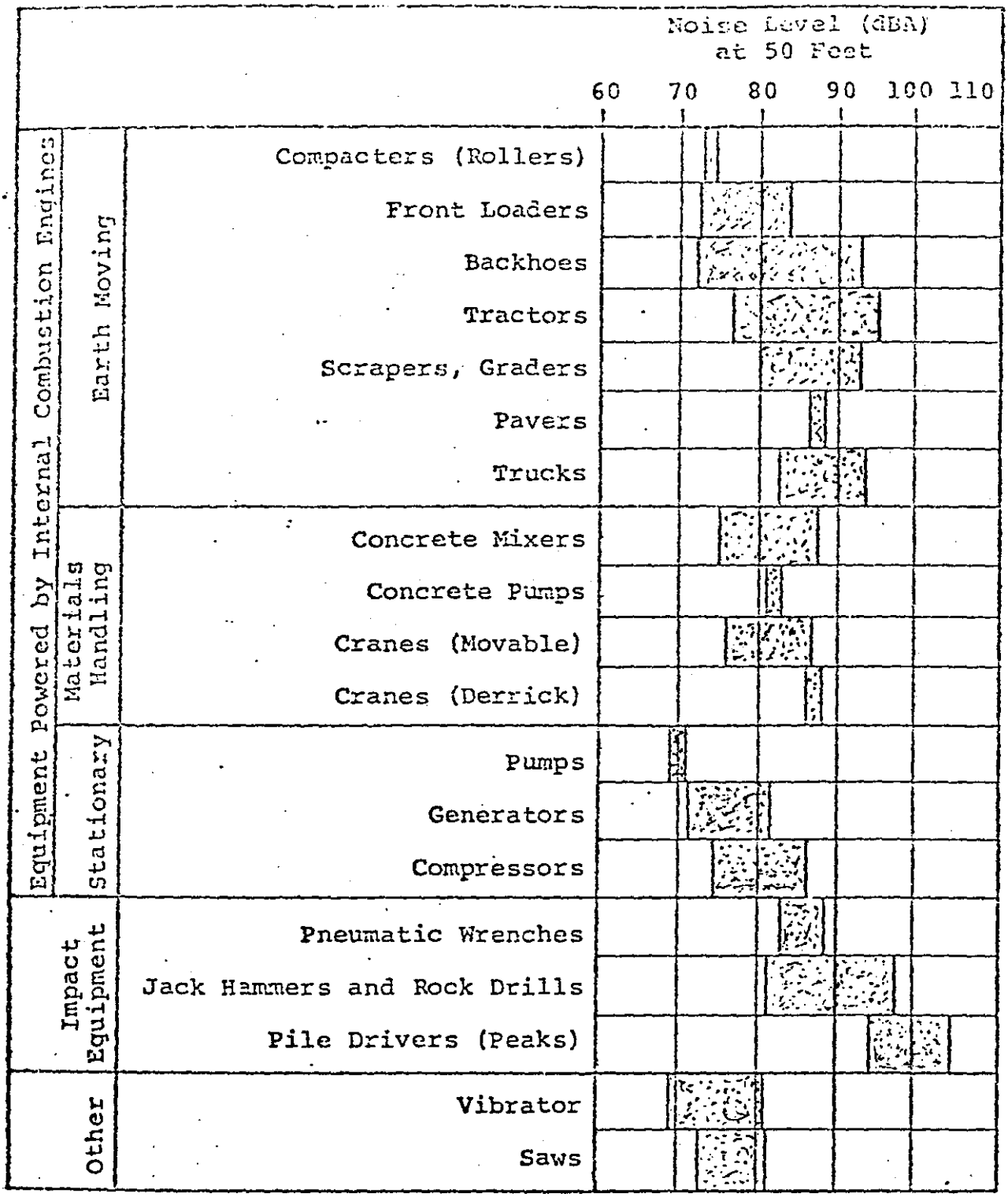
The project would have an impact on itself due to traffic generated noise in the vicinity of the village. Here, average daily traffic is expected to reach 4000-5000 vehicles or 600 vehicles during the peak hour (12% of ADT). With reduced speeds, this traffic would produce noise levels of 68 dBA along the road from the highway to the village. This level is greater than that recommended in the Noise Element of the Alpine County General Plan for the proposed land use.

Traffic beyond the village, in the existing and proposed new tracts, would disperse rapidly and the associate noise levels would be within allowable limits set forth in the General Plan.

For a period of about twenty years, development of one section or another of Bear Valley would take place. This would require the presence of construction equipment which produces noise. Noise levels of various types of construction equipment are shown on the table following this page.

During the winter, when most of the transportation associated with the site is over-the-snow, an increase in noise from snowmobiles would be expected with the proposed development. An increase in snowmobile use for recreational purposes in the vicinity of the proposed development would be expected with development of the proposed project. This would increase noise levels in the surrounding areas.

CONSTRUCTION EQUIPMENT NOISE LEVELS



Source: Bolt, Beranek, and Newman, 1971

Mitigations

While the Noise Ordinance proposed in the County General Plan may be effective in other parts of the County, and even in Bear Valley in the summer, it is not expected to be effective against snowmobile noise during the winter in Bear Valley. It is therefore suggested that educational or even legal methods be initiated to prevent the use of snowmobiles which are not properly equipped with mufflers. Snowmobile use for recreational purposes in the surrounding National Forest should be strictly limited to well-marked trails to limit the extent of increased noise levels.

Speed limits of 25 mph should be maintained throughout the development to assist in maintaining low noise levels.

AESTHETICS

Setting

Bear Valley and its rock-faced upper slopes, as seen by motorists traveling on Highway 4, would be classified as follows according to the system set forth in "National Forest Landscape Management, Volume 2", a publication by the U.S. Forest Service.* This Forest Service publication is one of the best in the field for determination of land management for aesthetically sensitive areas.

Analysis of the landscape as seen from Highway 4 would place the meadows in Variety Class C, the partially forested slopes in Variety Class B, and the rocky skyline areas in Variety Class B. The table hereunder shows Variety Class elements of the U.S.F.S. classification system referred to above.

	CLASS A Distinctive	CLASS B Common	CLASS C Minimal
Landform	Over 60 percent slopes which are dissected, uneven, sharp exposed ridges or large dominant features.	30-60 percent slopes which are moderately dissected or rolling.	0-30 percent slopes which have little variety. No dissection and no dominant features.
Rock Form	Features stand out on landform. Ususual or outstanding, avalanche chutes, talus slopes, outcrops, etc., in size, shape, and location.	Features obvious but do not stand out. Common but not outstanding avalanche chutes, talus slopes, boulders and rock outcrops.	Small to nonexistent features. No avalanche chutes, talus slopes, boulders and rock outcrops.

* See Appendix

	CLASS A Distinctive	CLASS B Common	CLASS C Minimal
Vegetation	High degree of patterns in vegetation. Large old-growth timber. Unusual or outstanding diversity in plant species.	Continuous vegetative cover with interspersed patterns. Mature but not outstanding old-growth. Common diversity in plant species.	Continuous vegetati cover with little o no pattern. No understory, over story or ground cover.
Water Forms, Lakes	50 acres or larger. Those smaller than 50 acres with one or more of the following: (1) Unusual or outstanding shoreline configuration, (2) reflects major features, (3) islands, (4) Class A shoreline vegetation or rock forms.	5 to 50 acres. Some shoreline irregularity. Minor reflections only. Class B shoreline vegetation.	Less than 5 acres. No irregularity or reflection.
Water Forms, Streams	Drainage with numerous or unusual changing flow characteristics, falls, rapids, pools and meanders or large volume.	Drainage, with common meandering and flow characteristics.	Intermittent strea or small perennial streams with littl or no fluctuation flow or falls, rapids, or meandering.

According to "National Forest Landscape Management, Volume 2" the "Variety Class" must be coupled with the "Sensitivity Level" of persons who are traveling through an area in order to determine a "Management Objective" or suitable use for the land in question. The Bear Valley Area which would be developed can be measured by Forest Service Sensitivity Standards as shown on the next page.

SUMMARY TABLE FOR ALL SENSITIVITY LEVELS:

	SENSITIVITY LEVEL		
USE	1	2	3
Primary Travel Routes, Use Areas, and Water Bodies	At least 1/4 of users have MAJOR concern for scenic qualities	Less than 1/4 of users have MAJOR concern for scenic qualities	
Secondary Travel Routes, Use Areas, and Water Bodies	At least 3/4 of users have MAJOR concern for scenic qualities	At least 1/4 and not more than 3/4 of users have MAJOR concern	Less than 1/4 of users have MAJOR concern for scenic qualities.

Areas visible from Highway 4 would fall within Sensitivity Level 1 since Highway 4 has been designated a "scenic highway" in that area. These Sensitivity Level 1 areas would include the meadow on the south side of the highway, the foreground meadow on the north side of the highway, and the sparsely vegetated slopes surrounding Bear Valley north of the highway. Areas which would not be visible from Highway 4 would fall within Sensitivity Level 2. These Sensitivity Level 2 areas include the more densely forested portions of Bear Valley, and areas shielded from the highway by forested areas.

Knowing the Variety Class of the landscape and the Sensitivity Level of the observers, "Management Objectives" can be determined for the landscape according to the following table from the U.S.F.S. publication.

SENSITIVITY LEVEL*

Variety Class	fg1	mg1	bg1	fg2	mg2	bg2	3
Class A	R	R	R	PR	PR	PR	PR
Class B	R	PR	PR	PR	M	M	M MM
Class C	PR	PR	M	M	M	MM	MM

The foreground meadows and middleground slopes showing Sensitivity Level 1 with Variety Class C and B respectively would thus be suitable for partial retention management. Here, alteration activities should remain visually subordinant to the characteristic landscape. Activities may repeat form, line, color, or texture common to the characteristic landscape, but changes in their qualities of size, amount, intensity, direction, pattern, etc. should remain subordinant to the visual strength of the characteristic landscape.

The middleground forests and the areas they shield and background forested slopes showing Sensitivity Level 2 with Variety Class B would be suitable for modification management. Here, activities may visually dominate the original characteristic landscape. However, activities of vegetation and landform alteration must borrow from naturally established form, line, color, or texture so completely and at such scale that its visual characteristics are compatible with the natural surroundings.

* In this chart:

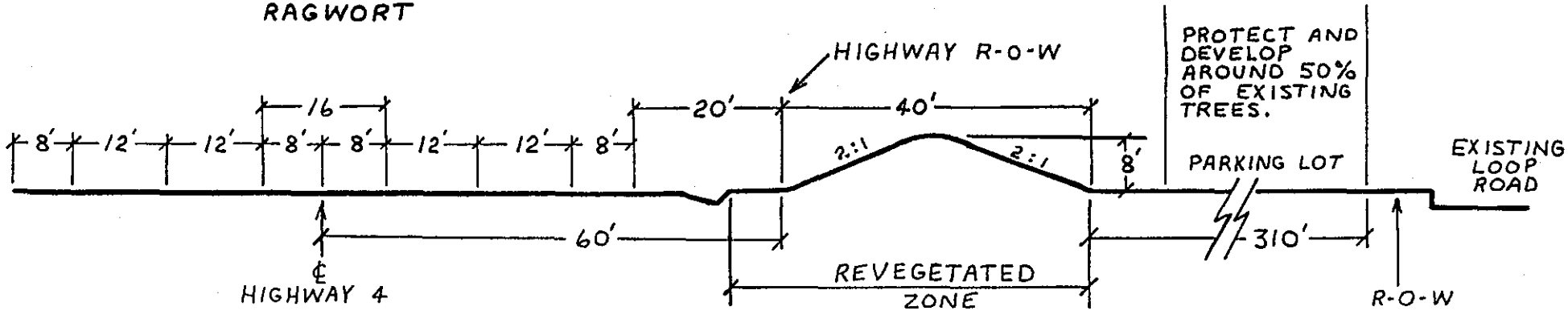
fg	= foreground	R	= retention
mg	= middle ground	PR	= partial retention
bg	= background	M	= modification
		MM	= maximum modification

CROSS SECTION OF SUGGESTED VEGETATION BERM.

WITH HWY. 4 WIDENED TO 4 LANES

NOTE : VEGETATION TYPES TO INCLUDE -

CURRANTS CEANOTHUS
GOOSEBERRIES MANZANITA
RAGWORT



Impacts

The parking area adjacent to Highway 4, as proposed, would not meet the Management Objectives for the landscape as previously defined, nor would it meet the County's previously established 200' setback along this route. The parking areas would remove trees that now screen the Creekside condominiums on from Highway 4.

Development in the areas which should be managed for partial retention could introduce buildings which would not conform with the landscape. Colors used on proposed structures within both the partial retention and modification management areas may clash with existing natural color.

The project may cause removal of up to 500 trees with diameters, at breast height, greater than 12". Grading for roadways, particularly on the higher slopes, may leave scars that would be visible for a number of years after construction.

The overall visual effect of the project would be to change the area south of the highway from a meadow and forest scene, to one which includes the intrusion of some buildings and roadway cuts.

Mitigations

Retention of the meadow south of the highway as proposed in the development plan, would help to mitigate the impact on visual quality due to construction of structures in the following land use zones: SF-8, 9; MF-12; CS-10 and REC-1.

Consideration should be given to reducing the number of tennis courts and concentrating more dwelling units into condominiums rather than single-family dwellings.* This would limit the extent of the impact while providing the same number of dwelling units.

New buildings should borrow from naturally established form, line, color, or texture so completely and at such a scale that their visual characteristics are those of natural occurrences within the surrounding area or character type. Architectural standards** have been adopted to reach this goal and an architectural committee has been set up to enforce the standards.

Tree removal should be kept to a minimum and specific development plans for commercial and condominium areas should show the location, dripline, and apparent physical condition of each tree on the site with a diameter greater than 12". Cut and fill slopes and disturbed areas should be revegetated according to guidelines set forth in the Vegetation section.

A vegetated berm for sound deadening and visual screening should be designed by a landscape architect for use along Highway 4 to screen the proposed parking lot. An example of such a berm is shown in cross-section on the sheet following this page.

All electric power and telephone service should be underground.

* See the section on Alternatives herein
** See Appendix

HISTORY

Setting

The area now known as Alpine County was for centuries the domain of the Washoe Indians, a semi-nomadic tribe who visited the higher elevations around Bear Valley to hunt and fish in the summers. Grinding holes used to crush acorns can be found in exposed granite formations around Bear Valley, and there are still Washoe decendants living in Alpine County.

The first white men to pass through Bear Valley were probably Jedediah Smith and his companions, who pioneered the passage through the Sierra Nevada in 1872 at the point now called Ebbetts Pass. Kit Carson was in the area as early as 1839 and accompanied John C. Fremont's 1844 expedition over the Sierra Nevada crest from a point near Markleeville. In 1850, after the California Gold Rush had opened the High Sierra to prospectors, Major John Ebbetts, for whom the pass was later named, visited the area for the first time. In 1853, he returned to survey the pass for the Atlantic and Pacific Railroad Company. With further discoveries of rich gold and silver veins in the late 1850's and early 1860's along with the attraction of the Calaveras Big Trees, Alpine County boomed. Its population peaked at 11,600 in 1864.

One newcomer to Bear Valley, then known as Grizzly Bear Valley, was Harvey S. Blood, who in 1864 was authorized to collect tolls from users of the Big Tree - Carson Valley Turnpike,

now State Highway 4. Bloods Ridge, Bloods Meadow, Bloods Creek, and Mt. Reba were all named after this local personality and his daughter Reba.

Lumbering became an important industry in the area in the 1860's and 1870's in response to the demand for firewood to drive mine machinery and timbers for mine tunnels. The boom came to an end, however, with the demonetization of silver in 1873, and the population steadily dwindled until by the 1920's it averaged only around 300. One of these was Monty Wolf, legendary thief, hermit and trapper who settled in Bear Valley in the 20's.

In 1952 a central California ranching family W.S. Orvis and Sons purchased Bloods Meadow and the rest of the private land in Bear Valley for use as summer pasture for their cattle. It was purchased from the Bishop estate which had originally purchased Bloods Meadow as a dam and lake site. This lake, like Lake Alpine would have been drained each year as the water was released downstream to the hydro-electric generator.

In subsequent years the Orvis family obtained an additional 400 acres of adjoining land from the Stanislaus National Forest through a land exchange, bringing their total holdings to about 870 acres. This is the current extent of the Bear Valley boundary.

The Bear Valley Development Company was organized in the early 1960's by Bruce and Jim Orvis, along with other members of the Orvis family and close friends and business acquaintances. Since 1965, when the first homesites were offered for sale in

the valley, the pace of growth has been relatively slow up to its present state.

The community at present consists of approximately 200 single-family homes, 148 condominium and apartment units and 75 lodging rooms in two lodges. There is commercial space of roughly 25,750 square feet, including 10,000 square feet adjacent to the main lodge, restaurants in both lodges, a transportation center and a service center. Community facilities include an elementary school for grades 1-8, a newly completed sewage treatment plant, fire station, post office, substations for PG&E and PT&T, and a sheriff's office. Recreation facilities include horseback riding, pack trips, tennis, swimming, fishing, boating, biking, skiing, cross-country skiing, hunting, 4-wheeling, photography, bird-watching, etc.

This existing development and other development as yet unbuilt, was approved by the Alpine County Planning Commission in 1967. At that time the land north of Highway 4 was changed from A-6 (agricultural) zone to R-1 (residential) and subsequently to planned development (PD) zone, with development to be controlled by the Bear Valley Master Plan. The sewerage treatment facility and tennis courts, south of Highway 4 were rezoned to PD also. Under that zoning plan, the Use Permit (No. 8) was issued for the master plan, and subsequent permits were issued for sepcific projects (See Table 1, Record of Approved and Existing Housing units). 518 single-family residential lots were subdivided and

sold, 1048 condominium and apartment units and 76 lodging units were approved for construction, of which 148 apartment/condo units and 76 lodging units were actually built.

Table 2 is a chronology of County actions which affected development at Bear Valley.

TABLE 1: RECORD OF APPROVED & EXISTING HOUSING UNITS

Project	Acres	No. Units Approved	Date of Approval	Units Built or Lots Subdivided
Alpine Village	6.3	80	1967	none(a)
Club Mediteranee	3.36	330 rms.(g)	1968	none(a)
Creekside 1 & 2	8.0	180	1971,72	112(b)
Condo Bear	0.7	27(g)	1972	16(c)
Employee Apts.	0.7	31(g)	1972	20(d)
Pinetree	10.4	300(g)	1973	none(e)
East Side Condos	n/a	100	(see note f)	none
Total Multi-Family		1048		148
Old Bear Valley Subdivision	52.8	59 lots	1965	59 lots
Bear Valley Sub.	200.0	389 lots	1965	389 lots
East Side Homesites	n/a	70 lots	(see note f)	none
Total Single-Family		518 lots		448 lots
The Lodge	2.5	62 rms.	1967	62 rms.
Red Dog Lodge	.1	14 rms.	1967	14 rms.
Total Lodging		76 rms.		76 rms.

Notes

(a) These two projects will not be built; they have been supplanted by the proposed Village Center, although acerages and numbers of units are not the same.

(b) Another 20 units are projected for Creekside 2, bringing the total to 132 when finished, not 180 as approved.

(c) Another 12 units are projected for Condo Bear, bringing the projected total to 28. These additional units will be built on an adjacent .5 acre parcel.

(d) These units were built on a different parcel from the o.7 acre parcel originally approved. The project is considered complete.

(e) This project will ultimately contain 200 units rather than the 300 approved.

(f) At its October 27, 1977 meeting, the Alpine County Planning Commission reaffirmed its earlier approval of these densities.

(g) At its September 29, 1977 meeting, the Alpine County Planning Commission reaffirmed its earlier approvals of these projects.

Source: Records of Alpine County Planning Commission.

TABLE 2

CHRONOLOGY OF COUNTY ACTIONS AFFECTING BEAR VALLEY DEVELOPMENT

1964 Alpine County published its "Master Plan Report", recognizing the importance of recreational resources to the county.

1964, 1965, 1966, 1967 Recorded Final Maps of Tracts 1,2,3 & 4.

1967 Bear Valley Company submitted and received approval on April 27, 1967 from the Alpine County Planning Commission for its "Master Plan, Bear Valley, Alpine County". PD-1-A and PD-1-B zoning designations were approved for phases A (a 27-acre commercial center), B (12.6 acres for Alping Village Condominiums), and c (6.3 acres in a second Alpine Village parcel). County Use Permit No. 8 was issued covering the entire master plan.

