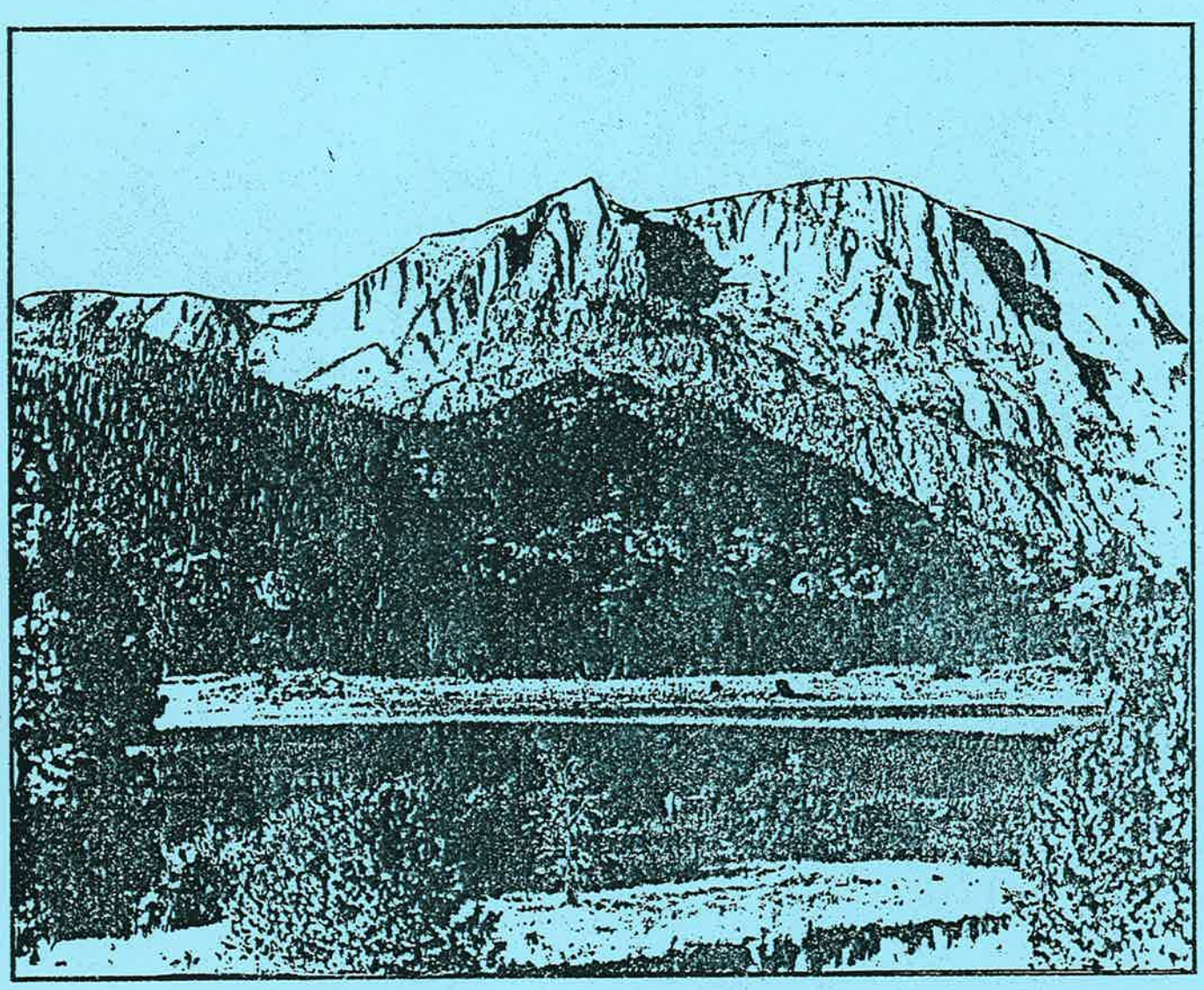
FINAL

JUNE LAKE AREA PLAN
ENVIRONMENTAL IMPACT REPORT



by

MONO COUNTY
PLANNING DEPARTMENT

1991

ENVIRONMENTAL IMPACT REPORT
FOR
JUNE LAKE 2010: JUNE LAKE AREA PLAN

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SUMMARY

JUNE LAKE AREA PLAN ENVIRONMENTAL IMPACT REPORT

SUMMARY

The ~~Draft~~ **June Lake 2010: June Lake Area Plan** and the ~~Draft~~ **Final June Lake Environmental Impact Report** (EIR) consists of three sections. The ~~Draft~~ June Lake Area Plan contains policies and implementation measures to guide the development of June Lake over the next 20 years. The ~~Draft~~ **Final** EIR was prepared to analyze the Area Plan's environmental impacts and to facilitate public review and input, in accordance with the California Environmental Quality Act.

JUNE LAKE 2010

The ~~Draft~~ June Lake Area Plan was prepared to update the existing 1974 **June Lake Area General Plan**. The June Lake Citizens Advisory Committee (CAC) was appointed by the Board of Supervisors to oversee and guide the preparation of the Updated Plan. The Mono County Planning Department and a consultant prepared the ~~Draft~~ June Lake Area Plan under the guidance of the CAC. Numerous policies contained in the Plan reflect the results obtained from the **June Lake Residence and Visitor Study,** which was prepared by the CAC and Mono County Staff in 1986. In early 1990, a preliminary draft of the Updated June Lake Area Plan was released for public review and comment. Comments received have been addressed in this version of the ~~Draft~~ Updated Plan.

JUNE LAKE ENVIRONMENTAL IMPACT REPORT

The **June Lake Area Plan Environmental Impact Report** (EIR) consists of the **June Lake Master Environmental Assessment** (MEA) and **Environmental Impact Analysis** (EIA). The MEA serves a dual purpose of providing the required information for an EIR's environmental setting section and the Area Plan's background information. The **Environmental Impact Analysis** contains an assessment of the Area Plan's anticipated environmental impacts. It also contains mitigation measures, designed to reduce the severity of the anticipated impacts and an analysis of project alternatives.

JUNE LAKE AREA PLAN, MASTER ENVIRONMENTAL ASSESSMENT AND ENVIRONMENTAL IMPACT ANALYSIS

The MEA provides the informational foundation for the ~~Draft~~ June Lake Area Plan. The issue sections at the beginning of the Plan's elements provides a listing of important issues upon which the policies contained in the Updated Plan are based. The pertinent issues were uncovered during the process of collecting and analyzing information contained in the MEA.

The **June Lake Master Environmental Assessment** was prepared to facilitate the continuous collection of information in the June Lake as it becomes available. With an existing data base such as the MEA, Mono County Planning Staff can better analyze future development projects as well as continuously update the data base. The MEA approach provides a distinct advantage over the standard environmental setting approach of an Environmental Impact Report. The preparation of the EIR's environmental setting section would take the same amount of time and effort, but once the EIR is certified, the EIR could not function as a living data base. The MEA's purpose on the other hand, would be to provide a working data base not only for background information for the preparation of the Updated Plan and EIR, but for future projects as well.

The **June Lake Environmental Impact Analysis** identifies potential impacts and notes the mitigation measures that have been included in the Plan to minimize the potential impacts. The EIA also contains an analysis of the overall impacts of the Draft June Lake Plan Updated and alternatives to the proposed project.

PURPOSE OF EIR

The California Environmental Quality Act (CEQA) requires the preparation of an Environmental Impact Report for projects that may have a significant effect on the environment. EIR's are a public document used to "analyze the significant effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid possible environmental damage" (CEQA Guidelines Section 15002.f). The **June Lake Area Plan Environmental Impact Report** was prepared to identify the environmental impacts associated with the Updated Plan, and ways in which the impacts of the proposed project can be mitigated or avoided. The alternative analysis contained in the Environmental Impact Analysis Section discusses various alternatives to the proposed project and the relative environmental impacts. All of the development alternatives analyzed resulted in one or more significant environmental effects.

CEQA prevents public agencies from approving projects for which an EIR has identified one or more significant environmental effects unless the public agency makes certain findings (CEQA Guidelines Section 15091). In cases where the decision-making body can determine that the benefits of the proposed project out-weigh the environmental impacts, a statement of overriding considerations can be issued. This statement must be supported by a brief explanation of the rationale for the finding. It must also be included in the record of decision and indicated in the Notice of Decision (CEQA Guidelines Section 15093).

PROPOSED PROJECT

As proposed under the Draft June Lake Area Plan, June Lake would develop into a "moderately-sized, self-contained, year-round community." The Updated Plan provides for improving June Lake's recreational economy by calling for an expansion of both summer and winter recreational facilities and housing, while maintaining its existing mountain village character. New development would be concentrated in the Rodeo Grounds and West Village areas as well as in and around the existing community areas of the June Lake Village and Down Canyon. The Pine Cliff area is designated as a conditionally developable area and potential land exchange areas are slated in locations bordering the Down Canyon area. Lands proposed for limited development or exchange into public ownership are the Silver Lake Meadow and the lands on the southern slope overlooking the June Lake Village. The following will provide a brief overview of the development proposed in June Lake's various community areas.

Pine Cliff

Proposed land uses in the Pine Cliff area include industrial storage, gravel batch plant processing operations and other light industrial uses. Development in the Pine Cliff area would be allowed only if studies demonstrate that proposed uses are inconsistent and incompatible with existing or proposed uses in other developed community areas. This land use strategy is designed to prevent "leap frog" development by concentrating growth in existing community areas. A land exchange with the USFS and the preparation of a Specific Plan and associated environmental studies must take place prior to developing this area.

June Lake Village

The June Lake Village will continue serving as the Loop's commercial center. The Plan would allow for infilling the commercial core with new shops, offices and lodging facilities along S.R. 158. A mixed use area, which is designed to promote smaller-scale retail or office space and rental/employee housing units, is proposed in the meadow area between June and Gull Lakes. Higher density housing would border the mixed use area near June and Gull Lakes. Two clusters of USFS permittee along the western and eastern fringes of the Village are proposed for exchange into private ownership. If feasible, lands on the southern slope overlooking the Village are proposed for exchange into public holdings.

West Village and Rodeo Grounds

The majority of the undeveloped lands in the West Village and Rodeo Grounds are planned for resident and second homeowner housing, recreational facilities and open areas. Commercial nodes are also planned to provide full-service hotels, convention facilities, large-scale restaurants, night clubs and other intensive commercial uses. The Updated Plan requires that development occur under a single well-coordinated Specific Plan. The Specific Plan would balance housing, recreational and entertainment facilities, and promote pedestrian traffic and compatible architectural designs. A coordinated circulation system that may include shuttles, ski lifts, pedestrian trails and bicycle paths/cross-country ski trails is also planned.

Down Canyon

The Down Canyon area will remain primarily oriented to single-family homes. Limited support commercial and recreational uses are planned for a few areas along S.R. 158. Moderate density residential and commercial lodging uses are proposed in several areas with adequate access. Two federally owned areas adjacent to the Down Canyon area have been identified for potential land exchanges for community expansion. A fire station and neighborhood park, among other uses, are planned in land exchange areas.

Silver Lake Meadow

The Silver Lake Meadow would remain in the Natural Habitat Protection District, which allows for limited development in non-environmentally sensitive areas. This area is proposed for future land exchange into public ownership.

Private Lands in the Planning Area

Two pockets of non-federal land outside of the June Lake Loop exist in the June Lake Planning Area. The first is located adjacent to the the eastern shores of Walker Lake. This area is designated as Planned Unit Development with minimum lot sizes of two acres. The other area of private land, located north of Grant Lake, is owned by the Department of Water and Power. These lands are designated for open space.

PLAN UPDATED COMPARED TO THE 1974 PLAN

The Updated Plan calls for a peak population at buildout of 12,698 persons at one time; the 1974 Plan allows for 10,500 persons at one time. These estimated figures are based upon peak periods and in no case reflect the anticipated resident population.

The land base distributions of the two Plans accounts for the difference between the peak population figures. The Updated Area Plan calls for development on approximately 488 acres,

while the 1974 Plan anticipated a private land base of 318 acres. In general, the distribution of development under the Plans changes slightly. The 1974 Plan called for growth in the Rodeo Grounds (Upper Gull Lake Village), West Village and June Mountain Base areas; the Update increases the area available for growth in the Rodeo Grounds and West Village, but limits development of the June Mountain base. The Update also calls for future land trades on lands adjacent to the Down Canyon area and in the Pine Cliff area, under certain conditions and following further planning and environmental studies. The Update also proposes exchanging environmentally sensitive private lands for less environmentally sensitive public lands.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

The proposed project would have a number of significant mitigatible and unmitigatible environmental effects,[1] both beneficial and adverse. The following provides a summary of the anticipated adverse significant environmental effects and the proposed mitigation measures. Mitigation measures were developed into policies and actions contained in the Updated June Lake Area Plan. This section provides a brief overview of significant environmental effects; impacts deemed insignificant are not discussed in this section, but are found in the Environmental Impact Analysis. Following the discussion of mitigatible significant effects, unmitigatible significant effects are discussed. A discussion of alternatives to the proposed project follows the discussion of significant effects.

The goals and objectives of the Updated June Area Plan inherently minimize potential environmental impacts by limiting development. June Lake citizen's realize that a drastic increase in growth would ruin the Loop's existing character and appeal to visitors. With this in mind, the Updated Area Plan's overall goal is that June Lake develop into a "moderately-sized self-contained year-round community." Under this goal, the Plan Update designates limited areas of National Forest Lands for potential land exchanges and community expansion. Expansion areas, where feasible, were limited to areas adjacent to established community areas to prevent the unnecessary expansion of roads or other infrastructure, and to restrict future environmental disturbance to lands adjacent to established areas.

SIGNIFICANT MITIGATIBLE ENVIRONMENTAL EFFECTS

The proposed project would have the following mitigatible significant environmental effects:

1) An increase in the number of people exposed to natural hazards such as fires, seismic events, and geologic events.
2) Increases in resident and visitor populations.
3) Increase the demand for emergency services.
4) An increase in the need for affordable housing in June Lake and surrounding communities.
5) An increase in demands on existing summertime recreational facilities. Additional usage may cause environmental damage especially along sensitive shorelines and streamside zones.
6) A decrease in air quality.
7) An increase in the ambient noise level caused by increased traffic and population density.
8) Impacts on cultural resources.
9) Water resource impacts caused by additional domestic water consumption.

These impacts are anticipated under the assumption that June Lake reaches full buildout as allowed in the Updated Plan. The significant effects described would result as changes in the existing conditions of June Lake occur.

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[1] Significant: "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, except economic or social changes by themselves.

NATURAL HAZARDS

The level of development specified in the Draft June Lake Area Plan would expose additional residents and visitors to natural hazards such as fires, seismic activity and geologic events. Without adequate mitigation, natural hazards could cause significant impacts in June Lake. Policies contained the Area Plan Update, the County General Plan and the Uniform Building Code contain measures to lessen dangers from natural hazards.

Mitigation measures include:

General

1) The County should work with other agencies in developing a secondary access road north of June Lake.

2) The County should work with Caltrans in developing road improvements along the section of S.R. 158 overlooking June Lake that would lessen the possibility of avalanche and rockfall closures.

Fires

1) The annexation of the the Down Canyon area into the June Lake Fire Protection District and the construction of a Down Canyon fire station.

2) Increased coordination with the California Department of Forestry and Fire Protection District and other agencies to a develop fuel modification program around developed private lands.

Seismic Hazards

1) The implementation of County Building Code structural standards and the requirement for soil compaction test in cases where fill is used or in areas subject to soil liquifaction in seismic events.

2) The implementation of Alquist-Priolo Special Study Zone policies which limit construction in fault rupture zones.

Geologic Hazards

1) Limiting the disturbance of vegetation which could buffer private property from falling rocks.

2) Requiring the engineering studies to determine the extent of the hazard and to provide adequate mitigation.

POPULATION INCREASES

Population increases of both year-round residents and visitors are anticipated under the level of development allowed in the Area Plan Update. Most of the anticipated growth would occur in the Rodeo Grounds and West Village. Infill development in the Down Canyon area and in the June Lake Village would also occur. The peak population is expected to increase from the

current level of 4,445 persons to 12,698 persons at full buildout; the resident population is anticipated to increase from 690[2] persons currently to 898 persons at full buildout.

Population increases are likely to increase the demand for public infrastructure and recreational amenities. It is also anticipated to impact vegetation and wildlife resources, air quality and visual quality. Key Area Plan Update policies mitigating the potential impacts include:

1) The preparation of Specific Plans for the West Village/Rodeo Grounds and for land exchange areas greater than five acres. The Specific Plan process will provide the opportunity for project impacts to be addressed in their entirety rather than on an incremental basis.

2) Developers of projects significantly impacting public facilities would be required to provide adequate mitigation for anticipated impacts during the development review process.

EMERGENCY SERVICES

New development would substantially increase the demand for emergency services including fire protection, search and rescue and police services.

Key Plan Update policies mitigating the potential impacts include:

1) The policy to prepare Specific Plans for the West Village and Rodeo Grounds area and for land exchange areas over five acres. Since most new development is anticipated in the West Village/Rodeo Grounds and in future land exchange areas, Specific Plans will be required to contain an analysis on the impacts on services and to design appropriate mitigation measures.

2) Policies to maintain and improve existing levels of emergency services.

AFFORDABLE HOUSING

The level of development allowed under the Area Plan Update is anticipated to expand the work force. New workers will likely be employed in lower paying service sector jobs and will require affordable housing for purchase or rent. Affordable and rental housing is currently in short supply in June Lake and new demands would further impact the situation.

Mitigation measures in the Updated Plan include:

1) Policies that would require employers generating new workers to provide employee housing in proportion to the size of the anticipated work force.

2) The designation of a mixed use area in the June Lake Village that is designed to allow for the construction of combined commercial/residential structures.

3) Developer incentives which would grant density bonuses if affordable units and/or managers units are provided.

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[2] June Lake's resident population widely varies depending upon the information source. The 1986 **June Lake Residence Survey** was used as the basis for population estimates.

4) If the housing situation worsens, policies would require developers to set aside a percentage of the total units constructed as affordable units.

SUMMER RECREATIONAL FACILITIES

The amount of development allowed under the Draft Area Plan will increase the usage of recreation areas and in turn could impact sensitive resources. Sensitive areas such as streamside zones and lakeshores would be impacted by an increase in recreational demand. Trampling of riparian vegetation and soil compaction may occur, this in turn could cause increases in soil erosion and sedimentation into water bodies. Litter could also be a problem. Impacts would be greatest near developed recreational areas such as parks, trails, campgrounds and day use and picnic areas, where activity and use is concentrated.

Policies in the Draft Area Plan that would prevent significant impacts include:

1) Expanding and diversifying recreational facilities/activities to distribute usage. Recreational facilities would be funded by the enactment of a parkland dedication ordinance which would require new development to dedicate lands for recreational facilities or to contribute to a recreational facility fund.

2) Working with the USFS to develop additional recreational opportunities and to curtail recreational use in significantly impacted areas.

AIR QUALITY

The level of development allowed under the Updated Plan has the potential to degrade the Loop's excellent air quality. Additional wood burning devices, automobile exhausts and suspended particulate matter combined with winter temperature inversions may lead to air quality impacts.

Air quality mitigation measures in the Updated Plan include:

1) Policies to minimize the need for automobile usage by promoting direct ski lift access, shuttle bus service during peak travel times, especially in the winter, housing in close proximity to recreational/entertainment facilities and a coordinated pedestrian trail system.

2) Policies that promote the development of coordinated loop-wide pedestrian trail and bicycle path/x-country skiing trail systems.

3) Coordinated land uses to allow the development of housing in close proximity to recreational/entertainment facilities.

4) Policies limiting the number of wood burning devices, discouraging wood burning devices in commercial lodging projects and requiring the installation of Environmental Protection Agency certified wood burning devices.

5) Promoting public awareness on the efficient operation of wood burning devices.[3]

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[3] The efficient operation of wood burning devices reduces emissions of air pollutants.

6) Encouraging the use of passive solar energy, especially in the West Village/Rodeo Grounds Specific Plan area.

7) Measures to upgrade and pave dirt roadways, a major source of particulate matter.

NOISE

June Lake's ambient noise level is anticipated to increase as result of the level of development allowed under the Updated Plan; levels would increase although not to nuisance levels or levels that would exceed Mono County's noise standards.

Noise mitigating measures would include:

1) The continued enforcement of noise controlling measures in the County's Noise Element and in Ordinances 79-47B and 79-479.

2) Land use locational controls which would reduce noise impacts on sensitive receptors.

3) Promoting the development of corporate yards for light industrial uses in Specific Plan areas.

4) Adhering to the noise abatement construction standards from Title 25 of the California Administrative Code.

CULTURAL RESOURCES

New development has the potential to uncover and disturb undiscovered cultural resource sites, while inducing visitation will increase scavenging on surrounding public lands.

Mitigation measures would include:

1) The USFS land exchange procedure which requires a cultural resource study prior to a land exchange. This procedure helps prevent lands with important cultural resource deposits from passing into private ownership by requiring the USFS to retain ownership of significant cultural resource sites along with adequate buffers.

2) Adhering to CEQA requirements which would require new construction in existing community areas to avoid cultural resource sites or to mitigate impacts.

3) Promoting a comprehensive study to identify and catalog cultural resource sites in the June Lake Planning area.

LOCAL AND REGIONAL WATER RESOURCES

Supplying water to the level of development allowed under the Plan could impact water resources in and around the June Lake Loop, especially under drought conditions.

Mitigation measures would include:

1) Promoting the construction of several water sources that can withstand drought periods without undue harm on the environment.

2) Promoting the preparation of a comprehensive water management plan to guide water use and the construction of new water supply facilities in a manner that minimizes environmental impacts.

3) Promoting water conservation efforts to delay or avoid the construction of new water supply and distribution facilities. Measures would include the use of water conserving fixtures in new development and the promotion of water conserving landscaping.

4) Ensuring new developments have adequate water supplies during the development review process.

UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

New development allowed under the Updated June Lake Area Plan is anticipated to have the following unmitigatible environmental effects:

1) Conversion of vegetation to impermeable surfaces and related secondary water quality impacts.
2) Visual impacts along the backshore of Gull Lake, along S.R. 158 bordering the Rodeo Grounds and the Down Canyon areas and in the conditionally developable Pine Cliff area.
3) An increase in traffic along S.R. 158 and other surface streets.
4) Increase the number of people exposed to avalanches and to severe volcanic episodes.
5) A reduction of the Loop's wildlife habitat.

VEGETATION REMOVAL

Converting vegetation to impermeable surfaces is considered a significant impact of the Updated Area Plan. Most of the disturbance will take place in the Rodeo Grounds and West Village and in areas of infill development in the Village and Down Canyon areas. Other potential areas of impact are the Specific Plan Areas located adjacent to the Down Canyon area and in the Pine Cliff area.

Impacts of disturbing and replacing vegetation with impermeable surfaces will result in increases in surface runoff from stormwaters and snowmelt. Surface runoff is anticipated to carry contaminants such as petroleum products, rubber, cinders, nutrients, sediments and litter into water bodies. Additionally, removing vegetation surfaces over groundwater recharge zones could impact groundwater resources by reducing the extent of recharge and increasing the risk of groundwater contamination.

Mitigation measures contained in the Updated Plan that would reduce the extent of damage but not to a level of insignificance include:

1) Developing future land trade areas under Specific Plans. Specific Plans will limit development in areas most susceptible to runoff and erosion or to provide comprehensive mitigation measures covering the entire project area.

2) Limiting development to areas adjacent to or in established community areas.

3) Minimizing the level of contaminants into water bodies by providing for the improvement of drainage systems and street sweeping.

4) Implementing Lahontan Regional Water Quality Control Board discharge policies.

5) Limiting development of the Silver Lake Meadow to low intensity land uses and also designating it for potential exchange into public lands.

VISUAL IMPACTS

Development in the Rodeo Grounds adjacent to S.R. 158 and in the West Village along the backshore of Gull Lake would cause visual impacts. Development in the Pine Cliff area and in

the established community areas of the Village and Down Canyon may also have visual impacts. Visual impacts on Gull Lake would occur from urban development proposed on the lake's northern and eastern shores. Additional visual impacts along the lake's western shore were avoided by excluding this area from the Rodeo Grounds land trade. Impacts along S.R. 158 adjacent to the Rodeo Grounds are also anticipated. With the exception of the June Mountain Ski Area parking lot, the area between the Village and Down Canyon is currently undeveloped. The Rodeo Grounds fronts S.R. 158 along this section and development along the highway could cause visual impacts through the corridor. Intensifying land uses in the Down Canyon retail service center could affect views from S.R. 158 through the area and views from surrounding residential development.

Mitigation measures in the Updated Plan that will reduce significant visual impacts but not to an insignificant level will include:

1) The development and implementation of Design Guidelines containing policies on landscaping, architectural themes, building materials and colors.

2) Preparing Specific Plans for the West Village and Rodeo Grounds, and for future exchange areas. Specific Plan areas can best locate structures, provide for architectural themes and comprehensive landscaping.

3) Community Design policies in the Community Development Element that lessen impacts on S.R. 158 and scenic views. Policies would also provide for compatible community design with the existing environment and minimize the impact of signs.

4) More stringent review and enforcement of the County's Sign Ordinance.

5) Continuing to implement the Mono County Zoning Code provisions to underground powerlines.

TRAFFIC AND CONGESTION

The level of development allowed under the Updated Plan will increase traffic congestion and lower travel speeds along S.R. 158 between the South June Lake Junction and the SCE Hydroelectric plant. Travel speeds in this section are anticipated to decrease from 35 mph to 25 or 30 mph. Road improvements along this section will be difficult as the highway runs along a narrow bench overlooking June Lake and through the June Lake Village and the Down Canyon area. Impacts on S.R. 158 north of the SCE Hydroelectric plant are not anticipated.

Additional traffic and congestion is anticipated for many of the local roadways. Most roadways are substandard in width and unpaved. Movement through the June Lake Village to the Down Canyon and to the West Village and Rodeo Grounds will grow increasingly difficult as traffic volumes increase, particularly under winter conditions. Travel along unpaved, privately maintained roadways in the Down Canyon would also worsen unless roads are upgraded.

Traffic mitigation measures contained in the Updated Plan that will reduce significant visual impacts but not to an insignificant level include:

1) Measures to construct an alternative access road on the northern side of June Lake. This roadway could provide for direct access into the West Village and Rodeo

Grounds as well as reduce the possibility of avalanche closures along S.R. 158 isolating June Lake.

2) Working with Caltrans to mitigate the avalanche hazards along the S.R. 158 south of June Lake.

3) Measures to improve traffic through the June Lake Village along S.R. 158. Policies include developing a loop roadway through the meadow between June and Gull Lakes, providing off-street parking and then restricting on-street parking during peak travel periods, and extending Leonard Ave. to connect with S.R. 158 near the June Mountain Ski Area. Policies promoting the development of a balanced, pedestrian-oriented community may reduce automobile traffic.

4) Policies which call for alternative means of funding roadway construction including, redevelopment, forming community service areas or benefit assessment districts.

5) Policies encouraging a balance of land uses which would place housing and recreational facilities in close proximity. This type of development would encourage walking or other modes of non-motorized transportation, direct ski lift access and shuttle bus service.

NATURAL HAZARDS

Significant impacts from large avalanches and catastrophic volcanic eruptions could result as development allowed in the Updated Plan will attract a greater number of residents and visitors. In all but the most severe incidents, policy measures in the Updated Plan would minimize significant impacts to life and property. Significant impacts, however, can be anticipated from the most severe events.

Avalanches

Although avalanches originating from the steep canyon walls could impact many areas of the Loop, only three private land areas are in potential avalanche zones.

Measures to minimize impacts would include:

1) Continuing to enforce the County's General Plan Safety Element Avalanche Policy which would substantially mitigate hazards in historic avalanche zones by limiting most construction to single-family uses. More intensive land uses may be permitted in historic avalanche areas, provided the development can be engineered to withstand potential avalanche impact forces.

2) Designating lands in the Village's historic avalanche area for land exchange into public holdings.

3) Developing a secondary access road along the northern side of June Lake or improving S.R. 158 to lessen the possibility of avalanche closures.

Volcanic Episodes

A catastrophic eruption along the dormant Inyo-Mono chain would result in widespread devastation caused by pyroclastic flows of hot, gas-laden clouds of ash. Mud flows and floods could also occur if the volcanic episode occurs during the winter when snow is on the ground.

Mitigation measures would include:

1) Updating the June Lake Loop evacuation plan area and developing a secondary access road.

2) Working with the USGS to develop an advanced warning system.

WILDLIFE HABITAT IMPACTS

The level of development proposed in the Updated Area Plan would result in direct and indirect impacts on wildlife habitat. These impacts would be significant even with Updated Plan's mitigation measures. Direct impacts on wildlife habitat would include replacement for urban uses, while indirect impacts would consist of additional use of surrounding National Forest Lands and off-site disturbances. Impacts may also be caused by free roaming domestic animals.

Mitigation measures include:

1) Confining proposed community expansion to areas adjacent to established community areas and discouraging land trades and future development on lands with significant wildlife habitat values.

2) The USFS land trade process which requires wildlife habitat studies prior to land exchange. Under the 1976 Forest Land Policy and Management, the USFS is required to retain public lands with significant wildlife habitat values.

3) Coordinating with wetland protection agencies on large projects in potential wetland areas.

4) Continuing to implement the Mono County Zoning Code's stream-side setback requirements to protect riparian corridors adjacent to streams, primarily Reversed and Rush Creeks.

5) Designating the Silver Lake Meadow for limited development, or for exchange into public holdings or for purchase by land conservation groups.

ALTERNATIVES TO THE PROJECT

Six alternatives were developed in preparing the Updated June Lake Plan. Alternatives ranged from the No Development Alternative to the Destination Resort Alternative. The Preferred Alternative for a "moderately-sized, self-contained, year round community," fell in between the extreme alternatives.

The Preferred Alternative best met the goals of the June Lake Community, while minimizing potentially significant environmental impacts. The Second Home Community was the environmentally superior development alternative; the Preferred Alternative finished third. All of the development alternatives would result in one or more significant environmental impacts. Significant impacts resulting from the Preferred Alternative would include: the replacement of vegetation with impermeable surfaces, visual impacts, increased traffic and congestion, increased exposure to severe avalanches or volcanic episodes, and wildlife habitat impacts. The environmentally superior development alternative would result in the same significant impacts, although to lower degree of significance.

ADDITIONAL INFORMATION

The **June Lake Area Plan Draft Environmental Impact Report** and the **Draft June Lake 2010: June Lake Area Plan** were prepared by the Mono County Planning Department under the guidance of the June Lake Citizens Advisory Committee. Copies of the documents will be available for public review at the Mono County Planning Department Offices in Bridgeport and near Mammoth Lakes. Local libraries in June Lake, Mammoth Lakes and Bridgeport will also carry the documents. Documents will be available for purchase from the Mono County Planning Department.

Specific comments and inquiries regarding the contents of the documents or requests for additional information should be directed to:

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I
INTRODUCTION AND PROJECT DESCRIPTION

FINAL
JUNE LAKE AREA PLAN ENVIRONMENTAL IMPACT REPORT

INTRODUCTION

JUNE LAKE AREA PLAN

The ~~Draft~~[1] **June Lake Area Plan** has been prepared to update the existing 1974 **June Lake Area General Plan.** The Area Plan contains land use goals, objectives and policies designed to guide the development of June Lake over the next 20 years.

The Area Plan update process began in 1985 with the formation of the June Lake Citizens Advisory Committee (CAC). One of the first tasks of the CAC was to assist Mono County Planning Staff in preparing and circulating the **June Lake Residence Survey and Visitor Study.** The data collected through this process forms the basis for many of the Updated Area Plan's policies. After completing the **June Lake Residence Survey and Visitor Study,** the CAC provided Planning Staff and its Consultant policy direction and input for the Area Plan Update's preparation. The Planning Consultant's Draft of the June Lake Area Plan was completed in June of 1987. During the process of preparing the Environmental Impact Report for the Updated Plan, which occurred concurrently with the Area Plan Update, numerous environmental mitigation measures were determined to be necessary. Beginning in August of 1988, the CAC and Planning Staff began revising the Updated Plan to include additional Area Plan policies designed as environmental mitigation measures. A preliminary draft of the June Lake Area Plan was completed in November 1989 and circulated for initial public review and comment. Comments received during the initial review period were incorporated into the Draft Updated Plan.

ENVIRONMENTAL IMPACT REPORT

The **Final June Lake Area Plan Environmental Impact Report** (EIR) consists the **June Lake Master Environmental Assessment** (MEA) and **Environmental Impact Analysis.** The MEA contains general planning and environmental background information on the existing conditions of June Lake, and serves as the EIR's environmental setting section. The **Environmental Impact Analysis** examines the Area Plan's potential impacts and contains a range of alternative community configurations. Potential environmental impacts identified in the EIR are addressed and mitigated by June Lake Area Plan policies. The Alternative Analysis considers a range alternative community development scenarios. By varing the extent of developable private land and land use intensities, the alternative analysis compares the relative benefits and environmental impacts of the proposed project with other possible alternatives. Alternatives considered ranged in development intensity from a low density second-home community to a high density destination resort.

AUTHORITY FOR ENVIRONMENTAL IMPACT REPORTS

The California Environmental Quality Act (CEQA) requires lead agencies prepare an Environmental Impact Report in cases where a project may have a significant effect on the environment. After determining that the proposed Area Plan Update may have a significant effect, the Mono County Planning Department drafted this EIR in accordance with CEQA.

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[1] **Additions to Draft Environmental Impact Report will be indicated in bold letters, while deletions will be shown with the strikethru symbol.**

This EIR has been prepared to:

1) provide information to public agency decision-makers and the general public of the significant environmental effect of a project;

2) identify possible ways to minimize the significant effects;

3) describe reasonable alternatives to the project; and

4) provide substantial evidence on the action of decision-making body to approve a project even if significant impacts are involved.

NOTICE OF PREPARATION

In accordance with CEQA's notification and review requirements, the Mono County Planning Department submitted a Notice of Preparation (NOP) for the Updated June Lake Area Plan and the Environmental Impact Report to the State Clearinghouse of Planning and Research and to local agencies. The first NOP was submitted in November of 1984. Since no action was taken on the proposed project, the County submitted a second NOP in August of 1987; the project was assigned the State Clearinghouse Number (SCH#.) 84112606. Comments and concerns received from public agencies through the notification process have been addressed in the EIR and Updated Area Plan. The following provides a brief summary of concerns.

Only the June Lake Public Utility District (JLPUD) responded to the first NOP. The JLPUD was concerned about future development's impacts on water service and sewer capabilities. The agency felt that with facility improvements adequate water supplies and sewer capabilities existed, however, as the community reaches buildout, new water facilities and, possibly, sewer facilities would be necessary.

Five agencies responded to the second NOP. The major issues identified included impacts to vegetation and wildlife habitat, growth inducing impacts, surface water contamination, cumulative impacts of growth on the local transportation system and impacts resulting from natural hazards. The responding agencies and their concerns are briefly summarized in Table 1.

TABLE 1 – AGENCIES RESPONDING TO NOP

AGENCY	CONCERN/COMMENT
June Lake Public Utility District	The EIR should consider the JLPUD's ability to provide water and sewage treatment to serve future development.
Regional Water Quality Control Board	The EIR should contain a discussion on surface water contamination caused by increased erosion and pollutant loads. All new development should be hooked up to the JLPUD's wastewater treatment system unless an exemption is obtained.
California Department of Fish and Game	The EIR should contain an inventory of vegetation and wildlife habitats with emphasis on identifying endangered, threatened or locally unique species. The EIR should discuss impacts on streams and watercourses related to increased runoff and erosion. The EIR should assess growth-inducing impacts on critical wildlife resources. To minimize impacts on wildlife, Specific Plans for the West Village/Rodeo Grounds and Oh! Ridge areas should be prepared prior to development.
California Department of Transportation	The EIR should discuss the cumulative effects of continued development on the local transportation system.
California Department of Conservation, Division of Oil and Gas	The EIR should discuss the potential environmental impacts related to geology, seismology and mineral resource conservation. The EIR should address seismic and volcanic hazards.
California Department of Forestry	No comment.

REQUIRED CONTENTS OF AN EIR

CEQA guidelines require that EIRs contain specific required elements. The following provides a listing of the mandated elements and their locations in the documents.

EIR ELEMENT	LOCATION
Summary	Area Plan & EIR Summary
Project Description (June Lake Area Plan)	I-7
Master Environmental Assessment	
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Irreversible Environmental Changes	IV-63
Growth Inducing Impacts	IV-64
Cumulative Impacts	IV-66
Effects Found to be Insignificant	IV-67

PUBLIC REVIEW AND APPROVAL REQUIREMENTS

~~Copies of the Draft **June Lake Environmental Impact Report** and **June Lake Area Plan** will be available for public review and input. The Mono County Planning Offices in Bridgeport and near Mammoth Lakes, and the Mammoth Lakes, June Lake and Bridgeport public libraries will have copies available for public review.~~

~~The public review period will last a minimum of 45 days. During this period, written comments on both the EIR and Area Plan may be submitted to the Mono County Planning Department. Specific comments and inquiries regarding the contents of the reports or requests for additional information should also be directed to the Planning Department (See Table 2). Following the public review period, all comments received will be addressed in the Final EIR and Area Plan.~~

TABLE 2 – MONO COUNTY PLANNING DEPARTMENT OFFICES

Southern Mono County	Northern Mono County
Mono County Planning Department HCR 79 Box 221 Mammoth Lakes, CA 93546 (619) 934-7504 Attention: Stephen Higa, Project Manager	Mono County Planning Department P.O. Box 8 Bridgeport, CA 93517 (619) 932-7911, Ext. 217 Attention: Scott Burns, Planning Director

The public review and comment period was opened for 60 days. Comments received during this period, responses to those comments and additional information have been added to Draft EIR in the Reponse to Comments Section. In general, most comments related to specific policies or land use designations in the Area Plan. Others provided additional information or suggested measures to clarify the material presented in the EIR.

The amended document will be the Final EIR. The Final EIR and Area Plan will be available for public review and comment at the Planning Department Offices in Bridgeport and Mammoth Lakes, and at local libraries. Copies will also be available at the cost of reproduction in Planning Department offices. Summaries of the Final EIR and Area Plan will be provided at no charge from the Planning Department.

The Planning Commission, at a duly noticed and advertised public hearing, will consider the final document, additional written comments and verbal testimony. After the close of the hearing, the Commission can recommend approval, conditionally approval, or denial of the June Lake Area Plan to the Mono County Board of Supervisors.

The Mono County Board of Supervisors will hold at least one public hearing to consider the recommendation of the Planning Commission. If new information is introduced at the hearing that may have influenced the Planning Commission's decision, the Board may refer the project back to the Commission. The Commission must then present its recommendation to the Board within 40 days. The revised Area Plan can then be adopted by the Board.

Prior to the Area Plan's adoption, the Board must certify the final EIR. The process may include the preparation of a statement of overriding considerations recognizing that the proposed project may have significant environmental effects. The issuance of a statement of overriding considerations allows decision-makers to find that the proposed project's benefits outweigh the unavoidable adverse environmental effects.

PUBLIC AGENCIES USING EIR

The following public agencies are expected to use the EIR in their regulatory and approval programs:

Federal

U.S. Army Corps of Engineers. Placement of fill material into "waters of the United States" (404 permit program).

U.S. Environmental Protection Agency. Oversight of 404 permit program implemented by the U.S. Army Corps of Engineers.

U.S. Fish and Wildlife Service. Endangered Species Act enforcement and regulation.

U.S. Forest Service. Approval of special use permits and land exchanges for future community expansion. Recreational facility expansion approvals. Management of lands surrounding the June Lake Community.

State

California Department of Transportation. Rights-of-way review and approval. S.R. 158 access and safety considerations.

Fish and Game. Stream alteration permits.

Lahontan Regional Water Quality Control Board. All water quality certifications and approvals, including monitoring.

State Water Resources Control Board. Water rights approval, if new rights or changes are required.

Great Basin Air Pollution Control District. Approval of building emissions and air quality monitoring.

State Lands Commission. Lake and Stream bed protection.

Local

Mono County Planning Department. Project development approvals.

Mono County Public Works Department. Grading permits and construction approvals. Road design and right-of-way approvals.

Mono County Planning Commission. Approval of various planning permits.

PROJECT DESCRIPTION

JUNE LAKE, CALIFORNIA

June Lake is located in Mono County, California, approximately 300 miles north-east of Los Angeles, 145 miles south of Reno, and 15 miles north of Mammoth Lakes (See Figure 1). The small mountain community is home to approximately 690[1] permanent residents; its economy is based upon recreation and tourism. As the state's population, particularly the Los Angeles metropolitan area, continues to grow and as the nearby Town of Mammoth Lakes evolves into a destination resort, recreational visitation in June Lake is expected to increase. Recreation has always played an important role in June Lake's development and will continue to do so in the future. The area's quaint small-town atmosphere and pristine natural setting are its primary attractions. Retaining the existing atmosphere while enhancing its appeal as a vacation resort will be the primary challenge over the next 20 years.

JUNE LAKE PLANNING AREA

The June Lake Area Plan encompasses a planning area that stretches from the Town of Mammoth Lakes planning area's northern boundary to the southern boundary of the Mono Basin Scenic Area. The Minarets Wilderness Area forms the planning area's western boundary and the eastern border is the south-west boundary of the Mono Basin Scenic Area and Highway 395 (See Figure 2). The planning area contains public and private lands located near the June Lake Loop.

The Area Plan concentrates on the private and developed public lands contained in the June Lake Loop and on pockets of private land in the planning area. USFS management prescriptions contained in the **Inyo National Forest's Land and Resource Management Plan** (1988) apply to federal lands in the planning area.

JUNE LAKE 2010 GOALS

The **Draft June Lake 2010; June Lake Area Plan** contains goals, objectives, policies and implementation measures designed to guide the development of June Lake over the next 20 years. Once implemented, the Area Plan will form the policy basis for future land use decisions of the Planning Commission and Board of Supervisors.

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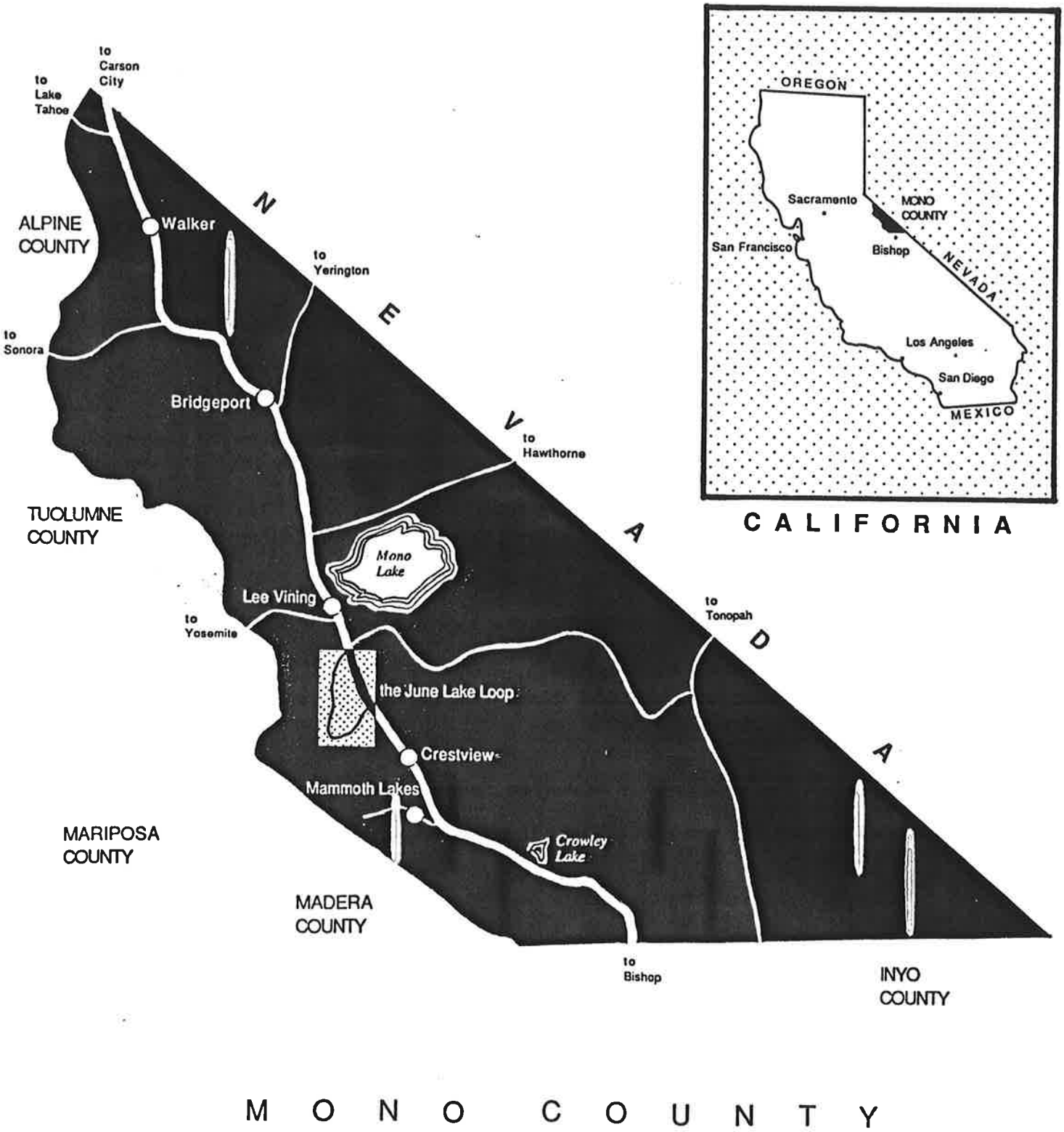
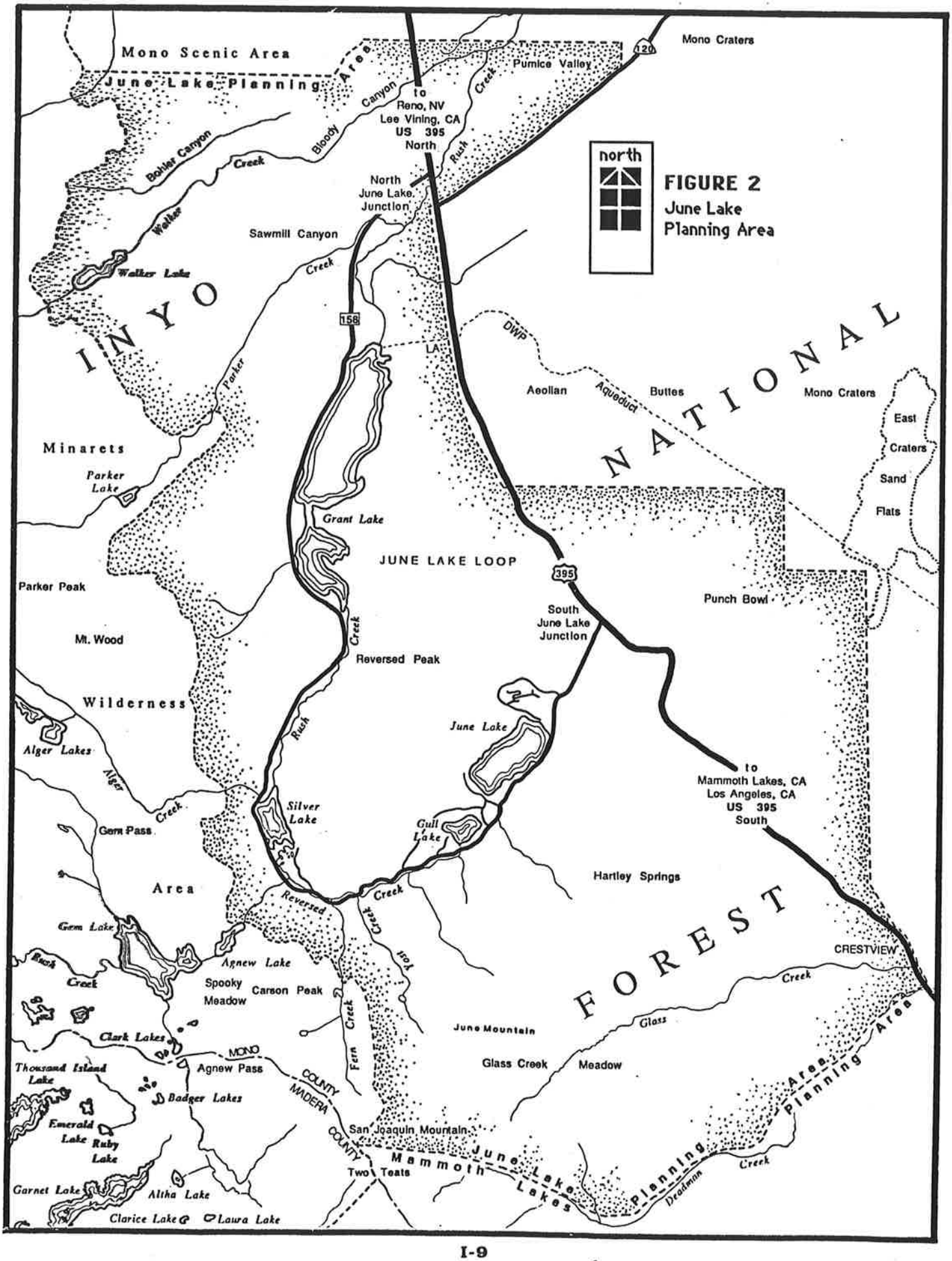
[1] Based upon 1985 **June Lake Residence Survey** and annual growth rate of 1.3%.



M O N O C O U N T Y

north

FIGURE 1
Vicinity Map


Mono Scenic Area
June Lake Planning Area
Mono Craters
Pumice Valley
120
to
Reno, NV
Lee Vining, CA
US 395
North
Bloody Canyon
Rush Creek
Bohler Canyon
Walker Creek
North
June Lake
Junction
Sawmill Canyon
Walker Lake
north
FIGURE 2
June Lake
Planning Area
INYO
158
LA
DWP
Aqueduct
Aeolian
Buttes
Mono Craters
NATIONAL
East
Craters
Sand
Flats
Parker Creek
Minarets
Parker
Lake
Grant Lake
JUNE LAKE LOOP
395
Parker Peak
Punch Bowl
South
June Lake
Junction
Mt. Wood
Reversed Peak
Wilderness
Rush Creek
June Lake
Alger Lakes
Alger Creek
to
Mammoth Lakes, CA
Los Angeles, CA
US 395
South
Silver
Lake
Gull
Lake
Gem Pass
Hartley Springs
Area
Reversed Creek
Gem Lake
Rush Creek
Agnew Lake
Spooky
Meadow
Carson Peak
Fern Creek
FOREST
CRESTVIEW
Glass Creek
June Mountain
Clark Lakes
MONO
Agnew Pass
Glass Creek
Meadow
Thousand Island
Lake
Badger Lakes
COUNTY
MADERA
COUNTY
Emerald
Lake
Ruby
Lake
San Joaquin Mountain
Mammoth
Two Teats
June Lake
Lakes
Planning Area
Deadman Creek
Garnet Lake
Altha Lake
Clarice Lake
Laura Lake

1 Mile

Planning for a resort community like June Lake requires balancing the needs of residents against those of visitors. The Loop's scenic beauty and numerous recreational opportunities are its primary attractions for visitors, while the small-town and mountain lifestyle are the attractions for seasonal and permanent residents. Preserving the existing natural environment and the ambience it creates, while accommodating additional development is of primary concern. In addressing this concern, the Draft June Lake Area Plan sets the overall goal that "June Lake ultimately develop into a moderately-sized, self-contained, year-round community." The Plan also establishes the following goals:

- Provide residents with quality housing, and visitors with a wide array of housing alternatives, each designed to promote unique experiences.
- Provide residents and visitors with a level of community facilities that improves the self-sufficiency of June Lake by reducing the demand on community facilities located in outlying areas.
- Plan and develop community infrastructure at a rate that ensures new demands will not over-burden existing facilities. Also, ensure that new development provides for associated expansion of existing facilities without placing undue financial burdens on existing users and impacts on the environment.
- Maintain and improve the visual quality of the June Lake Loop's environment by enhancing existing structures, guiding future development and preserving scenic views.
- Conserve and enhance the quality of the June Lake Loop's natural, scenic and cultural resources.
- Provide and maintain a circulation system and related facilities which will promote the orderly, safe, and efficient movement of people, goods, and services, and at the same time preserve the mountain village character of June Lake.
- Assure that land use policies and development practices minimize risks to life and property, yet provide for new development and growth.
- Expand and strengthen June Lake's tourist-orientation economy by stimulating the development of year-round recreational facilities and attracting and retaining a diversity of businesses, while protecting June Lake's scenic and natural resource values.
- Provide a level of community-oriented recreational facilities and programs that meets the needs of June Lake's population.

PROPOSED COMMUNITY DEVELOPMENT

The Updated Plan provides for improving June Lake's recreational economy by calling for an expansion of both summer and winter recreational facilities and housing, while maintaining its existing mountain village character. New development allowed in the Updated Plan would be concentrated in and around the existing community areas, such as the June Lake Village, Rodeo Grounds, West Village and Down Canyon areas. The Pine Cliff area is designated as a conditionally developable area. Land exchange areas are slated in locations bordering the Down Canyon area. Lands proposed for limited development or exchange into public

ownership are the Silver Lake Meadow and the lands on the southern slope overlooking the June Lake Village. The following provides a brief overview of the proposed land uses in June Lake's various community areas.

Pine Cliff

Proposed land uses in the Pine Cliff area include industrial storage, gravel batch plant processing operations and other light industrial uses. Development in the Pine Cliff area will be contingent upon studies that show proposed uses are inconsistent and incompatible with existing or proposed uses in other developed community areas. This land use strategy is designed to prevent "leap frog" development by concentrating growth in existing community areas. A land exchange with the USFS and the preparation of a Specific Plan must take place prior to developing this area. Existing special use permits with the USFS are consistent with the Draft Plan.

June Lake Village

Under the Updated Plan, the June Lake Village will continue serving as the Loop's commercial center. Additional commercial lands for new shops, offices and lodging facilities are proposed along S.R. 158. A mixed use area, which is designed to promote smaller scale retail or office space and rental housing units, is proposed in the meadow area between June and Gull Lakes. Higher density housing is slated to border the mixed use area along the lands closes to June and Gull Lakes. If feasible, lands on the southern slope overlooking the Village are proposed for exchange into public holdings.

West Village and Rodeo Grounds

The majority of the undeveloped lands in the West Village and Rodeo Grounds are planned for resident and second homeowner housing, recreational facilities and open areas. Commercial nodes are also planned to provide full-service hotels, convention facilities, large restaurants, night clubs and other intensive commercial uses. The Plan Update requires that development occur under a single well-coordinated Specific Plan. The Specific Plan would balance housing, recreational and entertainment facilities; promote pedestrian traffic; and compatible architectural designs. A coordinated circulation system using mass transit, ski lifts, pedestrian trails and bicycle paths/cross-country ski trails is also proposed.

Down Canyon

Few changes are proposed for the Down Canyon; it remains primarily oriented to single-family homes and to support commercial and recreational uses. Commercial and recreational uses are planned for a few areas along S.R. 158. Moderate density residential and commercial lodging uses are proposed in areas with adequate access. Two land trade areas for additional single-family homes and public facilities, such as a neighborhood park and a Down Canyon fire station, are proposed in areas adjacent to the Down Canyon area.

Silver Lake Meadow

The Silver Lake Meadow would remain in the Natural Habitat Protection District, which would allow for limited development in non-environmentally sensitive areas. This area is proposed future land exchange into public holdings.

Private Lands in the Planning Area

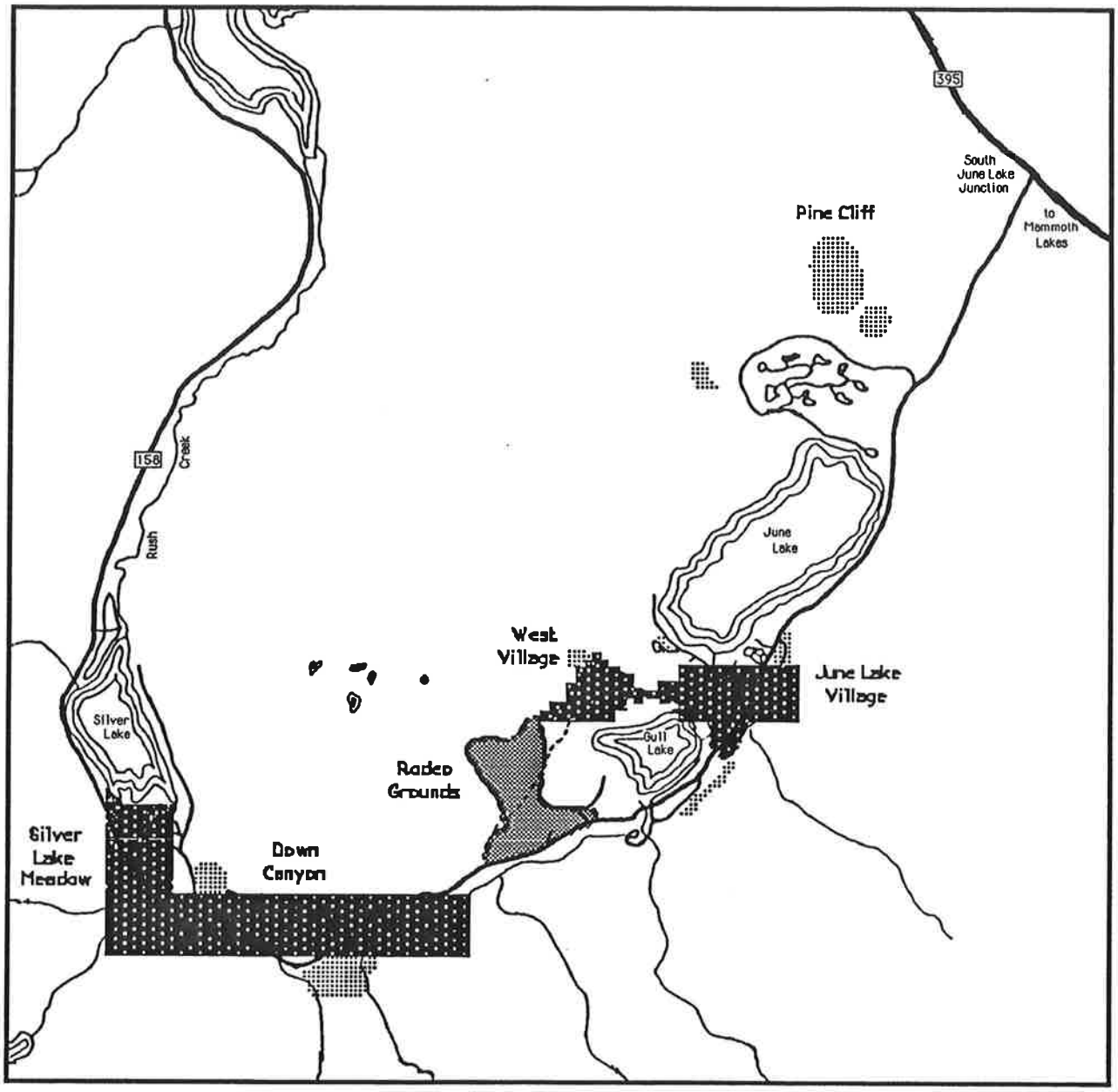
Two pockets of non-federal land outside of the June Lake Loop exist in the June Lake Planning Area. The first is located adjacent to the the eastern shores of Walker Lake. This area is designated as Planned Unit Development with minimum lot sizes of two acres. The other area of private land, located north of Grant Lake, is owned by the Department of Water and Power. These lands are designated for open space.

PLAN UPDATE COMPARED TO EXISTING 1974 PLAN

The Updated Plan calls for a peak population at buildout of 12,700 persons at one time; the 1974 Plan allows for 10,500 persons at one time. These estimated figures are based upon peak periods and in no case reflect the anticipated resident population.

The land base distributions of the two Plans accounts for the difference between the estimated peak populations. The Updated Area Plan calls for development on approximately 488 acres while the 1974 Plan worked with a private land base of 318[2] acres. In general, the distribution of development under the plans changes slightly. The 1974 Plan called for growth in the Rodeo Grounds (Upper Gull Lake Village), the West Village and the June Mountain Base areas. The Update increases the area available for growth in the Rodeo Grounds and West Village, but limits development of the June Mountain base. The Update also calls for future land trades on lands adjacent to the Down Canyon area and in the Pine Cliff area, under certain conditions, and following further planning and environmental studies. The Update also proposes exchanging environmentally sensitive private lands for less sensitive public lands.

[2] Developable acres are limited in the June Lake Village, Rodeo Grounds/June Mountain Base and the Silver Lake meadow.



north

FIGURE 3

Intra-loop Private
Land Base
Scale: .5" = 1400'

LEGEND

Private Lands
Lands in USFS Trade Process
Potential Exchange Lands

II.
JUNE LAKE MASTER ENVIRONMENTAL ASSESSMENT

MASTER ENVIRONMENTAL ASSESSMENT
FOR
JUNE LAKE 2010: JUNE LAKE AREA PLAN

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INTRODUCTION

The community of June Lake is located in Mono County, California (Figure 1). The community, with a resident population of approximately 690[1] persons, is nestled in a deep mountain canyon in the Eastern High Sierra. Outdoor recreational activities form the economic foundation of the rural mountain community.

JUNE LAKE MASTER ENVIRONMENTAL ASSESSMENT

The June Lake Master Environmental Assessment (JLMEA) was prepared as part of the June Lake Area Plan Update process. The JLMEA is a data base for the June Lake Planning Area from which the policies contained in the June Lake Area Plan are based (Figure 1). The JLMEA contains all of the background information for the June Lake Area Plan and the June Lake Area Plan Environmental Impact Report (JLAPEIR). The MEA fulfills General Plan Guideline requirements for information on existing conditions and the environmental setting requirements under the California Environmental Quality Act (CEQA).

LEGAL AUTHORITY OF MASTER ENVIRONMENTAL ASSESSMENTS

CEQA Guidelines (Section 15169) state that public agencies can prepare MEAs to provide a comprehensive data base for a particular area that can be referenced in future EIRs or Negative Declarations. CEQA guidelines do not contain requirements for the format, content or procedures used in preparing the MEAs. MEAs are suggested as an approach to identify and organize environmental information.

ADVANTAGES OF THE MEA

The comprehensive data base collected in the preparation of a MEA helps local agencies in preparing future environmental documents. The MEA contains information on the existing conditions in June Lake and analyzes the effects those conditions would have on future development. Future projects can benefit from this analysis as it will cut down on the work necessary to prepare future environmental documents. Another advantage of the MEA is that it allows local agencies to frequently update the data base as new information becomes available.

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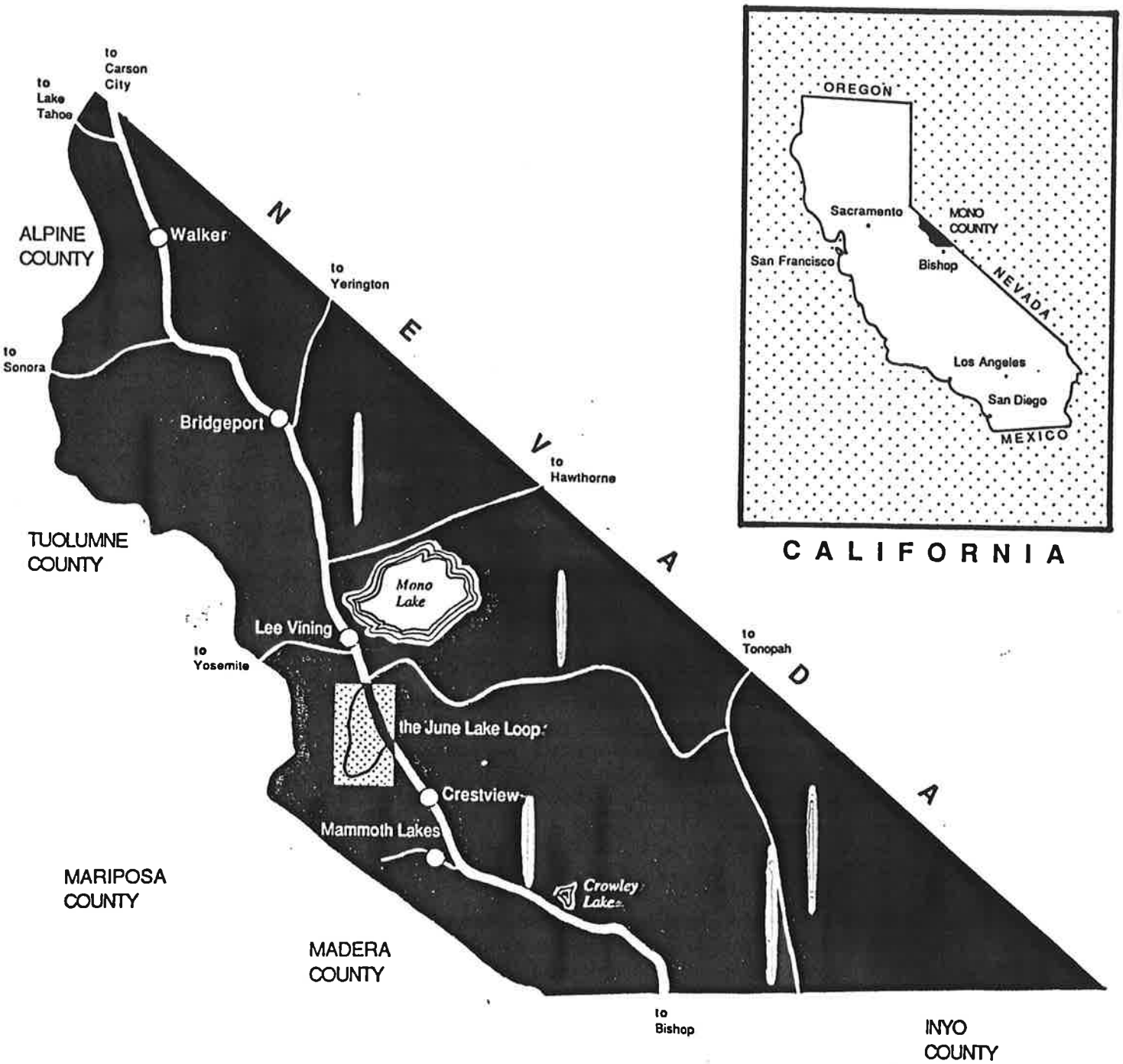
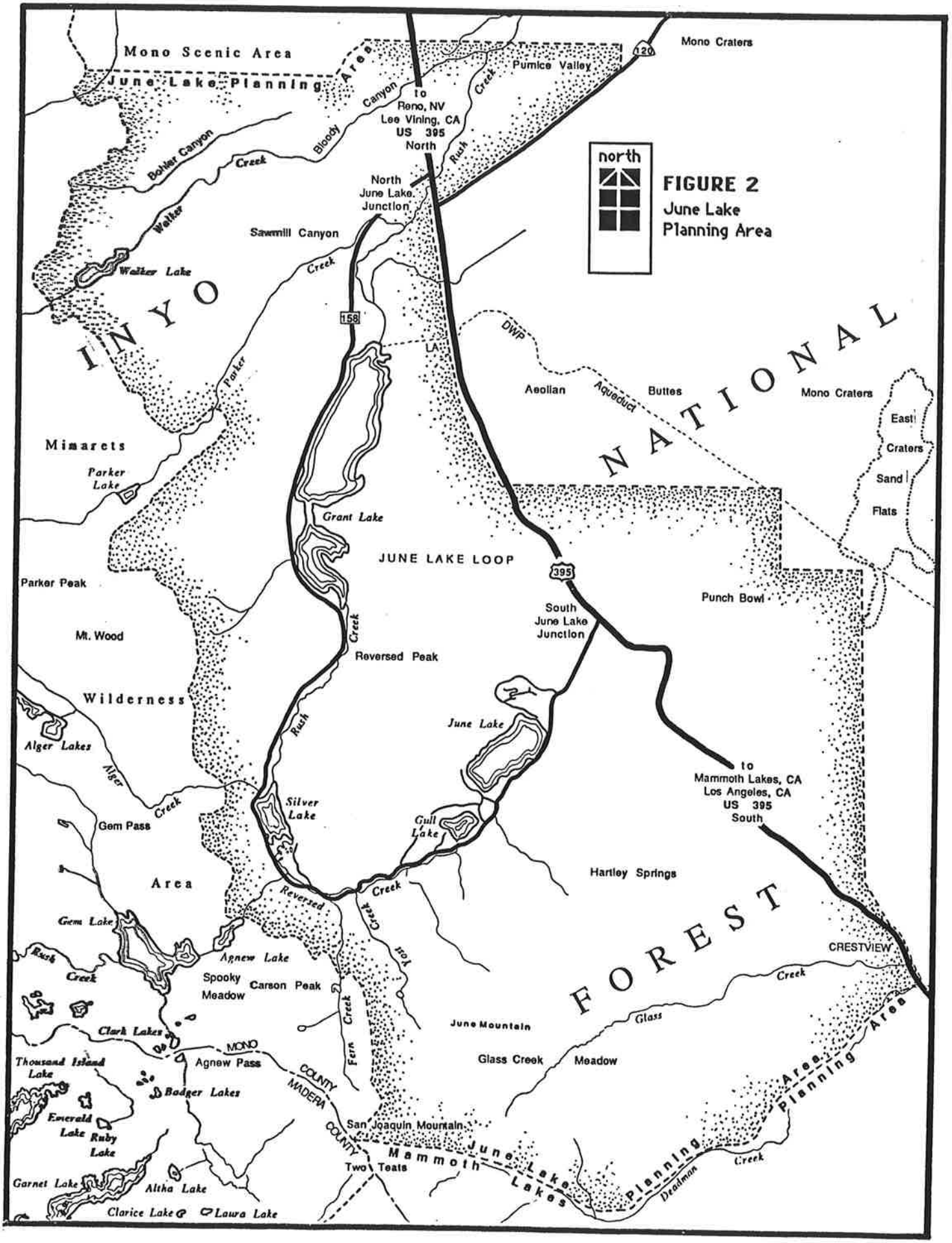
[1] Based upon 1985 **June Lake Residence Survey** and an annual growth rate of 1.3%.