1968 Bear Valley Company submitted an application for the addition of a service center (parcel D) to its Bear Valley PD zone plan. Approval of the Alpine County Planning Commission was received on June 27, 1968.

1969 Alpine County published a revised "General Plan", which endorsed the planning efforts at Bear Valley and Mt. Reba.

1969 Bear Valley Company submitted a request for an amendment to its PD-1 zone relating to parcel B condominiums. This was approved by the Alpine County Planning Commission on May 29, 1969.

1971 On the basis of Bear Valley Company's report, "Study for Bear Valley Lodge Shops", the Alpine County Planning Commission approved an addition to the PD-1 zoning plan for parcel A.

1973 Alpine County adopted revisions in its General Plan, particularly relating to the desirability of comprehensive planned unit developments.

1974 Environmental Impact Report was prepared for Bear Valley Subdivision Tract 5, Pinetree Village condominiums, employee housing, a corporation yard, and the Bear Valley Tennis Clubhouse. Revised May, 1974.

1975 An environmental analysis report was prepared for the expansion of Mt. Reba Ski Area into Grouse Valley Bowl, April, 1975.

1975 Bear Valley Company published its "General Development Plan" for the comprehensive development of the entire 870-acre parcel.

ARCHAEOLOGY

An archaeological survey will be conducted on the project site when the ground is cleared of snow. Archaeologists will coordinate with U.S. Forest Service personnel, who will be working on an Environmental Impact Statement for the proposed expansion of Mt. Reba. Archaeologists working on each project will coordinate efforts regarding resource materials, information on findings, and determination of impacts and mitigation measures. The archaeological report on the proposed project site will probably be forthcoming in July. As soon as it is completed, copies will be delivered to the County and the State Department of Historical Preservation. It is expected that these reports will arrive in sufficient time for the preparation of responses to the Alpine County Planning Commission and inclusion of applicable mitigative measures in their final E.I.R.

POWER

Setting

Electrical power is presently being served by Pacific Gas & Electric Co. Capacity of the present facilities is 6 megawatts with all facilities east of Cabbage Patch (State Maintenance Station 5 miles west of Bear Valley) to and including Lake Alpine use approximately 2.4 megawatts of the available capacity at present. The company does not keep records of each area therefore a detailed search would be required and is beyond the scope of this report.

Ebbetts Pass Gas Company supplies L.P. gas to the area. There is no natural gas supply.

Impacts

Each home or apartment in this project is expected to use an average of 50 KWH per day for an average load of 12 megawatts (including all existing development at Bear Valley), for the total of 2052 living units.

Mitigations

All new homes are now required to comply with the new insulation standards required by the Uniform Building Code. This could reduce heating requirements by about 50% for 25% of the total household use.

Minimum flow fixtures previously required for "Sewage Disposal" will reduce water heating by 50% or 7 1/2% of total household use.

TRANSPORTATION

Setting

Access to the Bear Valley area is provided by State Highway 4. Automobiles, including vans, trucks, campers, and motor homes and buses are the primary modes of transportation to the area.

Bear Valley has two distinct internal transportation modes. In the summer, vehicles use the paved streets in the existing tract to travel to and from residences, recreational, and commercial facilities. In the winter, however, this is not the case. Due to the extreme depth of snowfall, community travel is over-the-snow. Homeowners' cars are parked in a central lot (transportation center) and they travel to and from their homes on foot via cross-country skis, or by snowmobile. A one-way loop road is kept open serving the fire house*, sheriff's sub-station, lodge and elementary school.

In the summer, the primary daytime destination for residents of Bear Valley is the Lake Alpine Recreation Area, and surrounding U.S.F.S. trailheads. Access to these destinations is via Highway 4 by private vehicle.

In the winter, the primary daytime destination for residents of Bear Valley is Mt. Reba Ski Area. Access to the ski area is via Highway 4 by private vehicle or bus operated by Mt. Reba between Bear Valley and the ski area, or over the snow by snow-mobile or cross-country skiing.

* Even fire protection is handled over-the-snow in the winter by a special vehicle.

Highway 4 exhibited the following traffic volume characteristics last year as monitored by the Traffic Department of the State Department of Transportation (District 10) Stockton.

	Annual Average Daily Traffic	ADT Peak Month	Peak Hour
Hwy. 4 at Big Meadows	800	1600	190
Hwy. 4 at Mt. Reba	600	1950	160

Month-by-month ADT on Highway 4 at the highway maintenance station at Big Meadows (approximately 5.5 miles west of Bear Valley) is shown below:

Jan	1976	=	745	July	1976	=	1253
Feb	1976	=	1014	August	1976	=	1188
Mar	1976	=	945	Sept	1976	=	1246
Apr	1976	=	518	Oct	1976	=	728
May	1976	=	288	Nov	1976	=	525
June	1976	=	1021	Dec	1976	=	474

As shown above, July was the peak month for summer traffic and February the peak for winter traffic. According to Caltrans, the winter traffic has been growing at a rapid rate along Highway 4. This is primarily due to the development of ski facilities at Mt. Reba.

Capacity of Highway 4 near Bear Valley under summer conditions is 1100 vehicles per hour with a Class C* level of service. Capacity under snow conditions is difficult to estimate, but with

* Source: Traffic Engineering Theory & Practice, Pignataro, Louis J., 1973
Basis: Class C is defined as stable flow, but most drivers are restricted in their freedom to select their own speed, chang lanes, or pass.
Capacity = Level C maximum volume x adjustment for lane width and lateral clearance x truck factor
C = 1400 x .96 x .83 = 1150 vehicles/hour

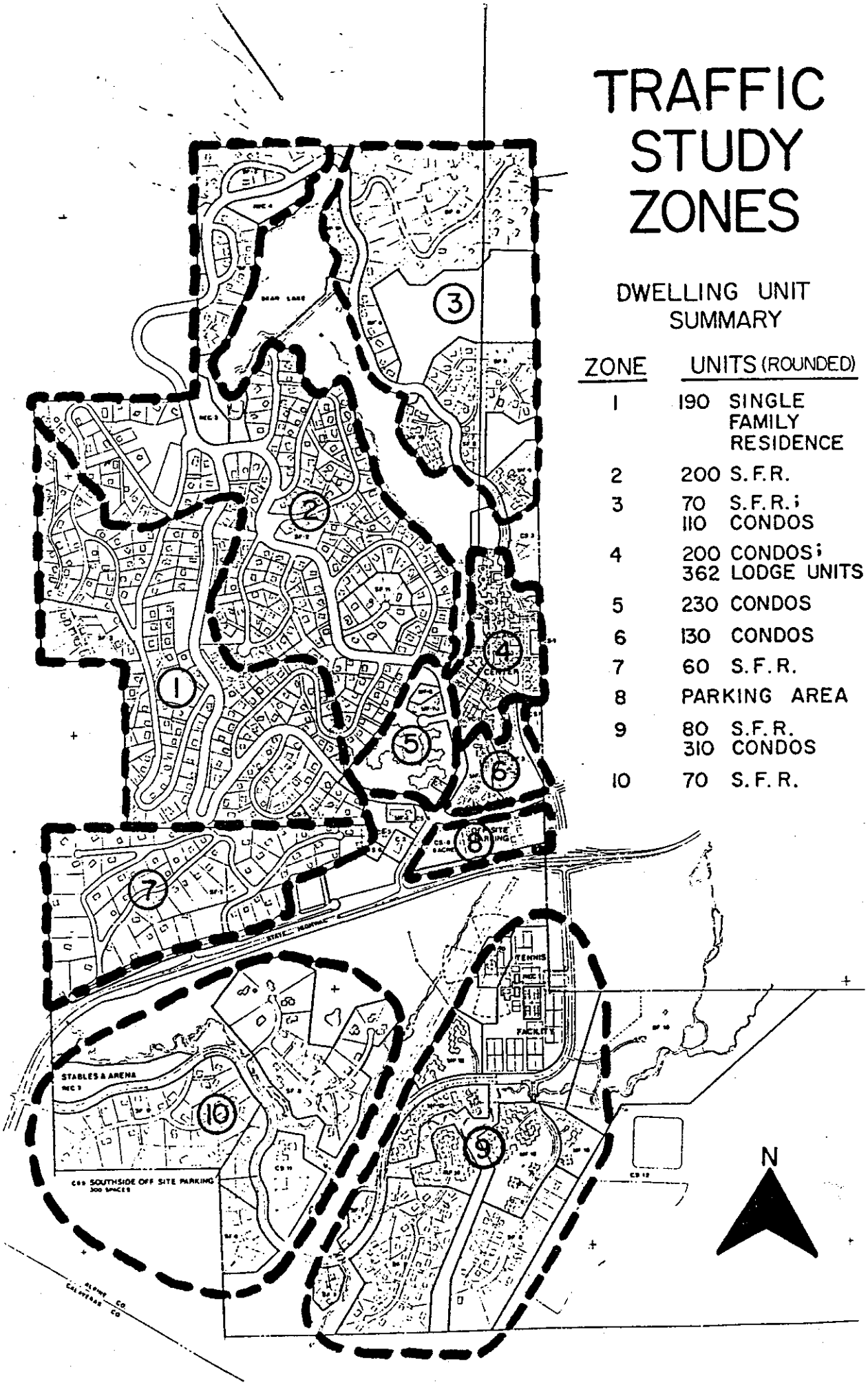
ample width plowed (30') and during non-blizzard times the roadway capacity would be between 700 and 1000 vehicles per hour in one direction. The reason for specifying capacity in one direction is that winter traffic in the area of the project is highly directional because so much of it (80%) is oriented to the Mt. Reba Ski Area. Traffic files up Highway 4 in the morning from the San Francisco Bay Area, Stockton, cabin sites, and motels in Calaveras County, and Bear Valley to the parking lot at Mt. Reba. Most of the spaces in the parking lot are full by 10 a.m. When the ski lifts close at 4 p.m. vehicles start leaving the Mt. Reba parking lot (the capacity of the lot is 1300 cars), and the flow is reversed. By 5:30, the bulk of the ski traffic is out of the area. During the skier exodus, the capacity of Highway 4 (in the westbound direction) is reached for a period of one and one-half hours.

Summer peaks are only about one-fourth of roadway capacity.

Impacts

Additional development at Bear Valley would add additional traffic to existing streets within the development as well as Highway 4. To predict the impact at full development, Bear Valley was divided into study zones (see Traffic Study Zone Map following this page) and certain assumptions were made as follows:

TRAFFIC STUDY ZONES



DWELLING UNIT SUMMARY

ZONE	UNITS (ROUNDED)
1	190 SINGLE FAMILY RESIDENCE
2	200 S.F.R.
3	70 S.F.R.; 110 CONDOS
4	200 CONDOS; 362 LODGE UNITS
5	230 CONDOS
6	130 CONDOS
7	60 S.F.R.
8	PARKING AREA
9	80 S.F.R. 310 CONDOS
10	70 S.F.R.

1) Trips per day by type of dwelling unit (summer):

   single-family dwelling = 7

   condominium unit = 5

   lodge (hotel) unit = 4

2) Desired destinations of traffic with a Bear Valley origin (summer):

   Westbound on Highway 4 20%

   Eastbound on Highway 4 20%

   Shopping or village area 25%

   Internal Recreation facilities 25%

   Visiting or miscellaneous internal 10%

3) Trips per day per type of dwelling unit (winter):

   single-family dwelling = 4

   condominium = 4

   lodge (hotel) unit = 3

4) Desired destinations of Bear Valley traffic with a Bear Valley origin (winter):

   Mt. Reba 50%

   Westbound on Hwy. 4 20%

   Shopping or village area 25%

   Visiting or miscellaneous internal 5%

5) The number of skiers per car (by observation) is 3

6) Winter would see all of zones 1, 2 and 3 using the parking lot next to Highway 4 as their place of trip origin.

7) Origin of trips for all other zones would be within the zone.

8) The peak hour is 15% of average daily traffic.

9) The area would be built-out in 20 years, hence the traffic flows shown are peak hour flows for the year 1998.

10) Summer traffic on Highway 4 would increase at 5% per year (compounded).

11) Winter traffic on Highway 4 would be strictly a function of traffic generation by Bear Valley and the Mt. Reba Ski Area.

12) One or more ski lifts will be constructed from Bear Valley to Mt. Reba. Mt. Reba will expand parking from 1300 (present) to 2000 vehicles.

The maps on the facing pages show the peak hour traffic generated by the project pursuant to the foregoing assumptions.

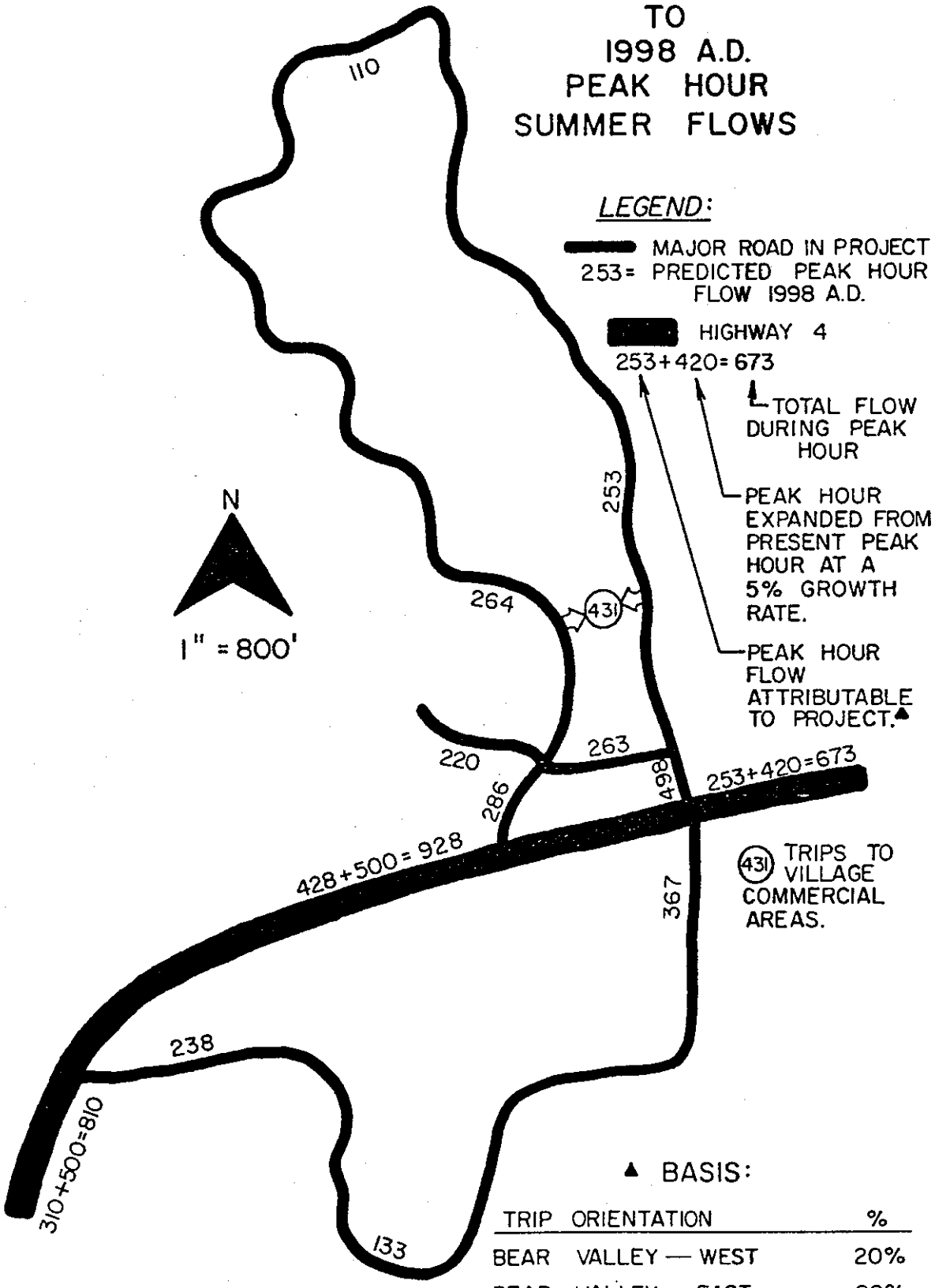
The impacts may be summarized as follows:

Winter:

1) Highway 4 would, in theory, be operating at capacity for 3 hours in the morning and for 3 hours in the evening between Bear Valley and Mt. Reba due to ski traffic.

2) If this stretch of road were widened to 4 lanes, the impacts would last for 1 1/2 hours each.

BEAR VALLEY TRAFFIC PROJECTIONS TO 1998 A.D. PEAK HOUR SUMMER FLOWS



LEGEND:

MAJOR ROAD IN PROJECT

253= PREDICTED PEAK HOUR FLOW 1998 A.D.

HIGHWAY 4

253+420=673

- TOTAL FLOW DURING PEAK HOUR
- PEAK HOUR EXPANDED FROM PRESENT PEAK HOUR AT A 5% GROWTH RATE.
- PEAK HOUR FLOW ATTRIBUTABLE TO PROJECT.▲

(431) TRIPS TO VILLAGE COMMERCIAL AREAS.

▲ BASIS:

TRIP ORIENTATION	%
BEAR VALLEY — WEST	20%
BEAR VALLEY — EAST	20%
BEAR VALLEY — INTERNAL:	60%
SHOP	25%
REC'N	25%
OTHER	10%

BEAR VALLEY TRAFFIC PROJECTIONS

TO 1998 A.D.

PEAK HOUR WINTER FLOWS
WITHOUT SKI LIFT

FROM MT. REBA TO THE VILLAGE

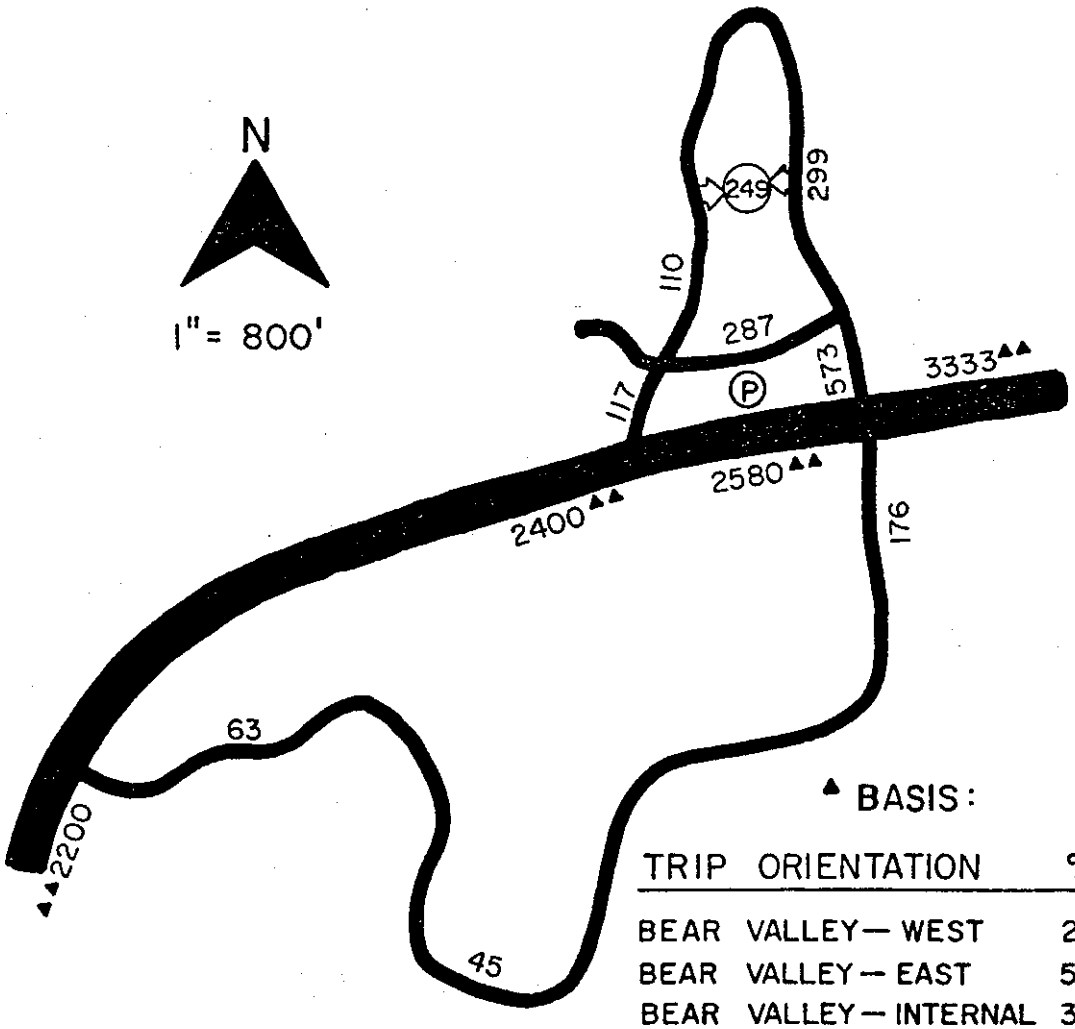
LEGEND:

299 ← PEAK HOUR FLOW▲
LOCAL ROAD

HIGHWAY 4
2580 ← PEAK HOUR FLOW▲▲

(249) TRIPS TOTAL TO SHOPPING DURING PEAK HOUR

(P) ASSUMED LOCATION OF ALL PARKING FACILITIES FOR STUDY ZONES 1,2,3



▲ BASIS:

TRIP ORIENTATION	%
BEAR VALLEY — WEST	20%
BEAR VALLEY — EAST	50%
BEAR VALLEY — INTERNAL	30%

▲▲ EXCEEDS CAPACITY OF ROAD

3) West of Bear Valley, peak hour project traffic would be minimal (239) on Highway 4, but Mt. Reba ski traffic would still require 1 1/2 hours morning and afternoon to dissipate.