M O N O C O U N T Y

FIGURE 1
Vicinity Map



Mono Scenic Area
June Lake Planning Area
Mono Craters
Pumice Valley
120
to
Reno, NV
Lee Vining, CA
US 395
North
Bloody Canyon
Bohler Canyon
Walker Creek
Rush Creek
north
FIGURE 2
June Lake
Planning Area
North
June Lake
Junction
Sawmill Canyon
Walker Lake
INYO
158
Parker Creek
DWP
LA
Aeolian Aqueduct
Buttes
Mono Craters
NATIONAL
East Craters Sand Flats
Mimarets
Parker Lake
Grant Lake
JUNE LAKE LOOP
395
Parker Peak
Punch Bowl
South
June Lake
Junction
Mt. Wood
Reversed Peak
Wilderness
Rush Creek
June Lake
Alger Lakes
Alger Creek
to
Mammoth Lakes, CA
Los Angeles, CA
US 395
South
Silver Lake
Gem Pass
Gull Lake
Hartley Springs
Area
Reversed Creek
Gem Lake
Yost Creek
FOREST
CRESTVIEW
Rush Creek
Agnew Lake
Spooky Meadow
Carson Peak
Glass Creek
Clark Lakes
June Mountain
Glass Creek Meadow
Thousand Island Lake
MONO COUNTY
Agnew Pass
Fern Creek
Badger Lakes
MADERA COUNTY
Emerald Lake
Ruby Lake
San Joaquin Mountain
Mammoth Lakes
June Lake Planning Area
Two Teats
Deadman Creek
Garnet Lake
Altha Lake
Clarice Lake
Laura Lake

1 Mile

VEGETATION

I. INTRODUCTION

The strikingly complex and varied vegetation pattern of the June Lake planning area plays a significant role in attracting residents and visitors to the Loop. This vegetative mosaic includes: forest lands used for recreation; riparian meadows and shrublands which provide food and cover for a variety of wildlife; grazing lands; and lands valued for their high scenic appeal. Vegetation also fulfills many other roles such as water cleaning, soil stabilization, nutrient entrainment and release, and erosion control.

The diversity of vegetative types within the planning area reflects a substantial range of geographic conditions and biotic factors. Plant communities range from those existing in dry desert conditions to those with high precipitation and/or moisture requirements. A variety of sources including aerial photographs, interviews with United States Forest Service (USFS) and California Department of Fish and Game (CDFG) personnel, California Wildlife Habitat Relationships Program publications and on-site field surveying and mapping were utilized in identifying the plant communities existing in the Loop.

II. SETTING

A. NATURAL PLANT COMMUNITIES

Nine principal communities were defined based on either the dominant plant species of the community or frequently associated plant species. While by no means exhaustive, the following plant community inventory provides a relatively accurate description of biological conditions and indicator species common to each. Figure 1 shows potential wetland areas, the most important and environmentally sensitive plant communities. Marshlands and the Open-Grass Meadow communities are shown as meadow areas, and Riparian Woodland-Meadow and the Mixed Riparian communities are depicted as riparian woodland areas in Figure 3.

Marshlands

June Lake's marshland communities are limited both in size and distribution. The three largest communities are located along the southern edges of June and Gull Lakes and at the south end of Silver Lake bordering Rush Creek. The predominant plant species are sedges (*Care spp.*; *Scirpus spp.*) and rushes (*Juncus spp.*). Willow (*Salix spp.*) and quaking aspen (*Populus tremuloides*) are typically found along marshland edges.

Open-Grass Meadow

The open-grass meadow community contains many combinations of low growing herb and grass species that thrive on flat, poorly drained areas adjacent to streams, lakes, springs, seeps and other water drainages. Favorable areas have water at or very near the surface throughout the entire year. Plants typical of this category include needlegrass (Stipa spp.), bluegrass (Poa spp.), squirrel tail (Sitanion hystrix), bromegrass (Bromus rigides), wheatgrass (Agropyron spp.), reedgrass (Calamagrostic spp.) and fescue (Festuca spp.).

The largest expanses of open-grass meadow communities are located between S.R. 158 and Nevada Street in the south Silver Lake area and to the southwest of Gull Lake within and adjacent to the Rodeo Meadows area.

Riparian Woodland - Meadow

This plant community is comprised of moisture-tolerant plants that grow on lands which tend to be somewhat drier than the open-grass meadow community. Although a drier condition is apparent, the water table is usually at or very near the surface throughout much of the year. Plant species include many of the grasses found in the open grass-meadow as well as willow, quaking aspen, lodgepole pine and undifferentiated forbs. The largest riparian woodland-meadow community occurs along S.R. 158 between the Reversed Creek outlet at Gull Lake and the eastern boundary of Silver Lake Pines Tract #2.

The vegetation in the marshland, open-grass meadow and riparian woodland-meadow communities is integral to the protection and maintenance of fish, wildlife and water quality within the Loop. Its dense and nutritious foliage serves as an excellent source of cover and food for numerous wildlife species; overhanging branches and leaves along streambanks and lakeshores provide shade which helps maintain favorable water temperatures for aquatic animals; root systems stabilize streambank and lakeshore soils, lessening erosion and surface water sedimentation; and meadow grasses filter solids from natural and man-caused run-off, preventing direct untreated discharge into surface water sources.

Mixed-Riparian

The mixed-riparian plant community - found growing along the shores and edges of the Loop's numerous lakes and streams - includes a mix of broadleaf trees, conifers, willows, forbs and grasses. In some instances the different plants are mixed, with no one species being dominant, while in other instances, pure stands exist. Species found most frequently include: quaking aspen, mountain alder (Alnus tenuifolia), cottonwood (Populus trichocorpa), jeffrey pine (Pinus jeffreyi), lodgepole pine (Pinus

murrayana), willow, and numerous undifferentiated grasses, sedges, rushes and forbs.

Juniper-Pine Scrub

Plants common to this community thrive in rocky thin soil on hillsides and in escarpment areas. Vegetation is comprised of a mixture of shrubs: great basin sagebrush (Artemisia tridentata), antelope bitterbrush (Purshia tridentata), curlleaf mountain mahogany (Cercocarpus ledifolius), tobacco brush (Ceonothus velutinus), manzanita (Arctostaphylos patula), snowberry (Symphoricarpos vaccinoides), western juniper (Juniperus occidentalis), and small usually sparse stands of jeffrey pine (Pinus jeffreyi). Lands bordering the northwest side of June Lake, the west side of Gull Lake and the east side of Silver Lake exemplify this vegetation type.

Sagebrush - Bitterbrush Shrub

The sagebrush-bitterbrush shrub community is the most widespread and prolific of the vegetation types occurring in the planning area. Plants exist on course, dry, well drained soils at lower elevations, on large openings in the forest canopy and occasionally on small flats and open mountain slopes. Plants tend to be widely spaced with grasses and forbs forming a sparse but characteristic understory between the larger shrubs. Coniferous trees may comprise up to 10% of the vegetative cover.

Primary indicator species are great basin sagebrush (Artemisia tridentata) and antelope bitterbrush (Purshia tridentata). Other shrubs including green rabbitbrush (Chrysothamnus decidoforus) and desert peach (Prunus andersonii), several perennial and annual grasses and forbs occur as important associate species. Much of the land west of U.S. 395 between the north and south junction with S.R. 158, and lands east of Grant Lake, are covered by plant species typical of this community.

Jeffrey Pine - Bitterbrush, Sagebrush Shrub

In the Jeffrey Pine-Bitterbrush, Sagebrush shrub vegetation community the dominant overstory indicator species is Jeffrey Pine (Pinus jeffreyi). Antelope bitterbrush, the principal shrub, great-basin sagebrush and undifferentiated grasses and forbs similar to those of the sagebrush-bitterbrush shrub community are found in the understory where sunlight penetrates to the forest floor. Lands bordering the south side of S.R. 158 between the south June Lake junction and the Oh! Ridge campground turn-off are characteristic of this community.

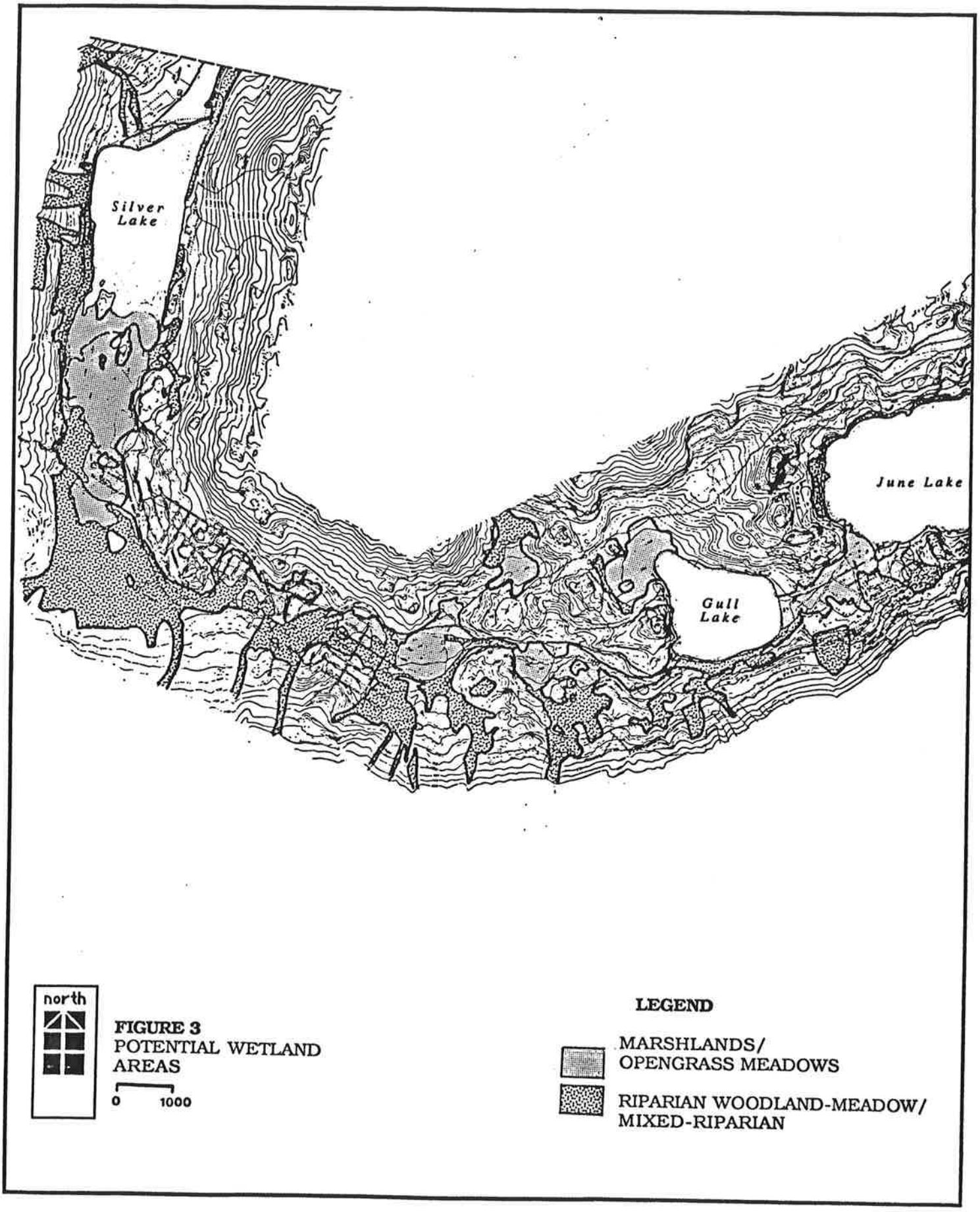


FIGURE 3
POTENTIAL WETLAND AREAS

Lodgepole Pine

Lodgepole pine (Pinus murrayana) can be found in pure stands or in mixed stands principally with red fir, white fir and jeffrey pine. At lower elevations, lodgepole pine associates freely with quaking aspen and willow along riparian and meadow zones where soils are poorly or imperfectly drained. At higher elevations it often occupies dry rocky sites.

Mixed Coniferous-Fir

The Mixed Coniferous-Fir plant community covers a great portion of the lands on and around Reversed Peak as well as the steep north facing slopes between Oh! Ridge and Carson Peak. Overstory species include jeffrey pine (Pinus jeffreyi), lodgepole pine (Pinus murrayana), white fir (Abies concolor), red fir (Abies magnifica), mountain hemlock (Tsuga mertensiana), and western white pine (Pinus monticoli). Understory vegetation may include species such as tobacco brush (Ceanothus velutinus), bitter cherry (Prunus emarginata), green leaf manzanita (Arctostaphylos patula) and snowbush (Ceanothus cordulatus).

B. SPECIES OF IMPORTANCE

The following plant species, while not distinguished as separate plant communities, are common species in the area.

Aspen

Aspen can be found growing in a variety of areas which appear different in many respects. Aspen frequently grows along or adjacent to streams and lakes, along drainage channels which course down mountainsides and in fairly large groves among conifers at higher elevations. Aspen is generally associated with ground moisture: either a high watertable, a drainage channel or hillside spring.

Pinyon Pine

Extensive stands of Pinyon Pine were not found in the June Lake study area. The largest single stand occurs on the east facing slope near the Rush Creek inlet to Grant Lake. Plants in this community thrive on steep, rocky, thin soiled escarpment areas. The lack of understory variety is believed to be the result of three factors: the tree may use most of the available water; its branches may shade the understory; and it yields a resin poisonous to most other plants.

C. SPECIAL STATUS SPECIES

State and/or federally listed rare, threatened, endangered and sensitive plant species known to occur in the planning area were determined through the review of numerous reports and data files. Table 1 contains the plant species thought to occur in the June Lake Planning Area.

TABLE 1 – LISTING OF SPECIAL STATUS PLANTS

Common Name	Scientific Name	CNPS[1]	R-E-D Code[2]	Federal Status[3]	State Status[4]
Utah Monkey Flower	Mimulus glabratus	2	3-2-1	None	None
Snow Willow	Salix navalis	2	2-1-1	None	None
Mono Milk Vetch	Astragalus monoensis	1	2-2-3	C2	CR
Mono Lake Lupine	Lupinus duranii	1	None	C2	None
Mono Buckwheat	Eriogonum ampullaceum	1	None	C2	None

[1] California Native Plant Society Lists:
- 1 Rare, threatened, or endangered throughout its range.
- 2 Rare, threatened, or endangered in California but common elsewhere.
- 3 More status information required.
- 4 Watch List, plants of limited distribution, currently low threats.

[2] R-E-D Code system was designed by the CNPS and State of California to evaluate plants proposed for State listing. The higher the number, the more critical the concern. Categories are listed on the following basis:

R(Rarity)
- 1 Rare, but found in sufficient numbers and distribution wide enough that the potential for extinction is low at this time.
- 2 Occurrence confined to several populations or to one extended population.
- 3 Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E(Endangerment)
- 1 Not endangered at this time.
- 2 Endangered in a portion of its range.
- 3 Endangered throughout its range.

D(Distribution)
- 1 More or less widespread outside of California.
- 2 Rare Outside of California.
- 3 Endemic to California.

[3] Federal Classifications (1973 Endangered Species Act).
- C1 Enough data on file to support federal listing.
- C2 Data insufficient to support federal listing at this time.

[4] State of California Classifications (California Endangered Species Act)
- CR Rare

TABLE 1 -- LISTING OF SPECIAL STATUS PLANTS -- Cont.

SOURCES:

California Native Plant Society. September 1984. **Inventory of Rare and Endangered Vascular Plants of California. Special Publication No. 1 (3rd Edition).**

California Department of Fish and Game. 1987. **Natural Diversity Data Base Computer Textual Report and Map Overlay for USGS Mono Craters SE Quadrangle, Special Plants.**

California Department of Fish and Game. 1987. **1986 Annual Report on the Status of California Threatened and Endangered Plants and Animals.**

U.S. Fish and Wildlife Service. 1987. **Listed and Proposed Endangered and Threatened Species That May Occur In Portions Of The Mono Craters Quadrangle.**

Environmental Science Associates, Inc. 1988. **Draft Mono County Master Environmental Assessment.**

Southern California Edison. 1989. **Endangered Species Alert Program Manual, Species Accounts and Procedures.**

Of the four (4) plant species identified, only the Mono Milk Vetch is known to exist within the corridor of the Loop. The **1986 CDFG Annual Report on the Status of California's Threatened and Endangered Plants and Animals** indicates that of the seventeen Mono Milk Vetch populations occurring in the Inyo National Forest and the BLM lands in Mono County, seven are threatened by grazing, off-road vehicle use and highway activities.

WILDLIFE HABITAT AND WILDLIFE

I. INTRODUCTION

The extensive and diverse range of natural habitats occurring in the June Lake Loop planning area support a magnificent and abundant variety of wildlife. The myriad of animal species along with the habitats they occupy contribute significantly to the aesthetic, recreational and scientific values of the area, and play an integral part in sustaining the overall health of the area's economy.

Materials from the California Department of Fish and Game, the United States Fish and Wildlife Service, the USFS and Southern California Edison were used to prepare this section.

II. SETTING

A. EXISTING CONDITIONS

Past and present land uses in the June Lake area have negatively altered wildlife habitats. Human influences that have the potential to alter wildlife habitats include: replacement of existing vegetation with structures and other facilities, increased human usage of lands surrounding community and recreation areas, sheep grazing and water diversions.

Development and Increased Use

Development replaces existing vegetation and impacts conditions that support native wildlife in and around community areas. Wildlife species residing in areas adjacent to disturbed areas that are sensitive to human disturbances have been displaced. Concentrated recreational usage around lakeshores and streamside areas and at other recreational facilities has also resulted in environmental impacts. Anticipated future growth in previously undeveloped areas and associated influxes of visitors are expected to cause additional environmental damage.

Community and recreational development activities can also adversely impact fish habitat. Short-term and long-term degradation of surface water quality had been attributed to development projects where run-off from disturbed and unprotected soils was inadequately controlled and treated prior to stream discharge. Improved access to recreation sites along lakes and streams tends to result in trampled riparian vegetation, compacted soils, eroded stream banks and increased stream channel sedimentation, all of which are detrimental to fish habitat.

Grazing

Sheep grazing in areas adjacent to the Loop occurs on lands owned or managed by the Los Angeles Department of Water and Power, the Forest Service, and the Bureau of Land Management. While grazing is not permitted in developed recreation areas, a significant amount is allowed on Rush Creek below Grant Lake and on Parker Bench west of Grant Lake. Both areas are considered important spring and summer deer ranges.

The habitat needs of the mule deer population conflict with sheep use of the summer range. Because sheep trample vegetation and damage stream banks, grazing often results in the loss of important protective cover for young fawns and forage for lactating does. In addition, sheep herded into or through established deer summer ranges can cause additional competition for food, water, shade and resting sites. Competition with sheep has also resulted in the loss of deer through forced migration to acceptable ranges outside the area.

Mule deer are not the only wildlife species affected by current sheep grazing practices. Other riparian dependent wildlife such as amphibians and reptiles, predatory birds, and various small and large herbivorous and carnivorous mammals are also affected when riparian habitat is damaged or destroyed. Grazing in riparian areas often results in a significant loss of vegetation with subsequent increases in sediment loads during snowmelt, rainstorms and high stream flow periods. Fish habitat is also damaged by grazing animals collapsing undercut banks and trampling spawning areas.

Protecting wildlife species that are in direct conflict or competition with sheep will require the implementation of mitigation measures (e.g., herding, fencing, developing alternative water sources) by the responsible agencies on whose lands grazing occurs.

Water Diversions for Export and Hydroelectric Power Generation

The Loop's lakes and streams are considered to be in fair to good condition. Besides grazing and uncontrolled runoff from development, water diversions for domestic use and energy production have caused the greatest impacts on water bodies. Water diversions affect trout fisheries and other aquatic resources, including riparian vegetation, when operational practices result in significant stream flow reductions, fluctuations, or dewatering. Within the Loop, the June Lake Public Utility District and the June Mountain Ski Area are the principal licensed diverters of water for domestic consumption. These diversions cause stream flow reductions and lake level fluctuations in surface waters tributary to Rush Creek.

Since 1941, water from Rush, Parker, Walker, and Lee Vining Creeks has been diverted to supply the City of Los Angeles with water and hydroelectric power. LADWP diversions affect Parker, Walker and Lee Vining Creeks below their junctures with the Lee Vining-Grant Lake Aqueduct, and Rush Creek both above and below Grant Lake which is a LADWP reservoir. Stream flows to lower Parker and Walker Creeks have been completely curtailed except for occasional releases for irrigation. Water diversions have resulted in the loss of approximately 42% of the riparian corridors outside of the Wilderness Area along both Parker and Walker Creeks.

Rush Creek has been damaged by both water diversions and the regulation of water flows for hydroelectric power generation. These occurrences have resulted in the loss of 75 % of the pre-1900 riparian corridor along Rush Creek outside of the Wilderness boundary. In 1926, after the construction of the Waugh Lake, Gem Lake, and Agnew Lake reservoirs, and the subsequent regulation of flows between them, the normal flow regime of the upper Rush Creek drainage was eliminated. Water released from the powerhouse, in combination with flows from tributary drainages and releases over the spillway or from the discharge pipes at Agnew Lake, however, appear sufficient to maintain the established fish habitat in Rush Creek, above Silver Lake.

At its inlet to Grant Lake, Rush Creek's productive capability may be reduced due to fluctuating water levels in Grant Lake. Below the Grant Lake Dam, recent court decisions have mandated that the LADWP provide Lower Rush Creek with a minimum flow of 19 cubic feet/second (cfs). Greater amounts may be required depending on the amount of drainage from adjoining watersheds and on Mono Lake's water level. Guaranteed minimum flows could allow riparian corridors along Lower Rush Creek to regenerate.

B. HABITAT TYPES

The protection and restoration of natural ecosystems is a key element in preserving and/or restoring the existence of wildlife species. A vast array of vegetative components and physical and biological factors serve to meet the specific needs of individual species. The distinct and subtle variations in the associations, abundance, successional stages and distributions of vegetation affects the capability of habitats to support wildlife. The presence of certain physical features such as snags, down logs, cliffs and rock outcroppings are also of significant importance.

Riparian

The riparian environment found along and adjacent to the Loop's lakes, creeks, and streams constitutes one of the most

ecologically significant wildlife habitats in the planning area. Situated in what is otherwise an arid landscape, riparian habitats offer wildlife readily available sources of water and vegetation used for drinking, cooling, food, cover and nesting. Riparian habitats also benefit wildlife as they provide vital components in close proximity, reducing the need for animals to travel. Small and large mammals, birds, waterfowl, reptiles and amphibians are common species that depend on this habitat.

Wet Meadows

Wet meadow habitat occurs on level or gently sloping areas adjacent to perennial springs, streams or lakes and in wet swales. Meadows provide water and herbaceous forage essential for pregnant and lactating does. Large aspen groves, which are often associated with wet meadows, provide excellent escape, hiding and thermal cover, as well as shade during the summer.

Marshlands

The limited land area covered by marshlands makes these habitats especially important for waterfowl and other non-game birds and mammals that depend on its productive aquatic and semi-aquatic vegetation for food and shelter, breeding, nesting, and refuge. Marshlands also provide the required breeding habitat for various invertebrates and amphibians which are an important food source for wading birds.

Grasslands (Dry Meadows)

Grasslands are found on relatively dry sites interspersed with some mixing of other cover types. Grasses and forbs are abundant and provide an important source of food for small mammals, birds and deer. Mice and burrowing rodents are often abundant, making meadows a favorite hunting ground for predatory birds and certain carnivorous mammals. Overstory vegetation provides nesting habitat for smaller birds.

Bitterbrush - Sagebrush Shrub

The habitat exemplified by these co-dominant shrubs provides good browsing for mule deer bitterbrush being the highly preferred browse species. Vegetation also provides cover and forage value for upland harvest species with population densities being highly dependent upon the degree of cover. Shrubs provide both food and shelter for numerous small birds and mammals, and understory grasses and forbs supply abundant green vegetation and seeds depending on the time of the year.

Juniper - Pine - Shrub

The juniper-pine-shrub habitat, a valuable area to many upland game species, exists on steeply sloping mountain uplands and

along ridge tops with rock outcroppings. Plant types common to this habitat provide both browse and cover. Prominent browse species are bitterbrush, tobacco brush and snow berry. Dense pockets of curlleaf mountain mahogany in association with other shrubs also provides excellent hiding cover for mule deer fawn.

Mixed - Conifer

The composition of wildlife occupying this habitat type varies considerably depending on tree density and size, amount and variety of understory vegetation and proximity to water. Mixed coniferous and riparian habitat associations (riparian woodlands) often contain a diversity of plant species which provide excellent deer fawning and fawn raising habitat. Herbaceous forage growing along the riparian zone is essential for pregnant and lactating does. Areas of dense vegetation consisting of aspen, snow berry, bitter berry and taller grass species also offer excellent fawn hiding cover.

Edge Habitat

Large quantities of potential food, cover or water in the June Lake Planning Area may go unused because they are distant from other requirements. Wildlife habitat must contain vital components within a relatively small area. This complexity of habitat requirements creates the "edge effect," the phenomenon that makes areas where habitat types converge more favorable than either habitat alone. In edge areas, both the number of animal species and the total biomass will be greater than in any comparable area contained wholly within one or the other type. Two "edges" common to the planning area are the meadow "edge" and the forest-shrub "edge". The former is an important hunting area for carnivorous mammals. The latter is of significant value to mule deer as it provides both the forage benefits of the range and the cover benefits of the forest.

C. HABITAT PROTECTION

The continued long term existence of June Lake's abundant and diverse fish and wildlife populations will depend on how well life-supporting habitats are protected and maintained. The protection and preservation of critically important habitat types, such as riparian areas, will require special consideration. To assist community and county planning officials in achieving this goal, a system of categorizing local wildlife habitats based on their relative values has been developed (Table 2). These habitat designations are similar to those developed by Taylor, in his 1987 CDFG report entitled **June Mountain Wildlife Study**. These designations include general recommendations aimed at maintaining and enhancing local wildlife resources.

TABLE 2 -- WILDLIFE HABITAT DESIGNATIONS

CLASS I	
Definition	Recognized as critical, highly localized wildlife habitat. Disturbance could cause irreversible impacts to habitat types and associated wildlife species.
Habitat Types	Riparian, meadow and marshland; deer fawning grounds and major deer migration corridors; threatened, endangered and sensitive species habitat.
CLASS II	
Definition	Recognized as critical habitat containing a complex mosaic of vegetation types. Because this habitat is more abundant, it is more negotiable for mitigation.
Habitat Types	Grasslands, Juniper-Pine-Shrub, Mixed Conifer.
CLASS III	
Definition	Recognized as abundant and homogeneous habitat, therefore slightly lower in species diversity. First priority for development due to minimal impacts.
Habitat Types	Bitterbrush - Sagebrush Shrub.

D. WILDLIFE

The June Lake Loop Planning Area contains a diverse variety of animal life including deer, mountain lion, bobcat, coyote, jackrabbit, squirrel, sage grouse, owl and trout. Many species of reptiles and amphibians also abound. This valuable resource provides a major attraction for the recreational users of the area.

A review of the California Wildlife Habitat Relationship Program for the Northeast Interior Zone indicates that some 69 species of mammals, 168 species of birds and 18 species of amphibians and reptiles may occupy one or more of the planning area habitat types during some stage of their life cycle.

E. WILDLIFE SPECIAL STATUS:

The following species are listed as occurring within the planning area by the California Wildlife Habitat Relationship Program[1] and have been given special status by the California Department of Fish & Game; USDI, Fish and Wildlife Service; USDA, Forest Service; and the National Audubon Society (Table 3). The existence of special status animals thought to occur in the June Lake Planning Area is based upon physical sightings, and the animal's range and food habits. Each species has been assigned a code depending on its current status, e.g., rare, threatened, endangered, sensitive, etc.. In California, approximately 80 wildlife species are listed by either the Federal or state government as endangered or threatened with extinction. About 150 wildlife species are considered candidates for threatened or endangered status.

Threatened and Endangered Mammals and Birds

According to the California Wildlife Habitat Relationship Program, Volumes III (birds) and IV (mammals), three mammals and three birds in the planning area are listed as endangered or threatened species. State and federally listed endangered species include the Bald Eagle (Haliaeetus leucoccephalus) and the American Peregrine Falcon (Falco peregrinus anatum). Four animals, three mammals, the Sierra Nevada Red Fox (Vulpes vulpes necator), Wolverine (Gulo gulo) and California Bighorn Sheep (Ovis canadensis californiana) and one bird, the Swainson's Hawk (Buteo swainsoni) are listed by the state as threatened species.

[1] Cooperative listing effort by the USDA, Forest Service, USDI, Bureau of Land Management, California Department of Fish and Game and Nevada Department of Wildlife.

Threatened and Endangered Reptiles and Amphibians

None of the reptile and amphibian species listed by the California Wildlife Habitat Relationship Program have been given special status by state and federal listing agencies.

Threatened and Endangered Fish

The Owens Tui Chub (Gila bicolor snyderi), a species considered native to the area, has been listed as endangered by both the State of California and the Federal Government. The species may reside in Silver Lake although its presence has not been confirmed.

TABLE 3 -- LISTING OF SPECIAL STATUS ANIMALS

Common Name	Scientific Name	Codes
MAMMALS		
Spotted Bat	Euderma maculatum	2
Townsend's Big-eared Bat	Plecotus townsendii	CSC, 2
Western White Tailed Hare	Lepus townsendii	CSC
Sierra Nevada Mountain Beaver (Mono Basin Population)	Aplodontia rufa californica	2
Panamint Kangaroo Rat	Dipodomys panamintinus panimintinus	*
Sierra Nevada Red Fox	Vulpes vulpes necator	CT, 2
Wolverine	Gulo gulo	CT, 2
American Badger	Taxidea taxus	CSC
California Bighorn Sheep	Ovis canadensis californiana	CT, 2
Mule Deer	Odocoileus heminonus	SS
Pine Marten	Martes americana	SIS
BIRDS		
Common Loon	Gavia immer	CSC, ABL
Western Grebe	Aechmophorus occidentialis	W, ABL
American White Pelican	Pelecanus erythrorhynchos	CSC
Great Blue Heron	Ardea herodias	W, ABL
Cooper's Hawk	Accipiter cooperii	CSC, ABL
Northern Goshawk	Accipiter gentilis	CSC, SS
Sharp-shinned Hawk	Accipiter gentillis	ESC, W, ABL
Golden Eagle	Aquila chrysaetos	CSC, SS
Swainson's Hawk	Buteo swainsoni	CT, 2, ABL
Ferruginous Hawk	Buteo regalis	ABL
Northern Harrier (Marsh Hawk)	Circus cyaneus	CSC, ABL
Turkey Vulture	Cathartes aura	ABL
Bald Eagle	Haliaeetus leucoccephalus	CE, FE
Osprey	Pandion haliaetus	CSC
Prairie Falcon	Falco mexicanus	CSC, SS
American Peregrine Falcon	Falco peregrinus anatum	CE, FE, ABL

TABLE 3 – LISTING OF SPECIAL STATUS ANIMALS (cont.)