4) A signal light would be warranted at the intersection of the main project entrance and Highway 4.

5) There would not be enough space in the 6 acre area set aside for parking (next to Highway 4) to accommodate autos used by occupants of the dwellings in study areas 1, 2 and 3. If the following formula was used:

2 parking spaces for each single-family dwelling
1 1/2 " " " " condominium
1 " " " " lodge (hotel) unit

then, 1076 spaces would be required at this lot. At 400 sq. ft. per space, ten acres would be required to handle the requisite parking.

If a parking structure were built on the site, it could provide space for 1076 cars, but it would cost in excess of five million dollars.* The cost per space to finance the structure (not counting maintenance and operating costs) would be over $700/year.** Currently the residents pay about $60 per parking space in snow removal costs each year. It is likely then that an impact of development would have to be the selection of ten acres for parking as opposed to six acres shown on the development plan***A sketch showing suggested parking areas to make up this requirement is shown on the following page.

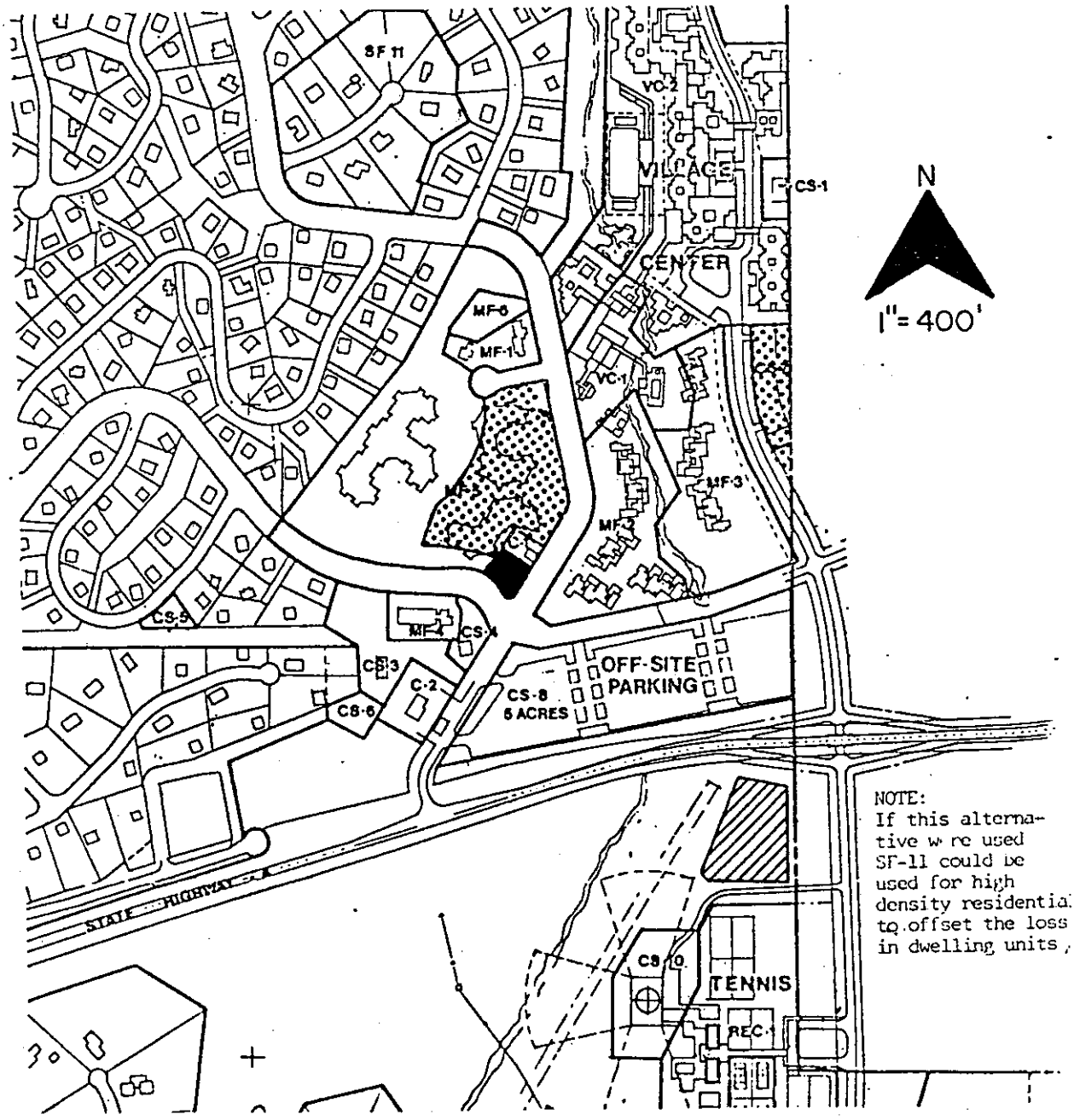
* Source: Gene Weatherby, R.C.E.
** Figuring 10% interest, 10 year payoff period and no points
*** See Appendix for costs of other options

ALTERNATIVE PARKING PLAN

SURFACE PARKING

LEGEND:

- ADDITIONAL PARKING AREA
- OPTIONAL PARKING AREA
- TRANSPORTATION CENTER



Summer:

1) Project traffic is expected to be 86% of the traffic predicted on Highway 4 west of Bear Valley and 60% of Highway 4 traffic east of the site.
2) At full development, there would not be enough cross traffic at the new main entrance to Bear Valley to warrant installation of a signal on Highway 4 (winter traffic would warrant one, however).
3) Adding predicted project traffic and estimated future Highway 4 traffic does not result in a need for four-lane construction on Highway 4 (winter traffic does). A provision for protected left-turns would be advisable however, at the new main entrance to Bear Valley.
4) Internal (Bear Valley) roads should operate satisfactorily without four lanes or traffic signals.

Mitigations

Provision should be made in the new development to allow for widening of Highway 4 to four lanes and for necessary lateral clearances, drainage and snow storage.*

When traffic warrants, or before the final units of the tract are approved, the developer should contribute to the cost of a signalized intersection at Highway 4 and the new main entrance.

* The present right-of-way of 120' should be sufficient for the above purposes.

Space should be set aside for 10 acres of winter parking (for residents) or a parking structure should be contemplated. Development and payment could be achieved via user fees and County Service Area as the need arises. The proposed 6 acre parking lot next to Highway 4 is in a sensitive area insofar as aesthetics are concerned. Further, if a parking building were to be constructed on the site, even greater care should be taken to minimize the impact on the visual quality of the area.

Parking lot development in this area should be coupled with landscaped low berms to screen the vehicles and yet allow for snow storage (see section on Aesthetics herein).

The completion of housing accommodation at Bear Valley will help to mitigate the effect of day skier traffic on Highway 4 west of the site by keeping skiers in the area overnight. The exact impact of housing in Bear Valley on the reduction in traffic on Highway 4 is estimated by the preparers of the EIR as follows:

1) 50% of the occupants of the housing ski at Bear Valley
2) The valley at buildout will house approximately 8000 persons - 4000 skiers from Bear Valley will ski during the day at Mt. Reba
3) At 3 persons per auto, the 4000 skiers would represent 1333 potential autos using Highway 4 east and west of Bear Valley to and from the ski area
4) These autos would not use Highway 4 west of the site, however, because their occupants are housed in Bear Valley.

The completion of a ski lift to Mt. Reba from the village area in Bear Valley will mitigate the effect of Bear Valley traffic on Highway 4 east of the site.* From the preceeding paragraph, it is obvious that the installation of such lift (or lifts) could reduce traffic on Highway 4 east of the site by up to 1300 vehicles each way each day.

Mt. Reba and Bear Valley should plan events to spread out the winter exodus time particularly on Sunday night. Night skiing and extended checkout hours might be discussed in this context.

* See discussion of various alternative ski lifts to the Bear Valley to Mt. Reba in the section on Recreation

MEDICAL FACILITIES

Setting

The nearest state approved hospital to the Bear Valley area is in San Andreas some 60 miles west along Highway 4 to Angels Camp and Highway 12 to San Andreas. The hospital presently has capacity to serve the area with emergency and long-term patient care. The hospital has excellent diagnostic equipment.

Doctors are few in the area with only 6 listed in the phone directory to serve a population of some 18,000 permanent residents in Calaveras County and surrounding territory.

The nearest ambulance service is from Arnold which is about 25 miles west on State Highway 4.

Impact

There is a need for medical facilities in the area at present and this project will cause the need to increase.

Mitigations

The fees charged for medical services will mitigate the impacts.

SCHOOLS

Setting

Bear Valley lies within the jurisdictional boundaries of the Alpine County Unified School District. The Bear Valley Elementary School presently has an enrollment of 30 K-8 students, two teaches, and one teacher's aide. The maximum capacity of the school is 64*students.

High school students from Bear Valley attend Bret Harte High School in Calaveras County. An interdistrict agreement has been made between the Alpine County Unified School District and the Bret Harte High School District to accommodate students from Bear Valley. The Alpine County budget includes the category "other tuition" which allots approximately $2500 per high school student per year to be paid to Bret Harte High School District for each Alpine County student. Students living in Bear Valley are bused to school via a cooperative Alpine County-Bret Harte school bus system. At present, 10 high school students living in Bear Valley attend Bret Harte High School. The present enrollment of Bret Harte High School is 550 students, and it has a capacity of 750-800 students.

* The building, however, was designed to house approximately 100 students with some interior modifications.

Impacts

The proposed development is expected to produce approximately 65 K-8 students and 21 high school students.* The total number of students in Bear Valley with development of the proposed project is therefore anticipated to be 95 K-8 and 31 high school students. The capacity of the existing K-8 school in Bear Valley would be exceeded with this impact.

Bret Harte High School District has indicated that it would be able to accommodate this increase in enrollment.

Mitigations

5.9 acres has been reserved within the development for construction of a high school.**Since the Bret Harte High School District has indicated that it would have the capacity to serve additional students from Bear Valley generated by the proposed development, it is suggested that this "reserve" be reviewed after the development is about 80% built out to determine whether or not its retention is still necessary.

* Basis: 230 single-family units proposed

849 multi-family units proposed

1079 units proposed, 14% permanent residents
= 147 permanent resident units x 3.0 persons/unit
= 441 permanent residents.

20% of permanent residents are students	=	88 students
75% of students are K-8	=	66 students
Therefore, high school	=	22 students

** The Alpine County School District owns 7 acres lying east of the proposed tennis courts adjoining the project area.

Since the total number of high school students in Bear Valley at build-out is anticipated to be about 32, if a school was desired in the community, it could share a building with the elementary school.

Revenues from property owners in the proposed development would help to mitigate the cost of providing additional educational facilities and services to residents of the proposed development. The Alpine County Unified School District tax rate in this area presently is $.82 per $100 assessed value. The assessed value of the proposed development is estimated at $18,656,000.* Therefore, approximately $153,000 per year would be available to the school district from property owners in the proposed development. If the Jarvis-Gann initiative was passed, revenues available to the school district would be cut by up to 30%. It is anticipated that there would still be more than enough revenues available from property owners in the proposed development to provide the necessary educational services.**

* Basis: see figures in Police Protection section
** Basis: see Economic Impacts

FIRE PROTECTION

Setting

As stated previously the fire protection body is the Bear Valley Volunteer Fire Department consisting of fifteen (15) volunteers.

Expenditures for support of the department are paid for out of County General Tax Revenues. Fiscal year 77-78 has a budget of $15,668 which includes $2,075 for services and supplies and $13,593 for Fixed Assets.

The department covers the entire surrounding area including coverage into the eastern portion of Calaveras County thru a reciprocal agreement between Calaveras and Alpine Counties.

Impacts

Additional strucutral improvements will be made and will need protection.

Response time to the outer regions will increase beyond 30 minutes.

Structures higher than 2 1/2 to 3 story will create special fire fighting equipment needs. Full time fire coverage will be required.

Mitigations

Taxes paid by the additional structures will create additional funds to purchase additional equipment and establish winter

only fire houses located at or near Rec-3 (See General Development Plan) and SF-7. These outlying stations could be manned by either full-time or volunteer residents using snow-cats with 2000 gallon capacity tankers for quick response time to the outer regions. The main fire house could supply backup during winter months and full-time coverage during the summer.

Structures exceeding 2 1/2 to 3 stories would not be constructed until a ladder truck is purchased by the Department or alternate means of fire extinguishing are provided.

POLICE PROTECTION

Setting

Police protection in Bear Valley is presently provided by the Alpine County Sheriff's Department. The California Highway Patrol offers backup services insofar as traffic is concerned.

A Sheriff's sub-station is located within the existing development, just north of Highway 4 on the main access road. Two full-time deputies and one dispatcher staff the station at this time. Complete 24-hour protection services are, however, not provided at this time. The deputies rely fairly heavily on volunteer "reserves" in the community, especially for search and rescue operations.

Impacts

The proposed development is anticipated to accommodate approximately 430 permanent residents, and an average of 6000 seasonal residents at any one time.

It is anticipated by the deputies that three more officers would be necessary to provide 24-hour protection service for the maximum number of seasonal and permanent residents, while one deputy and some volunteer "reserves" would accommodate the demand for increased protection from the permanent residents alone.

At $16,000 per year salary, an additional $48,000 per year would be necessary to pay the additional officers needed for increased protection in Bear Valley.

An increase in equipment, vehicles, and building space would be necessary to meet the demands for increased police protection with the proposed development. It is anticipated that two more radios at $1600 each, two new 4-wheel drive vehicles at $11,000 each, and two new snowmobiles at $2300 each would be necessary. A "holding area" would need to be added to the building for persons under arrest at a cost (for 800 S.F.) of $32,000.

Mitigations

It is believed that taxes paid by the property owners within the proposed development would be more than sufficient to mitigate the increased cost of police protection. Approximately 16% of the Alpine County General Fund is allotted for police protection. The tax rate for the County is $3.58 per $100 assessed value. Assuming an assessed value at total build-out of $18,656,000* revenues for police protection generated from the proposed development would total approximately $107,000 if the present ratio (16%) were used. Since this is more than enough to handle police protection, the additional money could be used for other County purposes. If the Jarvis-Gann initiative was passed, revenues

* Basis:

231 single-family units x $80,000/unit	= $ 18,500,000
649 condominiums x $52,000/unit	= 33,750,000
500 lodge units x $36,000/unit	= 18,000,000
125,000 sf commercial floor space x $35.00/S.F.	= 4,375,000
TOTAL APPRAISED VALUE	$ 74,625,000
Assessed value = 25% of appraised value	= $ 18,656,000

available to the County for police protection would be cut by up to 30%. It is anticipated that there would still be more than enough revenues available from property owners in the proposed development to provide the necessary police protection services.**

* See Summary of Public Agency Impacts

WATER SUPPLY

Setting

Water is supplied by the Lake Alpine Water Company which taps three springs in the upper part of the valley, developing 50 gpm. Water is stored in four storage tanks and in Bear Lake and is supplied to local users after passing through a 200 gpm peak flow treatment plant. These four tanks have a total storage capacity of 440,000 gallons, not including storage at the old Bear Valley Subdivision. Bear Lake has a storage capacity of 240 acre-feet which must be used or the water rights may be lost to a downstream user. The State Department of Health has approved Bear Lake for the dual purpose of providing recreation with body contact and as a domestic water supply source.

The present supply is adequate to deliver water to some 900 connections (3600 people) with some additions to the treatment plant such as an additional filter and pump.

The continued development depends upon developing an adequate source of water. Additional sources could be any or a combination of:

TOTAL WATER NEEDS = 400 ACRE-FEET PER YEAR
(319,500 gpd plus 40 AF/yr for miscellaneous)

1.	Present Water Available from Springs	= 81 AF/yr.	(50gpm)
2.	Present Water Available from Bear Lake	= 240 AF/yr.	
3.	Runoff from Bear Lake Drainage Basin	= 2460 AF/yr.	(60"/yr)
4.	Available Capacity Lost from Present Springs	= 65 AF/yr.	(40gpm)
5.	Well in Meadow	= 162 AF/yr.	(100gpm)
6.	Upstream Stanislaus	= 600 AF/yr.	

(Reserved in CCWD plan for Alpine County per Dave Wiler Tudor Engineering)

Impacts

An additional water supply must be developed prior to proceeding beyond the potential 900 connections or the water consumption rate must be reduced.

Mitigations

A. Prior to proceeding beyond the present capacity the owners of the water system, prior to making a committment to serve, will:

1. Develop a source of water to guarantee a minimum development of 400 AF/year.
2. Construct a storage system capable of delivering 505,000 gpd for 30 days during peak month of January or increase the source of supply.
3. Install a distribution system capable of delivering 1230 gpm to the overall area for peak consumption. This does not include provisions for fire flows. (See PUC General Order No. 103)

B. Reduction of water consumed could reduce the overall needs to the 1360 future connections to 199 AF/yr. plus 40 AF for miscellaneous uses. This represents a savings of 161 AF/yr. This can be accomplished by installing 3 liter per flush toilets, 1 liter per minute showers and all valves in the home would be self-closing.

Mitigation B would have the effect that no new sources would be required other than development of the lost water in

the springs. Additional treatment and pumping capacity at the treatment plant would be required to meet peak flows.

SEWAGE DISPOSAL

Setting

The agency responsible for collection, treatment and disposal of sewage in the Bear Valley area is Bear Valley Water District. The District was formed in 1968 pursuant to the California Water Code Sections 34,000 et. seq. The board of directors are property owners and are elected at large within the district. Each voting landowner has one vote for each $100 of assessed value on land only.

The growth of the district has been rapid and is outlined as follows:

1. District formed in 1968.
2. Constructed collection system and storage ponds serving portions of the commercial areas and high-density residences in 1968. Financed pursuant to Improvement Bond Act of 1915.
3. Constructed collection system serving 61 parcels of Bear Valley Tract 1 in and around Monte Wolf Road and Quaking Aspen road utilizing the Improvement Bond Act of 1915. Constructed in 1971.
4. Constructed sewage collection serving remainder of developed land north of State Highway 4 including the old Bear Valley Subdivision during 1972&3. This project was financed utilizing the Municipal

Improvement Act of 1913 which puts no burden of repaying on anyone except the landowner of the parcel for which a bond is issued.

5. In 1974 the District constructed its 500,000 gpd treatment using General Obligation binds in the amount of $620,800. These bonds are secured by a tax rate based on assessed value of land only. The 1977-1978 tax rate is $5.82 for each $100 of assessed balue.
6. Constructed sewage collection system serving the 18 lots of Bear Valley Tract No. 5 using the Improvement Bond act of 1913.
7. Pursuant to an agreement between the United States Forest Service and the District a collection system was installed in camp ground areas and transported to the Bear Valley Treatment Plant. This system was constructed in 1975 and 1976.
8. On April 4, 1978 LAFCO approved annexing the Lake Alpine area to the present district. Local hearings must now be held to complete the annexation process.

Currently the district has the ability to collect and treat 500,000 gallons per day of sewage. This is divided as follows:

1.	Bear Valley Area	395,000 gpd
2.	Mt. Reba	65,000 gpd
3.	Lake Alpine Basin	40,000 gpd
	TOTAL	500,000 gpd

For the Bear Valley area 395,000 gpd is sufficient for 1598 living units and commercial space of about 150,000 sq. feet. This is sufficient to allow for full development of all private land on the north side of State Highway 4 in accordance with the subject master plan.

At present no allowance for sewer capacity has been made for the proposed 454 living units and other facilities lying on the south side of State Highway 4.

Impacts

Collection systems and additional treatment and disposal fields must be constructed to serve the south side development.

Present homeowners will continue to pay the high sewer rates of $5.75 per month plus the tax rate unless the north side developes to its capacity.

Additional lands (35 Acres) must be made available for treatment, waste water storage and disposal.

Mitigations

Additional area for treatment and disposal systems must be located and approved for use prior to approval for any development on the south side of the highway or = All development from approval of this plan onward minimum water use facilities must be used. Minimum water use facilities are = 3 quart per flush toilets, 1 gallon per minute shower units,

automatic shut off valves at all sinks, and other items as they become available. If this is done the total flow from all development in Bear Valley would not exceed 170,000 gpd on the north side and 40,000 gpd on the south side. This is compared to 286,000 gpd on the north side only at ultimate development.

The mitigation for the collection system is that each individual parcel will have to be sewered and the cost will be paid by the developer.

High cost cannot be mitigated without sufficient development to approach design capacity.

SOLID WASTE DISPOSAL

Setting

Solid waste generated in Bear Valley is presently handled by a landfill in Calaveras County. An agreement with the Calaveras County Department of Public Works allows these Alpine County residents to utilize the landfill. Alpine County is charged according to projected waste generated by residents utilizing the landfill. For the fiscal year '77-'78, Alpine County was charged $6,252 for solid waste disposal in Calaveras County. This represents about 2.5% of Calaveras County's operating budget for solid waste disposal.

The landfill is situated on a 113 acre parcel near Vallecito in south-central Calaveras County. The operating portion of the site is 13 acres in size and has a capacity of 903,000 cubic yards. This site has been estimated to reach capacity in 1996, however, recent increases in the rate of growth in this area may shorten the lifetime of the landfill.

Impacts

The proposed development is anticipated to produce approximately 9000 cubic yards of solid waste per year.* This is

Basis: 123 permanent residences x 11.44 cu.yds/unit = 1407 cu.yd/yr.
757 seasonal residences x 1/2 x 11.44 cu.yds/unit = 4330 cu.yd/y
500 lodge units x 1/3 x 11.44 cu.yds/yr/unit = 1888 cu.yd/yr
125,000 sq. ft. commercial floor space x 11.44 cu.yds/1000' floor space = 1430 cu.yds/yr

TOTAL 9035 cu. yds/yr.

approximately three times the amount of waste which was generated in Bear Valley from March 1977 to February 1978. Alpine County would therefore be charged approximately three times the present charges, plus increases due to operating expense increases, for solid waste disposal in Calaveras County generated by the proposed development. The increase in solid waste generated by the proposed development may shorten the lifetime of the landfill. It is impossible to predict the degree of this impact since an overall increase in the rate of growth throughout the area served by this landfill is expected to shorten the predicted lifetime of the landfill.

Mitigations

Taxes which would be paid by property owners in the proposed development would mitigate the increased cost for solid waste disposal. Approximately 1.6% of the Alpine County General Fund is presently allotted for garbage disposal. The tax rate for the general fund is $3.58 per $100 assessed value. Assuming an assessed value of $18,656,000* at total build out of the proposed project, approximately $10,700 would be available for increased garbage disposal services. However, if the Jarvis-Gann initiative was passed, revenues available to the County for solid waste disposal would be cut by up to 30%.**

* See Economic Impacts

An effort should be made by property owners and businesses to limit the amount of solid waste generated. Composting and recycling programs should be implemented on a community-wide basis. Funding could be accomplished by fees charged to residents and businesses as part of their garbage collection fees.

Depending upon the outcome of air quality studies to be performed by the U.S. Forest Service in connection with an Environmental Impact Statement, they will be preparing for the expansion of the Mount Reba Ski area, solid waste (mostly paper) from Bear Valley might be burned (by contract) in the incinerator at Mount Reba.

LIBRARY

Setting

The Bear Valley Branch Public Library is located in a room in the Bear Valley Elementary School building. It presently has the capacity to serve the 175 permanent residents of Bear Valley, although shelf space and reading area is very limited. One librarian staffs the library.

Impacts

The increase in population with the proposed development would increase the demand for library services. It is not believed that the present facility could accommodate the increased demand for library services.

Mitigations

Taxes paid by property owners in the proposed development would help to mitigate the cost of increased library services. The developer should provide a "reserve" lot for a future library to be constructed near the village center.

PARKS AND RECREATION

Setting

Historically, recreation in the Bear Valley area has concentrated on winter sports. Alpine skiing is a main emphasis, with cross-country skiing increasing in popularity in recent years. Snowmobiling, tobogganing and snow play are also popular throughout the area.

Mt. Reba Ski Area, located just north of Bear Valley, provides most of the alpine skiing opportunities. Recent development of Grouse Valley Bowl has expanded skiing facilities at that area, particularly for the intermediate skiers. Mt. Reba currently handles up to 4000 skiers per day and the ski terrain in this area is capable of handling 10,000 skiers per day. During the 1977-78 skiing season, Mt. Reba had over 200,000 skier days. During the peak month, February, Mt. Reba had 50,000 skier days. In 1976-77, there were 75,000 skier days and in 1975-76 there were 106,000.* Origin of skiers is predominantly from the bay area, with one third coming from Santa Clara County.

The meadow on the south side of Highway 4, within the proposed development area, is one of the best cross-country ski areas for beginning skiers, and serves as access to more difficult trails within the Stanislaus National Forest. Trails in the Lake Alpine Recreation Area, just east of Bear Valley, are also

* In 1974-5 (a non-drought year) there were 165,000 skier days

popular for cross-country skiers. Other trailheads in the vicinity of the proposed development provide access for skiers to various parts of the U.S. Forest Service believes that the most suitable base for cross-country skiing in this area would be within Bear Valley. A cross-country ski school and equipment rental shop presently exists in Bear Valley.

Snowmobiling, tobogganing and snow play are most popular in the Lake Alpine Recreation Area and in Bear Valley.

Summer activities in the Bear Valley area are varied. The undeveloped state of much of the landscape in Bear Valley and in the adjoining Stanislaus National Forest provides opportunities for hiking, backpacking, rock climbing and hunting.

At Bear Valley there is sailing, swimming, and fishing at Bear Lake. In addition, there are six tennis courts, a swimming pool, and a stable. In the past, there have been camp programs at the stables. Each summer a music camp is held, with two weeks of workshops and one week of concerts given by distinguished musicians. In the past, special activities have included an international bike race, antique auto show, and professional archery tournament.

Lake Alpine Recreation Area, just east of Bear Valley, provides recreational opportunities for camping, fishing, hunting, boating, swimming, hiking, horseback riding, and picnicking. The Forest Service has several campgrounds at Lake Alpine totalling 167 camping units.

Impacts

Development of the proposed project would attract greater numbers of people to the region, thereby increasing the demand for recreational facilities.

The increased demand for summer recreational facilities due to the proposed development would be felt both within Bear Valley and throughout the surrounding National Forest. Pressures on lightly used and wilderness areas within the National Forest would increase. Day use of the Alpine Lake Recreational Area would increase.

It is estimated that during the winter ski season up to 4000 skiers per day from the existing and proposed development would use the Mt. Reba Ski Area.* This could necessitate expanded parking facilities, cafeteria space, and additional lifts at Mt. Reba.

The increase in winter use of the Bear Valley area with the proposed development would also increase the demand for cross-country skiing, snowmobiling, tobogganing, and snow play areas. There has been a trend in the past few years to commercialize these types of winter recreational use. Development of the proposed project may encourage commercialization. This could have an adverse effect on the preservation of open space within the development. At present, parking for these types of winter recreational uses is limited, and with development of the proposed project, it could be eliminated. Winter use of the Stanislaus National Forest surrounding Bear Valley would increase due to the increased demand for recreational facilities.

* The capacity of the Mt. Reba Ski Area is estimated by the U.S. Forest Service at 10,000 skiers.

Mitigations

Expanded summer recreational facilities included in the proposed development would help mitigate the demand for increased summer recreational facilities in the general area. The proposed facilities include an equestrian center, 26 additional tennis courts, and lakeshore picnic facilities at Bear Lake.

The administration at Mt. Reba proposes to construct one or more ski lifts into Bear Valley to transport Bear Valley skiers to the Mt. Reba Ski Area. These proposed lifts would (if approved by the Bear Valley Company and authorized under this master plan and subsequently approved by the U.S. Forest Service) reduce skier traffic on Highway 4 by as much as 2660 vehicles per day* between Bear Valley and Mt. Reba. The type of lift contemplated at present is a twin chair type having a maximum practical capacity of 1200 skiers per hour. From this, it is evident that two lifts would transport all of the estimated 4000 skiers from Bear Valley at full development up to Mt. Reba in (4000÷ 2400) one hour and forty minutes.

The Forest Service is considering a parking lot on their property adjoining Bear Valley village area as an alternative to expansion of parking facilities in the vicinity of Mt. Reba Ski Lodge.** If this were done, it would appear that at least three lifts would be required to transport skiers to the Mt. Reba Ski Area.

* 1330 autos each way daily

** Parking lot size to provide for full use of the remaining ski potential of Mt. Reba (10,000-4,000 = 6,000 skiers) at 3 persons per car would be 2000 spaces. Since there are already 1300 spaces at Mt. Reba, some 700 additional spaces would be required.

Several possibilities exist for the location of these transportation lifts from Bear Valley to Mt. Reba. Locations under study are shown on the map following this page. They were worked out by Mt. Reba and the U.S. Forest Service for consideration in connection with the Bear Valley project. Highlights of each lift proposal follows.

Alternative A: Base on National Forest land adjacent to County road west of Bear Lake.

1. Requires over-snow access or plowed road and shuttlebus from Bear Valley.
2. Access to lower terminal from top is somewhat difficult except for ski terrain to the west.

Alternative B: Direct straight lift from village center w/midramp for skiers skiing down to return to top.

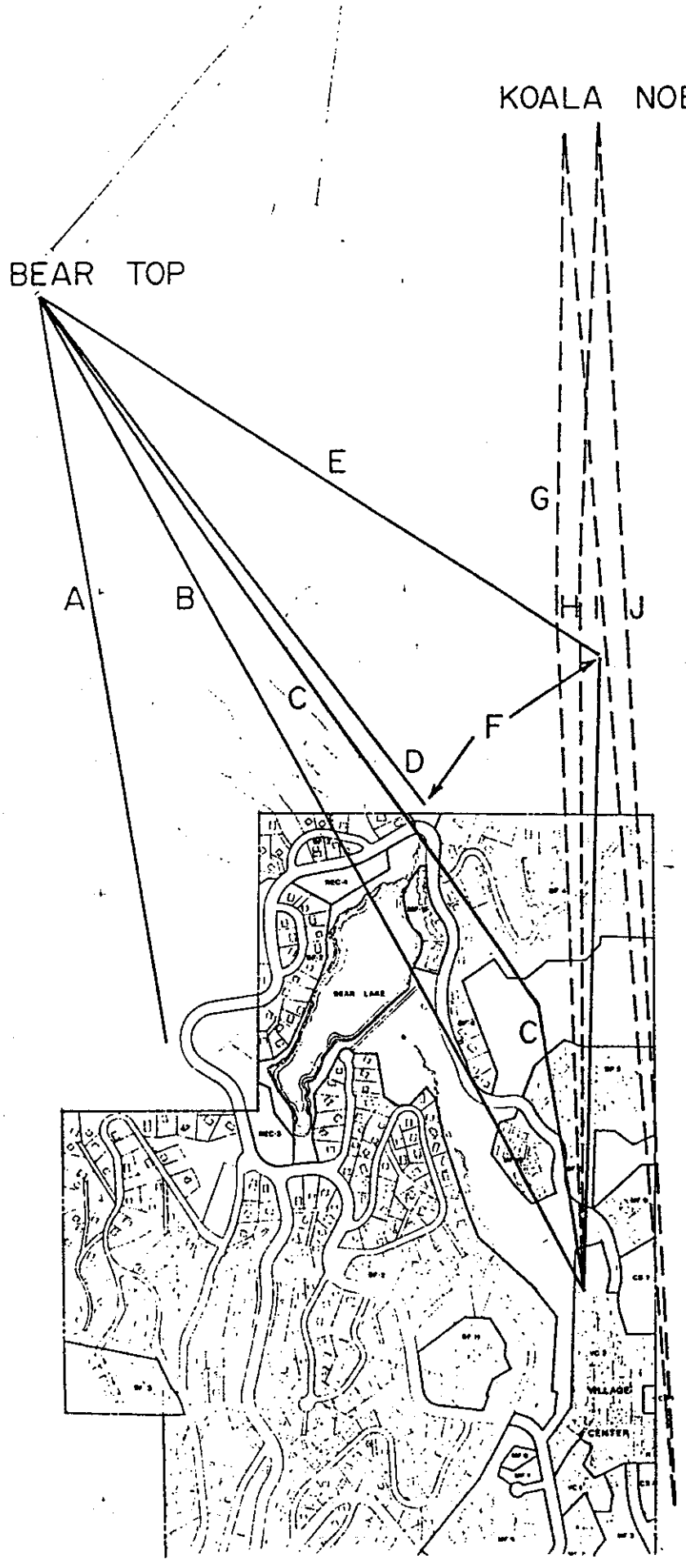
1. Would cross some existing developed lots.
2. Would cross Bear Lake and require some large towers if it is feasible from an engineering standpoint. Aesthetics of Bear Lake would be adversely affected.

Alternative C: Lift from village center to Bear top w/angle and midramp

1. Midramp would serve downhill skiers from Bear top.
2. Feasibility depends on available technology.

Alternative D: Lift from base area on National Forest land north of Bear Lake.

1. Good flat for base.
2. Good location for skiers from Bear top
3. Requires shuttle from village center.



1" = 800'

POSSIBLE LIFT LINE ALTERNATIVES FROM BEAR VALLEY TO MT. REBA SKI AREA

LEGEND:

A { LIFT LINE ALTERNATIVE

Alternative E: Lift from village center w/angle across cliff area to Bear top.

1. Feasibility depends on available technology.

Alternative F: Two lift system (first left of E, and ski to D)

1. More time required to move people.
2. Limited use during light snow cover.
3. D serves ski terrain.

Alternative G, H, I, and J: From village center to top of Koala area (6 alternatives)

There are three base locations and two upper terminal locations.

Bases - 1. North end of village center - Pvt. land
2. National Forest land east of PG&E station
3. National Forest land near Highway 4 w/base for public day use parking on National Forest land.

Upper Terminals:

1. Top of Koala knob.
2. Saddle southwest of Koala terminal (top of Feather Duster).

Key Concerns:

1. Length of lifts with base near Highway 4 would require about 40 minutes of transport time.
2. Public access to lifts in Bear Valley village could be limited due to use pressures of Bear Valley residents.
3. Public parking area would be required near Highway 4 and visual impacts from Highway 4 would occur.

Note: It is suggested that when the Master Plan is approved, it would be broad enough to show all of the alternatives above as mitigations with the possible exception of "A" and "B" which would appear to be more impact than mitigation.

The Forest Service and the developer should each establish cross-country skiing, snowmobiling, tobogganing and snow play trails and areas. In order to avoid a conflict in use, these trails and areas should be separated spacially. It is suggested that the developer, Forest Service and State Highway Department select one or two parking areas along Highway 4 for snow play, snowmobiling and cross-country skiing. Responsibility for operational aspects are suggested as follows:

- Donation of land for the above uses-developer, U.S.F.S.
- Development and maintenance of the parking lots-State
- Snow plowing of the parking lots-State
- Marking of use boundaries (i.e., snow play, cross-country trails, etc.)-developer, U.S.F.S.

If commercialization of these recreational uses was pursued by the developer, adequate parking and related operations responsibilities should be provided by private parties.

Developments such as parking pads or sanitary facilities associated with these uses in the meadow area and along access routes to Stanislaus National Forest should be fairly restricted so as not to materially change the visual quality of the meadow.

The increase in summer recreational demands in the area could be mitigated in the following ways. The previously mentioned recreational facilities provided in the proposed development would mitigate the demand for increased facilities within Bear Valley. The impact of increased use of the surrounding Stanislaus National

Forest could be mitigated by requiring use permits, developing further trail systems and use areas, and providing literature on the dangers of insensitive use of our natural environment. Expanded picnic areas at Alpine Lake Recreation Area would help to mitigate the effect of increased day use of that area. User fees might be collected to help mitigate the cost of these Forest Service improvements.

The proposed development plan will include sufficient parking within Bear Valley to accommodate all residents, condominium and lodge occupants as well as those who might be attracted to local commercial facilities.

SNOW REMOVAL SERVICES

Setting

Snow removal is presently provided in the commercial area of Bear Valley by an independent operator under contract from the County. A second operator contracts for the compaction of ski trails within the residential area. Cost of these services is borne by the Bear Valley property owners through County Service Area No. 1.

Impacts

Development of the proposed project would increase the demand for snow removal services. It would be necessary to expand the system of clearing the parking lots and roads in the village area. The main road to be constructed through the development south of Highway 4 is proposed to be plowed for all winter access.

Mitigations

Taxes paid by property owners in the proposed development would mitigate the demand for increased snow removal services. It would be necessary to annex the area south of Highway 4 to CSA No. 1 in order to tax that property for snow removal. The areas north and south of the highway could become zones 1 and 2 respectively of CSA No. 1. Thus, residents on the north side of

Highway 4 would not see any of their tax money spent to clear the main road through the new development south of Highway 4.

SUMMARY OF REVENUES AND REVENUE ESTIMATE PROJECTIONS WITH AND WITHOUT THE PROJECT

Alpine County	Now (1978)	Alpine Co. in 20 Yrs Without Further Dev. At Bear Valley	Alpine Co. in 20 Yrs With Further Dev. At Bear Valley
Property taxes	$ 213,000(1)	$ 357,000 (2)	$ 547,000 (7)
Sales taxes	30,000	56,000 (3)	488,000 (8)
Hotel/motel tax	15,000	28,000 (4)	192,000 (9)
Other taxes, licenses, permits, fines, forfeits, penalties; use of money & property; charges for services, etc.	156,000	293,000 (5)	293,000 (5)
Aid from other agencies	1,002,000	1,603,000 (6)	1,603,000 (6)
TOTALS	$1,416,000	2,044,000	3,123,000
County Service Area No. 1			
Property taxes	$ 5,000 (1)	12,000 (2)	34,000 (10)
Other	10,000 (11)	19,000 (5)	19,000 (5)
TOTALS	$ 15,000	31,000	53,000

(1) Estimated tax revenue based on the effect of Jarvis-Gann (40% of current revenue.)

(2) Expands non-Bear Valley property tax revenue (146,000) at 3.2%/yr. and Bear Valley tax revenue (67,000) at 1%/yr.

(3) Expands present sales tax revenues by 3.2%/yr. growth.

(4) Expands present hotel/motel tax revenues by 3.2%/yr. growth.

(5) Expands present funds by 3.2%/yr. growth.

(6) Expands present other government aid by 1.6%/yr growth.

(7) Expands non-Bear Valley property tax revenue at 3.2%/yr. growth and uses 1978 value of new (project) development as a basis for tax revenue (at 40% of present level).

(8) 0.9% of $61,000,000 in sales predicted for Bear Valley at full development (see Economic Impacts).

(9) Basis: 360 lodge units and 240 condominium units in the rental pool at full development; 50% year'round occupancy; $30.00/day average rate and 5% tax = $164,000. This figure must be added to the County figure without Bear Valley development.

(10) Basis: 1998 assessed value (see section on Police Protection) of $18,600,000 and a $0.12 tax rate (40% of present rate) = $22,000. To this must be added the $12,000 from the existing development.

(11) From County Budget (excludes carry over).

ESTIMATED ANNUAL COUNTY EXPENSES*

Brought about in twenty years by the proposed project (expansion of development in Bear Valley)

GENERAL: These are assumed to be 10% greater than the revenues shown for the budget in 20 years without Bear Valley development. (Basis: comparison of permanent population expected to be in Alpine County in 20 years vs the expected increase in permanent population due to the project.