BIRDS

Common Name	Scientific Name	Codes
Merlin	Falco columbarius	ABL
Sage Grouse	Centrocercus urophasianus	CSC, HS
Blue Grouse	Dendragapus obscurus	ABL
Snowy Plover	Charadrius alexandrinus	CSC, Z, ABL
California Gull	Larus californicus	CSC
Caspian Tern	Sterna caspia	W
Short-eared Owl	Asio flammeus	CSC, ABL
Long-eared Owl	Asio otus	CSC, ABL
Burrowing Owl	Athene cunicularia	CSC, W, ABL
Common Nighthawk	Chordeiles minor	ABL
Black Swift	Cypseloides niger	CSC
Lewis Woodpecker	Melanepes lewis	ABL
Hairy Woodpecker	Picoides villosus	ABL
Willow Flycatcher	Empidonax traillii	CSC, ABL
Winter Wren	Troglodytes troglodytes	ABL
Golden Crowned Kinglet	Regulus satrapa	ABL
Loggerhead Shrike	Lanius ludovicianus	ABL
Warbling Vireo	Vireo gilvis	ABL
Yellow Warbler	Dendragapus petechia	CSC, ABL
Vesper Sparrow	Pooecetes gramineus	ABL

REPTILES AND AMPHIBIANS

None

FISH

Owens Tui Chub	Gila bicolor snyderi	CE, FE

INVERTEBRATES

Mono Lake Brine shrimp	Artemia monica	2
Langston's blue butterfly	Euphilotes langstoni langstoni	2
Mono checkerspot butterfly	Euphydras editha monoensis	2
Travertine banded-thigh diving beetle	Hygrotus fontinalis	2

CODES

CE	listed as endangered in the State of California
CT	listed as threatened in the State of California
CC	candidate for listing as threatened or endangered in the State of California
CSC	California Department of Fish and Game species of special concern
FE	listed as endangered by the Federal Government
FT	listed as threatened by the Federal Government
FPE	proposed as endangered by the Federal Government
FPT	proposed as threatened by the Federal Government

TABLE 3 – LISTING OF SPECIAL STATUS ANIMALS (cont.)

1	category 1 candidate for Federal listing (Taxa for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened).
2	category 2 candidate for Federal listing (Taxa which existing information indicates may warrant listing, but for which substantial biological information to support a proposed rule is lacking).
W	Watch List. Location information for these Taxa is not computerized. The Natural Diversity Data Base is currently collecting distribution information but maintains manual files only.
SS	Sensitive Species. Species that occur on National Forest land and are designated by the Regional Forester as sensitive because of viability concerns.
HS	Harvest Species. This group includes those animals classified as game species by the California Department of Fish and Game and important on the Inyo National Forest.
ABL	Audubon Blue List. Includes bird species on the National Audubon Society "Bluelist" for 1978. The species are considered to show declining populations over a substantial portion of their range.
SIS	Includes non-harvest species of special public interest designated by the Regional Forester, U.S. Forest Service.
*	Taxa listed without a code but which fall into one or more of the following categories:
a)	Taxa that may be considered endangered or rare under Section 15380 of CEQA guidelines.
b)	Taxa that are biologically rare, very restricted in distribution or declining throughout their range but not currently threatened with extinction.
c)	Population(s) in California that may be peripheral to the major portion of taxa's range but which are threatened with extinction in California.
d)	Taxa slowly associated with habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forest, desert aquatic systems, native grasslands).

SOURCES:

California Department of Fish and Game. 1987. **Natural Diversity Data Base Computer Textual Report and Map Overlay for USGS Mono Craters SE and Mammoth Mountain Quadrangles. 7 1/2 minute series.**

California Department of Fish and Game. 1987. **Natural Diversity Data Base Special Animals.**

California Department of Fish and Game. 1987. **1986 Annual Report On The Status Of California's Threatened And Endangered Plants And Animals.**

USDA Forest Service. 1983. **Analysis Of Management Situations.**

USDI Fish and Wildlife Service. 1987. **Listed and Proposed Endangered and Threatened Species And Candidate Species That May Occur In The Planning Area.**

. 1980. **California Wildlife Habitat Relationships Program, Northeast Interior Zone, Volumes II, III and IV.** Ed., Airola, D.

F. WILD LIFE SPECIES OF AREAWIDE IMPORTANCE

Mule Deer

Mule deer generate tourist traffic during the off-season hunting period and provide aesthetic pleasure for residents and tourists. While not classified as a special status species, mule deer are nonetheless sensitive to growth and development. Consideration should be given to any and all major projects where impacts may negatively affect their established migration routes and fawning and summering habitats and activities.

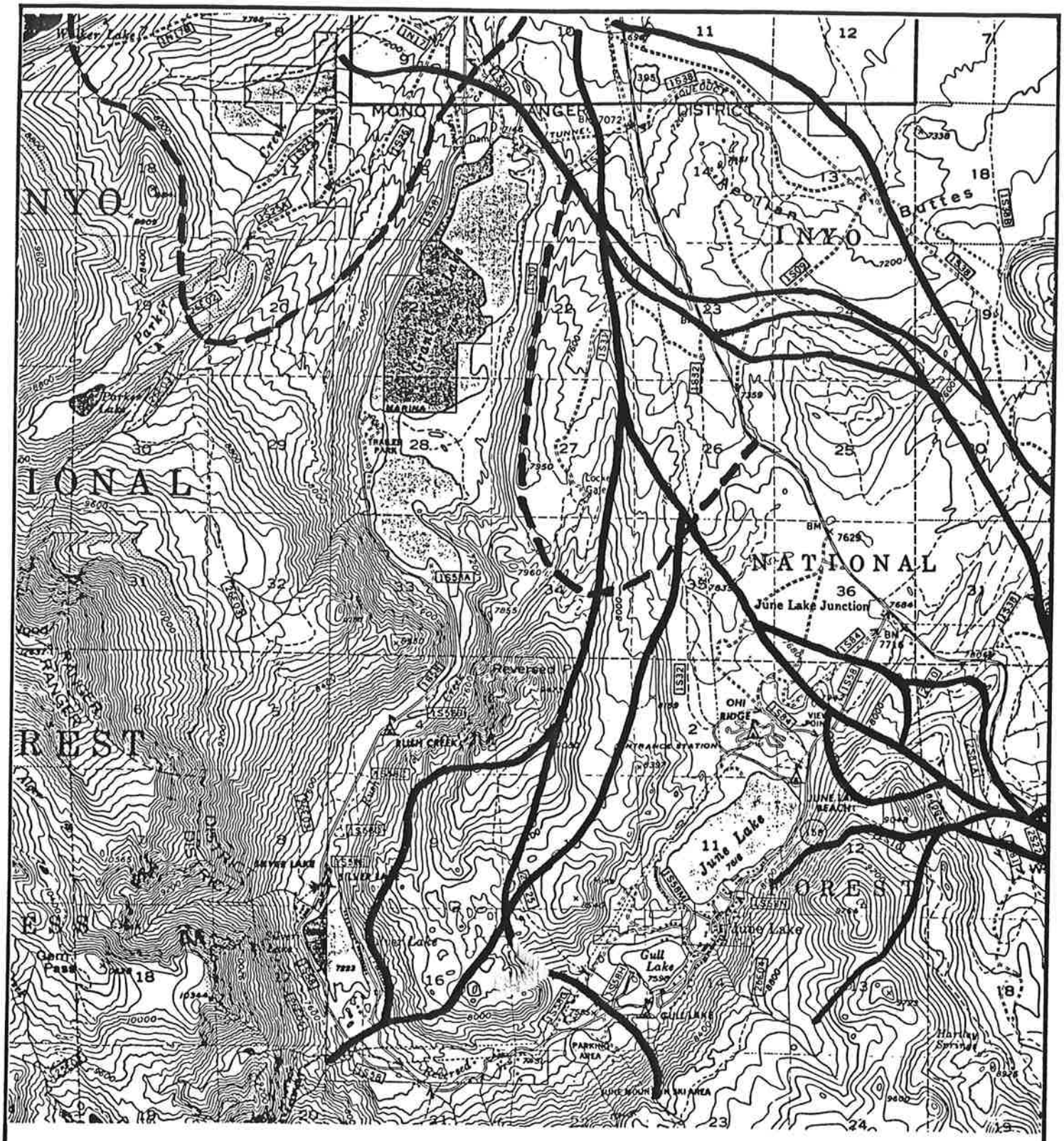
Lone bucks, does with fawns, and family groups which migrate through and summer in and around the Loop belong to one of two major deer herds; the Mono Lake herd and the Casa Diablo herd. Migration routes and holding areas for these herds are shown in Figure 4.

Mono Lake Herd

Recent CDFG estimates indicate that the Mono Lake herd contains a population of between 4,000 to 5,000. The Mono Lake herd winters near Hawthorne, Nevada and summers in the central Sierra, including a portion of the June Lake Loop. The exact locations of the herd's summering grounds and migration routes are not known at present. However, general observations indicate that major crossings occur on U.S. 395 near the base of Conway grade on U.S. 395, south of Lee Vining, and near the north U.S. 395 and S.R. 158 junction. The number of deer which break off from these groups to migrate through or summer within the Loop, while as yet undetermined, is expected to be substantial. In early 1988, the CDFG began a three year radio telemetry study to identify the herd's summering grounds and migration routes.

Casa Diablo Herd

A recently completed study on the Casa Diablo herd found that a large segment of this population migrates to summering habitat in and adjacent to the June Lake Loop from wintering grounds near Benton. The 1500 to 2000 members of this herd follow three principal migration corridors. The smallest number migrates through the Deadman, White Wing and Glass Creek areas. Some remain in this area while others travel over San Joaquin Ridge to summering grounds located further west. The majority of the herd utilizes two separate and distinct migration corridors. The southern migration corridor heads west from Bald Mountain, crossing U.S. 395 near Wilson Butte. The corridor continues in a northwesterly direction crossing S.R. 158 near Oh! Ridge and terminates near Reversed Peak. The northern most migration corridor follows a northwesterly course from Bald Mountain through Clark and Alpers Canyons. Paralleling the tunnel road



north

FIGURE 4
DEER MIGRATION CORRIDORS
AND CRITICAL HABITAT AREAS
SCALE: 1" = 5,280'

SOURCE: CDFG, 1989.

LEGEND

Migration Corridor
Holding Area

along the west side of the Mono Craters, the corridor turns west near the Aeolian Buttes, crossing U.S. 395 near the West Portal turnoff. From here it follows a course around the north end of Grant Lake, to spring holding areas (staging grounds) in the general vicinity of Parker and Walker Lakes. While some deer remain in this area for the remainder of the summer, others continue their migration in search of summering areas located to the north and south. Those which head north have been tracked as far as Twin Lakes near Bridgeport. Most, however, find needed habitat in Lee Vining and Lundy Canyon areas. Those heading south summer in ranges throughout the June Lake Loop and the mountains to the west.

According to Ron Thomas, CDFG Wildlife Biologist, the marsh-meadow area between Silver Lake and the Clark Tract subdivision may serve as a critical corridor where large numbers of deer migrate off Reversed Peak enroute to summering grounds within the Reversed Creek, Rush Creek and Alger Creek watersheds. Routes across public and/or private lands in the west side of the canyon have not yet been identified.

Deer Fawning

The protection, preservation and enhancement of June Lake's deer fawning habitat will play a critical role in the community's effort to sustain and increase mule deer population levels. Quality fawning habitat can be broadly defined as an undisturbed environment containing sufficient and readily accessible sources of food, water, shelter, cover and thermal protection, all within a relatively well defined land area.

Community growth and development activities impact deer fawning by directly replacing deer fawning habitat and by indirectly creating additional disturbances to fawning habitat in close proximity to expanding areas. Another impact results from the continual disturbance of fawning activities by free roaming dogs. Regardless of the habitat's quality, or the level of disturbance caused by construction activity, if dogs are allowed to run free, deer fawning in established fawning niches will be disrupted. This problem is indirectly related to irresponsible dog owners and limited enforcement of local leash laws.

Trout

Trout fishing is one of the Loop's most popular and economically important recreational activities. From opening day on the last Saturday in April, to the close of the season on October 31, individuals, families, and organized fishing clubs fish at the Loop's numerous local and back country lakes and streams.

Fishing waters within the Loop proper include four lakes, two major creeks and a number of tributary streams. Natural fish reproduction in these resident trout habitats falls short of

meeting current sport fishing demands. The shortfall is supplemented by CDFG hatchery born and reared trout.

June Lake, Gull Lake, Silver Lake and Grant Lake offer both shore and boat fishing with marinas and boat launching facilities located at each. Rainbow Trout (Salmo gairdneri), the principal game fish reared at the CDFG Fish Spring Hatchery, is regularly planted in each of these lakes as well as Walker Lake. Genetically, this species is not well adapted for spawning and is therefore considered as a "put and take" species by the CDFG. Species better adapted for spawning in the streams tributary to Gull Lake, Silver Lake, and Grant Lake include the Brown Trout (Salmo trutta) and Eastern Brook Trout (Salvilinus fontinalis). These species are reared at the CDFG Hot Creek Hatchery and are occasionally planted in the Loop lakes. Parker Lake and Walker Lake, two popular day hike fishing spots northwest of Grant Lake, also contain naturally reproducing populations of Brown and Eastern Brook Trout.

The characteristics of Loop's streams and creeks vary significantly. Reversed Creek and its tributary streams, are relatively narrow and surrounded by brush, limiting fishing to the bank. Rush Creek, on the other hand, is considerably wider with an open vegetative canopy, lending itself to a variety of fishing techniques, including fly fishing. Hot Creek Hatchery reared Rainbow Trout and native Brown Trout are commonly taken from these waters. Rush Creek above Grant Lake is considered an excellent spawning tributary and as a result is closed during most of October when wilder species begin their fall spawning runs. Lakes and streams within the Ansel Adams Wilderness Area (located directly west of the Loop and accessible from the Gem Lake Trail head near Silver Lake) sustain populations of Eastern Brook and Rainbow Trout. Golden Trout (Salmo aquabonita), considered the most beautiful trout of the Sierra, thrive in a few lakes and streams at higher elevations, including Alger and Lost Lakes. Cutthroat Trout (Salmo clarkii), the first trout species introduced in the 1850's, has been out-competed by other species and occurs only in limited numbers. Recent efforts by the DFG to enhance cutthroat populations have had limited success.

WATER RESOURCES

I. INTRODUCTION

Water resources play an extremely important role in maintaining June Lake's unique mountain character and its water based recreational economy. The following summarizes the existing conditions of water resources in the Loop including the surface and subsurface hydrology, the water quality of lakes and streams, the effects of water exported for domestic uses and instream values.

II. SETTING

A. SURFACE HYDROLOGY

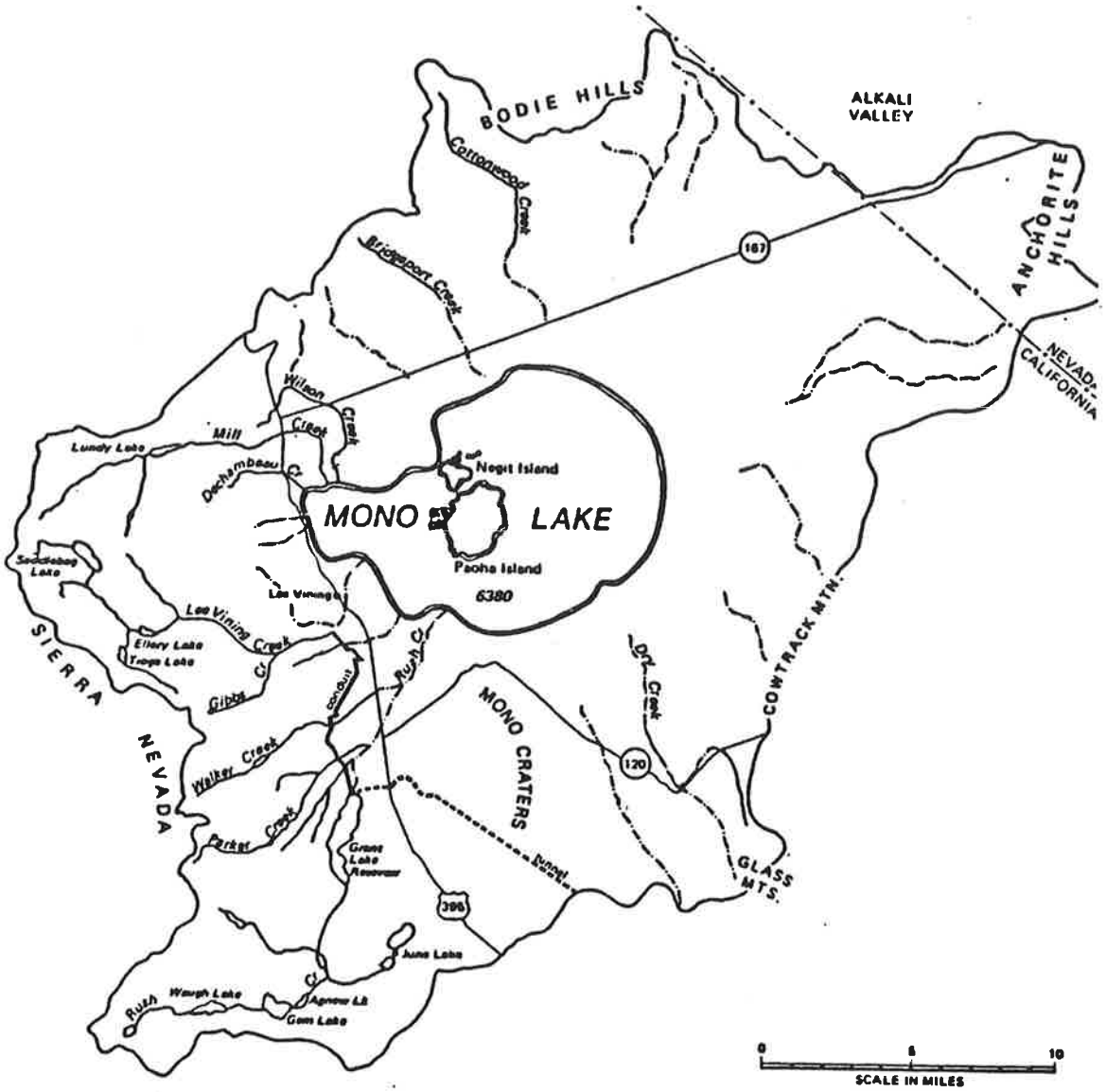
Nearly all developed lands in June Lake are situated within the southeast portion of the Rush Creek Basin. This basin includes five distinct watersheds (Table 4) all of which are located within the Mono Lake Hydrologic Unit (Figure 3).

TABLE 4 -- RUSH CREEK BASIN WATERSHED AREAS

WATER SHED	AREA (sq. miles)
Reversed Creek Subunit	14.0
Rush Creek Subunit	23.3
Alger Creek Subunit	11.9
Parker Creek Subunit	7.9
Walker Creek Subunit	10.2

The Rush Creek Basin provides dramatic relief with elevations ranging from 6,500 feet along the Rush Creek riparian corridor above Mono Lake to near 13,000 feet in the uppermost reaches of the Ansel Adams Wilderness Area. The Basin is dotted with glaciers and high alpine lakes and streams, all of which were tributary to Mono Lake before the installation of stream diversion facilities.

All surface and subsurface flows within the Loop originate as precipitation that falls on the Reversed Creek, Rush Creek and Alger Creek subunits. The bulk of these flows result from spring and summer melt of the previous winter snowpack. Over two-thirds of the average annual precipitation occurs during the months of November through March. Lesser amounts are derived from convectional downpours which occur during the summer.



north

FIGURE 5
MONO LAKE
HYDROLOGIC UNIT

Reversed Creek Subunit

Surface water flows on the floor of the Loop begin at June Lake and terminate at the mouth of Rush Creek at Mono Lake. June Lake, Gull Lake and Reversed Creek are sustained by tributary flows out of the 14.0 square mile Reversed Creek Subunit. With the exception of a concentrated area of springs along its west shore, all tributary drainage into June Lake is thought to occur as subsurface flow from percolating precipitation. At a lake level of 7610 feet, storage in June Lake has been estimated at 17,800 acre feet. Outflow from June Lake normally occurs during the spring and lasts from one to three months depending on the previous winter's precipitation.

Gull Lake also receives the majority of its supply from subsurface springs. Secondary supply sources include surface and subsurface drainage from June Lake and surface flows from numerous springs located along its north and south shorelines. At a lake level elevation of 7,595 feet, storage in Gull Lake has been estimated at 2,569 acre feet. Reversed Creek, which originates as spillover from Gull Lake, collects the balance of all surface drainage out of the Reversed Creek watershed. The principal tributaries to Reversed Creek are Gull Canyon Creek, an ephemeral stream whose drainage area encompasses a portion of the June Mountain Ski Area; Snow Creek, a principle domestic supply source for the June Lake Public Utility District (JLPUD); Yost Creek, an untapped stream; and Fern Creek, one of two principal surface suppliers diverted for domestic use by the JLPUD in the Down Canyon area. The remaining drainage originates from unnamed springs and streams.

Two flow measuring stations are currently maintained within the Reversed Creek Watershed: one on Reversed Creek below its outlet at Gull Lake; and one on Snow Creek at the JLPUD Diversion Dam. Both are maintained and read by JLPUD staff on a weekly basis. Measurements taken at the Reversed Creek station between November 1984 and November 1987 ranged from less than 0.35 cubic feet/second (cfs) on 7-16-85 to 9.62 cfs on 3-11-86, and averaged 1.39 cfs over the three year period. Measurements taken at Snow Creek for the same period ranged from 0.48 cfs in September of 1987 to 2.14 cfs in May of 1986, with an average flow of 0.96 cfs for the three year period. Gauging stations to measure flows at other domestic water sources have not been developed.

Upper Rush Creek Subunit

The upper Rush Creek Subunit has a tributary drainage area of 23.3 square miles. Surface drainage out of this watershed is controlled through a series of reservoirs with operations coordinated by the Southern California Edison Company (SCE) and the Los Angeles Department of Water and Power (LADWP). SCE reservoirs regulate stream flows above LADWP diversion facilities for hydro-electric power production and LADWP uses Grant Lake Reservoir for domestic water storage.

Water released from the Rush Creek powerplant over and/or through the Agnew Lake Dam flows into a natural streambed which flows into Silver Lake. Reversed Creek flows into and becomes part of Rush Creek above Silver Lake. Records kept by SCE for their flow recording station located below Agnew Lake shows an "actual flow" [1]of 55.9 cfs for the 23-year period beginning 1951 and ending 1974.

Alger Creek Subunit

The northern most watershed with major tributary drainage into Loop waters is Alger Creek. This subunit has a drainage area of approximately 11.9 square miles. During the summer, a portion of Alger Creek's flow is diverted as the primary domestic water supply for residences and commercial establishments in the immediate vicinity of Silver Lake. A flow measuring station has not been developed for this stream and its flow ranges are unknown at this time. Silver Lake is also the terminus for surface flows out of this watershed.

Silver Lake and Middle Rush Creek

Silver Lake, which is fed by tributary drainage from the Reversed Creek, Rush Creek and Alger Creek subunits, has an estimated volume of 3,389 acre feet at a surface water elevation of 7,217 feet. The amount and source of subsurface flows into Silver Lake have not yet been determined.

Overflow from surface and subsurface drainage into Silver Lake re-enters the Rush Creek drainage near the northeast corner of the lake. Small perennial and ephemeral flows from surrounding mountain springs add to its volume as it courses towards Grant Lake, about 2.5 miles downstream of the Silver Lake discharge.

Flows in this section of Rush Creek are measured at the LADWP Rush Creek measuring station located 0.6 miles upstream of Grant Lake. LADWP records for the 37-year period beginning in 1937 and ending in 1974 indicate an average annual discharge of 81.8 cfs through this facility.

Grant Lake

Grant Lake, located at the northern end of the June Lake Loop, is a man-made reservoir constructed, operated and maintained by the LADWP as part of their Los Angeles Aqueduct System. The reservoir is supplied by four principal streams including Rush Creek, the main tributary of the June Lake Loop, and Parker, Walker and Lee Vining Creeks, streams which are diverted from watersheds north of the June Lake Loop. The capacity of Grant Lake is estimated at 47,500 acre feet.

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[1] Actual flow -- The total flow of Rush Creek below Agnew Lake and Rush Creek powerplant tailrace.

With the exception of court-ordered maintenance flows released to Rush Creek below Grant Lake and Lee Vining Creek below its check dam, surface waters from Grant Lake are exported by the City of Los Angeles for municipal use and hydro-electic power generation. Exports have averaged close to 93,000 acre feet/year since the completion of the Los Angeles Aqueduct's second barrel in 1970.

Parker and Walker Creeks

Parker and Walker Creeks once flowed in the Planning Area north of Grant Lake. These creeks supported riparian corridors and self-reproducing trout populations. With the exception of controlled releases for pasture irrigation on City of Los Angeles lands, surface flows have been completely diverted by the DWP. Recent court decisions, however, have invalidated the current diversion practices, and have required the DWP to reconstruct the historic Walker and Parker Creek channels and re-water them.

B. SUBSURFACE HYDROLOGY

Due to the availability of surface water supplies within the Loop, significant development of groundwater resources has not been necessary. Groundwater usage is limited to domestic wells operated by the June Mountain Ski Area, a few commercial establishments and scattered single-family residences located in the Down Canyon area of June Lake.

Limited hydrologic information for the June Lake Loop was collected during a reconnaissance level investigation initiated by the California Department of Water Resources in September, 1974. The study was limited to an evaluation of the groundwater resources in the alluvium between Gull Lake and Silver Lake. Meadow areas between June and Gull Lakes were not included as previous investigations indicated that groundwater was probably unconfined and combined with subsurface flows between the lakes. Developing wells in this area would simply draw water from the lakes rather than from an independent underground source. The alluvium downstream of Silver Lake was not studied because of funding limitations and because of the impracticality of developing a domestic water supply so far from June Lake's developed communities.

Groundwater within the June Lake Loop originates from precipitation in the surrounding watersheds. Beginning in the spring, rainfall and melting snowpack percolates to recharge underground reservoirs and aquifers. Subsurface seepage and streamflow infiltration into underlying sediments also help to replenish the groundwater supply. The total amount of natural replenishment has not been determined.

The area between Gull Lake and Silver Lake is made up of marine sediments, igneous rocks, glacial moraines and recent alluvium.

These formations are categorized as non-water bearing or water bearing, based upon whether significant amounts of water can be retained in the formations. Nonwater-bearing formations consist of consolidated marine sandstones and mesozoic granitics. These hardrocks form the foundation of the Loop. Water-bearing formations consist of unconsolidated glacial till and alluvium in the form of sands, silts and clays.

The alluvium filled meadows adjacent to Reversed Creek were found to be the most promising sites for developing future groundwater supplies. Specific yield from these sites would probably be low, however, because they contain a high percentage of fine sediment derived from the erosion of moraines bordering the Valley. Seven to ten percent of these alluviums are estimated to contain water. Using a storage factor of seven percent, the total water in storage between Gull Lake and Silver Lake has been estimated at 650 acre feet.

Also, the JLPUD drilled a test hole immediately north of Gull Lake at its Snow Creek water filteration plant site. Test pumping at depth of 440' in almost entirely factured hard-rock, indicated a low but acceptable specific yield of .6 gpm/foot of draw-down. The District may drill at this site to supplement water supplies as new development demands more water than Snow Creek can provide in the dry fall season.

A summary of the estimated groundwater in storage for the areas identified in Figure 6 is shown on Table 5. The water in storage represents the amount of water in the sediments at a given time and water level. Because the groundwater is actually in a transient state moving downstream as subsurface flow or surfacing in the creek channel, the subsurface flows would have to be estimated to determine the actual groundwater supply.

TABLE 5 -- GROUNDWATER IN STORAGE AT 7% SPECIFIC YIELD

Subarea	Acres	Average Sediment Depth Feet	Water in Storage Acre-feet
A1	14.5	75	70
A2-N	5.0	70	20
A2-S	25.0	100	160
A3	21.0	75	100
A4-1	29.0	20	30
A4-2	37.0	40	100
A5-E	13.0	30	25
A5-W	34.0	50	110
A6	8.0	60	30
Totals	186.5		650

Source: DWR, 1981.

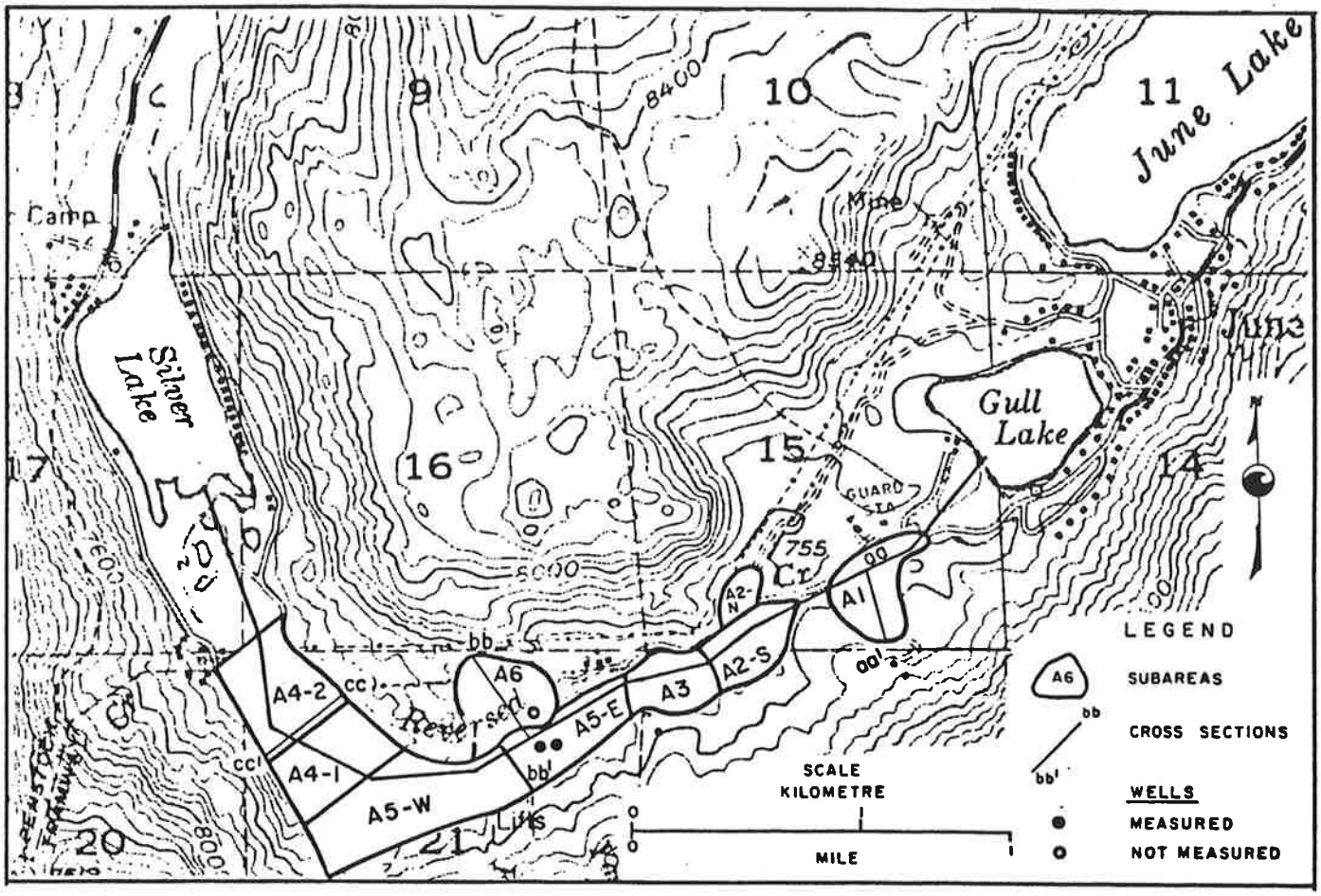


FIGURE 6 -- LOCATIONS OF GROUNDWATER SUBAREAS
SOURCE: DWR, 1981.

C. WATER QUALITY

JUNE, GULL AND SILVER LAKES

Biologically significant water quality information for the Loop's lakes and streams was collected during the June Lake Area Water Resource Assessment Study conducted by the California Department of Water Resources in 1977 and 1978. The study's results were published in **Water Quality Study - June Lake Loop,** 1979 by Randall L. Brown, California Department of Water Resources.

Water quality parameters examined during the studies included: 1) dissolved oxygen (DO) and temperature; 2) phytoplankton free floating algae and nutrients; 3) zooplankton (microscopic animals); 4) light penetration; and 5) dissolved minerals. The study focused on June, Gull and Silver Lakes and to a lesser extent Reversed and Rush Creeks. Table 6 describes the study sites. Analysis of the study's water quality data indicates that surface water in the June Lake Loop is of excellent quality for domestic

consumption, fish habitat and other beneficial uses.

TABLE 6 – SAMPLING STATIONS, JUNE LAKE STUDY, 1977

Station Name	Station Location
Stream	
R-1	Outlet from Gull Lake at weir--right below Highway 158.
R-2	Reversed Creek immediately above confluence with Rush Creek.
R-3	Rush Creek at Powerhouse--at Highway 158 bridge.
R-4	Rush Creek between Silver and Grant Lake at old weir structure.
Lakes	
JL-1	June Lake near S.E. shore in area of maximum depth.
JL-2	June Lake near N.W. corner in about 80 feet of water.
GL-1	Gull Lake, due north of Marina, just past mid-lake in about 65 feet of water.
Sl-1	Silver Lake, area of maximum depth off N. shore.
G-1	Grant Lake, just east of narrow channel.

Source: DWR, 1981.

Dissolved Oxygen and Temperature

Water temperatures and dissolved oxygen control the amount of aquatic habitat available for fish and other organisms. Variations in water temperatures during the early spring and summer months cause lakes in the Loop to stratify into various layers. Waters warmed by the relatively higher air temperatures tend to stratify over heavier, cool waters. During periods of stratification, water temperatures vary from around 70° F near the surface to 40° F near the bottom. Mixing of stratified layers occurs twice a year, usually in May and October. During these periods, the water temperatures are about the same from top to bottom.