EXTRA ADDED EXPENSES:

Police Protection (see section on Police Protection)	
Salaries & benefits	$ 48,000
Annualized equipment costs (2 yr life)	13,000
Annualized capital costs (20 year life)	4,000
M&O shared with fire station	-0-
SUB-TOTAL	$ 65,000
Added Fire Protection	
Salaries and benefits	$ 90,000
Annualized equipment costs (5 yr life)	40,000
Annualized capital costs	30,000
M&O on station	20,000
SUB-TOTAL	$ 180,000
Road Maintenance	
New public road mileage: 4.5 miles	
Maintenance cost per mile/yr = $500/mile	
Annualized replacement cost/yr = $ 6,000/mile	
Total cost of M&O & replacement for new roads = 4.5 x $6,500 = $29,000 (rounded)	$ 29,000
Snow Removal	
New road estimated to be plowed is 1.8 miles	
Cost now is $30,000 per mile	
HENCE, cost of snow removal on new roads =	$ 54,000
Library	
Salaries and benefits	$ 40,000
M&O on 3,500 S.F. building	20,000
Annualized equipment cost (5 year life)	10,000
Annualized capital cost (20 year life)	15,000
SUB-TOTAL	$ 85,000
TOTAL EXTRA COSTS	$ 468,000
EXCESS OF REVENUES OVER EXTRA COSTS	$ 611,000

ECONOMIC IMPACTS

Setting

Bear Valley lies within the Central Sierra Economic Development District (CSEDD), made up of Alpine, Tuolumne, Calaveras and Amador Counties. The primary economic bases of the 4-county CSEDD area are tourism/recreation, mining, forest production, and construction. CSEDD considers that tourism and recreation hold the greatest promise for economic stimulus and growth, as the other economic bases have traditionally been limited by lack of available capital and high costs of production and distribution from the area.

With regard to Bear Valley, estimates place per capita daily expenditures of visitors to the area at approximately $42.00 in winter and $33.00 in summer. Using the 1977-1978 skier-day figure of 200,000, this means that over 8.4 million dollars was brought to the area by the skiing industry alone. Assuming only 50% of the winter visitors to Bear Valley are alpine skiers, indicates that another 8.4 million dollars was spent by non-skiers visiting the area. Summer tourism in the Bear Valley area is estimated at 200,000 visitor-days. This means that 6.6 million dollars is spent by summer tourists. The total of expenditures by visitors in this area is therefore estimated at approximately 23.0 million dollars per year.

Permanent residents of Bear Valley are estimated to spend approximately $231,000 per year* for goods and services. Since goods and services are limited at Bear Valley, this figure is low, assuming permanent residents do at least 2/3 of their shopping in nearby larger towns.

As shown by the figures above, expenditures by permanent year-round residents represent less than 1% of the total expenditures in this area.

Employment in the Bear Valley area is primarily seasonal in nature, due to the predominance of the tourism industry. The Mt. Reba Ski Area is the major employer supporting an average of 125 employees during the peak winter season. Approximate employment most of the year in Bear Valley is 50 people, including lodges, shops, restaurants, community, and municipal services.

Alpine County is presently collecting $.08 per $100 assessed value for the 1915 Bond Redemption Fund. The County levied this tax when it became necessary, due to tax delinquencies, to take over repayment of the general obligation bond which was established by the original developer of Bear Valley to cover the costs of sewage collection in the core area of the development. Tax code areas 51-001 and 51-005, which include the existing Bear Valley development, are paying $5.82 per $100 assessed land value (not including improvements) to pay off the Bear Valley Water District Bond which was established to pay for construction of the sewage treatment plant serving that area.

* Basis: 1/3 x 14,000 = $4,620 per year per household x 50 households

Impacts

Development of the proposed project would strengthen and expand the tourism and recreation economic base of the area. The proposed increase in lodging, condominium, and single-family units is anticipated to raise the winter visitor spending to approximately 37 million dollars per year in this area, and the summer visitor spending to approximately 24 million dollars per year.* The total visitor spending in the area is therefore anticipated to be 61 million dollars per year at build-out of the proposed project.

The increase in permanent residents in Bear Valley with the proposed development would raise spending by permanent residents to approximately 1.6 million dollars per year.** This assumes that with the increase in commercial facilities, permanent residents would be spending about 2/3 of their income in the Bear Valley area.

* Basis: Winter - 8000 visitors x 110 days = 880,000 visitor-days
880,000 visitor-days x $42 = 37 million dollars

Summer - 8000 visitors x 90 days = 720,000 visitor-days
720,000 visitor-days x $33 = 24 million dollars

** Basis: 2/3 x $14,000 per household x 173 households = $1,600,000

Development of the proposed project would provide more seasonal and year-round employment in the Bear Valley area. Mt. Reba Ski Area anticipates a need for approximately 150 more seasonal employees with expansion due to the proposed development. Bear Valley would probably employ an additional 75 seasonal employees with development of the proposed project. Approximately 150 new year-round jobs may be created, including lodges, shops, restaurants, community, and municipal services.

Development of the proposed project would more than double the tax base for Alpine County. Revenues which would be paid by property owners in the proposed development would exceed that which would be necessary to provide services, since the majority of owners would be seasonal residents. Excess revenues would therefore be available to help pay off the previously mentioned bonds and provide increased services throughout Alpine County. If the Jarvis-Gann initiative was passed, revenues available to Alpine County would be cut by up to 30%. The impact on Alpine County from the reduction in revenues would be, in part, relieved by the increased tax base provided by the proposed development. Property in the new development would be assessed at present valuation, while existing properties would be assessed at 1975 values.

SOCIAL IMPACTS

Setting

Alpine County has fewer residents than any other county in California and a much lower density of people per square mile (1.1) than the state as a whole (127.7).* The county's population of 484 in the 1970* census and an estimated current population of 1000 in 1978** is concentrated in the towns along the primary highways through the county. The population increase appears to have resulted from net in-migration, since county birth and death rates are almost equal. In-migration appears to be mainly of families, as is suggested in the age distribution of population shown below.

Percentage Population by Age Group*

Years of Age	Alpine	CSEDD	California
0-4	5.3%	6.2%	8.2%
5-13	19.6%	15.3%	19.5%
14-18	7.3%	9.7%	9.2%
19-21	2.0%	3.8%	45.5%
22-54	57.8%	38.3%	45.5%
55-64	6.2%	12.9%	8.6%
65+	1.8%	13.8%	1.0%

*Source: United States Department of Commerce, Bureau of the Census and the California Department of Finance

** Source: Outlook '77 by the Pacific Gas & Electric Company

Alpine County is the only one of the four CSEDD counties to have any significant minority population. Approximately 23% of its residents are American Indian and 4.5% are Oriental. Its total ethnic minority percentage is almost 28%, compared with 5.1% for the CSEDD area. Expansion of population in Bear Valley would not have an impact on ethnic minorities, however, because almost all of the Indian and Oriental population lives in Markleeville on the other side of the Sierra range and quite remote from the project.

Alpine County's present and projected rates of population growth are the highest in the four-county General Sierra Economic Development District (CSEDD). Expansion of the recreation industry in the county may be responsible for this growth. The nature of this industry causes intense seasonal fluctuations in the resident population. It is estimated that the population swells from around 400 or 500 year-round residents to somewhere near 15,000 during the winter skiing period and in the peak summer months.

As previously stated, the present permanent population in Bear Valley is estimated to be 175. Here in-migration appears to be mainly young single people rather than families as is the trend in Alpine County as a whole. This may be due, in part, to the seasonal nature of much of the employment which cannot support families.

Impacts

Development of the proposed project is anticipated to bring approximately 431 new permanent residents to Bear Valley. Their composition with regard to age and marital status is anticipated to be similar to that presently existing in Bear Valley due to the continuing seasonal economic base. The influx of presumably young single people would alter the statistics for Alpine County as a whole, thus changing county-wide demographic character.

Mitigations

None proposed.

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Alpine County General Plan shows the entire project site to be within a Special Planning Area. According to the General Plan, "This classification is applied to a variety of land uses which either have been, are being, or are proposed to be developed in conformity with planned development or other carefully prepared and closely supervised plans because of natural environmental or other factors requiring such planning and controls. Appropriate uses in such areas are those expected in comprehensive planned development projects. Consistent zoning: PD." The proposed development is a comprehensive planned development, thus it conforms with the long-term use for this area selected by Alpine County.

Skiing, one of the most rapidly growing sports in the west, is by nature confined to those few locations in the state having suitable climate, sun orientation and slope. Mt. Reba is one such area. The provision of overnight accommodations in or near places with ski potential helps increase skier use while reducing travel distance to and from the slopes.

GROWTH INDUCING IMPACTS

Development of the proposed project would contribute significantly to population and economic growth in the area. As previously discussed, the project would bring approximately 431 permanent residents to Bear Valley, bringing the total permanent population of the area to around 600. Seasonal use of the area at total build-out is estimated, as previously discussed, at 1.6 million visitor-days. Economic growth would be fostered by this increase in population and visitor use with the purchasing of goods and services, and payment of property taxes. The increase in permanent residents would in turn induce an increase in public services such as police protection, fire protection, schools and libraries. These are described in more detail in previous sections of this report.

Development of the proposed project may induce growth in surrounding areas. At present, the property is surrounded by Stanislaus National Forest, however, it would be possible for parcels adjoining the proposed development to become private holdings by a trade-off system. In this manner, the Forest Service would "trade" public lands in the Bear Valley area for privately-owned more desirable parcels elsewhere. If such a trade were negotiated, adjoining parcels would most likely be developed for recreational and commercial use similar to that proposed for Bear Valley.

Heavy commercial facilities (auto repair, propane companies, etc.) and employee housing will be developed in communities along Highway 4 west of the site. This effect will probably be noticeable as far away as Arnold.

SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

1) Construction of roads, buildings, and recreational facilities would cause disturbance to soils on the site.
2) Some soils would be consolidated and compacted in the immediate vicinity of roads, walkways, and buildings.
3) Snowmelt overtopping creek banks in the area could cause minor earth slides which could cause damage to adjacent structures, roadways, and residents.
4) If the Bear Lake Dam was to fail, additional loss of life and property damage would occur.
5) Native vegetation would be removed on approximately 27% of the project site.
6) Approximately 500 trees with diameter at breast height greater than 12" may be removed.
7) The coniferous forest wildlife habitat of the marten, wolverine, and grey squirrel would be disrupted beyond their tolerance within the project.
8) Parts of the meadow wildlife habitat would be disturbed.
9) The migration route of the Railroad Flat Deer Herd would be disrupted.
10) In general, a reduction in all animal and bird species in the immediate vicinity of the development would result.

11) Dust created in earthmoving activities would increase suspended particulate matter, thus diminishing air quality locally for the duration of construction.

12) Erosion and siltation could accelerate, thereby decreasing water quality.

13) Runoff from parking areas and streets could add pollutants to local drainages.

14) Noise levels could increase to 77 dBA at a distance of 100' from Highway 4.

15) Noise levels could increase to 68 dBA within the development.

16) Noise from construction equipment on the site would increase levels for the duration of construction.

17) An increase in snowmobile use in the winter would increase noise levels in the vicinity of the project site.

18) The visual quality of the area would be degraded with the introduction of buildings, roads, and recreational facilities which would not conform with the landscape.

19) Archaeological sites may be impacted. This will be shown in the forthcoming archaeological report.

20) Sewage collection systems and additional treatment and disposal facilities would need to be constructed to serve the south side of the development.

21) Approximately 12.0 megawatts of electricity would be required.

22) During the winter, the increase in traffic would result in Highway 4 operating at capacity for 3 hours in the morning and 3 hours in the evening.

23) A signalized intersection would be warranted at the main project entrance and Highway 4.

24) Additional water supply would have to be developed.

25) There would be an increased demand for fire protection services.

26) There would be an increased demand for police protection services which would necessitate hiring more deputies and expanding equipment and facilities.

27) There would be an increased demand for medical services and facilities.

28) There would be an increased demand for recreational facilities in the surrounding area.

29) There would be an impact on the local elementary and high school districts of 65 and 21 more students respectively.

30) Approximately 9000 cubic yards of solid waste would be generated each year.

31) There would be an increased demand for library services.

32) There would be an increased demand for snow removal services.

ALTERNATIVES TO THE PROPOSED ACTION

1) Do Nothing

This alternative was studied and rejected for several reasons as follows:

a) Taxes levied on the project land would not be offset by income and the property would ultimately be sold at auction due to non-payment of taxes.

b) Taxes are already delinquent on about 45% of the existing lots in Bear Valley. A "do nothing" alternative would not assist the county in making up revenue to eliminate losses of this type.

c) The chances are that the remaining project acreage under a "do nothing" approach would be split up and sold to various owners thus making it more difficult to adhere to a comprehensive plan for the valley.

d) If Mt. Reba were to expand to its full skier potential without extensive overnight accommodation available in Bear Valley, the parking lot capacity serving Mt. Reba would have to be expanded to over 3000 spaces. This would result in greatly increased congestion and traffic delays on Highway 4 throughout the ski season.

e) The sewage treatment system which is now constructed was designed to serve the full anticipated development north of Highway 4. Thus the "do nothing" alternative would leave the existing owners with the burden of paying off most of the $620,800 bonded debt.

The environmental impacts of the "do nothing" alternative would be significantly less than the impacts created by moving ahead with the project. The economic impacts, however, would be substantial and adverse to existing owners and to the county under the "do nothing" alternative.

2) Significantly Reduce the Density of the Proposed Development

This alternative would have beneficial effects on the problems of finding sufficient land for parking. It would result in less vegetation removal and less effect on wildlife and the mitigation of deer. It would have a detrimental effect on the flow of payments for the sewer bonds because fewer property owners would be carrying the load. It would, similar to the "do nothing" alternative, significantly increase congestion and delay on Highway 4 if Mt. Reba were developed to its full potential.

3) Change the Proposed "Mix" of Single-Family Homes, Condominiums, and Lodge Units in Favor of More Condominiums and Lodges While Holding the Overall Density the Same

This option would result in the following effects:

a) It would result in less roadway to construct and maintain thus reducing impacts on vegetation and wildlife.

b) It would result in shorter utility runs thus reducing costs for water, power, sewer and telephone maintenance.

c) It would result in fewer visual impacts (see particularly SF 6 & 8).

d) It could result in less impact on deer migration.

e) It may or may not be as profitable.

f) It may or may not produce the expected assessed value figures used in the body of this E.I.R.

The overall impact of this option would be less than that posed by the proposed project, and it should be examined further prior to the final E.I.R.

4) Retain the Area South of Highway 4 as an Agricultural Area and Continue With Development Under the Existing Plan for Bear Valley North of the Highway

This alternative would have the following effects:

a) It would increase the need for day skier parking by 227 spaces* if Mt. Reba were to expand to its full potential. This would lead to increased congestion on Highway 4.

b) There would be little or no conflict with deer herd migration.

c) On-site recreation facilities (south of the highway) would not be expanded.

d) More area would be available for cross-country skiing.

e) The area south of the highway would not assist in paying off the bonded debt for the sewer facility.

f) Ultimately because taxes would be greater than revenues and because a sewer line runs through the property, it

* Derivation:
454 dwelling units x 3 persons/unit = 1362 persons.
Using 50% as skiers and 3 persons per car means that 227 parking spaces would be required.

could be split up and developed in more of a piecemeal manner. Thus, the option for development pursuant to an orderly plan would be more difficult. The overall effect would be lower environmental impacts, but more adverse impacts on traffic and economics.

5) Develop a Plan With Much Higher Densities Than the One Proposed

This would result in the following:

a) The capcity of the sewer plant to handle the effluent generated would be exceeded.

b) The capacity of the water system to serve the area might also be exceeded.

c) Environmental impacts would be greater: more vegetation would be removed; more animal habitat would be depleted.

ORGANIZATIONS AND PERSONS CONSULTED

Alpine County Board of Supervisors

Alpine County Sheriff's Department - Bear Valley Substation

Alpine County Unified School District - Bear Valley School

Bret Harte High School District

Robert Koch, Calaveras County Department of Public Works

Kieth Dunbar, Calaveras County Water District

Don Stikkers, U.S.F.S.

Wes Lewis, U.S.F.S.

State of California - Air Resources Board

Perry Walther, Bear Valley Company

Bob Broyer, Bear Valley Company

Bruce Orvis

Maury Rasmussen, Mt. Reba, Inc.

Berridge Associates, Inc.

Bear Valley Property Owners' Association

Ted Merry, Fire Chief & Manager, Bear Valley Water District

Mike Bettger, Administrator, Mark Twain Hospital

APPENDIX

Vegetation Mix

Analysis of Surface Parking Fiscal Impact

Carbon Monoxide Modeling

Air Quality Impact Computation Sheets

VEGETATION MIX

NORTHRUP, KING & CO.
FRESNO, LIFORNIA 93710

NOTICE: Northrup, King & Co. warrants that seeds sold have been labeled as required under State and Federal Seed Laws and that they conform to the label description. No liability hereunder shall be asserted unless the buyer or user reports to the warrantor within a reasonable period after discovery (not to exceed 30 days), any conditions that might lead to a complaint. OUR LIABILITY ON THIS WARRANTY IS LIMITED IN AMOUNT TO THE PURCHASE PRICE OF THE SEEDS. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF.

MIXTURE Special Purpose Mixture

LOT NO. F6429

COMMODITY	PURITY	GERMINATION	HARD SEED	Total Germination & Hard Seed	DATE TESTED
Bromegrass, Blando	36.86 %	93 %	%	%	6/75
Ryegrass, Wimmera	29.56 %	51 %	%	%	6/75
Wheatgrass, Pubescent	25.67 %	89 %	%	%	6/75
	%	%	%	%	
	%	%	%	%	
	%	%	%	%	
	%	%	%	%	

CROP SEED .10 %

INERT MATTER 4.77 %

WEEDS .04 %

NOXIOUS WEEDS NONE

NET WEIGHT 30 POUNDS

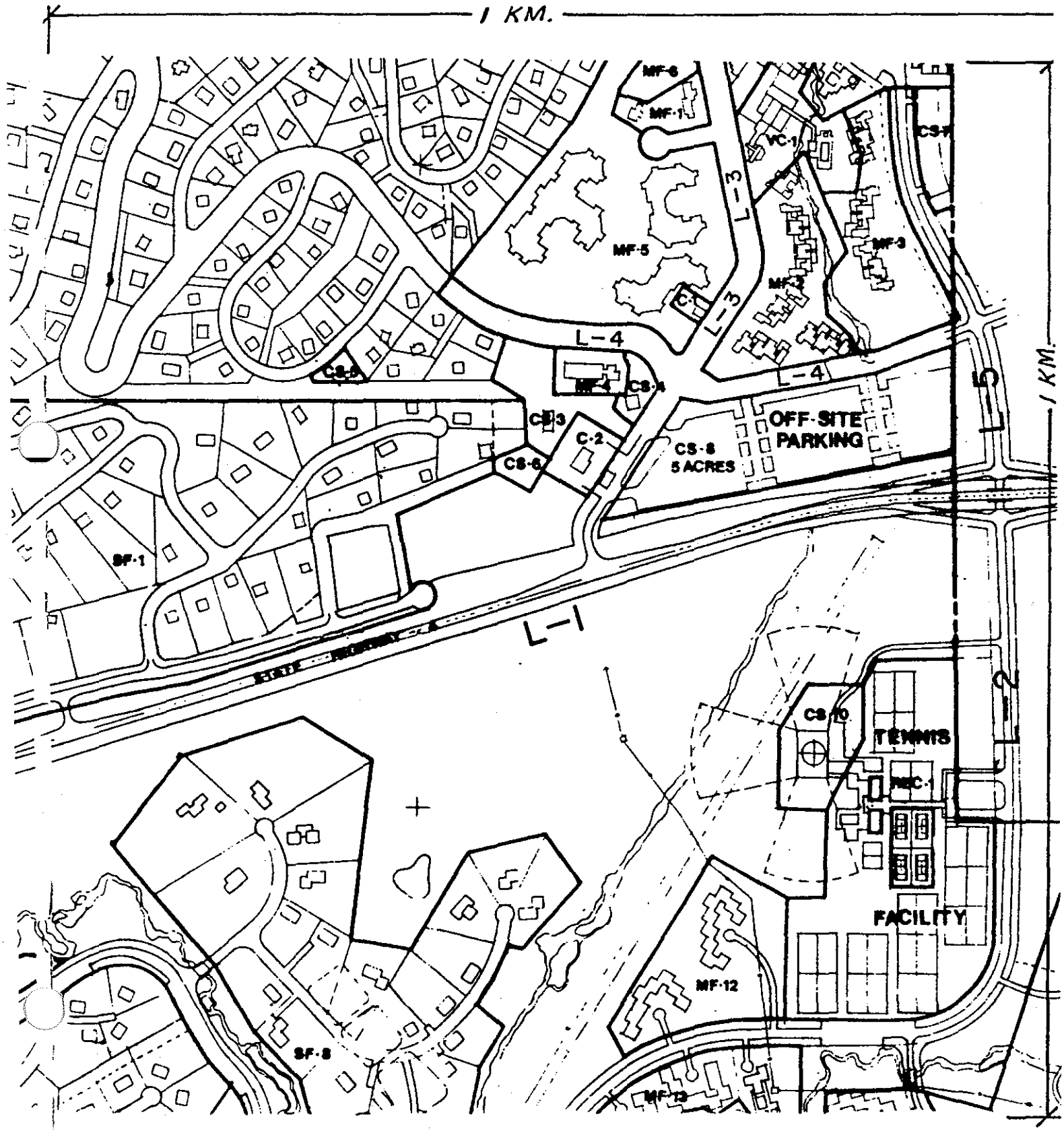
ANALYSIS OF SURFACE PARKING FISCAL IMPACT

The estimate of costs associated with the use of additional land area for parking (as opposed to the use of a parking structure) is derived as follows:

1) Acres of parking required: 10
2) Acres associated with a parking building: 6
3) Excess land area required for surface parking: 4
4) It is assumed that the land in question would otherwise have been used for commercial purposes and would have been valued at $1.50 per square foot.
5) It is further assumed that 50% of the land would have been covered by a building which would have been valued at $40.00 per square foot.
6) Thus the value of land and building (s) would have been (6 x $1.50 x 43560 + 3 x $40.00 x 43560) $5,619,000.
7) The property tax revenue of such a building would at 1% be $56,200 per year.
8) The sales tax revenue off such a building figuring $75.00/sq.ft. per year in retail sales would be $98,000 annually.
9) The loss in net profits at 5% of the gross retail sales would be $490,000 annually.
10) Summary: Tax Loss - $154,000
Profit Loss - $490,000

LOCAL PROJECT IMPACT AREA

L-1 THROUGH L-5 : LOCAL PROJECT LINE SOURCES



Project: _____

Pollutant: _____

COMPUTATION SHEET NO. 2

Line source impact computation sheet
(numbers in circles indicate previous entries)

Line source code number 1-1 (reference the project site plan)

Line source emission computation for the year of full project utilizatio

Average daily traffic[1]:1) 17,200 vehicles. Link length:2) .62 mile

Peak hour traffic:3) 2290 vehicles; time of peak hour:4) 4:[illegible] pm.

Maximum consecutive 8-hour traffic:5) 10,320 vehicles; time:6) 2:[illegible]5 pm.

Traffic, 6-9 am:7) -. Capacity:8) 11 vehicles/hour(one way).

Average link speed:9) 45 mph. Year of utilization:10) 19[illegible].

Emission factors for subject pollutant (grams per vehicle mile) and for the appropriate year from Table 1 and Figure 2.

Factor at average link speed: 11) 4.[illegible] g/mi. Factor at 10 mph:12) 15.5 g/m

Calculation of maximum pollutant emission rates for the line source link

1-hour emission rate ((3) x (12) x 0.173).....13) 2918 µg/m-sec

8-hour emission rate ((5) x (11) x 0.022).....14) 1101 µg/m-sec

24-hour emission rate ((1) x (11) x 0.007).....15) 584 µg/m-sec

Total daily emission ((1) x (2) x (11).....16) 51,[illegible]00 g/day

17) Peak hour volume capacity ratio for the slow direction only:

((3) x 0.6/(8).....17) 1.4

[1]Unless otherwise indicated, traffic will be counted both ways on the link and values will be given for the peak day of the year if known. traffic values are total numbers for the given time interval and not per hour numbers unless otherwise indicated.

Project: _____

1

Pollutant: _____

COMPUTATION SHEET NO. 2

Line source impact computation sheet
(numbers in circles indicate previous entries)

Line source code number 1 (reference the project site plan)

Line source emission computation for the year of full project utilizatio

Average daily traffic[1]:1) 1173 vehicles. Link length:2) .57 milc

Peak hour traffic:3) 176 vehicles; time of peak hour:4) 4 pm.

Maximum consecutive 8-hour traffic:5) [illegible] vehicles; time:6) 9am-5 pm.

Traffic, 6-9 am:7) ——. Capacity:8) [illegible] vehicles/hour(one way).

Average link speed:9) 3[illegible] mph. Year of utilization:10) 1[illegible].

Emission factors for subject pollutant (grams per vehicle mile) and for the appropriate year from Table 1 and Figure 2.

Factor at average link speed: 11) _____ g/mi. Factor at 10 mph:12) 55 g/m

Calculation of maximum pollutant emission rates for the line source link

1-hour emission rate (③ x ⑫ x 0.173).....13) 472 µg/m-sec

8-hour emission rate (⑤ x ⑪ x 0.022).....14) 105 µg/m-sec

24-hour emission rate (① x ⑪ x 0.007).....15) 55.[illegible] µg/m-sec

Total daily emission (① x ② x ⑪).....16) 4540 g/day

17) Peak hour volume capacity ratio for the slow direction only:

(③ x 0.6/⑧).....17) .12

---

[1]Unless otherwise indicated, traffic will be counted both ways on the link and values will be given for the peak day of the year if known. Traffic values are total numbers for the given time interval and not per hour numbers unless otherwise indicated.

Project: _____

Pollutant: _____

COMPUTATION SHEET NO. 2

Line source impact computation sheet
(numbers in circles indicate previous entries)

Line source code number _____ (reference the project site plan)

Line source emission computation for the year of full project utilizatio

Average daily traffic[1]:1) _____ vehicles. Link length:2) .28 mile

Peak hour traffic:3) 117 vehicles; time of peak hour:4) 4 pm.

Maximum consecutive 8-hour traffic:5) _____ vehicles; time:6) _____ pm.

Traffic, 6-9 am:7) _____. Capacity:8) _____ vehicles/hour(one way).

Average link speed:9) _____ mph. Year of utilization:10) _____.

Emission factors for subject pollutant (grams per vehicle mile) and for the appropriate year from Table 1 and Figure 2.

Factor at average link speed: 11) _____ g/mi. Factor at 10 mph:12) 15.5 g/m

Calculation of maximum pollutant emission rates for the line source link

1-hour emission rate (③ x ⑫ x 0.173).....13) 314 µg/m-sec

8-hour emission rate (⑤ x ⑪ x 0.022).....14) 69.9 µg/m-sec

24-hour emission rate (① x ⑪ x 0.007).....15) 37 µg/m-sec

Total daily emission (① x ② x ⑪).....16) _____ g/day

17) Peak hour volume capacity ratio for the slow direction only:

(③ x 0.6/⑧).....17) .08

---

[1]Unless otherwise indicated, traffic will be counted both ways on the link and values will be given for the peak day of the year if known. Traffic values are total numbers for the given time interval and not per hour numbers unless otherwise indicated.

Project: _____

Pollutant: _____

COMPUTATION SHEET NO. 2

Line source impact computation sheet
(numbers in circles indicate previous entries)

Line source code number _____ (reference the project site plan)

Line source emission computation for the year of full project utilizatio:

Average daily traffic[1]:1) 1913 vehicles. Link length:2) .20 mile

Peak hour traffic:3) 237 vehicles; time of peak hour:4) _____ pm.

Maximum consecutive 8-hour traffic:5) 1145 vehicles; time:6) _____ pm.

Traffic, 6-9 am:7) _____. Capacity:8) _____ vehicles/hour(one way).

Average link speed:9) _____ mph. Year of utilization:10) _____.

Emission factors for subject pollutant (grams per vehicle mile) and for the appropriate year from Table 1 and Figure 2.

Factor at average link speed: 11) _____ g/mi. Factor at 10 mph:12) 15.5 g/m

Calculation of maximum pollutant emission rates for the line source link

1-hour emission rate (③ x ⑫ x 0.173).....13) 770 µg/m-sec

8-hour emission rate (⑤ x ⑪ x 0.022).....14) 171 µg/m-sec

24-hour emission rate (① x ⑪ x 0.007).....15) 70.7 µg/m-sec

Total daily emission (① x ② x ⑪).....16) 3827 g/day

17) Peak hour volume capacity ratio for the slow direction only:

(③ x 0.6/⑧).....17) .19

[1]Unless otherwise indicated, traffic will be counted both ways on the link and values will be given for the peak day of the year if known. Traffic values are total numbers for the given time interval and not per hour numbers unless otherwise indicated.

Project: _____

Pollutant: _____

COMPUTATION SHEET NO. 2

Line source impact computation sheet
(numbers in circles indicate previous entries)

Line source code number _____ (reference the project site plan)

Line source emission computation for the year of full project utilizatio

Average daily traffic[1]:1) 3[illegible] vehicles. Link length:2) .[illegible] mile

Peak hour traffic:3) [illegible]73 vehicles; time of peak hour:4) 5 pm.

Maximum consecutive 8-hour traffic:5) [illegible] vehicles; time:6) [illegible] pm.

Traffic, 6-9 am:7) _____. Capacity:8) _____ vehicles/hour(one way).

Average link speed:9) _____ mph. Year of utilization:10) _____.

Emission factors for subject pollutant (grams per vehicle mile) and for the appropriate year from Table 1 and Figure 2.

Factor at average link speed: 11) [illegible] g/mi. Factor at 10 mph:12) [illegible] g/m

Calculation of maximum pollutant emission rates for the line source link

1-hour emission rate (③ x ⑫ x 0.173).....13) [illegible] µg/m-sec

8-hour emission rate (⑤ x ⑪ x 0.022).....14) [illegible] µg/m-sec

24-hour emission rate (① x ⑪ x 0.007).....15) [illegible] µg/m-sec

Total daily emission (① x ② x ⑪).....16) [illegible] g/day

17) Peak hour volume capacity ratio for the slow direction only:

(③ x 0.6/⑧).....17) .28

[1]Unless otherwise indicated, traffic will be counted both ways on the link and values will be given for the peak day of the year if known. Traffic values are total numbers for the given time interval and not per hour numbers unless otherwise indicated.

Project: _____

Pollutant: _____

COMPUTATION SHEET NO. 3

Area source impact computation sheet
(numbers in circles indicate previous entries)

LPIA code number _____ (reference the project site plan)

Computation of project area-wide emissions

Total LPIA trip generation.....1) [illegible] vehicle trip ends per day.

For the year of project completion enter near idle emission factor for subject pollutant from Table 2.....2) 4.5 g/min.

Enter the LPIA near idle emissions for the subject pollutant assuming 3 minutes idling/trip end (3x(1)x(2)).....3) _____ g/day.

Enter the LPIA emissions at speed for the subject pollutant (sum of total daily emissions from all LPLS links from computation sheets No. 2).....4) 47,106 g/day.

Enter any other LPIA emissions for the subject pollutant (from airport runways and sources not otherwise accounted for. Use procedures given in reference 1).....5) [illegible] g/day. *

Enter total LPIA emissions from all sources ((3)+(4)+(5))/8.64E+4).....6) 8.3 g/sec.

Enter the local ambient annual average concentration for the subject pollutant ((6) multiplied by factor from Figure 3 (50).....7) 415 µg/m³.

Convert annual average concentrations to annual maximum concentrations at other appropriate averaging times using Figure 4 and Table 3. Enter concentrations below.

Averaging times:	1-hour	3-hour	8-hour	24-hour
Concentration: (µg/m³)	8) [illegible]	9) [illegible]	10) [illegible]	11) [illegible]

Enter value of SGD used for this analysis: 12) [illegible]

* [illegible] g: See next page for terrain adjustment factor.

FIREPLACE BURNING

Assume

1) 15 lbs/day burned/fireplace* x 1 ton/2000 lbs = .0075 tons/day

2) 85 lbs/ton CO x 1 ton/2000 lbs =.0425 tons/ton CO

3) .0075 T/day/fireplace x .0425 T/T CO = .00031875 T/D CO

4) .00031875 T/D CO/fireplace x 1366 fireplaces** = .43 T/D CO

5) .43 T/D CO x 2000 lbs/T x 453.6 grams/lb = 390,096 grams/day CO

* This is twice the amount stated by the Placer County Air Pollution Control District for Residential Refuse Burning.

** Assume all existing and proposed residences and condominium units have one fireplace.

Project: _____

_____

Pollutant: _____

COMPUTATION SHEET NO. 4

Regional impact computation sheet
(numbers in circles indicate previous entries)

Enter total project emissions for the subject pollutant (sum of LPIA emissions from computation sheet No. 3 including point source emissions).....1) 166 g/day.

Enter the regional scale concentration for the 1-hour averaging time
((1) x 4.25E-7).....2) _____ $\mu g/m^3$.*

Compute the regional scale concentration at other averaging times (multiply (2) by the following averaging time factors: 3-hr=0.8; 8-hr=0.7; 24-hr=0.6). Enter results below:

Averaging times:	3-hour	8-hour	24-hour
Concentration ($\mu g/m^3$):*	3) _____	4) _____	5) _____

* Since concentration calculations assume the daily average emission rate, results for shorter term averaging times may be underestimated. If the diurnal variability of project emission rate is known, an adjustment may be made by multiplying the results by the appropriate ratio of emission rates. If, for example, the daily average emission is at the rate of 10 grams per second and the average emission rate in the peak 8-hour period is 100 grams per second, the result in entry (4) would be multiplied by 10.

When a large project contains several LPIA's which are widely separated, separate regional impact calculations for the individual LPIA's might be appropriate.

PROJECT IMPACT SUMMARY FORM NO. 1*
(Line and area sources)

Contaminant	Air quality standard averaging time	Air quality standard ($\mu g/m^3$)	Calculated air quality impacts ($\mu g/m^3$)							
			Regional	Local Area 1	Local Area 2	Roadside L-1	Roadside Road L-2	Roadside Road L-3	Roadside Road L-4	Roadside Road L-5
Carbon monoxide	1-hour	40,000	.1	?		6118	472	314	770	1536
	8-hour	10,000		?		1101	105	69.9	171	342
Non methane hydrocarbons	3-hour (6-9a.m.)	160								
Nitrogen dioxide	1-hour	500								
	1-year	100								
Sulfur dioxide	1-hour	1,306								
	24-hour	104								
	1-year	80								
Suspended particulate	24-hour	100								
	1-year	66								

Non-methane hydrocarbon entries can be used locally and regionally to estimate the potential for oxidant formation.

Please note: This form provides for three area source computations and four roadside computations. The specific area sources and roads for which the computations are made should be identified on an accompanying site plan or other mapping of the project area. Additional copies of this form may be used if necessary.

* Line and area source impact is indicated on this form as the maximum concentration of air quality standard related contaminants expected to occur during a single year as the result of project emissions. Impact calculations are based on simplified, manual dispersion calculations and statistical techniques with conservative input values. Impact is analyzed on a regional and local basis for project emissions alone and on a roadside basis for total project and non-project emissions. An impact is given for each of the averaging times appropriate to a given standard. By itself, this information is considered sufficient as a first approximation of the extent to which air quality will be degraded by the project alone. Determination of the significance of the impact should be made by an air pollution control agency or qualified consultant with a consideration of projected background concentrations resulting from non-project emissions.

COUNTY OF ALPINE

FINAL

ENVIRONMENTAL IMPACT REPORT

FOR

BEAR VALLEY MASTER PLAN

Submitted

October 26, 1978
&
Revised
December 28, 1978

OWNER

BEAR VALLEY POLICY COMMITTEE
% Perry Walther
P.O. Box 1135
Bear Valley, California 95223
(209) 753-2327

WRITERS OF FINAL EIR

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TABLE OF CONTENTS

LETTERS OF COMMENTS AND RESPONSES

TABLE OF CONTENTS CONT'

Other Documents which are a part of this Final but not included herein:

MINUTES OF HEARING ON DRAFT EIR
held on September 28, 1978
October 26, 1978 & November 30, 1978
DRAFT ENVIRONMENTAL IMPACT REPORT
Submitted June 29, 1978

RICHARD G. SALTER, *AIP*
The Land Use Group
Area Code (916) 441-1722

September 11, 1978

To: Each Member
Alpine County Planning Commission

Re: Bear Valley Environmental Impact Report

Action Requested: To add, modify or delete information summarized herein; Responses from project developer will lead to the preparation of the Final EIR.

A. LAND USE

At the 8-31-78 public hearing, testimony by the proponents indicated a lack of certainty on density location and housing mix. Also, the Development Plan (May 1978) was stated to be unworkable in the area south of Highway 4 (streets, lotting grades, etc).

Should the Planning Commission decide to eliminate single family dwellings, then multi-family clusters with parking plan should be a new exhibit

Because "trade-offs" are under discussion (single family for condo-mult) in areas not yet defined, overall EIR review can only be related to more definite information and plan. Special concern is high density changes north-west of the lake and over-the-snow travel problems. Also, should the density be the "same" under an alternative plan not yet developed?

B. SEWAGE

Capacity:

1. Needed is an estimate of growth of the entire sewage service area; Bear Valley, Mt. Reba and Lake Alpine (capacity and flows). Will Bear Valley pre-empt Lake Alpine and Mt. Reba's allocations?

2. Is inflow/infiltration a treatment factor?

POST OFFICE BOX 147 ☐ SACRAMENTO, CALIFORNIA 95801

Member: American Institute of Planners

B. SEWAGE

Costs:

1. Estimate the costs of improvement to the existing treatment plant, if any. Is there a sinking fund for other than maintenance?

2. Estimate the required future improvement costs of collection/treatment of effluent at build-out.

3. Estimate the financial impact on the system in servicing the south of Highway 4 development at the approximate 454 unit density.

4. Project revenues and expenditures for maintence, operation and plant improvements: present and future.

5. US FOREST LANDS: What are lease conditions and terms of lease for treatment, storage and disposal?

C. WATER

Same as for sewage: capacity and costs

D. SOLID WASTE

Costs:

1. State method (s) and costs for disposal. What will be the amount of garbage fees to be colledted? What will be Alpine County"s costs, if any?

E. PARKING

Winter Conditions

1. Should condominiums, lodge units be the alternative land use south of Highway 4?
How will they be designed and where will parking be provided?

2. Explain method of snow removal and regeme during and after snowstorms. What are the average yearly costs and sources of revenue from CSA #1?

3. In selecting a "most likely" ski lift alternative, what will:

   a. be the Forest Service responsibility (page 96) for parking facilities?

RICHARD G. SALTER, *AIP*

Major discussion item: An over-the snow transportation system.

E. Parking (Con't.)

b. New parking needs be south of Highway 4. Will this impact unfairly upon present Bear Valley residents?

4. Incorporate US Forest Service comments by Don Strikker on parking. What is the impact on timber from snow removal: Mitigation measures?

a. What are the impacts of snow removal--plowing, blowing and stacking?

F. ECONOMIC

1. Needed is a cost/revenue statement that expresses 1978 conditions along with a 5 and 10 year projection. Costs should include money amounts necessary to bring water, sewer, roads maintenance and on-going County administrative costs... (Sheriff, library, fire protection, etc. up to 1978 requirements: 1983 and 1988 projections... How will revenues be derived and how much?

2. Require a periodic up-dating of the EIR as a condition to subsequent Use Permits.

G. OTHER NOTES:

1. Geology: "The more seismically sensitive lands... <u>would</u> remain in open space. Will they?

2. Soils: "Seasonal limits <u>should</u>...be June 15 through October 15".. Need positive mitigating action statement

3. Drainage & Flood Control

"No living quarters <u>should</u> be allowed at ground level (of the dam)". This should be ensured through design and use permit approval

Note: The Division of Dam Safety (Mr. Tom Patton) reports that the dam is sound and is inspected annually.

RICHARD G. SALTER, *AIP*

4. VEGETATION: Mitigation: again, language does not imply an action by developer to mitigate through design and approval of use permits. What private action to mitigate is selected?

5. FIRE HAZARD:

Is another fire fighting facility needed?