Dissolved oxygen follows a pattern similar to that of water temperatures. During periods of mixing, dissolved oxygen is relatively uniform throughout the water column. However, during the late spring and summer months when the waters are stratified, deeper waters, due to the decomposition of organic materials on the bottom, may contain inadequate amounts of dissolved oxygen to support fish. In all of the Loop lakes, reduced oxygen levels were found in deeper waters. However, this problem

was of particular concern in Gull Lake where low oxygen concentrations (below 3mg/l) during the entire ice free period and the complete lack of oxygen between June through September, were found below 30 feet at Gull Lake. The lack of dissolved oxygen would have forced trout and other fish to survive in the upper 30 feet.

Nutrients and Phytoplankton

The nutrients of principal concern in lakes are nitrogen and phosphorus. These elements in high concentrations can lead to algae blooms which in turn may discolor lake waters and cause negative visual impacts. Eutrophication can also occur as algae blooms use up available dissolved oxygen and suffocate other lifeforms.

The nutrient concentrations of June and Silver Lakes were low, probably the result of nutrients being consumed by floating algae. Gull Lake exhibited enhanced nutrient levels, especially as the depth increased. Higher concentrations of ammonia, another source of nitrogen usable to algae, and orthophosphorus are derived from the anaerobic decomposition of algae and detritus in the oxygen-depleted bottom waters of Gull Lake.

The growth of phytoplankton or free floating algae is related to available nutrients; higher concentrations lead to greater quantities of algae. In general, concentrations of phytoplankton were low in all lakes. The algal numbers, along with the oxygen data, indicate that Silver Lake may be slightly enriched in comparison with a lake such as Tahoe. This enrichment is important in terms of fishery habitat in that more food is available for the fish than would be found in a non-nutrient enriched lake.

Dissolved Minerals

June, Gull and Silver Lakes all contain water of excellent mineral quality. June Lake contained the highest amount of Total Dissolved Solids (TDS), 130 mg/L, of the Loop's lakes. Concentrations at Gull and Silver Lakes measured 95 mg/L and under 40 mg/L, respectively. For comparison, Lake Tahoe water contains 60 mg/L, and Lake Shasta, 90-100 mg/L, while the suggested upper limit for drinking water is 500 mg/L. None of the constituents measured in any of the lakes pose a water quality problem.

Zooplankton

Zooplankton, small animals barely visible to the unaided eye, feed on living phytoplankton and the remains of other organisms. These organisms are capable of limited movement and provide an important link in a waterbody's food chain. Populations consist of approximately equal proportions of rotifers ("wheel animals") and cladocerans ("water fleas"). Copepods (a small crustacean) were also common in all samples.

Zooplankton collected in June Lake ranged from 69 organisms/gallon to 112 organisms/gallon. Samples collected in Gull Lake ranged from 112 organisms/gallon to 592 organisms/gallon. The high number corresponds to a phytoplankton "bloom" and is probably not representative of normal population levels. Silver Lake contained relatively high concentrations of zooplankton; two samples revealed populations of 135 and 385 organisms/gallon. The relatively large numbers of zooplankton in Silver Lake were somewhat surprising in view of the quality of water entering the lake, but they do enhance the lake's value as a fish habitat. One hundred organisms/gallon is considered more than adequate to support substantial numbers of resident trout.

Light Penetration

The depth to which light penetrates is important to the organisms inhabiting a waterbody. A device called a secchi disk is used to measure water clarity and the depth to which light penetrates. Light penetration is vital in defining the photic zone, the portion of a lake in which algalcell production (photosynthesis) exceeds consumption (respiration). The photic zone is approximately 3.5 times the secchi depth. The actual factor can be anywhere from 2.5 to 4 and has to be determined experimentally for each water body. The factor of 3.5 was assumed for this report for the three lakes.

Representative secchi depths in California range from 3 to 6 feet in the Sacramento-San Joaquin Delta, 100 feet in Lake Tahoe, and 15-25 feet in Don Pedro Reservoir (Tuolumne River).

Secchi depths in June Lake ranged from 19 feet to 40 feet. Using a factor of 3.5 (3.5 x 19=67 feet), the calculated photic depth ranged from 67 feet to 120 feet. Gull Lake secchi depths averaged about 20 feet. The photic zone, however, generally extended to the bottom indicating that low light conditions should not limit algae growth. Secchi depths and calculated photic depths in Silver Lake ranged between 14.4 feet to 22.2 feet and 50 feet to 78 feet, respectively. The average secchi depth in Silver Lake was lower than that of June or Gull Lakes (the water was more turbid or had more color) but on the average algae would be able to grow at any depth.

REVERSED AND RUSH CREEKS

Dissolved Minerals

Water sampled from Reversed Creek below Gull Lake and above the Rush Creek confluence, and from Rush Creek at the SCE powerhouse and between Grant and Silver Lakes, indicated a very low level of dissolved minerals. This supports the finding that the main surface waters of the June Lake Loop are of excellent mineral quality.

Sampling for dissolved nutrient concentrations at the same locations found low concentrations in all cases. The highest concentrations were found below Gull Lake and the lowest at Rush Creek at the powerhouse.

GROUNDWATER QUALITY

Information about the quality of the Loop's groundwater supply is restricted to a brief analysis performed by the California Department of Water Resource during their Water Resource Assessment Study of the June Lake area in 1977 and 1978. Based on limited sampling data, the Department found the groundwater supply to be "calcium bicarbonate" in character, with a total dissolved solids (TDS) concentration ranging from 30 to 50 mg/L. These limited findings would indicate that the Loop's groundwater is of excellent quality and could, if needed, be utilized to supplement the area's surface water supply for consumptive uses.

WATER QUALITY MONITORING

June Lake water purveyors monitor the bacteriological quality of domestic water by routinely testing for coliform bacteria. Coliform organisms are indicators of potential contamination and may originate from human, animal or soil sources. If coliform standards are met, the water is considered bacteriologically safe. The bacteriological quality of treated water distributed by the Loop's local public water agencies has been found to meet the drinking water standards specified in the California Domestic Water Quality and Monitoring Regulations.

The JLPUD also performs routine sampling and analysis of their raw water sources and treated supplies to demonstrate compliance with standards set by the California Department of Health Services for general mineral, general physical, inorganic chemical, organic chemical and radioactivity constituent levels. Test results indicate compliance for all parameters analyzed.

D. WATER EXPORTERS

Los Angeles Department of Water and Power

The Los Angeles Department of Water and Power (LADWP) supplies water to the City of Los Angeles. In the early 1900's, when local supplies could no longer support the City's anticipated needs, the City began searching for additional sources. This search ultimately led to the acquisition of rights to nearly all the water tributary to the Owens River. In 1913 the city constructed an aqueduct to carry water from the Owens River approximately 233 miles to Los Angeles.

Rapid expansion within the city strained this supply and caused the LADWP to extend its aqueduct system into the Mono Basin. The extension included the construction of Grant Lake and associated tunnels and facilities. In 1940, the Division of Water Resources, the predecessors to the present California Water Resources Control Board (SWRCB), granted the LADWP a permit to appropriate virtually the entire flows of Rush, Parker, Walker and Lee Vining Creeks. By April 1941, the LADWP began diversion and export of nearly half the flow from these streams.

In June of 1970, the LADWP completed a second aqueduct from the Haiwee Reservoir allowing for a 50% increase in total flow to the City. As a result of this increase in system capacity, average exports from Grant Lake increased from 79 cfs (57,193 acre feet per year) for the period 1940-41 to 1970-71 to 128 cfs (92,668 acre-feet per year) for the period 1971-72 to 1982-83. Long-term future average export is expected to equal approximately 128 cfs (92,668 feet/year). Based on historical operation of the Mono Basin extension, the SWRCB issued a license to the LADWP in 1974 allowing for a maximum diversion of 167,800 acre-foot per year for direct use and storage.

Some of the water not captured for export from Parker and Walker Creeks is used to irrigate LADWP leased lands located within the Mono Basin. This amounts to an average release of 12 cfs or 8,700 acre-feet per year. In addition, a court-ordered 19 cfs or 13,755 acre feet per year is currently being released to Mono Lake from Mono Gate #1 via Rush Creek below Grant Lake. Flows in excess of 19 cfs occur in very wet years when runoff exceeds aqueduct diversions and storage facility capacity.

All waters currently diverted for exportation to Los Angeles were at one time tributary to Mono Lake, a scenic and ecological treasure of local and national significance. As a result of the diversions, the level of Mono Lake dropped to 6,373 feet in 1979, approximately 43 feet below its pre-diversion level. The declining lake level and its impacts on the Mono Lake ecosystem have since become the focus of intense scientific research.

The environmental consequences of LADWP's exports from the Mono Basin, prompted the National Audubon Society to file suit against Los Angeles in May of 1979. The suit seeks to reduce or eliminate the export of waters tributary to Mono Lake. Plaintiffs contend that the lake's gradual recession has caused a host of adverse biological and physical environmental impacts, almost all of which would result in direct and/or indirect consequences for surrounding communities, including June Lake.

An initial court decision guaranteed a minimum flow of 19 cfs down Lower Rush Creek to maintain the fish habitat. The LADWP appealed the decision and a subsequent court sustained the first ruling as well as prohibited water exports from the Mono Basin until the State Water Resources Control Board reviews the allocation of water rights, or Mono Lake's level rises above 6,377 feet. After three drought years, the lake level is below the court mandated level of 6,377 feet and exports out of the Mono Basin have been halted. Water is now being stored in Grant Lake and released through Lower Rush Creek to raise Mono Lake to the court mandated level.

Although outside of the June Lake Planning Area, Mono Lake and its associated resources provide significant economic, recreational, scientific and scenic opportunities for residents and visitors of the June Lake area. Waters tributary to Mono Lake such as Lower Rush Creek, and possibly Parker and Walker Creeks if re-watered, could provide additional recreational opportunities. Maintenance of a healthy environment in and around Mono Lake is of direct importance to the June Lake community.

E. INSTREAM VALUES

Besides providing an excellent source of drinking water, the area's water resources also serve as primary components of the natural environment.

The quality and quantity of water within local lakes and streams is especially significant to June Lake since its economy is sustained by water-oriented activities. The protection and preservation of local water resources will help maintain recreational and visual resource values, local trout fisheries, wildlife habitat, riparian vegetation and streambanks and lakeshores. Adequate flows will also help to reduce the deposition of sediments in streams and eutrophication rates or changes in the microecology of its lakes.

The anticipated renewal of community development and population growth will create an increase in domestic, municipal and fire protection water demands. To adequately meet these demands, additional supplies will need to be diverted from existing sources, if available. If unavailable, new sources will need to be located and developed.

The extraction of excessive amounts of water from local lakes, streams or groundwater basins could affect the recreational experience and scenic quality for which the June Lake Loop is well known. Retaining the Loop's excellent water quality, fish and wildlife habitat, and natural characteristics, will require a concerted planning effort between local public water purveyors and resource protection agencies, including the USFS and CDFG. The USFS, in its February 1982 report entitled **June Lake Loop - A Review Of Current Water Uses And Future Needs,** has identified several water management strategies for the June Lake Loop, many of which have already been implemented by local water purveyors. Additional recommendations presented in this document could be followed by all agencies to guarantee that consumptive and non-consumptive uses are managed in the public's best interest.

CLIMATE

I. INTRODUCTION

June Lake's climate is shaped by its proximity to the Sierra Nevada and by its elevation. Elevations within the Loop range from 7,600 feet along the canyon floor to 12,000 feet at its higher mountain peaks. June Lake's mountainous environment is relatively dry and variable with strong breezes and large diurnal temperature fluctuations .

II. SETTING

A. TEMPERATURE

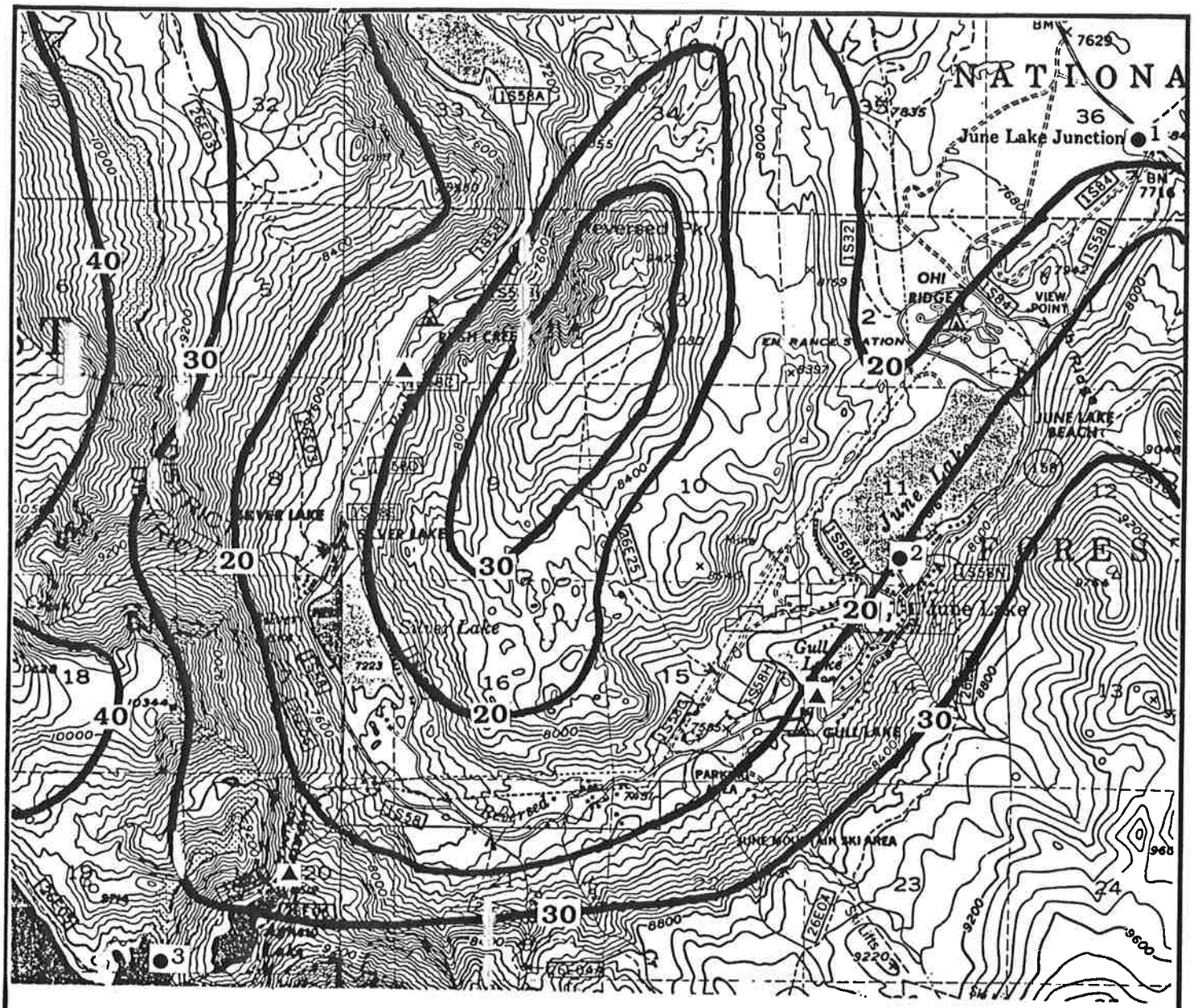
Diurnal and seasonal variations in temperature are characteristic of the area. Temperatures tend to decrease with increasing elevation, although cold air drainages and winter temperature inversions can reverse this trend. Mean daily summer temperatures are usually between 60 F^o and 65 F^o, while mean daily winter temperatures (December through February) are usually below freezing. Summer daily maximum temperatures normally range from 75 to 85 F^o. Winter daily maximum temperatures are often above freezing. Significant daily temperature fluctuations of between 40 to 50 F^o are common in the winter.

B. PRECIPITATION

Precipitation is greatest in late winter and generally increases as a function of elevation. Winter storms are usually regional, whereas summer thunderstorms are localized. An isohyetal map of the Mono Basin, which includes the June Lake area, was prepared in 1979 as part of a Department of Water Resource study entitled, **Mono Lake, California Water Balance** (Figure 7). Over the 17-year study period (1951-78), contours of average annual precipitation (isohyetal) for the June Lake area indicate that the mean ranged from 50 inches at the higher elevations to 20 inches on the canyon floor.

C. WINDS

The prevailing winds in the Mono Basin are from the southwest. Strong winds occur in every month of the year, but are more frequent in the late winter and spring. Light afternoon winds are typical in the summer due to temperature differences between the basin floor and the mountains.



north

FIGURE 7
ISOHYETAL MAP
(Average percipitation, Oct. 1951 - Sept. 1978)
SCALE: 1.25" = 5,280'

SOURCE: DWR, 1981.

LEGEND

●1 Percipitation Station
▲ Gaging Station

AIR QUALITY

I. INTRODUCTION

The June Lake Loop has excellent air quality except on a few winter days, when temperature inversions trap air pollutants. Potential pollutants include emissions from wood burning devices, re-entrainment of roadway particulates and exhaust from internal combustion engines.

II. SETTING

A. REGULATORY FRAMEWORK

The June Lake planning area, designated as a Class II Air Quality Region, lies within the Great Basin Valley Air Basin and is under the jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Local air quality must meet both federal ambient air quality standards established by the Environmental Protection Agency (EPA) pursuant to the Clean Air Act and state standards established by the California Air Resources Board (Table 7). The GBUAPCD monitors air quality and enforces these standards.

B. AIR QUALITY AND HEALTH EFFECTS

The GBUAPCD monitors air quality at three locations in the Town of Mammoth Lakes, however, it has not established a monitoring station in June Lake. According to GBUAPCD staff, based on preliminary samples, the pollutants of primary concern in the June Lake area are suspended particulate matter (PM-10) and carbon monoxide (CO). Particulate concentrations are composed of fine (less than 10 microns in diameter) particles which can be inhaled into the upper respiratory tract or into the lung itself resulting in temporary or sometimes permanent injury. CO is inhaled through the lungs and enters the blood stream by combining with hemoglobin, the substance that normally carries oxygen throughout the body. Carbon monoxide combines much more readily with hemoglobin than oxygen and can result in oxygen depletions. In areas of high altitude like June Lake, the health effects of CO occur at lower ambient levels and may be more pronounced.

Particulates

Air pollutants in the form of particulate matter are largely dust, dirt, soot, smoke and liquid droplets. Natural sources include brush and forest fires, wind erosion of naturally exposed soils and wind blown pollens. Human-induced sources include: emissions and dust entrainment from motor vehicle traffic on local streets and highways, construction related activity, off-road

vehicle use and combustion of wood and propane fuel for space heating.

The major sources of suspended particulates during the summer are attributed to emissions from combustion of motor vehicle fuels, dust re-entrainment from vehicular traffic, the area's dirt roads and wind erosion of soils, including those exposed around the shoreline of Mono Lake. Winter related particulates are generated from wood burning fireplaces and stoves, the use of cinders on state and county roadways and auto emissions.

Carbon Monoxide

Carbon Monoxide (CO) is created entirely from the combustion of fossil fuels. CO sources within the June Lake area include wood (and to a much lesser extent propane) combustion for space heating, water heating and cooling, and exhaust from all gas and diesel fueled internal combustion engines. Fireplaces and wood burning stoves are, without question, the major source of CO emissions during the winter season. Emissions from internal combustion engines also contribute a significant amount of CO as the combination of cold weather/cold start operations of vehicles for short local trips results in poor combustion efficiency. The primary source of CO during the summer season, when wood burning is all but curtailed, is combustion emissions from autos, trucks, construction equipment and outboard motors.

C. TEMPERATURE INVERSIONS

Significant air quality degradation in June Lake is frequently associated with inversion conditions that occur from late fall through spring. Inversions occur during the evening and throughout the early morning hours when cold, calm, dense air is trapped near ground level. Under normal conditions, air circulation and mixing occurs as warm, light air rises and is replaced by cold, heavier air. Inversions occur when this system breaks down and relatively warm air settles upon cooler air. During these periods, particulate matter is poorly dispersed and trapped under the layer of warm air. Inversions are usually dissipated by day time warming and increased wind movements.

TABLE 7 – STATE AND FEDERAL AIR QUALITY STANDARDS APPLICABLE TO JUNE LAKE, CALIFORNIA.

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARD	FEDERAL STANDARD[1]
Oxidant	1 Hour	.10 ppm (200 ug/m^3)	None
Ozone	1 Hour	None	.12 ppm (235 ug/m^3)
Carbon Monoxide	8 Hour 1 Hour	9 ppm (10 mg/m^3) 20 ppm (23 mg/m^3)	9 ppm (10 mg/m^3) 35 ppm (40 mg/m^3)
Nitrogen Dioxide	Annual Average 1 Hour	None .25 ppm (470 ug/m^3)	.05 ppm (100 ug/m^3) None
Sulfur Dioxide	Annual Average 24 Hour 1 Hour	None .05 ppm (131 ug/m^3) .25 ppm (855 ug/m^3)	.03 ppm (80 ug/m^3) .14 ppm (385 ug/m^3) None
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean 24 Hour	30 ug/m^3	50 ug/m^3
Sulfates	24 Hour	25 ug/m^3	None
Lead	30 day Average Calendar Quarter	1.5 ug/m^3 30 ppb	None 1.5 ug/m^3
Hydrogen Sulfide	1 Hour	.03 ppm (42 ug/m^3)	None
Vinyl Chloride (chloroethene)	24 Hour	.0010 ppm (26 ug/m^3)	None
Visibility Reducing Particles	1 observation	Insufficient amount to reduce prevailing visibility to less than 10 miles when the relative humidity is less than 70%.	None

1 Primary standard only.

Source: Great Basin Unified Air Pollution Control District, 1989.

D. FIREPLACES AND WOOD STOVES EMISSIONS

Fireplaces and wood stoves are in general use throughout the June Lake area and contribute significant amounts of air pollutants during winter use. The major atmospheric pollutants of concern are unburnt combustibles, such as carbon monoxide, gaseous organic and particulate matter, produced as a result of incomplete or inefficient combustion.

Fireplace emissions are highly variable and are primarily a function of wood characteristics and operating practices. During the early stages of the burning cycle a fast burn rate and higher flame intensity enhances secondary combustion and thereby lowers emissions. Conversely, higher emissions result from a slow burn rate and lower flame intensity.

The thoroughness of combustion and the amount of heat transferred from wood stoves depends heavily on fire box temperatures, the time spent in the fire box and mixing. Temperatures, time and mixing are effected by air flow through the stove and by the mode of stove operation. Emissions also depend on the burn rate; as the burn rate decreases, emissions increase for the great majority of closed combustion devices.

In addition to unburnt combustibles, lesser amounts of nitrogen oxides, sulfur oxides and volatile organic compounds are emitted from fireplaces and wood stoves.

E. VEHICLE EMISSIONS

Emissions generated from automobile usage in June Lake degrade local air quality and in turn, cause health, safety and aesthetic impacts. While some portions of the total auto emissions are associated with traffic on U.S. 395, most can be attributed to automobile trips originating, terminating or occurring within the Loop itself. Areas that concentrate vehicular activity, such as the June Lake Village or June Mountain Ski Area, tend to have the highest levels of air pollutants.

While the effects of auto emissions on local air quality have not yet been studied, vehicle emissions for total organic gas, reactive organic gas, carbon monoxide, oxides of nitrogen and particulate matter have been predicted for Mono County by GBUAPCD staff.

Another important contribution to air quality degradation in the planning area relates to suspended particulates originating from unpaved roads. Unpaved road dust (and all particulates) raises the level of total suspended particulates and reduces visibility.

GEOLOGY

I. INTRODUCTION

Geologic studies were conducted to identify possible hazard areas and other features that may hinder development, during the preparation of the 1974 **June Lake Loop Area General Plan.** Geologic information was also gathered from other environmental documents conducted on June Lake projects.

II. SETTING

A. GEOLOGIC FEATURES

Four prominent geologic features characteristic of the Eastern Sierra Nevada exist near June Lake. These include: the eastern escarpment of the Sierra Nevada fault; the glaciated valleys and moraines extending from the lower Sierra foothills into the high desert plains; the Mono Basin, an immense sump area with no natural surface outlet; and the Mono Craters range of recently active volcanoes. The formation of the Sierra Nevada extended from the late Jurassic period to the early Pleistocene, when the last major uplift along the Sierra Nevada fault created the Eastern Sierra scarp. Repeated episodes of glaciations and volcanic activity both before and after this last uplift have given the eastern Sierra Nevada (and the June Lake Loop) many of its prominent features. The horseshoe-shaped canyon that contains June, Gull, Silver and Grant Lakes and Reversed and Rush Creeks is of geologic importance to the June Lake Loop. Glaciers carved out the horseshoe-shaped canyon and separated it into two lobes on either side of Reversed Peak. Faulting and less resistant rock types account for the deeper and narrower canyon on the Grant Lake side when compared to the June Lake side. As a result, Reversed Creek exhibits an unusual flow pattern as it flows towards instead of away from the Sierra Nevada front range.

The principal geologic units of the Loop area are pre-Tertiary granitic rocks, Tertiary and Quaternary volcanic rocks, Pleistocene glacial deposits and recent alluvium. The alluvial material which forms much of the valley floor varies in thickness from 25 to 100 feet and is comprised primarily of silty sands, gravel and dispersed boulders which are commonly associated with alluvial and glacial deposition. The Inyo-Mono volcanic chain, which stretches from Mammoth Mountain to Mono Lake, contains obsidian domes, extensive local tephra deposits and pyroclastic ash flows, cinder cones and numerous explosion pits. Ash, dust, and pumice ejected from the volcanoes in this chain, cover much of the area.

A geologic map of the southern section of the Mono Craters Quadrangle (which includes the June Lake Loop) is presented in Figure 8. Map cross sections B-B' and C-C' are shown in Figure 9.

Table 8 contains the corresponding key for the rock types identified in the maps.

TABLE 8- KEY TO GEOLOGIC MAP OF THE MONO CRATERS QUADRANGLE MONO AND TUOLUMNE COUNTIES, CALIFORNIA.

ORDOVICIAN AND SILVRIAN

Metamorphosed sedimentary rocks of the log cabin mine pool pendant.

SOm - Marble and calc-silicate hornfels.
SOg - Biotic-bearing quartzite.
SOx, SOa - Older-sedimentary rocks.
SOc - Marble, calc-silicete hornfels and quartzite.
SOh - Quartzofeldspathic hornfels.
SOs - Marble and calc-silicate hornfels.

PENNSYLVANIAN AND PERMIAN

Metamorphosed sedimentary rocks of the Gull Lake roof pendant.

PPH - Quartzofeldspathic hornfels.
PPm - Carbonaceous marble.
PPg - Calc-silicate hornfels, quartzite and quartzofeldspathic hornfels.
PPc - Marble and calc-silicate hornfels.

Angular Unconformity

PPh - Quartzofeldspacthic hornfels, carbonaceous marbles.

PERMIAN AND JURASSIC

Metamorphosed sedimentary and volcanic rocks of the Ritter Roof pendant.

Angular Unconformity

PC - local basal conglomerate.
PT - Felsic volcanic tuffs, volcanic flows, local graywackes.
Pa - Andesite flows and local breccias, local graywackes and sandstone lenses.
Ph - Quartzofeldspathic hornfels, calc-silicate hornfels, volcanic flows.
Jc - Local based conglomerate.
Jt - Volcanic tuffs and flows, lapilli-tuff, shale and calc-silicate hornfels.
Jx - Graywackes, volcanic tuffs and flows, crossbedded sandstones.

TABLE 8 - Cont.

JURASSIC AND CRETACEOUS

Granitic Rocks

Jdo - Diabase of Reversed Creek.
Jb - Quartz Monzonite of Billy Lake.
Jr - Granodiorite of Rush Creek.
Jw - Diorite of Waugh Lake.
Jla - Garnet bearing aplite.
Jl - Wuartz monzonite of Lee Vining Canyon.
Jd - Diorite of Bloody Canyon.
Jm - Granodiorite of Mono Dome.
Jg - Gabbro.
Ke - Quartz monzonite of Ellery Lake.
Kgu - Granite rocks, undifferentiated.
Kk - Granodiorite of Kuna Crest.
Ks - Sheared granodiorite of Koip Crest.
Kjm - Quartz monzonite of Mono Lake.
Ka - Quartz monzonite of Aeolian Buttes.
Kwc - Wheeler Crest Quartz Monzonite.

TERITARY AND QUATERNARY

Volcanic Rocks and Glacial Deposits

Ta - Volcanic and sedimentary rocks (VSR) andesitic crystal lithic tuff.
Tgt - Vsr, quartz latite of Two Teats.
Tcl - VSR, indurated conglomerate.
Tda - Hypabyssal rocks, undifferentiated.
Qsh - Till of the Sherwin Glaciation.
Qto - Old fill, probably of Sherwin Glaciation.
Qbt - Bishop Tuff.
Qam - Andesite of the Mono Craters.
Qtao - Older till of the Tahoe Glaciation.
Qta - Till of the Tahoe Glaciation.
Qb - Basalt of the June Lake Junction.
Qti - Till of the Tioga Glaciation.
Ql - Lake beds.
Qa - Andesite.
Qal - Surficial deposits (sd) alluvium and pumice.
Qsl - Sd, landslide or inactive rock glacier.
Qts - Sd, talus and slopewash.
Qt - Sd, talus.
Qrg - Sd, rock glacier.
Qm - Sd, cirque moraine.
Qr - Rhyolite of Mono Craters (RMC) rhyolite domes.
Qrf - RMC, obsidian flows.
Qro - RMC, older rhyolite domes.

Source: Kistler, 1966

north

FIGURE 8
GEOLOGIC MAP

SOURCE: Kistler, 1966.

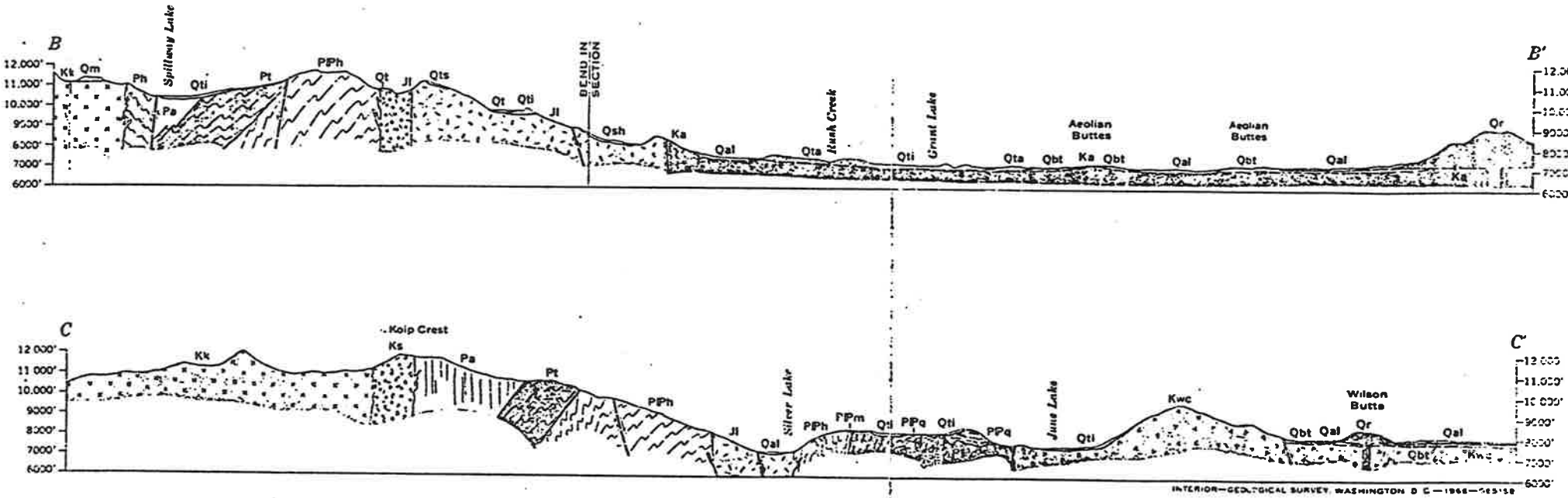


FIGURE 9 -- CROSS SECTION OF GEOLOGICAL FEATURES
SOURCE: Kistler, 1966.

SOILS

I. INTRODUCTION

The topography in the June Lake area ranges from relatively flat mountain valleys and basins to rugged moraines and mountains. The area's soil is formed from either granite and rhyolitic rock sources or from aerially-deposited ash and pumice material which overlays the original granite and rhyolitic soils. Soils information was prepared by a United States Forest Service Soil Scientist.

II. SETTING

A. SOIL TYPE AND LOCATION

The June Lake Loop's soil types and locations are mapped and depicted in Figure 10 and Table 9. Soil type characteristics, such as the depth to bedrock, erosion hazard rating and waste holding capacity of each soil type, are noted in Table 10. The area's soils have low to moderate fertility, and are moderately to highly susceptible to erosion in their present state. Most of the soils are deep (greater than 60 inches to bedrock). Their available water capacity ranges from low to high, with the majority being in the low to moderate category. The present erosion hazard ranges from low to high, but most of the soils are in the moderate to high range. Soils which presently display high erosion or have a potentially high erosion rate are those in Units A101, A132, A134, A135, A140, A151, A152, A153, BFC and JFD with the A135 Unit having the highest potential for erosion. The soils of the area are relatively fragile, and are subject to loss through erosion if disturbed. The sandy texture makes them subject to erosion once existing vegetative cover, vegetative litter, and surface rock fragments are removed.

Units with potential irretrievable losses are: A101, A132, A135, A148, A153, BFC, and parts of BGC, CGC, and JFD. These soils, when disturbed, possess high erosion potentials. Efforts at mitigating soil erosion on these soils are costly, and the results generally marginal. From a soil resource perspective, these areas when highly disturbed, are considered sacrifice areas.