6. WILDLIFE:

"Meadows and riparian lands <u>should</u> be avoided"..

Page 29, paragraph 3... alternatives needs to be quantified and explained

7. AIR QUALITY

What mitigating measures are available and controllable by the developer?

What public action is required to reduce emissions, if any.

Note: State Air Resources Board staff have no comments on the EIR.

8. WATER QUALITY:

What mitigating measures are proposed?

9. AESTHETICS:

What specific actions are proposed by developers? Berms-cluster development-tree removal- utilities?

10. ARCHAEOLOGY:

What are the conclusions of the report? all "findings" are in proposed areas for development. Developers intend to preserve historical site south of Highway 4.

11. TRAFFIC:

What traffic control measures will be required? Any dedications for widening of Highway 4?

Other County services: police, courts, schools, etc. need further discussion as part of economic impacts. School site "trade" status?

US Forest Service comments are enclosed for review.

Bear Valley Residents, Inc. EIR review is also enclosed.

RICHARD G. SALTER, *AIP*

RESPONSES

A. Land Use

The revised development plan following this page shows the density location and housing mix proposed by the project proponents. Overall project density is the same under this plan as originally proposed. The increase in multi-family* units over single-family units will minimize the areal extent of disturbance on the property by approximately 19%. (See derivation in response under "Wildlife".)

Additional density proposed in the northeast area of the property is a result of homeowners requests for winter parking. Also some of the units objected to by the homeowners at the east end of Bear Lake were moved to the northeast area. Higher density here will assist in making over-the-snow transportation more feasible to the northern extremities of Bear Valley to existing and proposed developments.

Prior to development in any sub-area (MF-16, etc.) a precise plan must be prepared and approved by the County.

*Multi-family units include: Apartments; condominiums; townhouses; clusters; etc.

PROJECT SUMMARY

BEAR VALLEY DEVELOPMENT PLAN

General Development Plan
North Side

Single Family Parcel	Acerage	Density	Units	Beds 6/Unit	Cars 2/Unit
SF 1	52.8	1.1	59	354	118
SF 2	200.0	1.9	389	2334	778
SF 3	6.9	1.1	8	48	16
SF 4	12.7	2.0	26	156	52
SF 6	6.2	2.1	13	78	26
Sub Total	278.6		495	2970	990

Multi Family Parcel	Acerage	Density	Units	Beds 4/Unit	Cars 1.5/Unit
MF 1	.7	22.8	16	64	24
MF 2	3.9	15.4	60	240	90
MF 3	4.1	17.6	72	288	108
MF 4	.7	28.6	20	80	30
MF 5	5.4	18.5	100	400	150
MF 6	.5	24.0	12	48	18
MF 7	---	---	---	---	---
MF 8	---	---	---	---	---
MF 9	3.5	8.6	30	120	45
MF 10	3.8	11.8	45	180	68
MF 11	2.5	4.8	12	48	18
MF 12	33.1	3.4	113	452	170
MF 13	---	---	---	---	---
Sub Total	58.2		480	1920	721

Village Center	Acerage	Density	Units	Beds 2/Unit	Cars 1/Unit
VC 1	2.5	---	62	124	62
VC 2	15.2	---	500	1000	500
Sub Total	17.7		562	1124	562

Commerical	Acerage	Density	Units	Beds 2/Unit	Cars 1/Unit
C 1	.1	---	14	28	14
C 2	.7	---	---	---	---
C 3	1.5	---	---	---	---
Sub Total	2.3		14	28	14

North Side Total	356.8		1551	6042	2287
80% Occupancy				4834	1830

Single Family Parcel	Acreage	Density	Units	Beds 4/Unit	Cars 2/Unit
SF 5	39.4	1.1	44	264	88
Sub-Total	39.4		44	264	88

Multi Family Parcel	Acreage	Density	Units	Beds 4/Unit	Cars 1.5/Unit
MF 14	4.6	7.4	34	136	51
MF 15	4.1	13.2	54	216	81
MF 16	24..	4.6	112	445	159
MF 17	25.7	7.3	187	745	289
MF 18	14.5	4.1	59	236	88
Sub-Total	73.2		446	1778	668

Southside Total	112.6		453	1900	701
80% Occupancy				1520	561
General Development Plan Total	467.9		2041	8064	3037
80% Occupancy				6451	2430

Community Services

CS1	P.G.& E. Substation	0.3 Acres
CS2	Elementary School	2.9
CS4	Sheriff & Fire Station	0.4
CS5	Pacific Telephone	0.2
CS10	Heliport	2.0
CS11	School	5.9
CS12	Sewage Treatment	127.6

Recreation

Rec1	Tennis Facility	13.0 Acres
Rec2	Stables and Arena	3.3
Rec3	Homeowner's Center	2.2
Rec4	Beach - Picnic Area	2.1

Parking Facilities

P1	Short Term Parking	0.9 Acres
P2	Off-Site Parking	5.0
P3	Transportation Center & Parking	5.0
P4	South side Off-Site Parking	5.0

B. SEWAGE

Capacity

1. The following are estimates of the ultimate future capacities from the Service Area currently in the Bear Valley Water District.

Source of Sewage	Summer Flow (gpd)	Winter Flow (gpd)
Bear Valley (Minimun Flow Fixtures for Future Development)	326,000	326,000
Mt. Reba (Minimun Flow Fixtures)	<1,000	25,000
USFS (Lake Alpine) (Contract Maximums)	40,000	<4,000
Lake Alpine Homeowners (37 Homes @ 200 gpd ea.)	7,400	7,400
TOTALS	374,400	362,400

Notes:
1. BVWD authorized its attorney to draft an ordinance requiring mimimum flow fixtures on all new development to be discussed and hold public hearings for adoption prior to end of year.
2. Maximum treatment plant capacity is currently 500,000 average daily flow.
3. Flows from Bear Valley assume all future development to be based on minimum flow per note above.

2. Infiltration-Inflow at Bear Valley has not been a treatment factor.

Costs

1. Treatment Costs have already been spent by the BVWD thru a General Obligation Bond. Mt. Reba, the USFS, the Lake Alpine

Homeowners and the future development of the South Side have or will be required to pay fees in accordance with the equivalent bond amounts paid on the North Side. Such as the average homeowner on the North Side will pay about $540 per residence and all future development will pay the same.

These additional fees will be placed in a sinking fund for expansion, if necessary, major repairs, or anything else the board can legally use the funds for.

2. Assuming treatment and disposal regulations remain the same and based on current value of money, future collection/treatment costs are as follows:

Item	Estimated Cost per Residence
Collection System	$3200 per residence
Treatment System	540 per residence
Connection Fee	300 per residence
TOTAL ESTIMATED COST	$4040 per residence

3. Financial impact on the system in serving the 454 units is as follows:

M & O COSTS	Annual Costs North Side (1598 Units)	Annual Costs South Side (454 Units)
Collection System	$ 56,500	$ 9,700
Treatment System	126,000	21,600
Pump Stations (New)	-0-	1,700
TOTALS	$182,500(1)	$33,000
Equivalent Annual Cost per residence	$ 69	$ 73
Combined Annual Cost per residence	$70	
Fees(1) Annexation Fees ($540/res.)	-	227,000
Connection Fees ($300/conn.)	290,400	136,200
TOTAL FEES TO SINKING FUND	$290,400	$363,200

(1) Based on BVWD 1977-78 budget and rules and regulations.

4. Projected revenues and expenditures for M & O and plant improvements are as follows:

Item	1977-78	5 yrs.	10 yrs.
Income (Monthly Fees) (1)	$24,050	$76,700	$119,900
(Conn.&Annex. Fees)(2)	11,060	30,000	84,000
Expenditures (3)	32,955	56,000	78,000
Plant Improvements (4)	-0-	33,000	66,300
Available for other improvements		17,700	59,600

(1) Assumes rate increase of 7% per year.

(2) Assumes 100 units added per year all on North Side until complete.

(3) M & O costs to increase 7% per year and add 1 man at end of 5 years.

(4) Spray field to be constructed in stages as needed.

(Assume every two years add 10% of spray field)
(Original cost $327,800 increased @ 15% per year)

5. No USFS lands are now being utilized.

C. WATER

Capacity

1. The following are estimates of the alternate water needs of the service area which includes the north and south side of State Highway 4 which is shown in the development plan and is under the ownership of Lake Alpine Water Company, a private water company controlled by the State of California, Public Utilities Commission (PUC).

Area of Need	Estimated Annual Flow
N/S Bear Valley	277 Ac. Ft.
S/S Bear Valley	79 Ac. Ft.
Allowance for loss & Fire Water	40 Ac. Ft.
TOTAL ANNUAL NEEDS	396 Ac. Ft.

Note: Lake Alpine Water Co. cannot expand service area to Mt. Reba or the Lake Alpine area without proving additional capacity and obtaining approval from the PUC.

2. Losses for exfiltration are adequately included in 1. above.

Costs

1. Costs of improvements to the treatment plant, if additional surface water is used, is as follows:

A. Present Treatment Plant Capacity = 200 gpm

B. Future Capacity Required from all Sources is about = 300 gpm

C. Costs to Provide Additional Treatment = $60,000 (1)

(1) Based on current 1978 prices.

It must be noted that if the springs can be developed to their ultimate capacity and one well could be developed in or about the meadow area the costs would be approximately as follows:

A.	Spring improvement	=	$5,000
B.	Well and Pump	=	9,000
C.	Chlorination	=	3,500
	TOTAL COSTS		$17,500

2. Ultimate improvement costs for distribution, storage and treatment are:

A.	Distribution system per residence	=	$1,435
B.	Storage (1,500,000 gal)	=	1,026
C.	Treatment System ($60,000)	=	130
	TOTAL COST PER RESIDENCE	=	$2,591 (1)

(1) Appears about right for area. Individual items A,B & C will vary depending upon location, density and parcel configuration.

3. Financial impact on the water system in serving the 454 units is as follows:

M & O	Annual Costs North Side (1598+Comm)	South Side (454)
Distribution	$ 46,000	$ 7,900
Treatment	184,000	31,700
TOTALS	$230,000	$39,600
Equivalent Annual Cost per residence	$ 86.88	$ 87.22

Since this system is owned and operated as a private company annexation and connection fees cannot be charged, therefore the only financial burden on the resident is the construction costs which are outlined in paragraph 2 above.

4. Projected revenues and expenditures for M & O and plant improvements are as follows:

Item	1977-78	5 yrs.	10 yrs.
Income (1)(2)	$31,660	$101,100	$210,700
Expenditures (3)(4)	30,230	96,600	128,600
Depreciation (5)	8,000	8,000	8,000
Connections (2)	348	848	1,348

(1) Assumes rate increase of 7% per year.

(2) Assumes 100 units added per year all on north side until complete.

(3) M & O costs to increase 7% per year. Full time operator required at 1000 connections.

(4) Capitol expenditures not included (See item 3 above)

(5) Depreciation is figured on current equipment installed. Future equipment installed by the developer cannot be depreciated nor can it be used as a profit base.

5. Three springs and three storage tanks are currently on USFS land by permit which expires in 1991. (See USFS letter dated September 12, 1978)

Since the facilities are located on public lands and will have been for some 25 years at the end of 1991, it is seriously doubted that a higher and better use could be justified for revoking the

permit. There is nothing more beneficial than the enjoyment by the public of having a pure source of water at the pressures necessary to sustain life as we know.

D. Solid Waste

Costs:

As stated in the Draft E.I.R., pgs. 90-91, solid waste generated by the project will be disposed of in a landfill in Calaveras County by a special agreement with the Calaveras County Department of Public Works. At present, costs to Alpine County for usage of the landfill are based upon the Department of Public Works' projections of waste generation. The proposed development is anticipated to generate up to three times the amount of waste presently generated in Bear Valley. Alpine County would therefore be charged an additional $18,756 per year (three times the '77-'78 charges), plus increases due to operating expense increases, for use of the Calaveras County landfill for solid waste disposal from the project if the current method of funding continues. However, it is suggested that fees for landfill usage be paid by users as part of the garbage collection fee rather than being imposed upon Alpine County.

Garbage collection for the proposed project will be by a private contractor. At present, fees for single family residence garbage collection are $7 per month for weekly pick-up of one 30 gallon can. Bear Valley Lodge pays $.80 per 30 gallon bag. Multi-family and commercial facilities pay a monthly rate based on estimated waste generation. Fees for garbage collection are anticipated to be approximately the same or slightly higher per unit when the project is complete.

Additional impacts and mitigations regarding solid waste disposal are as described in the Draft E.I.R. pgs. 90-91a.

E. Parking

1. The revised development plan shows multi-family units as the alternative land use for most of the area south of Highway 4. We do not believe that lodge (hotel) units would be appropriate here. Parking for multi-family units will be provided adjacent to each unit within the areas designated "Multi-family". Design layout and specifications will be subject to review during the tentative map approval process. Future development designs will be required to minimize the impacts on visual quality and vegetation disturbance. These impacts have been maximized in the E.I.R. so as not to understate them.

Approximately 600 parking spaces are proposed south of Highway 4 on property now owned by the School District (see revised plan). In addition, parking is proposed along the loop road-way serving the south side of the Highway. A total of 500 spaces would be available here in the winter under this plan. In either case parking will be provided to meet the minimum standards of the County (702 spaces required).

2. Snow removal will begin as rapidly as possible in the event of a snow storm.

Snow will be stored on the berms and in the tree fringes of the proposed parking areas. Early removal will mean blowers are moving snow instead of ice hence the impact on the abutting trees will be less.

Yearly cost for snow removal via the C.S.A. is about $49,500. Other costs and revenue sources for C.S.A. No.1 are shown on the following pages which are taken from the 1977-78 County Budget.

3.a. The Forest Service will not be responsible for providing parking facilities for Bear Valley residents and guests who will utilize the ski lift to Mt. Reba.

A subsidized over-the-snow shuttle system should be required to be developed to transport Bear Valley residents and guests to the ski lift and to and from residence areas. In addition, a day use snowmobile parking lot should be made available for Bear Valley residents and guests at the ski lift until such time as snowmobiles can be replaced with a shuttle system.

b. As shown in the revised development plan, a 5 acre site, owned by the Alpine County School District, is proposed to be utilized for south area parking. By establishing a zone 2 under C.S.A., designated as that area south of Highway 4, the impact of funding snow removal and parking facility maintenance will be contained within that area.

4. Responses to comments from the U.S. Forest Service have been included herein.

The impact on timber from snow removal is anticipated to be minimal as evidenced by healthy trees along Creekside Drive where snow removal has taken place in past years. It may be necessary to remove some trees along the roadways to allow for snow removal. However, this could be accomplished only when and where necessary, rather than throughout the project site.

State Controller
County Budget Act
1966

COUNTY OF [illegible]
STATE OF CALIFORNIA
[illegible] DISTRICT BUDGET
(Name)
BUDGET FOR THE FISCAL YEAR 19 [illegible]

DISTRICT BUDGET FORM
SCHEDULE 13B
GOVERNING BOARD
Board of Supervisors [ ]
Other [ ]

SUMMARY DATA

FUND	NET ASSESSED VALUATION		ALLOWANCE FOR DELINQUENCY
[illegible]	Secured Roll: [illegible] ; Unsecured Roll: 190,370		Secured: [illegible] %; Unsecured [illegible] %
	Secured Roll:	; Unsecured Roll:	Secured [illegible] %; Unsecured [illegible] %
	Secured Roll	; Unsecured Roll	Secured [illegible] %; Unsecured [illegible] %

FUND	Fund Balance as of June 30 19 77 Actual [X] Est. [ ]	LESS FUND BALANCE—UNAVAILABLE: Reserve for Encumbrances	Uncancelled General Reserves and Reserves Within ACO Funds	Other Reserves	Inter-Fund Transfers	Fund Balance Available for Financing Budget Year Requirements	Estimated Revenues (Other Than Current Property Taxes)	Total Available Financing
General	8,503	7,000				15,503	10,250	25,753

FUND	REQUIREMENTS: Expenditure Appropriations	Provisions for Reserves (Increases or New Reserves)	Total Requirements	Available Financing	MEANS OF FINANCING: Amount to be Raised by Current Property Tax Levy: Total	Unsecured	Secured	Tax Rate on Secured Roll Actual [X] Est. [ ]
General	37,818		37,818	25,753	12,065	1,150	10,915	.30

ANALYSIS OF REVENUES BY SOURCE
(Other than Current Property Taxes)

SOURCE—DESCRIPTION (1)	Actual Revenues 19 75 76 (2)	Actual [X] Estimated [ ] Revenues 19 76 77 (3)	Revenue Estimates Requested [X] Recommended [ ] 19 77 78 (4)	Approved/Adopted by the Governing Board 19 77 78 (5)	Fund (General or Operating unless otherwise indicated) (6)
Prior Secured Taxes	1,327.38	7,439.86	9,000	9,000	
Interest	945.77	1,189.59	1,200	1,200	
State Homeowners Exemption	249.97	405.49	700	500	
State Business Inventory Exemption	2,540.70		500	550	

EXPENDITURE DETAIL

EXPENDITURE CLASSIFICATION (7)	Actual Expenditures 19 75 76 (8)	Actual [X] Estimated [ ] Expenditures 19 76 77 (9)	Expenditure Estimates Requested [X] Recommended [ ] 19 77 78 (10)	Approved/Adopted by the Governing Board 19 77 78 (11)	Fund (General or Operating unless otherwise indicated) (12)
SALARIES AND EMPLOYEE BENEFITS					
7010 Salaries and Wages	2,000.00	6,329.36	9,876	11,304	
7020 Social Security	117.00	370.27	578	661	
7027 Public Employee's Retirement System		636.65	1,244	1,424	

State Controller
County Budget Act
1968

COUNTY OF ALPINE
STATE OF CALIFORNIA
COUNTY SERVICE AREA #1 (Name)
DISTRICT EXPENDITURE DETAIL—Continued
BUDGET FOR THE FISCAL YEAR 19[illegible]

DISTRICT BUDGET FORM
SCHEDULE 13C
GOVERNING BOARD
Board of Supervisors
Other

EXPENDITURE CLASSIFICATION	Actual Expenditures 19 75, 76	Actual Estimated Expenditures 19 76, 77	Expenditure Estimates Requested Recommended 19 77, 78	Approved Adopted by the Governing Board 19 77, 78	Fund (General or Operating unless otherwise indicated)
(7)	(8)	(9)	(10)	(11)	(12)
SALARIES AND EMPLOYEE BENEFITS					
7030 Group Health Insurance		225.20	46.	4,1	
TOTAL SALARIES AND EMPLOYEE BENEFITS	2,117.00	7,561.48	12,060	13,85[illegible]	
SERVICES AND SUPPLIES					
7060 Communications	62.25	8.90	200	200	
7100 Insurance	97.45	47.71	75	75	
7170 Office Expense			300	300	
7180 Professional and Specialized Services					
1. Snow Removal	25,567.66	20,480.00	20,500	20,500	
2. Snow Grooming and Packing	3,000.00	3,000.00	3,000	3,000	
3. Bear Valley Study	7,635.82				
4. Mosquito Abatement	2,000.00	1,600.00	1,800	300	
5. Bear Valley Parking Lot		4,651.23			
6. Fire Hydrants		1,500.00			
7. Other	350.00	193.00			
7190 Publications and Legal Notices	274.67		100	100	
7250 Transportation and Travel			300	300	
TOTAL SERVICES AND SUPPLIES	39,987.85	31,480.84	26,275	24,775	
FIXED ASSETS					
7370.1 Bear Valley Fire House	16,484.00				
7370.2 Snow Cat			13,243	13,243	
TOTAL FIXED ASSETS	16,484.00		13,243	13,243	

53.6% of total budget for snow removal

State Controller
County Budget Act
1966

COUNTY OF ALPINE
STATE OF CALIFORNIA
COUNTY SERVICE AREA #1 (Name)
DISTRICT EXPENDITURE DETAIL—Continued
BUDGET FOR THE FISCAL YEAR 19 77 . 78

DISTRICT BUDGET FORM
SCHEDULE 13C
GOVERNING BOARD
Board of Supervisors ☐
Other ☒

EXPENDITURE CLASSIFICATION	Actual Expenditures 19 75 . 76	Actual ☒ Estimated ☐ Expenditures 19 76 . 77	Expenditure Estimates Requested ☐ Recommended ☐ 19 77 . 78	Approved Adopted by the Governing Board 19 . .	Fund (General or Operating unless otherwise indicated)
(7)	(8)	(9)	(10)	(11)	(12)
EXPENDITURE TRANSFERS AND REIMBURSEMENTS					
7390 Reimbursements					
1. Mosquito Abatement			(200)		
2. CETA				(13,805)	
TOTAL EXPENDITURE TRANSFERS AND REIMBURSEMENTS					
TOTAL COUNTY SERVICE AREA #1	58,588.85	59,042.32	51,938	37,818	

The impacts of snow removal-plowing, blowing, and stacking, are as follows:

Blowing the snow on the trunks of trees within about 30 feet from the area to be cleared breaks off tree limbs, removes bark and makes the trees more suceptible to bug infestation. This effect may be mitigated if snow is blown early in the storm before it turns to ice. An alternative which is not considered advisable from an aesthetic standpoint would be to remove all trees within 30-40 feet of areas subject to snow removal. Most lower story vegetation seems to survive the advent of snow blowing and stacking. Small trees, however, seem to become stunted as a result of this activity.

F. Economic

1. Water and Sewer costs are not anticipated County expenses. All costs associated with the water and sewer system will be paid by the developer.

County administrative costs have been set forth in the D.E.I.R. for a 20 year projection.

A 10 year projection is set forth hereunder. Basis of the projections are the same as those used in the D.E.I.R. They assume Bear Valley will be built-out in 20 years.

County Service Area #1 Revenue Summary

Revenue Source	Now (1978-79)	Alpine Co. in 10 Years Without Further Development at Bear Valley	Alpine Co. in 10 Years With Further Development at Bear Valley
Property taxes	$32,117	$39,150 (2)	$66,821 (4)
Other	$10,000 (1)	$14,802 (3)	$14,802 (3)
TOTALS	$42,117	$53,952	$81,623

(1) From County Budget, excludes carry over.
(2) Expands Bear Valley property tax revenue at 2%/yr.
(3) Expands present funds by 4.0%/yr.
(4) Total revenue at ½ buildout = $373,125., using 6.7% going to CSA #1 = $24,999 + property taxes without futher development, $41,822 = $66,821.

School Revenue Summary per Student

	Now (1978-79)	In 10 Years With Further Growth In Bear Valley and In The County. (1)
Property tax school revenue/student in Bear Valley	$1276 (2)	$1671 (4)
Property tax school revenue/student in Alpine Co.	$594 (3)	$605 (5)

(1) Figures based on an Alpine County 1990 population projection of 1500 by the State Department of Finance and ½ buildout of the proposed new Bear Valley Master Plan development.

(2) 45% of the total Countywide school revenues from property taxes is from Bear Valley. 45% x $113,420 = $51,039 40 students reside in Bear Valley.

(3) Countywide school revenues from property taxes = $113,420. Total number of students in the County is 191, source Alpine Co. Unified School District.

(4) Total appraised value of ½ buildout of proposed new Bear Valley Master Plan development = $37,312,500 as shown in the section on Police Protection in the Draft E.I.R. Total revenue would therefore be $373,125, 23.5% of which would be for schools = $87,684 + present school revenues, $51,039 = $138,723. Total student population in Bear Valley in 10 years = 83

(5) Additional school revenues from Bear Valley in 10 years = $87,684 + projected Countywide school revenues in 10 years - $113,420 x 1.61 = $182,606 (61% increase projected by State Dept. of Finance, i.e. population increase from 930 - 1500) Total = $270,290. Additional students in Bear Valley in 10 years = 43 + projected number of students in the County in 10 years (26.9% of 1500) 404 = total 447 students.

Revenue Source	Now (1978-79)	Alpine Co. in 10 Years Without Further Development at Bear Valley	Alpine Co. in 10 Years With New Bear Valley Master Plan Developed to the Half Way Point.
Property taxes	$336,548	$438,246 (1)	$698,687 (6)
Sales taxes	$35,000	$51,800 (2)	$228,960 (7)
Hotel/Motel tax	$20,000	$29,605 (3)	$111,730 (8)
Other taxes, licenses, permits, fines, forfeits, penalties, use of money and property, charges for services, etc.	$126,195	$186,800 (4)	$186,800 (4)
Aid from other agencies	$1,001,000	$1,173,197 (5)	$1,173,197 (5)
TOTALS	$1,518,743	$1,879,648	$2,399,374

(1) Expands non-Bear Valley property tax revenue ($185,101) at 3.2%/yr and Bear Valley tax revenue ($151,447) at 2%/yr., basis 75-76 assessed value ratio - $253,633 + $184,613 = $438,246.
(2) Expands present sales tax revenues by 4%/year.
(3) Expands present hotel/motel tax revenues by 4%/year.
(4) Expands present funds by 4%/year.
(5) Expands present other government aid by 1.6%/yr.
(6) Property taxes without further development = $438,246 + property taxes available to County from ½ buildout of new Bear Valley Master Plan - total appraised value of ½ buildout - $37,312,500. Total revenue = $373,125, 69.8% (from 78-79 split) of which would go to the County = $260,441 + $438,246 = $698,687.
(7) Sales tax generated at ½ buildout = 0.9% x $19,684,500 = $177,160 + sales tax predicted without further development, $51,800 = $228,960.
(8) Basis: 180 lodge units and 120 condominium units in rental pool at ½ buildout; 50% year round occupancy; $30./day average rate and 5% tax = $82,125 + hotel and motel tax predicted without further development, $29,605 = $111,730.

Estimated County Expenses For Bear Valley

	Now (1978-79)	In 10 Years With Further Development at Bear Valley (1)
Police Protection	$75,000	$112,500
Fire Protection	$50,000	$150,000
Road Maintenance	$48,750 (2)	$65,625 (3)
Snow Removal	$42,500	$71,012 (4)
Library	$ 3,000	$42,500
Public Protection Superior Court, Judicial Court, etc.	$23,333	$31,500 (5)
County Administration; Building Dept., County Clerk, Auditor, Probation Office, Treasurer, Assessor, Elections, Planning Commission	$77,119	$104,111 (5)
Health, Sanitation	$23,991	$32,388 (5)
Public Assistance, Welfare	$25,212	$34,036 (5)
TOTAL	$368,905	$643,672

(1) ½ buildout of the proposed new Bear Valley Master Plan development.
(2) Existing public road mileage = 6.5 mi.
Maintenance costs/year = $1500/mi.
Annualized replacement cost/year = $6000/mi.
6.5 x $7500 = $48,750.
(3) New public road mileage = 2.25 mi.
Maintenance costs per mile/year = $1500
Annualized replacement cost/yr = $6000/mile.
(4) New road estimated to be plowed - 1.8 miles x 20' wide x $.15/sq. ft.

(5) Based on 1.35 x increase with ½ buildout based on increase in visitor days and permanent population projections - rate - expressed in 78-79$.

F. Economics

2. We are opposed to updating of the E.I.R. with subsequent use permits for impacts covered in this E.I R. The Environmental Quality Act will determine when a new or updated E.I.R. is required.

no page 25

G. OTHER NOTES

1. Geology: It is the full intent of Bear Valley Company in this presentation to have all sensitive areas remain as open space. The general plan, as modified, will maintian the areas as open recreation lands. In addition to the above, as each unit or area is developed, a preliminary soils and geologic investigation is required and if any other areas are found they also will be placed in open recreation lands.

2. Soils: Seasonal limits for work involving earthwork shall not start before June 15 and reseeding must be completed by October 15. Earthwork which has not been reseeded or otherwise protected by October 15 shall be "winterized" by one or more of the following:

a) Cover exposed earth with straw

b) Construct basins for silt retention

c) Conduct runoff through forest litter via sheet flow

Prior to reseeding all smooth or compacted surfaces shall be scarified or roughened.

3. Drainage and Flood Control: No living quarters shall be allowed at ground level for any structure within the flood plain or as identified on the general plan as MF 10, VC 2, CS 10, MF 14, MF 15 and the following portions, below elevation 7045' MSL, of MF 16, and MF 18.

Note: Commercial establishments may be occupied at ground level so long as there are no attached living quarters.

4. Vegetation:

Mitigations which have been incorporated into the development plan to minimize the impact on vegetation are as follows:

1. Future tentative maps will be required to show all trees over 18" in diameter and an effort will be made to preserve large conifers in specific building site, parking lot and roadway design.

2. The revised development plan shows conversion of more dwelling units into multi-family, reducing the number of single-family units proposed and limiting the extent of disturbance.

Other proposed mitigations, as stated in the Draft E.I.R. pgs. 18-20, will be required as conditions of approval of tentative maps where deemed necessary by the Alpine County Planning Commission.

5. Fire Hazard: It was suggested by the Fire Chief, Mr. Ted Merry, that two (2) additional one-man fire houses be established at or near REC-3 and SF 7 for winter protection. (See Pages 78 & 79 of DEIR) It was also felt by Mr. Merry that the additional taxes paid by the future homeowners in these areas could support the costs involved.

6. Wildlife:

The revised development plan shows a conversion of more dwelling units into multi-family, reducing the number of detached single-family units proposed and limiting the extent of disturbance.

Former development area SF-8 has been reduced so that more of the meadow is preserved in its natural state. Elimination of cattle will provide additional habitat and feed for wildlife. Protection of the prime archaeologic zone in the north portion of SF-8 will result in the prohibition of development and trespass in this area.

The revisions mentioned have been incorporated into the development plan as shown on the revised map. The substitution of multi-family for single-family detached housing while retaining the overall yield at the site, is anticipated to reduce the areal extent of human impact by approximately 19%*.

* Basis:

Multi-family units - Average disturbance-

building	-	1000 sq. ft.
parking	-	450 sq. ft.
patio	-	750 sq. ft.
on site road-		300 sq. ft.
TOTAL	-	2500 sq. ft./unit

Single-family units - Average disturbance-

building	-	2000 sq. ft.
parking, driveway	-	800 sq. ft.
patio	-	900 sq. ft.
garage	-	500 sq. ft.
on site road-		1800 sq. ft.
TOTAL	-	6000 sq. ft./unit

Original development plan-

231 single-family dwelling units x 6000 sq. ft./unit = 1,386,000 sq. ft.

649 multi-family dwelling units x 2500 sq. ft./unit = 1,622,500 sq. ft.

TOTAL DISTURBANCE = 3,008,500 sq. ft. = 69 acres

(Continued next page)

Revised development plan-

79 single-family dwelling units x 6000 sq. ft./unit = 474,000 sq. ft.

791 multi-family dwelling units x 2500 sq. ft./unit = 1,977,500 sq. ft.

TOTAL DISTURBANCE = 2,451,500 sq. ft. = 56 acres

13 acres less disturbed with revised plan

69 acres disturbed with original plan

= 19% reduction in disturbance

7. Air Quality

Mitigating measures which are available and controllable by the developer are as follows:

1. Use of water trucks in construction sites for dust suppression.

2. Implementation of a bikeway plan throughout the project as a strategy to reduce automobile emissions by reducing the number of trips by private automobiles.

3. Implementation of a shuttlebus system providing transportation to the village center and recreational areas when it becomes economically feasible.

4. Installation of efficient wood burning stoves by building contractors to minimize emissions from burning.

Public action which is required to reduce emissions includes:

1. Utilization of mitigation measures which may be provided by the developer such as bikeways and shuttlebus.

2. Minimizing emissions by minimizing trips by private automobiles or snowmobiles.

All of the foregoing may be unnecessary though because predicted air quality at full development (see D.E.I.R.) will not present any problems.

8. Water Quality: Mitigation measures proposed are as follows:

A. Construction activities involving disturbance of soil will use water as a dust palative and maintain moisture in the ground to minimize blowing dust.

B. Following construction all disturbed areas will be planted with native grasses and drainage facilities installed.

C. Roofs shall be constructed using natural woods and painted metals eliminating contact between weather and oil or tarred roofing products. Either drains shall be used, to eliminate ground splatter and erosion or concrete or native rock energy dissipators shall be used along all drip lines to minimize erosion.

D. Sand traps and leaching beds shall be constructed to accept runoff from each parking area. Sand traps shall be able to accept and store 20 cubic feet of sand without overflowing into leach fields. Fields shall be a minimum of 25 feet long, 2 feet wide and 2 feet deep below leach lines.

9. Aesthetics

The developer intends to minimize the impact on visual quality in the following ways:

1. A vegetated berm will be constructed along Highway 4 as proposed in the Draft E.I.R., page 56.

2. Clustering development in multi-family units will minimize the extent of development and allow for preservation of more of the meadow south of Highway 4 and vegetation throughout the site, generally.

3. An effort will be made to preserve conifers over 12" in diameter in specific building site selection throughout the property.

10. Archaeology

The conclusions of the archaeological report revealed that a total of seven prehistoric sites and one possible historic site exist in the area planned for development. One site, described as a "village" site, consists of a massive flake scatter of approximately 10,000 square meters in surface area. In addition, this site contains 5 bedrock mortar complexes as well as a probable midden development. The archaeologist who conducted the survey believes that this site would qualify for inclusion in the National Register of Historic Places, and that this is the only site of such great significance that preservation should be required. The revised development plan includes modifications to avoid disturbance of this sensitive archaeological site. Appropriate mitigation for this site is "avoidance". Appropriate mitigation for the other archaeological sites is

"preservation". The historical site is less than 50 years old, off the property and no mitigation is therefore proposed.

11. Traffic

There are insufficient warrants to support a grade separated intersection at Highway 4 and the proposed new road into the Village Area. There may be a warrant for installation of a signal at this intersection in the winter but not in the summer. Therefore an intersection at grade without signals is all that is proposed. No dedications for additional rights of way are required. Additional paving for turn movements and for support of snow plows which will be required to shave the snow back for visibility at the intersection will be required.

APPENDIX C

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

PERMIT 21237

Application **5648G** of **Lake Alpine Water Company and County of Alpine c/o Lake Alpine Water Company P.O. Box 5013 Bear Valley, CA 95223-5013**

filed on **July 30, 1927,** has been approved by the State Water Resources Control Board (State Water Board) SUBJECT TO PRIOR RIGHTS and to the limitations and conditions of this permit.

Permittees are hereby authorized to divert and use water as follows:

1. Source: **Bear Creek**

Tributary to: **Bloods Creek thence North Fork Stanislaus River thence Stanislaus River**

within the County of **Alpine.**

2. Location of Point of Diversion (POD)

By California Coordinate System of 1983, Zone 2	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridian
Reba Dam (Bear Lake): North 1,940,509 feet and East 7,121,746 feet	**SW¼ of NW¼**	**7**	**7N**	**18E**	**MD**

3. Purpose of Use	4. Place of Use	Section	Township	Range	Base and Meridian	Acres
Municipal Recreation	**Within the service area boundary of Lake Alpine Water Company.**	**7**	**7N**	**18E**	**MD**	**All**
		18	**7N**	**18E**	**MD**	**All**
		12	**7N**	**17E**	**MD**	**SE¼**
		13	**7N**	**17E**	**MD**	**E½ within Alpine County**

The place of use is shown on map on file with the State Water Resources Control Board dated March 2009.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 0.78 cubic feet per second by direct diversion (not to exceed 175 acre-feet per year), and 220 acre-feet per annum by storage from October 1 of each year to July 31 of the succeeding year.

   The total amount of water to be taken from the source shall not exceed 395 acre-feet per water year of October 1 to September 30.

   (0000005E)

6. This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.

   (0000005I)

7. The total quantity of water collected to storage under this permit and License 11007 (Application 21485) shall not exceed 460 acre-feet per year.

   (0000005M)

8. The capacity of the reservoir covered by this permit shall not exceed 360 acre-feet.

   (0000005N)

9. The amount authorized for appropriation may be reduced in the license if investigation warrants.

   (0000006)

10. Complete application of the water to the authorized use shall be prosecuted with reasonable diligence and completed by December 31, 2020.

    (0000009)

11. Progress reports shall be submitted promptly by permittees when requested by the State Water Board until a license is issued.

    (0000010)

12. Permittees shall allow representatives of the State Water Board and other parties, as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

    (0000011)

13. Pursuant to California Water Code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

    The continuing authority of the State Water Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittees without unreasonable draft on the source. Permittees may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the State Water Board also may be exercised by imposing further limitations on the diversion and use of water by the permittees in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the State Water Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

(0000012)

14. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Board if, after notice to the permittees and an opportunity for hearing, the State Water Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the State Water Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

(0000013)

15. This permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the permittees shall obtain authorization for an incidental take prior to construction or operation of the project. Permittees shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

(0000014)

16. Permittees shall maintain records of the amount of water diverted and used to enable the State Water Board to determine the amount of water that has been applied to beneficial use pursuant to Water Code Section 1605.

(0000015)

17. Permittees shall comply with the following condition that is derived from the executed agreement between the permittees and the South San Joaquin Irrigation District and Oakdale Irrigation District, dated March 20, 2007, and filed with the State Water Board:

    The rights acquired under this permit shall be junior to the rights acquired under the permits issued to South San Joaquin Irrigation District (SSJID) and Oakdale Irrigation District (OID) pursuant to Applications 1081, 3091, 10872, 10978; issued to OID pursuant to Applications 8892, 9666; issued to SSJID pursuant to Application 2524; and claimed by SSJID and OID pursuant to Statement of Water Diversion and Use 4683.

    Inclusion in this permit of certain provisions of the referenced agreement shall not be construed as approval or disapproval of other provisions of the agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

(0000024)
(000000T)

18. Calaveras County Water District and Northern California Power Agency filed protests to Water Right Application 5648G and Petition for Partial Assignment of State Filed Water Right Application 5648 and associated change petitions. In resolution of those protests, Permittees entered into agreements with Calaveras County Water District and Northern California Power Agency entitled "Agreement Resolving Protests of Calaveras County Water District by Calaveras County Water District, County of Alpine, Lake Alpine Water Company" (May 2007) and "Agreement Resolving Protests of Northern

California Power Agency by Northern California Power Agency, County of Alpine, Lake Alpine Water Company" (May 2007). In accepting this permit, Permittees acknowledge the terms of those agreements.

(0000024)

19. Permittees shall consult with the Division of Water Rights and develop and implement a water conservation plan or actions. The proposed plan or actions shall be presented to the State Water Board for approval within one year from the date of this permit or such further time as, for good cause shown, may be allowed by the State Water Board. A progress report on the development of a water conservation program may be required by the State Water Board at any time within this period. All cost-effective measures identified in the water conservation program shall be implemented in accordance with the schedule for implementation found therein.

    The permittees must adopt into their water conservation program (WCP), required under this condition, the best management practices (BMPs) identified in the California Urban Water Conservation Council's Memorandum of Understanding (MOU) regarding urban water conservation in California. The WCP will include the BMPs in effect at the time the plan is developed. Future updates to the MOU will not require changes to the WCP.

    (0000029B)

20. In accordance with sections 1601, 1603, and/or section 6100 of the Fish and Game Code, no work shall be started on the diversion works and no water shall be diverted under this permit until permittees have entered into a stream or lake alteration agreement with DFG and/or DFG has determined that measures to protect fish life have been incorporated into the plans for construction of such diversion works. Construction, operation, and maintenance costs of any required facility are the responsibility of the permittees.

    (0000063)

21. The State Water Board reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the State Water Board concerning availability of water and the protection of beneficial uses of water in the Sacramento-San Joaquin Delta and San Francisco Bay. Any action to change the authorized season of diversion will be taken only after notice to interested parties and opportunity for hearing.

    (0000080)

22. This permit is subject to prior rights. Permittees are put on notice that, during some years, water will not be available for diversion during portions or all of the season authorized herein. The annual variations in demands and hydrologic conditions in the Sacramento - San Joaquin Delta are such that, in any year of water scarcity, the season of diversion authorized herein may be reduced or completely eliminated by order of the State Water Board, made after notice to interested parties and opportunity for hearing.

    (0000090)

23. Before making any change in the project determined by the State Water Board to be substantial, permittees shall submit such change to the State Water Board for its approval in compliance with Water Code section 10504.5(a).

    The State Water Board shall have continuing authority to revoke all or any portion of this permit issued pursuant to Decision 1648 and the partial assignment of Application 5648, if permittees fails to diligently place water to beneficial in accordance with condition 10. All or any portion of the revoked assignment shall return to the State Water Board and be available for the release or assignment to permittees or others consistent with the requirements of Water Code sections 10500, et seq.

    (0000119)

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefore shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

STATE WATER RESOURCES CONTROL BOARD

Victoria A. Whitney, Chief
Division of Water Rights

Dated: JUN 10 2009