Units which may be partially mitigated are: A115, A121, A133, A134, A140, A142, A144, A149, A152, A122, STMD, and parts of CGB, and JPD. These soils have high erosion hazard potentials when disturbed. Efforts at mitigating soil erosion in these areas are costly and, depending on the techniques used and site-specific considerations, only low to moderately successful.

Units which may be fully mitigated or will suffer only limited accelerated erosion from manipulation are: 1A, and parts of BGC, KCGB, and CGC. When disturbed, these soils have low to

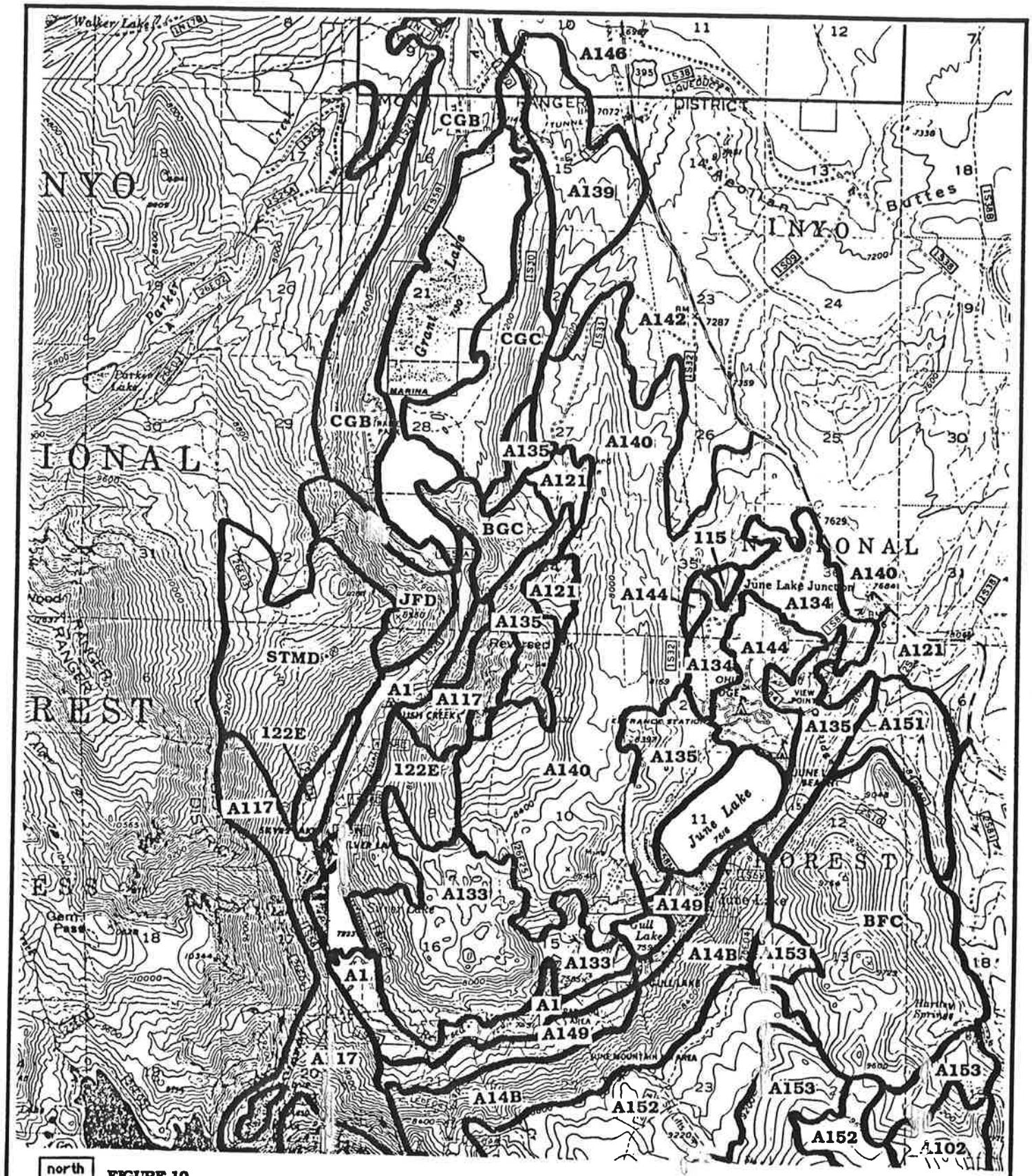
moderate erosion hazard potential and mitigation projects generally prove successful.

Units which have no potential for erosion are those which are made up of rock outcroppings and rubbleland. Although no erosion potential exists for these units, there is a hazard of rock movement in the rubbleland components, units A102 and A117.

TABLE 9 – SOIL UNIT MAP

A101:	Typic Cryorthents, ashy over cindery - Stonewell family, cold-rock outcrop complex, 30 to 60 percent slopes.
A102:	Rubbleland, rhyalitic - rock outcrop complex.
A115:	Entic Ulbx Haploxerolls, ashy - Stonewell family, warm complex, 15 to 30 percent slopes
A117:	Rock outcrop, granitic - Rubbleland complex.
A121:	Entic Ultic Haploxerolls, ashy - Oosen family, warm, complex, 15 to 30 percent slopes.
A132:	Corbett family - Rock outcrop, rhyolitic - Railcity family complex, 30 to 60 percent slopes.
A133:	Corbett family - Rock outcrop, rhyolitic - Railcity family complex, 15 to 30 percent slopes.
A134:	Typic xeropsamments, ashy, 2 to 15 percent.
A135:	Typic xeropsamments, ashy - rock outcrop complex, 30 to 60 percent slopes.
A139:	Brantel family, 2 to 15 percent slopes
A140:	Xeric torripsamments, ashy - rock outcrop association 15 to 60 percent slopes.
A142:	Brantel family - rock outcrop complex, 2 to 30 percent slopes.
A144:	Xeric Torripsamments, ashy, 2 to 30 percent slope.
A146:	Xeric Tomorthents, ashy over cindery, warm - Brantel family complex, 2 to 15 percent slopes.
A148:	Stecum - Salt Chuch family complex - 30 to 75 percent slopes.
A149:	Wapal family - Entic Ultic Haploxerolls, ashy, 15 to 30 percent slopes.
A151:	Oosen family, warm - rock outcrop, granite complex, 15 to 60 percent slopes.
A152:	Typic (Dystric) Cryopsamments, ashy - rock outcrop 15 to 30 percent slopes.
A153:	Typic (Dystric) Cryopsamments, ashy - rock outcrop complex, 30 to 60 percent slopes.
BFC:	Oosen family, cold-rock outcrop complex, 30 to 60 percent slopes.
BGC:	Wrango - Grove families complex, 30 to 60 percent slopes.
CGB:	Wrango - Berent families complex, 2 to 30 percent slopes.
CGC:	Wrango - Berent families complex, 30 to percent slopes.
JFD:	Rock outcrop, granite-Wapal - Sirretta families complex, 30 to 70 percent slopes.
122E:	St. Mary's family, 15 to 60 percent.
STMD:	St. Mary's family, 60 to 80 percent.
1A:	Ola - Ginser families complex, 0 to 15 percent slopes.

Source: USFS, 1987.



north

FIGURE 10
SOIL UNIT MAP
SCALE 1" = 5,280'

SOURCE: USFS, 1987.

TABLE 10 – SOIL CHARACTERISTICS

Map Unit Number/Component		Depth of Bedrock (Inches)	EHR (1)	EHR, Max. (2)	Available Water Holding Capacity (Inches) (3)
A101:	Typic Cryorthents, ashy cindery	>60	Mod-High	High-V.High	1.70 to 3.20
	Stonewell family, cold	>60	High	Very High	1.70 to 2.80
	Rock Outcrop	--	--	--	--
A102:	Rubbleland, rhyalitis	--	--	--	--
	Rock Outcrop, rhyolitic	--	--	--	--
A115:	Entic Ultic Haploxerolls, ashy	760	High	High	3.10 to 4.20
	Stonewell family, warm	>60	Mod.	High	1.70 to 2.80
A 117:	Rock Outcrop, granitic	--	--	--	--
	Rubbleland, granitic	--	--	--	--
A121:	Enbc Ultic Haploxerolls, ashy	>60	High	High	3.10 to 4.20
	Oosen family, warm	>60	Mod.	High	2.40 to 3.40
A132:	Corbett family	>60	Mod-High	High-V. High	.70 to 1.70
	Rock Outcrop, Phylitic	--	--	--	--
	Railcity family	>60	Mod-High	High-V.High	1.10 to 2.40
A133:	Corbett family	>60	Mod.	High	.70 to 1.70
	Rock Outcrop, rhyloitic	--	--	--	--
	Railcity family	>60	Mod.	High	1.10 to 2.40
A134:	Typic Xeropsamments, ashy	>60	High	High	1.90 to 3.70
	Rock Outcrop	--	--	--	--
A135:	Typic Xeropsamments, ashy	>60	High-V.High	High V. High	1.90 to 3.70
	Rock Outcrop	--	--	--	--
A139:	Brantel Family	>60	Mod.	High	1.00 to 2.70
A140:	Xeric Torripsamment, ashy	>60	Mod-High	High	1.40 to 3.40
	Rock outcrop	--	--	--	--
A142:	Brantel family	>60	Mod.	High	1.00 to 2.70
	Rock outcrop	--	--	--	--
A144:	Xeric Torripsamments, ashy	>60	Mod.	Mod-High	1.40 to 3.40
A146:	Xeric Torriarthents,	>60	Mod.	High	1.10 to 2.50
	Brantel family	>60	Mod.	High	1.00 to 2.70
A148:	Stecum family	>60	Mod-High	High-V.High	0.60 to 1.50
	Salt Chuch family	40-60	Mod-High	High-V.High	.75 to .85
A149:	Wapal family	>60	Mod.	High	2.40 to 3.00
	Entic Ultic Haploxerolls, ashy	>60	High	High	3.10 to 4.20
A151:	Oosen family, warm	>60	Mod-High	High-V. High	2.40 to 3.40
	Rock Outcrop, granitic	--	--	--	--
A152:	Typic (Dystric) cryopsamments, ashy	>60	Mod-High	High	2.10 to 3.80
	Rock Outcrop	--	--	--	--

TABLE 10 -- SOIL CHARACTERISTICS -- cont.

Map Unit Number/Component		Depth of Bedrock (Inches)	EHR (1)	EHR, Max. (2)	Available Water Holding Capacity (Inches) (3)
A153:	Typic (Dystic) cryopsamments, ashy	>60	High	High-V.High	2.10 to 3.80
	Rock Outcrop	--	--	--	--
BFC:	Oosen family, cold Rock outcrop	>60	High	V. High	2.40 to 3.40
BGC:	Wrango family	40 to 60	Low-Mod.	Mod.	2.00 to 2.70
	Grove family	>60	Mod-High	High-V.High	2.10 to 3.20
CGB:	Wrango family	40 to 60	Low-Mod.	Mod.	2.00 to 2.70
	Berent family	>60	Mod-High	High-V.High	3.00 to 4.50
CGC:	Wrango family	40 to >60	Low-Mod.	Mod.	2.00 to 2.70
	Berent family	>60	Mod-High	High-V.High	3.00 to 4.50
JFD:	Rock Outcrop, granitic	--	--	--	--
	Wapal family	>60	Mod-High	High V.High	2.40 to 3.00
	Sirretta family	>60	Mod-High	Mod-High	0.60 to 0.70
122E:	St. Mary's family	>60	Low-Mod.	Mod-High	.60 to .70
STMP:	St. Mary's family	>60	Mod.	High	0.60 to 0.70
1A:	Ola family	20 to 40	Mod.	Mod.	3.20 to 4.00
	Ginser family	>60	Low	Low	3.40 to 4.00

1. - Erosion Hazard Rating of soil under present conditions.
2. - Erosion Hazard Rating of soil when disturbed.
3. - Available water holding capacity to a depth of 60 inches, or bedrock, whichever is shallower.

SOURCE: USFS, 1987.

NATURAL HAZARDS

I. INTRODUCTION

The June Lake area is subject to numerous natural hazards, including geologic hazards, seismic and volcanic activity, avalanches, floods and fires. The following documents were used in preparing this section: **Hazard and Planning Geology of the June Lake Loop Area, Mono County, California** (1974); **Mono County Draft Master Environmental Assessment** (1988); **Draft Conway Ranch Environmental Impact Report** (1989); and **June Lake Area General Plan** (1974).

II. SETTING

A. GEOLOGIC HAZARDS

Hazards relating to geologic formations and processes other than those related to seismicity are indicated on the Geologic Hazard Map, Figure 11. Six geologic hazard units have been defined including Active Rockfall Areas, Active Debris Fans, Inactive Debris Fans, Active Talus and Blockfall Areas, and Glacial or Morainal Till areas. Stable bedrock and alluvial deposits are also indicated. Technical information on the nature of the individual geologic units, and the geologic activity and processes which cause hazards is contained in the report, **Hazard and Planning Geology of the June Lake Loop Area, Mono County, California**, by Robert R. Curry, Geology Consultant.

Active Rockfall Areas

Active rockfall areas are defined as hillslope areas comprised of largely morainal deposits, clearly demonstrating that frequent natural episodes of rolling and bouncing rocks and boulders occur. Both source areas and areas below source areas where damage could occur and that could limit uses of a site are mapped. Releases can occur at any time the hillsides are not covered with a blanket of snow greater than two to three feet.

USFS permittee cabins located on the hill overlooking Gull Lake on the south side of S.R. 158, and the June Mountain Ski Area would be the only developed areas potentially impacted by active rockfalls.

Active Debris Fans

Areas mapped as active debris fans are depositional fan areas created by mudflows and identified by their funnel-like shape and grooved surface. Fan deposition occurs in gullies during periods of intensive surface water runoff caused by rainstorms or snowmelt. Mudflows and rockflows occur when intense surface

discharges flow over partially saturated slope materials. Fan flow frequencies vary from once every 100 years to as frequent as once every 10 years.

Active debris fans could impact development along the Down Canyon area's south-west boundaries and near the Silver Lake Resort.

Inactive Debris Fans

Designated inactive debris fans are stabilized in terms of the fan-forming process and do not constitute a hazard due to debris flows as long as overall alterations to the vegetative cover and slope materials do not occur. Changes in land use or natural occurances such as fires or avalanches can change the vegetative cover and reactivate debris fans. Assuming changes do not occur, the frequency of damaging debris flows is greater than one every 100 years.

A small portion of the Peterson Tract's south-west corner could be impacted by an inactive debris fan. Since most of the inactive debris fan is located on National Forest lands, development is not anticipated to disturb the vegetative covering and increase land use hazards.

Active Talus and Blockfall Areas

Designated units include areas where active accumulation and transportation of blockly boulder deposits occur and where the occasional release of boulders due to spring snowmelt or snow and boulder avalanches occurs. Blockfall is the process of direct vertical fall of rock while talus is the bouncing of boulders down a debris chute onto the depositional slope.

Inactive Talus and Blockfall Areas

Inactive Talus and Blockfall Areas are currently not transporting boulders and other slope debris. However, these areas are still subject to spring-time snowmelt release of occasional boulders and are subject to snow and boulder avalanches during winters of heavy snow accumulation.

Inactive Landslides

Only two inactive landslides are indicated on the Geologic Hazard Maps. The largest is an unconsolidated debris avalanche landslide originating near the summit of June Mountain and terminating near the June Mountain Ski Lodge. It is composed of mixed bedrock and till and appears to have occurred prior to the last peak major glacial period over 18,000 years ago. The second slump-type of landslide is found along the northwest side of Rush

Creek below Silver Lake in an area of thin till cover over bedrock. Under non-seismic conditions these areas do not comprise a hazard to land use activity, except to uses such as man-made lakes, sewage drain fields, or other unnatural sources of water which may over-saturate and load the unit.

Till, Alluvium and Sediments

As components of morainal deposits, till, alluvium and sediments were deposited by receding glaciers in the lower reaches of the June Lake Loop. Morainal materials tend to be dry except when adjacent to lakes. Non-saturated morianes are quite stable and do not present a slope stability hazard unless artificially charged with water.

Most private land in June Lake is located on till, alluvium and sediments. Unless saturated like the areas between June and Gull Lakes and the Silver Lake meadow, these areas should not present a hazard to future land uses.

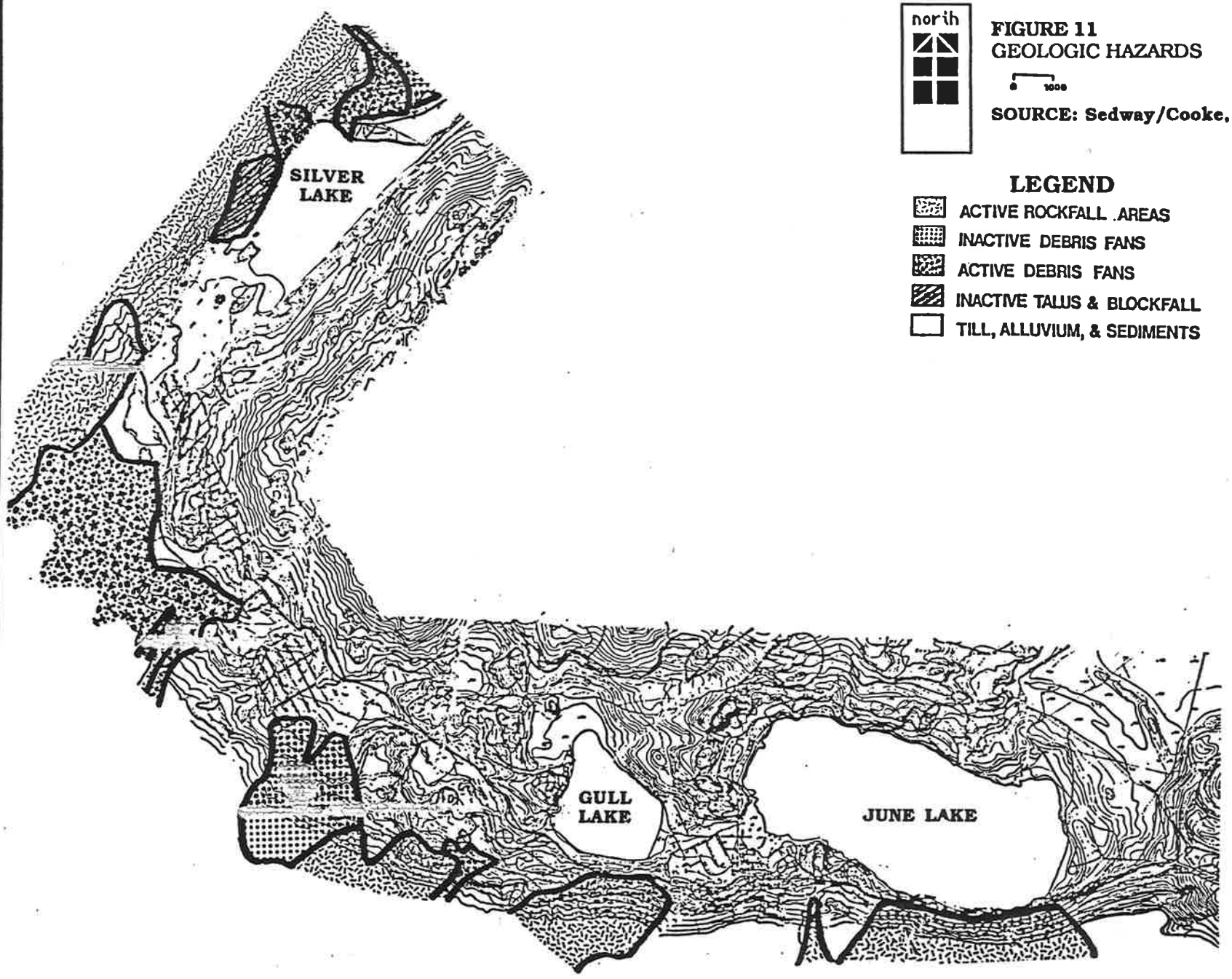


FIGURE 11
GEOLOGIC HAZARDS

SOURCE: Sedway/Cooke, 1974.

B. VOLCANISM

Evidence of volcanic activity can be found throughout the southern section of Mono County. Potential volcanic hazards are described based upon the following documents: **Draft Conway Ranch combined Specific Plan and Environmental Impact Report**, September 1989 and **Draft Mono County Master Environmental Assessment,** March 1988.

The June Lake Loop lies near the Long Valley Caldera and the Inyo-Mono Crater Chain (Figures 12 and 13). Volcanic eruptions along these formations has occurred over the past 2,000 years at an average rate of one occurance per century. As recent as 1982, the U.S. Geological Survey (USGS) detected signs of volcanic activity and issued a "Notice of Potential Volcanic Hazard" warning. In 1984, the notice was rescinded. Volcanic eruptions, **unless of catastrophic magnitudes such as the one that created the Long Valley Caldera,** generally do not result in direct loss of life, but may result in considerable property loss and may have associated loss of life due to earthquakes, observer ignorance, and/or general panic. Volcanic hazards include explosive blasts, pumice and ash fall out and hot flowing material.

An additional volcanic hazard could occur if eruptions of hot ash and pumice occurred during times of snowcover. When hot ash and pumice mix with snow-covered slopes, pyroclastic flows or both hot and cold masses of ash, pumice, debris and water form. These flows would flow downslope ultimately burning or burying all in their path. If hot pumice and ash were to fall on a heavy snowpack around June Mountain, catastrophic flows could destroy Hartley Springs and the June Lake Village area. The probability of occurrence is expected to be less than one in a 100 years.

C. SEISMIC HAZARDS

Located in one of the most seismically active areas in the Western United States, the June Lake Area is subject to numerous dangers including the primary effects of ground rupture, ground shaking and dam failure, and the secondary effects of soil differential compaction/settlement, liquefaction and landslides. The **Draft Conway Ranch Combined Specific Plan and Environmental Impact Report,** September 1989, **Mono Plan Draft EIR,** 1983 and the **Draft Mono County Master Environmental Assessment,** 1988 were used in preparing this section.

June Lake lies in a region of very high seismicity. Major earthquake damage is to be expected although the potential for serious damage or destruction to most masonry or frame structures and their foundations is low. Damage may also occur through mass failure of earth materials and foundations and substantial damage by dislodged rocks in hillside areas.

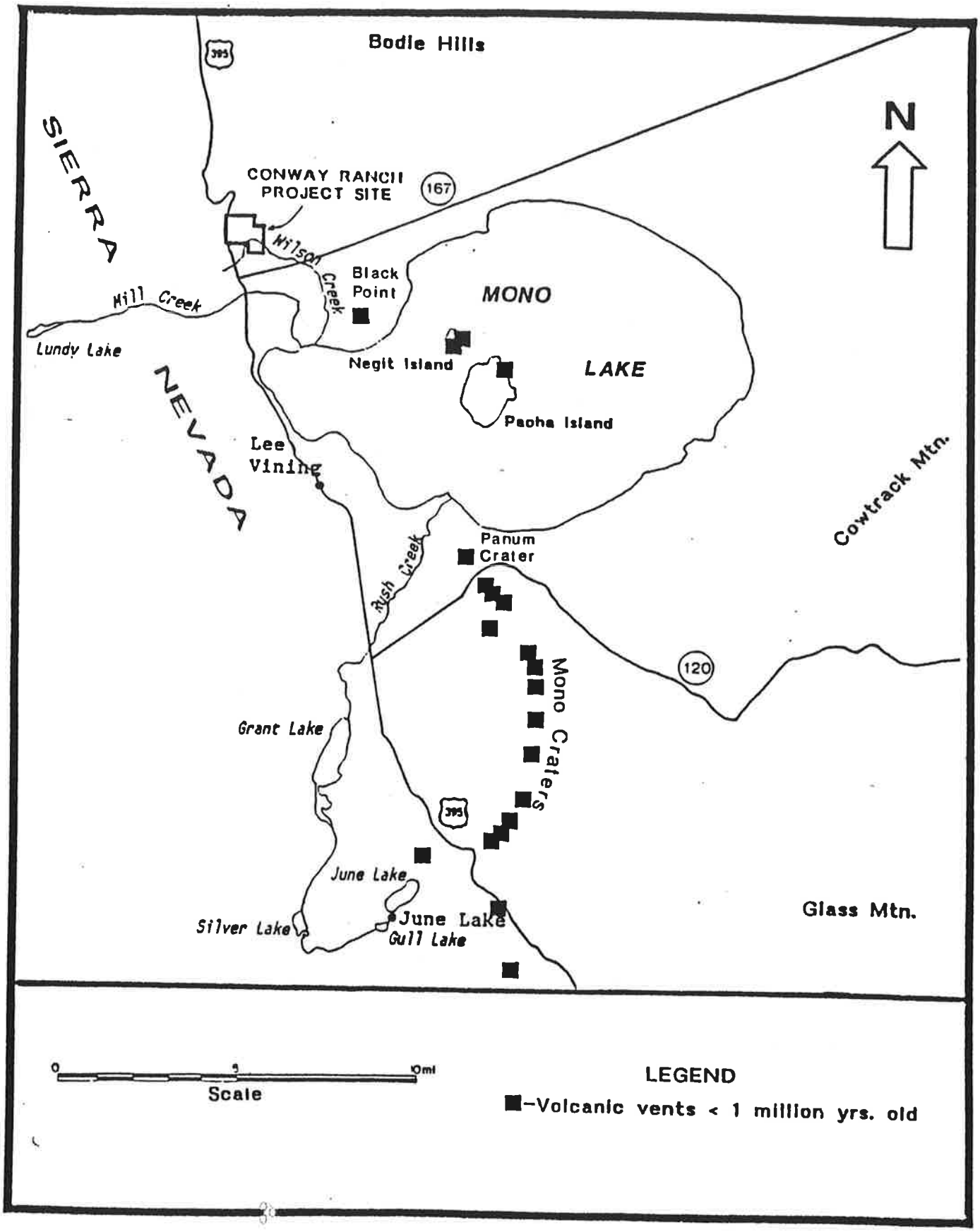


FIGURE 12 -- VOLCANIC VENTS WHICH HAVE BEEN ACTIVE IN THE PAST ONE MILLION YEARS.
SOURCE: Beak Consultants Incorporated, 1990.

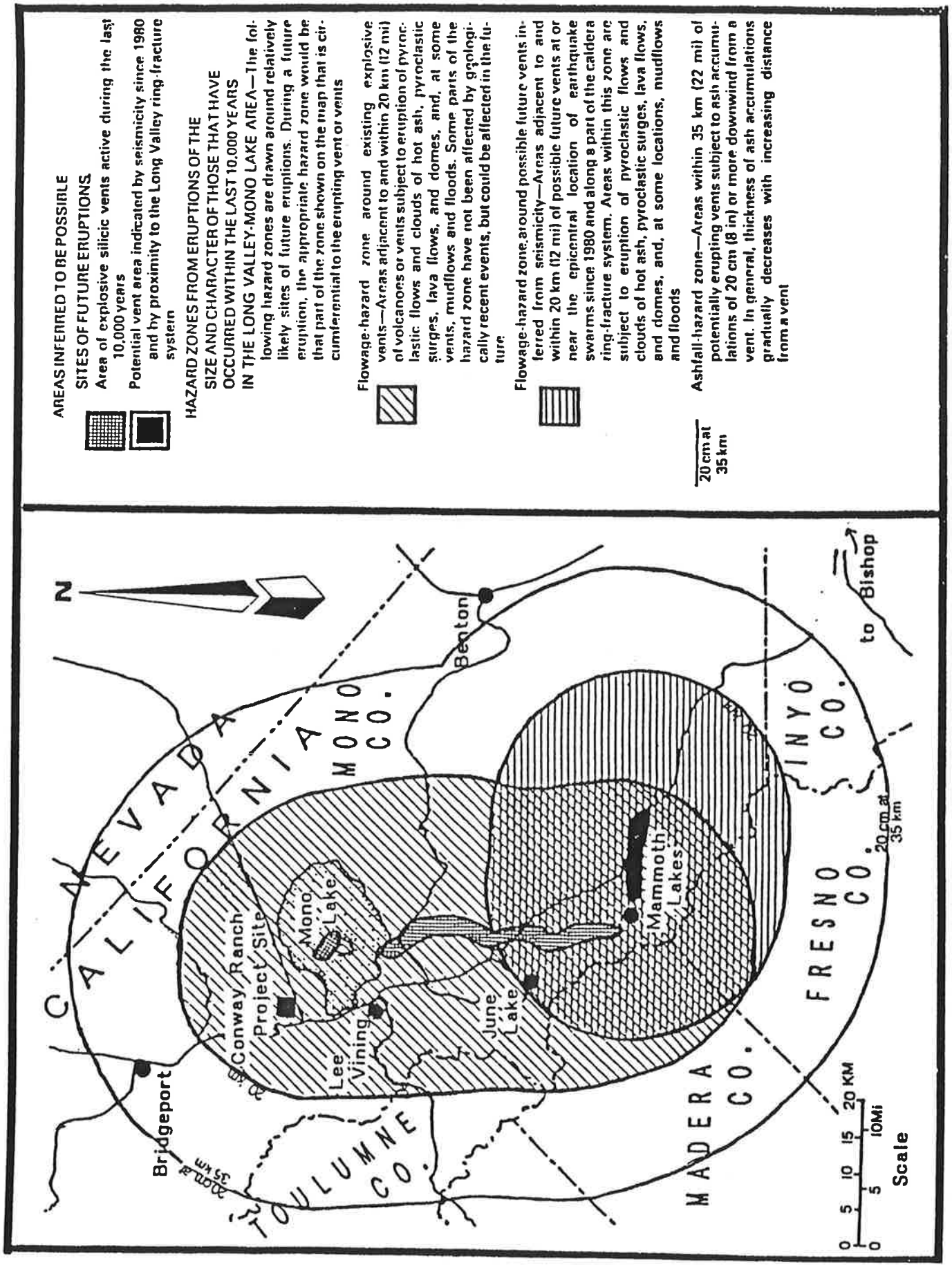


FIGURE 13 -- VOLCANIC HAZARDS.
SOURCE: Beak Consultants Incorporated, 1990.

Earthquake Epicenters and Magnitudes

Earthquakes occurring in the June Lake Area between 1900 and 1982 with magitudes on the Richter scale of greater than three are shown in Figure 14. The largest seismic event shown on the map was a 4.9 event; most were equal to or less than 3.9. While noticeable to people, earthquakes of less than a Richter magnitude of 4.0 are considered small. Quakes of larger magnitudes, greater than 6.0, have occurred south of the planning area in Long Valley, and the May, 1980 earthquake series near Mammoth Lakes had Richter magnitudes ranging up to 6.0. Quakes of this magnitude often cause severe damage.

Ground Rupture

The 1972 Alquist-Priolo Special Studies Zones Act mandates that the Division of Mines and Geology determine fault-rupture hazard zones. Fault-rupture zones, shown in Figure 15, are defined as areas that are well-defined and sufficiently active to constitute a potential hazard from surface fault rupture. In these zones, state mandated regulatory measures prevent the County from allowing structures designed for human occupancy and require full geotechnical analysis for any proposed projects.

Three Alquist-Priolo zones could affect future land uses in the June Lake area, including the fault north-east of Oh! Ridge, the fault running through the West Village and the fault in the western section of the Down Canyon area,

Ground Shaking

Almost all of Mono County is located in an area where intensive groundshaking is possible. The California Division of Mines and Geology places the county in a region where major earthquake damage is expected. In the Uniform Building Code, the area is designated as seismic zone 4, the zone of greatest hazard. Ground shaking associated with earthquakes of greater than Richter magnitude 5.5 may result in forces greater then those accounted for in the Uniform Building Code, particularly if structures are located near the epicenter. The extent of damage depends on the characteristics of the quake and the nature of geologic materials.

Water Waves

Fault rupture and ground shaking resulting from earthquakes can generate waves in lakes, reservoirs or water tanks. Two facilities, the Los Angeles Department of Water and Power Grant Lake Dam and the June Lake Public Utility District Water Storage Facility, could be susceptible to damage in a large magnitude earthquake.

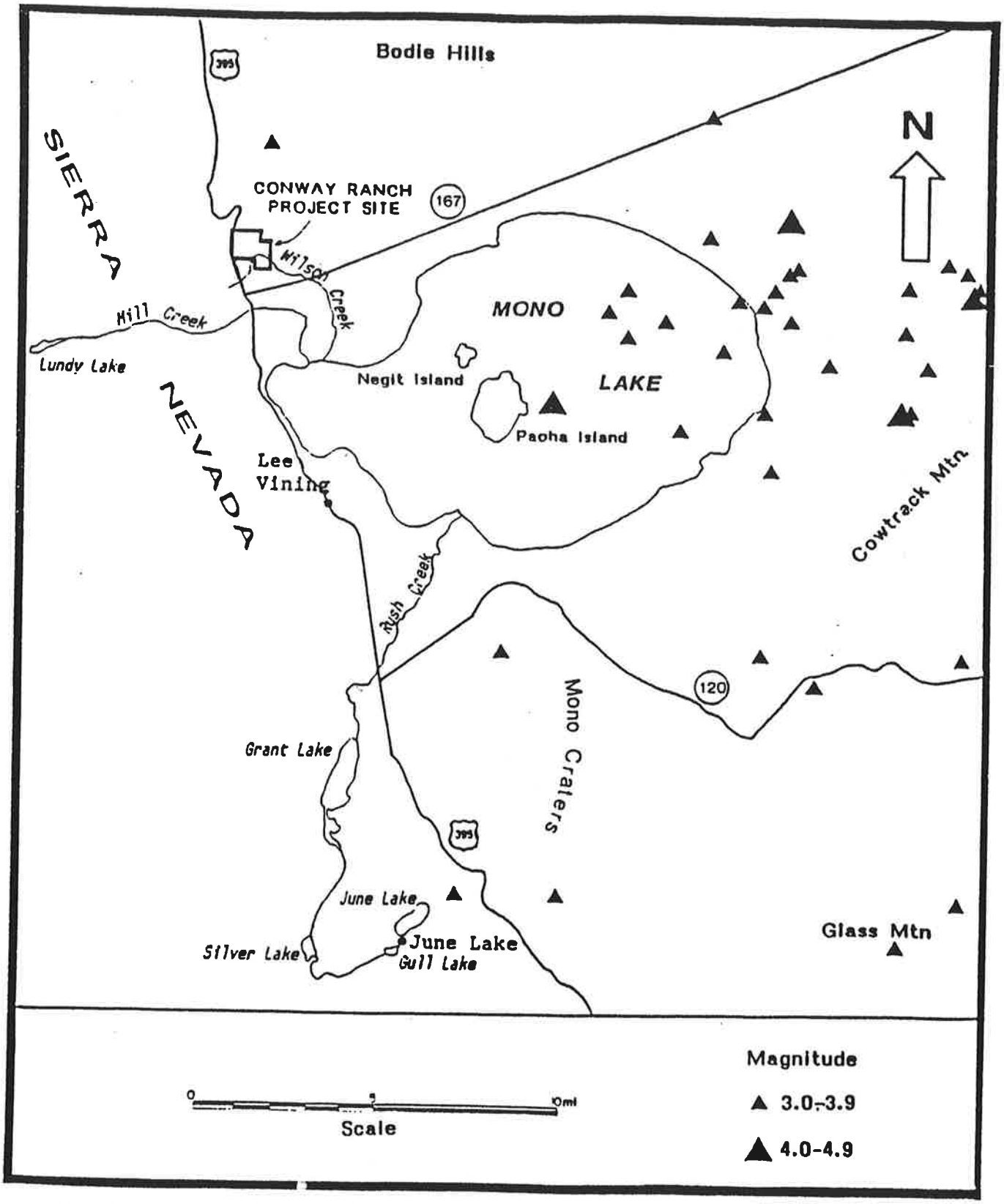
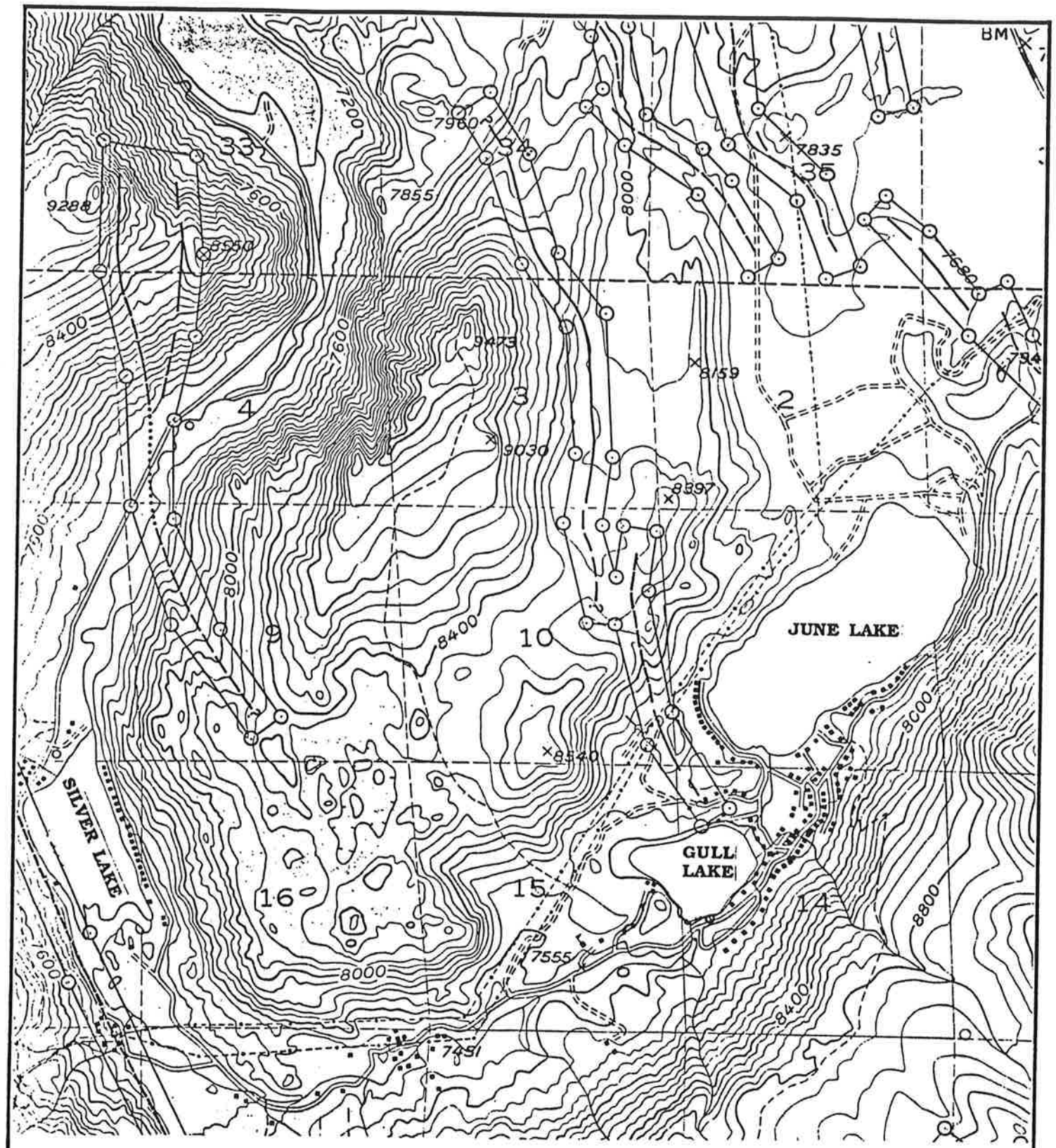


FIGURE 14 -- EARTHQUAKE EPICENTERS FOR THE PERIOD 1900 TO 1982.
SOURCE: Beak Consultants Incorporated, 1990.



north

FIGURE 15
FAULT RUPTURE ZONES
Scale: .5" = 1,320'

SOURCE: California Division of Mines and Geology, 1989.

Ground Failure

Ground failure induced by earthshaking includes differential settlement/compaction and liquefaction. Differential compaction occurs when earthshaking forces rearrange poorly consolidated soils. Settlement leading to structural damage is normally associated with rapidly deposited alluvial soils such as in alluvial fans or active stream channels, or improperly founded or poorly compacted fills.

Soil liquefaction caused by earthshaking involves a sudden loss in strength of a saturated, cohesionless soil (predominately sand) and results in the temporary transformation of the soil into fluid mass. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface, and where the soils are composed predominantly of poorly consolidated fine sand.

Landslides

Only two inactive landslides, which occurred over 10,000 years ago, are found in June Lake; no active landslide areas have been identified. One of the inactive slides orginates near the summit of June Mountain and terminates near the June Mountain ski lodge. The other is located on the northwest side of Rush Creek below Silver Lake. Even under seismic conditions, due to the lack of potential landslide areas and the occurrance of inactive slides away from designated community areas, landslides do not constitute a hazard to future or existing land uses.

D. AVALANCHE HAZARD

The entire outer perimeter of the June Lake Loop from Oh! Ridge to north of Grant Lake has been identified as an avalanche hazard area in the **June Lake Loop Avalanche Hazard Study.** Using the Swiss classification system, avalanche hazards have been classified into three levels of potential hazard, according to estimated frequency and the destructive power of anticipated avalanches. The Avalanche Hazard Map, Figure 16 delineates avalanche hazard zones within the Loop according to this system. Several factors such as terrain configurations, vegetative cover, avalanche debris distributions, historic climatic conditions, and other natural occurrences experienced at the site were considered in formulating the avalanche hazard map.

The glacially-cut canyon walls and morainal deposits along the outer perimeter of the June Lake Loop provide starting zones for many avalanches. Most areas in the Loop are subject to avalanches, however avalanches on the southern half of the Loop create a greater hazard to life and property than those on the northern half. Avalanche dangers force the closure of the northern half of the Loop road during the winter. Also, the

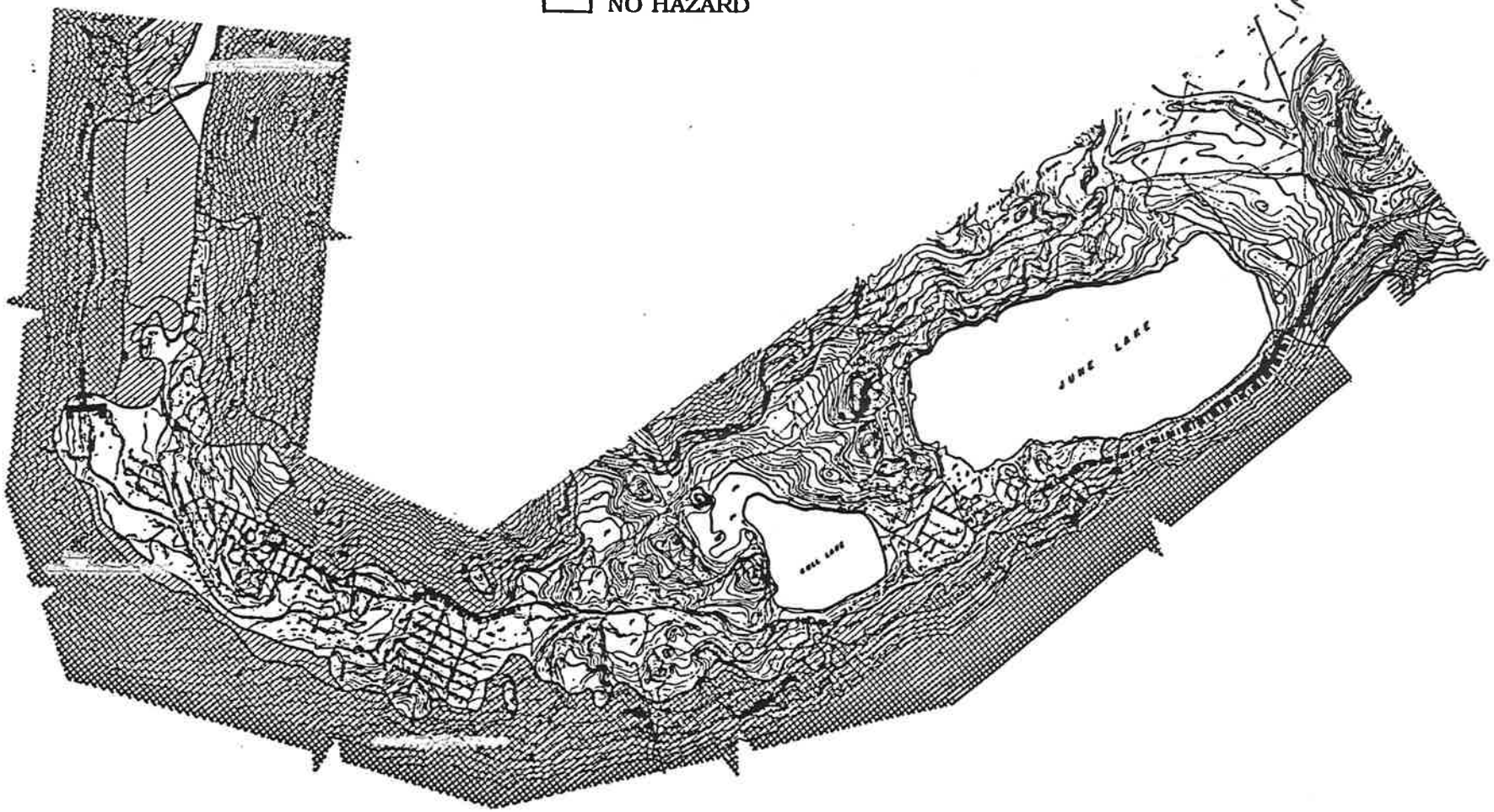


FIGURE 16
AVALANCHE HAZARDS

SOURCE: Sedway/Cooke, 1974.

northern half of the Loop contains no private land. On the southern half of the Loop roadway, avalanches starting on north facing slopes overlooking June Lake can cause temporary road closures. Currently, Caltrans is studying options to reduce roadway closures. These options include developing avalanche mitigating structures in starting zones, constructing snowsheds over S.R. 158 in historic avalanche paths or improving the current avalanche monitoring and control procedures.

In 1988, the County revised its avalanche policies to restrict development in historic avalanche areas. Single-family homes and related structures are the only type of development allowed in historic avalanche areas without Planning Commission or Board of Supervisors approval. Projects more intensive than single-family developments may be constructed in avalanche areas if adequate structural mitigation is provided. Figure 17 shows June Lake's conditional development areas.

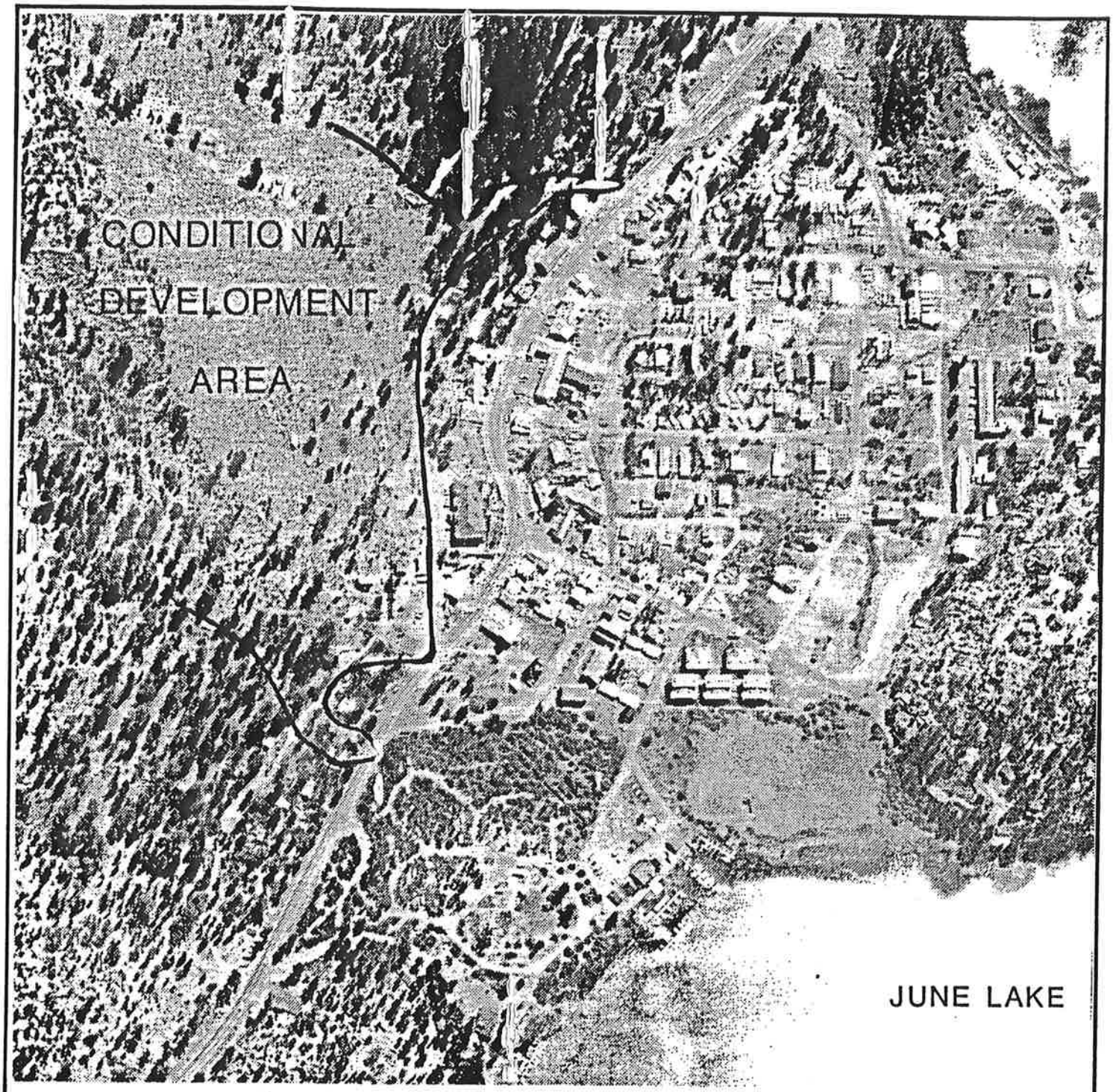


FIGURE 17
CONDITIONAL DEVELOPMENT
AREA, AVALANCHES

SOURCE: June Lake Avalanche Committee, 1988.

north

E. FLOOD HAZARDS

Flooding in June Lake can occur around streams, lakes and areas of high groundwater. Figure 18 adopted from Flood Insurance Rate Maps prepared by Federal Emergency Management Agency, show the areas likely to be impacted in a 100 year flood (100 year floods have a one percent chance of occurring in any one year). The most venerable areas of private land include lakeshores and a two hundred foot-wide band around Reversed Creek in the Down Canyon area, the drainage ditch between June and Gull Lakes and along the small drainage between the intersection of Gull Lake Road and S.R. 158 and Gull Lake. Flood areas not affecting private lands include a band along Rush Creek below Silver Lake and the lakeshores of Gem and Agnew Lakes.

F. FIRE HAZARDS

The California Division of Forestry (CDF) has mapped private land areas within the State and classified all lands according to the severity of fire hazards. All privately owned parcels within the Loop are desigated as "very high hazard" lands. The degree of hazard is based on fuel loading, fire weather, and other related factors. Using another rating system, the Insurance Service Office (ISO), assigns the June Lake Community a rating of seven, on a one to ten scale, with ten being the lowest rating for fire protection.

A more complete section on fire suppression responsibility and fire fighting capabilities can be found in the Emergency Services Section.

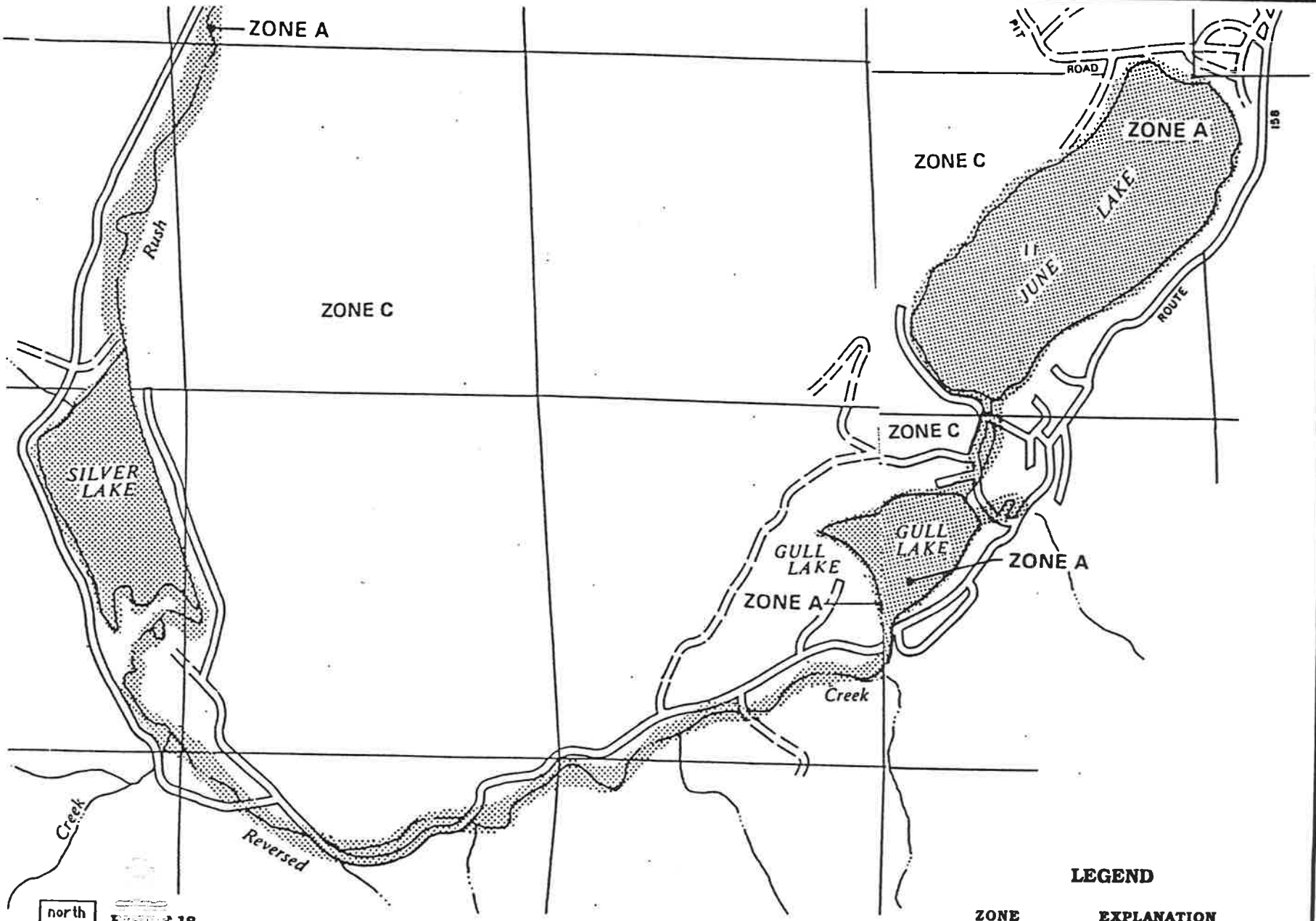


FIGURE 18
FLOOD ISURANCE RATE MAP

SOURCE: Federal Emergency Management Agency, 1985.

LEGEND

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
C	Areas of minimal flooding.

ENERGY RESOURCES

I. INTRODUCTION

June Lake's primary energy resources include: hydroelectric power; liquid petroleum fuels such as gasoline, diesel fuel, propane, and butane; and wood. Limited quantities of passive solar energy are also used. Geothermal and wind are currently potential untapped sources in the Loop.

The generation of additional energy to correspond with community growth could adversely affect the Loop's environment. Wood burning devices and internal combustion engines could impact air quality, while additional hydroelectric generation facilities could have detrimental effects on streams and lakes.

II. SETTING

A. ENERGY SOURCES

Electricity

Electrical power for the June Lake area is provided through facilities owned and operated by the Southern California Edison Company (SCE). Electricity in the June Lake area is used for space and water heating, lighting, air conditioning and ventilation, and for appliance and equipment operation. The primary power source is the 10 Megawatt (MW) Rush Creek Hydroelectric Plant located near Silver Lake. The plant facilities consist of a powerhouse with the impulse turbine/generator units, two penstocks, a valvehouse, flowlines, intakes, three dams and appurtenant electrical, mechanical and transmission equipment.

Besides the plant, on-demand backup and supplementary power suppliers are available through an interconnected 115 KV grid system (Figure 19). The 115 KV lines, which run through the Down Canyon, West Village and Rodeo Grounds areas, constrain adjacent land uses. SCE requires a 35 foot setback from the centerline of the duel support poles for safety and access.

Load increases related to June Mountain Ski Area expansion and community growth will necessitate the construction of new electrical distribution and substation facilities in the near future. Once the new facilities are completed, the existing station at the Rush Creek Hydroelectric Plant will serve as a standby unit.

Electrical Consumption

Peak consumption of electricity occurs during the winter when commercial and residential space and water heating demands,

and demands for power to operate ski area machinery are greatest. SCE expects a 6% increase in electrical energy demand over the next six years. Supplies to meet this as well as long range demand projections are reportedly available and shortages are not anticipated.

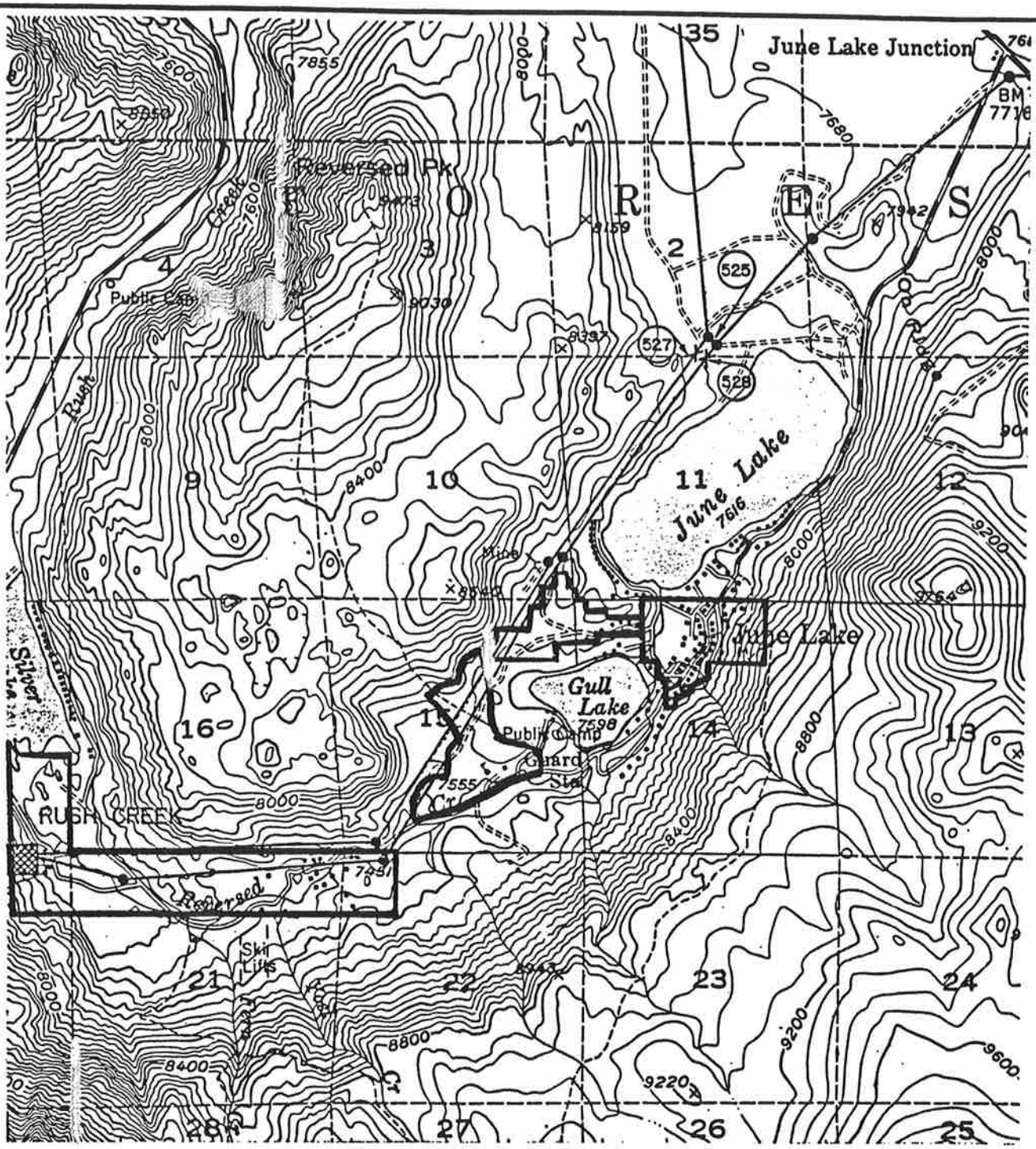
SCE estimates that approximately 40% of the annual power production of the Rush Creek facilities may be consumed within the June Lake planning area. During the low-flow winter months, nearly all of the power may be consumed locally. The amount of power which can be generated during this period is dependent on the volume of water in storage each year and available for release. During the high flow summer months, energy in excess of that needed within the planning area is transmitted for use outside the Loop.

Power Generation Versus Wildlife

The demand for hydroelectric power has increased in recent years as a result of a national desire to develop a more inexpensive and non-polluting energy source. While the steep average gradient of the planning area and the relatively high seasonal precipitation amounts of upper elevations provide a number of suitable conditions for small hydroelectric power development, the potential conflicts between diverting streams for power generation and maintaining instream values will likely preclude any further development. Resource agencies are concerned that generating additional hydroelectric power could reduce the amount and condition of aquatic and riparian wildlife habitat, scenic quality and water based recreation.

Liquid Petroleum Gas

Regional natural gas facilities have not been developed in the June Lake planning area. Liquid fossil fuels (e.g. propane and butane) are available from one of three locally operated liquid petroleum gas (LPG) distributors: Petrolane Gas Service, Turner Gas Company and Cal Gas. Fuel is delivered by truck on a regular basis to tanks located at single-family residences, condominium complexes and commercial establishments. LPG is used primarily for space and water heating and, to a lesser extent, for fueling large and small residential and commercial appliances. Only a small percentage of vehicles are equipped to operate on LPG. As with electricity, peak consumption occurs during the winter when space heating demands are greatest. Future use projections vary from company to company, ranging from 3 to 6 % for the next five-year period. Adequate supplies to meet existing and future LPG demands are reportedly available.



north

FIGURE 19
115 KV TRANSMISSION LINES

0 1 MILE

SOURCE: Southern California Edison Company.

Gasoline and Diesel Fuel

Within the planning area, the greatest amounts of gasoline and diesel fuel are used for powering passenger cars and trucks, recreation vehicles and heavy construction equipment and machinery. Smaller amounts are used for operating private and public electrical generating systems, off-road vehicles, outboard motors and smaller gasoline and diesel powered equipment and machinery.

Wood

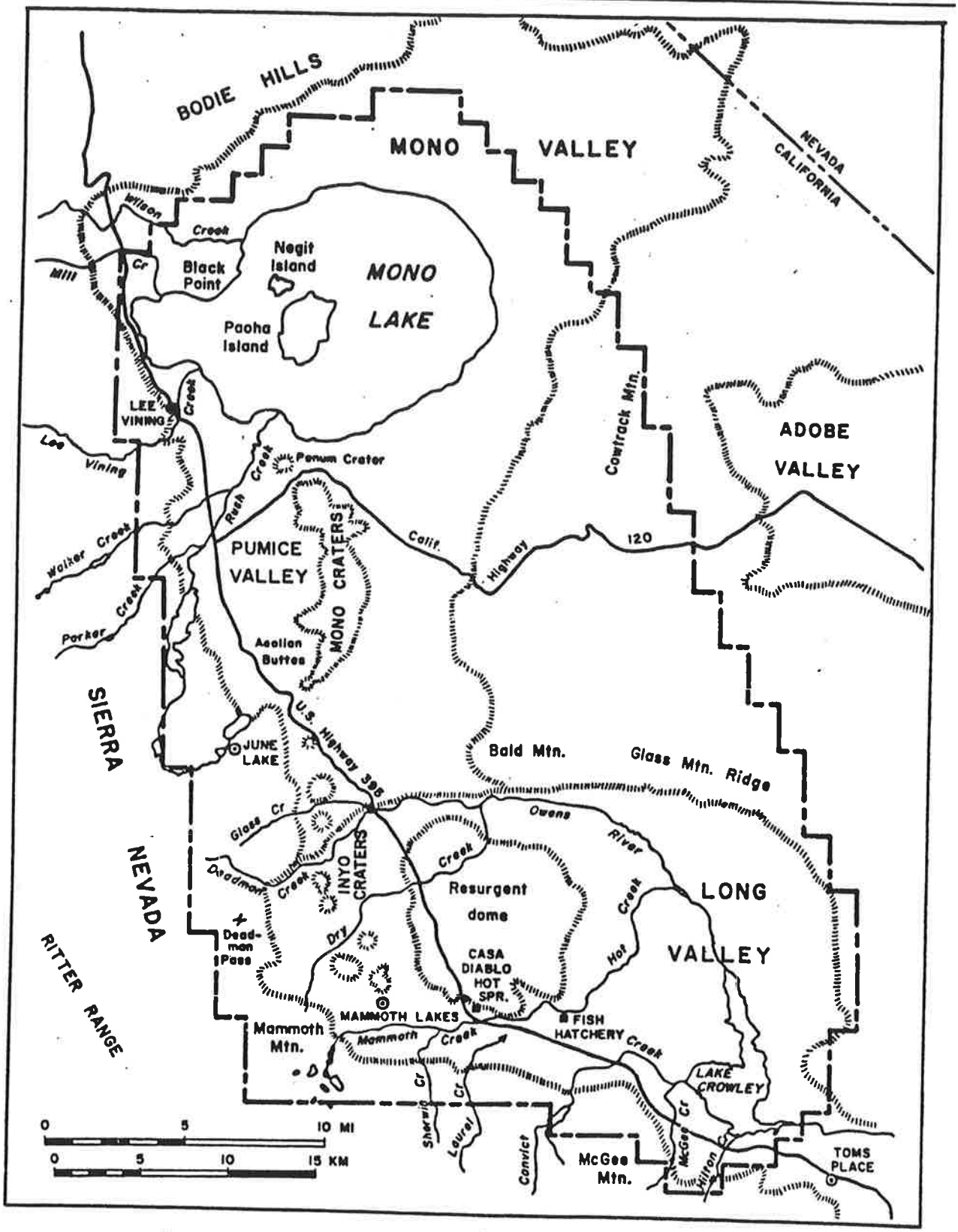
Wood is used extensively for space heating and to a much lesser degree for residential water heating and cooling. An average of 5,400 wood gathering permits per year have been issued from the Lee Vining, Mammoth Lakes, Bishop, and Mt. Whitney USFS Ranger Districts for the wood seasons beginning in 1985 and ending in 1987. According to USFS figures, 12,800 cords were taken during each of those years -- an average non-commercial harvest of 2.37 cords per permit. Wood harvested by commercial firewood companies, by the Mammoth and June Mountain Ski Areas and by persons harvesting without a permit is estimated at 7,200 cords per year over the same three year period. Wood taken from LADWP, SCE and BLM lands has not been determined.

In 1987, USFS estimated that about 500 cords of firewood were harvested for use in June Lake. Non-commercial permittees residing in June Lake harvested 300 cords, while commercial firewood companies operating in June Lake harvested the remaining 200.

Geothermal

Figure 20, taken from the geothermal element of the Mono County General Plan, indicates that the June Lake Loop lies almost entirely within the 460,256 acre Mono-Long Valley Known Geothermal Resource Area (KGRA). A KGRA is defined as an area with higher-than-average potential for discovery of geothermal resources. The Mono-Long Valley KGRA is know to contain several fumaroles and hot springs. In addition, there are numerous locations where hydrothermal alteration is evident and many areas where heat flows prevent snow from accumulating.

According to Dan Lyster, Mono County Energy Director, past drilling and geothermal survey work has yet to detect significant geothermal resources in the June Lake area. Future geothermal resource development for energy related uses in the June Lake Loop appears unlikely.



north

FIGURE 20
MONO-LONG VALLEY REGION
KNOWN GEOTHERMAL RESOURCE
AREA

SOURCE: Mono County, 1982.

Solar

Limited quantities of solar energy are used in the June Lake Loop. Generally, solar usage has been limited to individual users who incorporate solar technology into the design of residential and commercial buildings or who retrofit existing structures with solar devices. Winter space heating and year-round water heating, to date, are the primary uses of solar energy. Lessening conventional energy demands while reducing the production of air pollutants are solar energy's most valuable assets.

Taking advantage of solar energy requires locating buildings in areas where solar radiation is not blocked by topography or trees. As many of June Lake's developed areas are situated on north facing slopes of greater than five or ten percent, the availability of sunlight during the winter is severely constrained. The same holds true for development on heavily wooded south facing slopes. Such locations limit solar applications and require alternative methods of energy efficient design to achieve the same level of energy use possible with passive designs in other locations. The West Village/Rodeo Grounds and the Pine Cliff areas, due to their southern exposure and unobstructed orientations, provide an opportunity to use solar energy.

Wind

The suitability of private or public lands within the June Lake planning area for wind power are not well known. Any future applications must consider negative impacts on visual quality.

B. ENERGY CONSERVATION

New buildings in the planning area must comply with building energy efficiency standards contained in Title 24 of the California Administrative Code. Both prescriptive and performance methods are provided for compliance. Prescriptive standards insure a minimum level of energy efficiency through required building design features such as insulation, caulking and weather stripping. Performance standards are allowable annual energy budgets which, if met through innovative design or use of renewable or alternative energy service, exempt the building from some prescriptive requirements. The Title 24 requirements are enforced at the local level through the building permit review process; compliance must be demonstrated prior to receiving a building permit.

VISUAL RESOURCES

I. INTRODUCTION

Visual resources associated with the undeveloped public lands surrounding June Lake play an important role in attracting tourists and supporting the local economy. The resources were identified in the **Draft Mono County Master Environmental Assessment** (1989), **June Lake Residence Survey and Visitor Study** (1986) and the **June Lake Loop Imageability Study** (1986). These studies were used in preparing the following.

II. SETTING

A. JUNE LAKE PLANNING AREA

The visual and aesthetic splendor of the June Lake planning area is one of its most valuable and obvious assets. The Loop derives its visual character from: unique geologic formations; clean, clear lakes and streams; diverse vegetative types; contrasting land forms; abundant and varied wildlife; and seasonal variation in climatic conditions.

Residents, recreational visitors, and tourists are drawn to the area by its magnificent scenery. Snowcapped, barren peaks reaching heights in excess of 12,000 feet rise as escarpments along the south, southeast and southwest edges of the Loop. Springs and streams originate as snowmelt and cascade down the canyon walls to join a string of four beautiful lakes and interconnecting creeks. Well-defined and highly visible corridors of riparian vegetation border these water bodies. Adjoining the riparian areas, in flat, poorly drained sites are highly sensitive wetlands, primarily of the marsh, wet meadow and riparian woodland types. The plant, animal and water components which make up the wetland communities offer a wealth of color, texture and sound. Drier areas in the north and northwest portions of the Loop provide visual contrast to the riparian and wetland land areas. Wide uninterrupted expanses of sagebrush and bitterbrush marked with occasional patches of Jeffrey Pine coexist in flat to gently rolling terrain. At higher elevations, the Juniper-Pine-Shrub plant community, characterized by a mosaic of plant shapes and forms, set against the steep, rocky canyon walls, eventually displaces the Jeffrey Pine community.

Planning Area

Figure 21 illustrates local visual resource designations as determined by the United States Forest Service and the Bureau of Land Management (BLM). The USFS uses the Visual Management System to derive visual quality objectives for various areas. This system focuses on the class and visual sensitivity of the resource. The class pertains to a resource's visual characteristics, while the sensitivity measures a viewer's concern for visual quality. Once the visual class and sensitivity have been determined, visual quality objectives are assigned. These objectives, which range from preservation to maximum modification, describe the acceptable level of alteration that can occur without harming the resource. The objectives are defined as follows:

Preservation (P) - Allows only ecological changes on the land and would restrict uses to only very low visual impact recreational facilities.

Retention (R) - Allows management activities which repeat characteristics already found in the natural landscape.

Partial Retention (PR) - Allows management activities which repeat characteristics already found in the natural landscape and other changes provided that the visual impact is dominated by the natural environment.

Modification (M) - Allows management activities that may visually dominate the natural characteristics of environment but also borrow some of its features.

Maximum Modification MM - Allows management activities which disturb vegetation and landforms to dominate the natural characteristics of the environment.

Using a system similar to the USFS, the BLM inventories and establishes classifications for visual resources. The BLM's Visual Resource Management System uses visual contrast, the difference between the existing setting and proposed uses, to assess potential impacts and management alternatives. The classes are presented as follows:

Class I - Very High - Visual contrast is prohibited. No changes will be allowed to alter the existing basic visual elements.

Class II - High - Visual contrast is permitted. Changes that will not be visible in the characteristic landscape are allowed.

Class III - Moderate - Visual contrast that remains subordinate to the characteristic environment is permitted.

Class IV - Low - Visual contrast caused by a management activity may attract attention and represent a dominant feature, however, it must conform to the basic elements of the environment.

B. ADJACENT LANDS

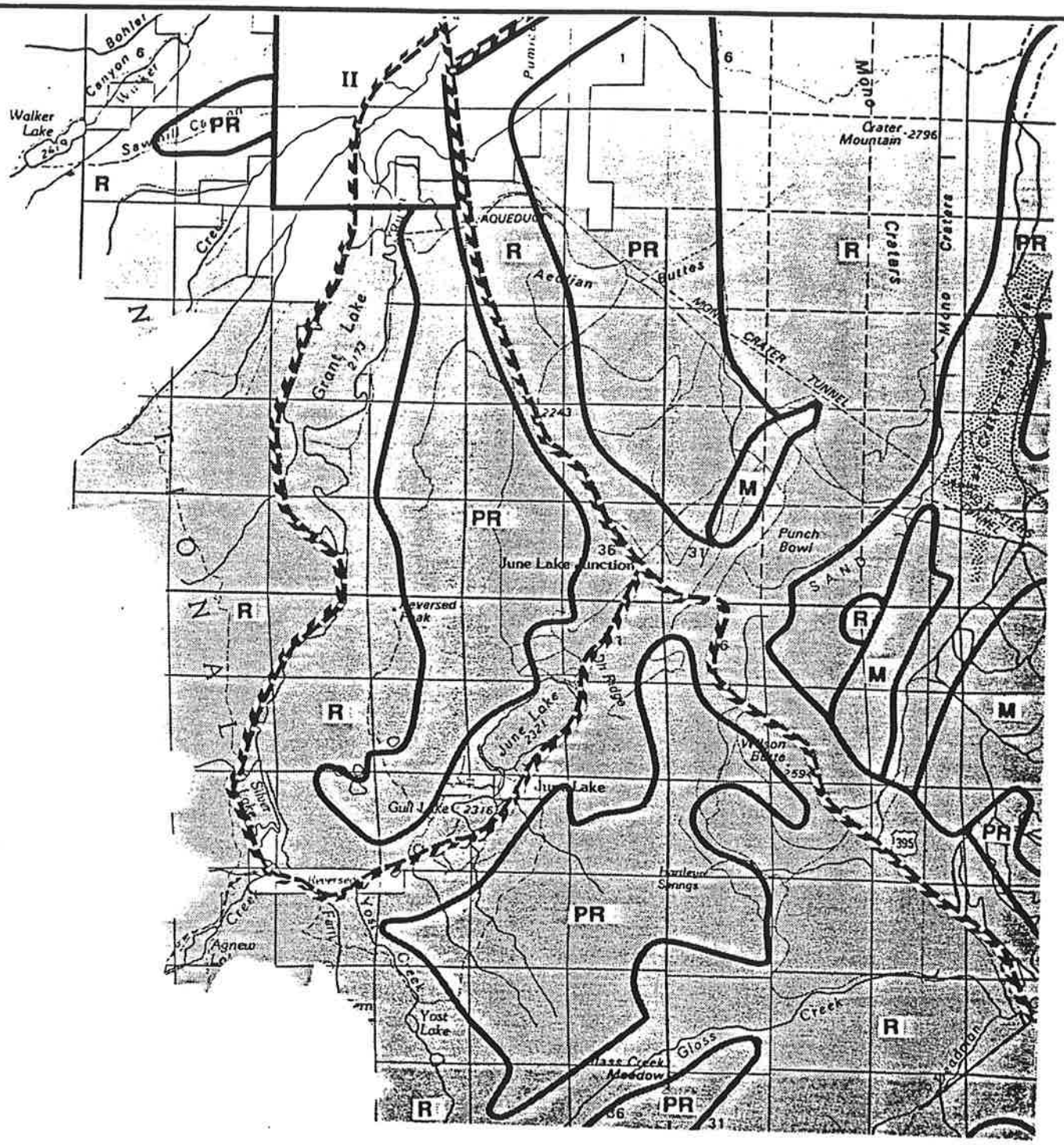
In addition to the sensitive visual resources contained in the planning area, adjacent visually sensitive areas include the Mono Basin National Forest Scenic Area on the planning area's northeast boundary and the Ansel Adams Wilderness on the western boundary. Visual quality objectives in the Mono Basin Scenic Area are either retention or partial retention while lands contained in wilderness areas are managed under the preservation objective.

C. JUNE LAKE LOOP

Visually sensitive natural landmarks contained in the June Lake Loop or visible from the canyon floor were identified by the June Lake Citizens Advisory Committee in the 1986 **June Lake Imageability Study.** Landmarks, as identified in the study, were divided into major and minor classifications. Major landmarks included June, Gull, Silver and Grant Lakes, Carson Peak, Horsetail Falls and the balancing rock at the entrance to the June Lake Village.

D. BUILT ENVIRONMENT

The historic development of the June Lake Loop, with its unplanned land uses, building designs, utility structures, and circulation patterns, is often in direct contrast with the surrounding natural environment. Against this natural backdrop, many of the atypical shapes, textures and colors of structures and roadways, above ground powerlines and other structures are easily discernible, sometimes from great distances. During the day, sunlight reflects from metal and glass surfaces, while at night, lights within the community isolate the urban areas from the uninterrupted darkness of the natural areas surrounding it.



LEGEND

USFS VQOs		BLM VRMs	
P	Preservation	I	Very High
R	Retention	II	High
PR	Partial Retention	III	Moderate
M	Modification	IV	Low

Eligible State Scenic Highway

County Adopted Scenic Highway

north

FIGURE 21
SCENIC RESOURCES

0 1

SOURCE: Environmental Science Associates, 1989.

June Lake, as characterized by visitors in the **1986 Visitor's Study,** is described as an alpine village nestled high in the Sierra Nevada Mountains. This popular observation stems primarily from the architectural flavor exhibited by a number of roadside frontages along the 0.3 mile section of the June Lake Village. West of the Village, in the largely residential Down Canyon area, pockets of more contemporary developments are found. With the exception of commercial uses fronting S.R. 158, most development in Down Canyon is concealed by roadside vegetation and topographic features.

The 1986 **Imageability Study** determined visually important features of the built environment. Landmarks include: the June Lake Junction Store, the OH! Ridge overlook, the Heidelberg Inn, the June Mountain Chalet and Ski Area Parking lot, the Mountain Rose Restaurant and the Silver Lake Resort.

E. SCENIC HIGHWAYS

The Mono County Scenic Highway Element designates two scenic highways within and adjacent to the planning area; State Route 158 and U.S. 395 (Figure 21). These County designated Scenic Highways are subject to special measures designed to preserve the visual quality of areas adjacent to and observed from scenic highways. County Scenic Highway Element policies protect visual quality by calling for landscaping to visually screen projects, developing away from highways, designing projects to minimize impacts, preventing the use of visually obtrusive signs, undergrounding new utility lines and limiting the number of access points to highways.

Highways designated as County Scenic Highways are eligible for designation as a State Scenic Highway by the State Director of Transportation. If accepted into the state program, these roadways will also be subject to state scenic highway development standards.

CULTURAL RESOURCES

I. INTRODUCTION

The June Lake area has a rich and varied cultural resource history. Several Paiute tribes were known to have seasonally inhabitated the area. White settlers, primarily involved with prospecting and mining minerals, beginning moving into the area in the mid- to late-1800s. These settlers were followed others involved in support-oriented activities such as ranching, hydroelectric power generation, water exportation and transportation. The recreational component of the economy began evolving around the early 1900s and has continued growing to this date.

Much of the following discussion, summarizing the paliioenvironment, regional prehistory, and ethnography of the region, has been taken from recent studies conducted by Clay and Hall, 1987; Burton, 1987; and Jackson, 1985.

II. SETTING

A. PREHISTORIC CONTEXT

Archaeological research in the Inyo-Mono region has grown considerably over the last decade. The results of recent investigations suggest a complex prehistoric record of initial human settlement and subsequent episodes of demographic change, technological innovations and socio-cultural evolution. It is becoming evident that human use of this region is probably as ancient as other areas of the Western Great Basin, beginning about 7,000 years ago and persisting as late as Euroamerican contact. Common archaeological finds include flaked stone projectiles and tools, rock and wood food processing instruments, clay or ceramic storage and cooking containers and primitive structural remains.

Materially, prehistoric archaeological locations in the region are characterized by a diverse assemblage of artifacts, features and occasionally, organic refuse. Recognized categories of flaked stone tools include projectile points, bifaces, blanks, unifaces, cores, drills and occasional flake tools. Sharp-edged, bifacially flaked projectile points were lashed to the foreshaft or mainstays of arrows, atlatl darts and spears. Aside from their use in hunting activities, projectile points probably underwent incidental use as fine cutting tools. Stone unifaces and bifaces were used in a variety of cutting, scraping and stripping tasks. Blanks represent early and intermediate stages in the manufacture of points and bifaces. Cores were natural cobbles or chunks of rock struck repeatedly with a hammer of stone, wood or bone to produce a usable tool. Drills were used to punch or bore holes in skins, wood, bone, horn or imported shell and steatite. Flaked stone

debris, consisting of the by-products of core reduction, tool manufacture and tool repair, was a primary source of casual flake tools and is by far the most frequently encountered class of archaeological debris in the eastern Sierra.

The following chronology, based primarily on time sensitive projectile points, has been proposed for the region and represents at least four separate temporal units over the last 5000 years. Not much is known about earlier post-Pleistocene patterns.

Marana Period -- 650 to 100 B.P. (Before Present)
Desert Side-notched, Cottonwood series.
Haiwee Period -- 1250 to 650 B.P.
Rose Springs/Eastgate series.
Newberry Period -- 3250 to 1250 B.P.
Elko, possibly Gypsum, Contracting Stem series.
Little Lake Period -- 4950 to 3250 B.P.
Little Lake (vz. Pinto) series.

Ground stone tools found at many archaeological sites in the region include milling slabs, handstones, mortars and pestles. Handstones and milling stabs were presumably used in combination to grind seeds and pine nuts. Bedrock mortars common near the crest of the central Sierra were usually deep, steep walled depressions in which vegetable matter was pounded or crushed with a stone or wood pestle.

A final class of debris likely to be preserved at some prehistoric sites is pottery sherds, and fragments of ceramic vessels used for cooking and storage.

Reported prehistoric structural remains in the region include rock rings, hearths, hunting blinds, stone and brush game-drive corrals and drift fences and non-rock lined house depressions and storage pits.

B. PREHISTORIC ENVIRONMENT

The region's potentially significant prehistoric environmental topics are: 1) the climatic changes which took place in the Holocene and the effect they had on the regional and local distribution of foods and materials critical to hunter-gather adaptive strategies and; 2) the recurrent late Holocene volcanic events along the Inyo-Mono volcanic chain.

While climatic changes allow for comparatively longer, more gradual periods of cultural adjustment, the near simultaneous multiple vent volcanic eruptions may have brought about immediate and severe impacts on plant, animal and human ecology. Volcanism may have affected prehistoric human occupants and archaeological sites in the following ways: 1) volcanic activity produced the valuable and intensively exploited obsidian resources which provide the primary archaeological

indicators of human occupation; 2) eruptions may have rendered portions of the region uninhabitable during certain periods, either through direct ashfall and lava flow, or indirectly, by affecting local environments; 3) volcanism coupled with hydrographic phenomena, produced numerous hot springs and geyser resources in the region, many of which were used by human groups; and 4) the deposition of pumice tephra may have obscured archaeological evidence in portions of the various survey areas.

C. ARCHAEOLOGICAL SURVEYS

A series of archaeological investigations was conducted during the late 1950's and early 1960's by Emma Cori Davis. In the late 1950's, she reported on the excavation of a child burial at CA-MNO-384 near Grant Lake. The burial, associated with bone artifacts, an abalone shell, and over 70 olivella shells, was discovered in a test excavation unit, as were several projectile points including Humboldt, Desert Side-notched, and possibly Elko or Little Lake types. A large obsidian biface and many groundstone fragments were also recovered. Additionally, Davis recorded petroglyphs located near the summit of one of the Mono Craters, suggesting that the petroglyphs may have functioned in child puberty ceremonies (E.L. Davis,1961).

A small exposed site (05-04-51-5) on Oh! Ridge near June Lake was excavated by Bettinger (1973a). A total of 11.3 cubic meters was excavated from three site loci and a variety of flaked and groundstone artifacts were recovered. Only one Desert Side-notched projectile point was found. Activities represented at this site included tool repair and maintenance, and food preparation.

Hildebrandt (1981) conducted extensive subsurface testing at the Interlaken Condominium site northwest of Gull Lake (CA-Mno-338). Work consisted of surface examinations and excavation of 33 auger holes. Three projectile points were recovered including a Humboldt, an Elko contracting stem and an Elko-like point.

Archaeological surveys on forest lands located in the general vicinity of June Lake are listed in Table 11.

D. ETHNOGRAPHIC CONTEXT

Available linguistic data indicate two language families and several dialect communities in the general vicinity of the June Lake Loop at the time of Euroamerican contact (Heizer, 1966; Heizer and Whipple, 1971). Penutian-speaking central and southern Sierra Miwok inhabited the area west of the Mono Basin and the crest of the Sierra Nevada. Numic-speaking western Sierra Mono inhabited the upper western Sierra slopes west of the Owens and Long Valleys. Land immediately east of the

Sierra was occupied by at least three distinct, Numic-speaking northern Paiute groups: the Owens Valley Paiute, the Mono Lake Paiute and the Walker Lake Paiute.

The ethnographic inhabitants of the Mono Basin, the Mono Lake or Kuzedikea Paiute, were divided into several bands totaling between 200 and 300 persons (Davis, 1962; Matranga and Sterns, 1952; Steward, 1933). The Mono Lake Paiute were organized around the nuclear family, with perhaps one or two additional relatives completing the households.

TABLE 11 - ARCHAEOLOGICAL SURVEYS IN THE JUNE LAKE AREA

F.YEAR	APR#	NAME AND DESCRIPTION OF SITES LOCATED	REFERENCES
F72	05-04-03	The Archaeology of Portillos' Well	Bettiger
F77	05-04-37	June Lake Parking Areas	Balint
F77	05-04-38	June Mountain Poma Lift	Self
F78	05-04-52	Hartley Springs Timber Compartment	Farrell
F78	05-04-53	East Full Lake Land Exchange	Farrell
F78	05-04-54	June Lake P.U.D.	Self
F78	05-04-68	June Lake Junction Waterline	Farrell
F79	05-04-70	Silver Lake Campground	Farrell
F79	05-04-102	Interlaken	Bodie
F80	05-04-131	Gull Lake Land Exchange	Bodie
F80	05-04-146	Reversed Peak Snowponds	Farrell
F80	05-04-189	North Village Land Exchange	Burton
F80	05-04-219	June Lake Bicycle Trail	Lipp
F83	05-04-295	June Lake Avalanche Site	Faust
F84	05-04-321	Gull Lake Cabin Removal	Lipp
F84	05-04-340	Rodeo Meadows Land Exchange	Faust
F87	05-04-406	Williams Tract Water System	Faust
F79	05-04-97	New Poma Lift	Taylor
F86	05-04-393	June Mountain Lift Courses and Access Road	Faust
F81	05-04-195	Deer Earthquake Timber Sale Compartment	Burton
F85	05-04-350	North Gull Lake Land Exchange	Reynolds

SOURCE: Clay and Hall, 1987.

In terms of subsistence patterns, traditional Northern Paiute activities were keyed to the seasonal distribution, density and breeding and ripening cycles of plants and animals used for food and raw materials. Spring was spent at riparian temporary camps in mountain canyons of the Sierra Nevada and Bodie Hills, where early green bulbs and shoots were gathered. In early summer, the Mono Lake Paiute moved to meadow camps at the foot of the Sierra Nevada and Bodie Hills, where seeds and bulbs were harvested. Piuga (larvae of the Coloradia pandora moth) from the Jeffrey Pine forest south of Mono Lake and Koo-chah-

bee (brine fly larvae, Ephydra spp.) from the shores of Mono Lake were collected during the summer. In fall, pinyon pine nuts were gathered. Winter was spent at pinyon camps on the east side of Mono Lake or at meadow camps if the pinyon crop was poor. Major game such as deer and mountain sheep were hunted throughout most of the year, sometimes being ambushed from brush or stone blinds erected along game trails and creeks or near springs. Food stores accumulated over the summer and fall supplied most of the meals in the winter, a season in which there was much socializing, planning and probably a good deal of craftwork.

The Mono Lake Paiutes traded salt, pinyon pine nuts, piuya, brine fly larvae, finished points, sinew backed bows, buffalo hides, rabbitskin blankets, baskets, pumice stone and red and white pigments to neighboring groups in exchange for shell money, acorns, baskets, arrows, a fungus used in paints, manzanita berries, elderberries and squawberries (J.T. Davis, 1961; Davis 1965; Hall 1983). There is abundant evidence of local and trans-sierran trade between Mono Lake Paiute and Sierra Miwok. Sierra Miwok served as intermediaries in trade with Yokut and Plains Miwok. This trade activity is confirmed by evidence obsidian biface production at several of the studies sites in the region, and abundant obsidian from the eastern Sierra which has been found west of the Sierra Nevada range. Obsidian sources included those at Mono Craters, Bodie Hills, Glass Mountain, Casa Diablo and Mount Hicks.

E. HISTORIC CONTEXT

White settlers began moving into the eastern sierra and western Nevada around the middle to late 1800s. The first settlers were involved with mineral exploration and mining and were followed by support-oriented ranching, farming, and railroad enterprises. The early 1900s saw a broadening of social and economic ties to distant population centers through the construction of roadways, the Los Angeles Aqueduct and associated hydroelectric power and distribution systems, and agricultural distribution systems. In the latest period, an economy based upon numerous outdoor recreational activities has evolved to complement established economic activities. The recreational component of the economy has been responsible for attracting a great portion of new growth and settlement.

F. HISTORIC PRESERVATION

Significant historic sites, structures and objects over 50 years old are eligible for placement on the National Register of Historic Places if the resource has scientific research value, historical significance or social value. Resources with scientific research value provide scientific evidence of aboriginal ecology and cultural development. Sites of historic value provide permanent

physical evidence of a particular historical period or event. Resources deemed to have social value either enhance the understanding of regional prehistory, or possess emotional or sentimental value.

The Silver Lake Resort one of the Eastern Sierra's first resort developments and the Rush Creek Hydroelectric Generating Plant, both constructed in the early 1900s, may qualify for the National Register of Historic Places. Local historic preservation groups may identify other structures in the future.

EMERGENCY SERVICES

I. INTRODUCTION

The nearest hospitals with full service emergency facilities are located in Mammoth Lakes and in Bishop, 15 and 60 miles south respectively, and in Bridgeport, 40 miles to the north. The Sheriff's department maintains offices in Bridgeport and near Mammoth Lakes, and the California Highway Patrol is headquartered in Bridgeport. Both agencies have officers that reside in June Lake and if not on duty, are available in emergencies. Structural fire protection services are provided by the June Lake Fire Protection District, and the California Division of Forestry and the USFS provide wildlands fire suppression. The County maintains a paramedic unit and the community in cordination with the Sheriff's Department operates a volunteer search and rescue unit. In addition, the County Office of Emergency Services has prepared an emergency response plan in the event of a major disaster.

II. SETTING

A. LAW ENFORCEMENT, HIGHWAY SAFETY, AND VEHICLE CODE ENFORCEMENT

MONO COUNTY SHERIFF'S DEPARTMENT

The Mono County Sheriff's Department must provide law enforcement, crime prevention, search and rescue and limited traffic and vehicle code enforcement for June Lake and other unincorporated areas of the county. Service is provided from the county seat in Bridgeport and a resident deputy program. The June Lake service territory ranges from Conway Summit to the north to Crestview to the south. Patrols are provided on a two shift per day, one officer per shift basis. Two officers per vehicle are provided when warranted. During potential avalanche related road closure periods, the Department has adopted a policy of maintaining Sheriff and paramedic personnel in the Loop. In addition to temporary road closures, responses to calls, especially during winter conditions, may be delayed due to poor road conditions and physical obstructions such as illegally parked vehicles and unplowed roads.

CALIFORNIA HIGHWAY PATROL

The California Highway Patrol (CHP) has primary responsibility for enforcing vehicle codes and investigating vehicle related accidents on county and state roads. When not on patrols, CHP vehicles are dispatched from officer residences in the June Lake area via radio communication with the district station located in Bridgeport. The June Lake Loop falls within a larger service territory covering state and county roadway systems between the

Caltrans Crestview Maintenance Station and S.R. 167. Response times to calls originating from the June Lake area vary depending on the location and the status of patrol vehicles at the time of the call.

B. FIRE PROTECTION

Structural Fire Suppression

The June Lake Fire Protection District (JLFPD) is a 28 member volunteer fire department that provides structural fire protection to the June Lake Village area and to contracting businesses and residents in the Down Canyon area (Figure 22). The Down Canyon and Pine Cliff areas are not in the fire protection district, forcing property owners to contract for services. The district also provides emergency medical service, primarily as backup assistance or first response service to the County's paramedic unit. The Fire Chief estimates that 40% of all calls are fire related, while 60% are accidents or medical emergencies. In addition to the above, the JLFPD is party to a mutual aid agreement with ten other fire protection districts in the county. This agreement formalizes the procedure for each district to send personnel and equipment to fires and medical emergencies beyond district boundaries when needed.

Volunteers are dispatched to fires and other emergencies within the JLFPD service area via the Mono County Sheriff's Department 911 Emergency Communication System. Volunteers alerted to the call by scanners, pagers or strategically placed sirens respond by meeting at the Big Rock Road Station where vehicles are manned and dispatched.

Existing equipment includes five engines, one of which is 30 years old, one water tender and one utility truck. The district does not own a ladder truck although the addition of one would greatly improve the department's overall fire fighting capabilities.

The district is administered and managed by a fire chief, an assistant chief and a five member Board of Commissioners. Existing district policies call for developer exactions to mitigate the impact of new development on district facilities (Resolution 82-2 and 84-4) and provide a formula, based upon the tax rate and assessed value, for calculating fees for contract fire protection service (Resolution 75-2). The district has also informally recognized the fire protection needs of Down Canyon and is investigating potential fire station locations in that area. Situating a fire station in this area would significantly reduce response time. Additionally, the district has contacted Local Agency Formation Commission and expressed a strong interest in resurrecting an annexation proposal for the Down Canyon area.

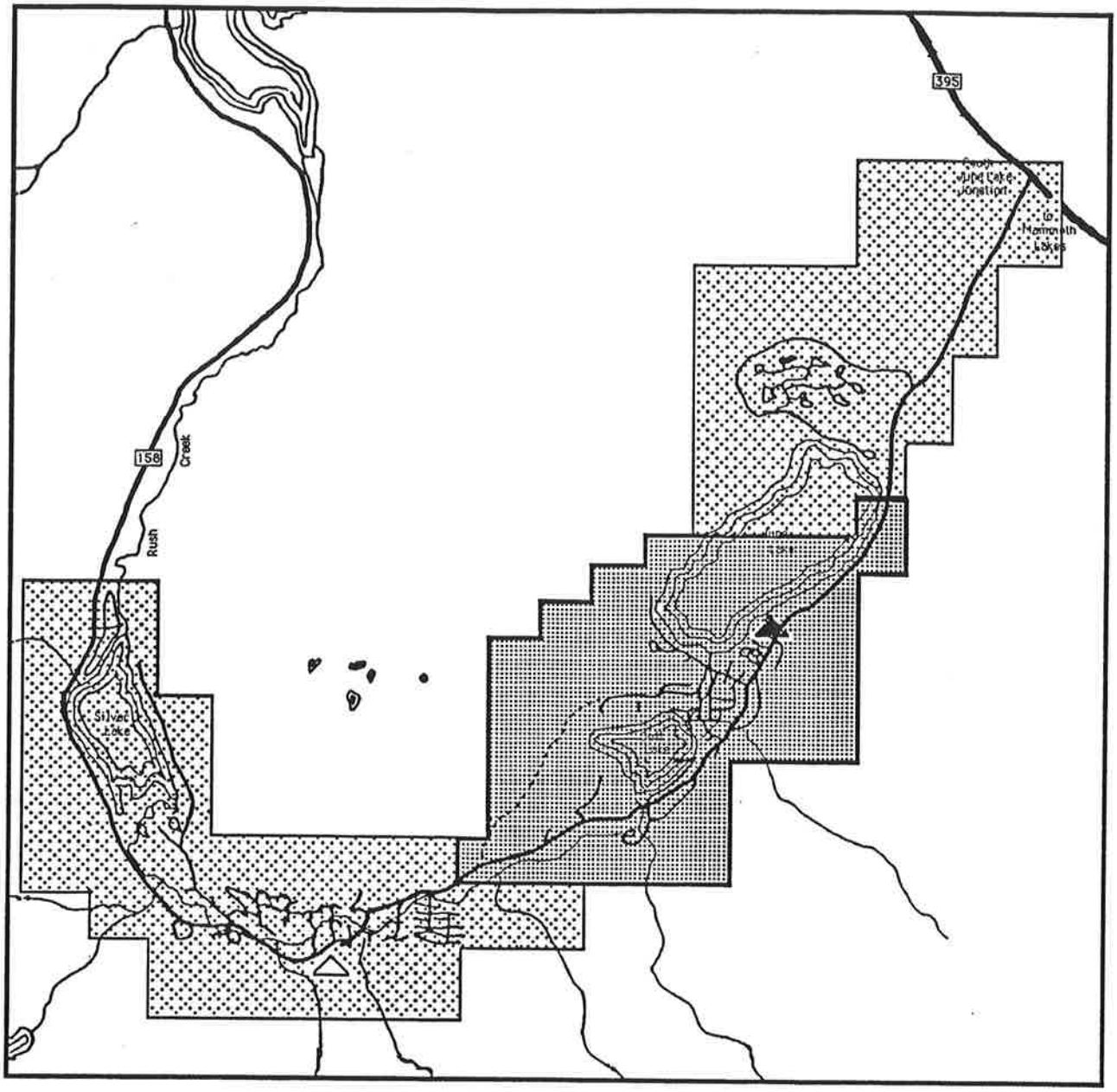


FIGURE 22
JLFPD SERVICE AREA & SPHERE OF INFLUENCE
Scale: .5"= 1,400'

LEGEND

- Fire Protection District
- Sphere of Influence
- Fire Station
- Paramedics/Search and Rescue
- Proposed Fire Station - Down Canyon

A recent Insurance Service Office (ISO) rating for locations served by the JLFPD was set at seven. Ten represents the lowest level of protection, the greatest fire hazard, and generally higher insurance rates. The district's fire chief has indicated that the water supply and fire flow pressure in most of the Village area are marginal and that fire equipment and vehicles have difficulties accessing many areas of June Lake, particularly during the winter. Water facility improvements by the June Lake Public Utility District could greatly enhance the fireflow conditions. Even with the relatively poor ISO rating, the National Fire Protection Association, based on their standards for rural fire districts, has determined that the JLFPD is providing an adequate level of service.

Wildland Fire Protection

Wildland fire protection services on public lands surrounding June Lake is provided by the Forest Service while the California Division of Forestry is responsible for controlling wildland fires on private lands. Under mutual aid agreements both agencies will respond to suppress large wildland fires.

C. PARAMEDIC SERVICES

Paramedic service for June Lake and the surrounding area is provided by Mono County under the direction and supervision of the Mammoth Lakes Fire Protection District chief. A winterized mobile intensive care unit, manned on a 24 hour/day basis by a two man certified paramedic team, is housed at the June Lake Fire station located at S.R. 158 and Big Rock Road. Mobile units are dispatched via the Mono County Sheriff's Department 911 Emergency Communication System.

D. EMERGENCY RESPONSE

An emergency response plan has been developed for the June Lake area by the Mono County Office of Emergency Services. The plan provides for the orderly evacuation of communities in the event of a major disaster. June Lake is exposed to several potential hazards, including avalanches, volcanic and seismic activity, floods and fires. The emergency plan would be executed if a major event were to occur.

E. SEARCH AND RESCUE UNIT

Community volunteers in coordination with the Mono County Sheriff's Department operates a Search and Rescue unit in June Lake. The Search and Rescue team provides services county-wide and is partially funded by the Sheriff's Department, Southern California Edison, the United Way and private donors. Emergency calls are dispatched through the USFS or Sheriff's Department. The unit operates out of a private residence in June Lake.

TRANSPORTATION

I. INTRODUCTION

Historically, residents and visitors of the June Lake area have depended on the automobile as their primary means of transportation. As the area grows, however, air quality, energy consumption, noise, traffic congestion and other automobile related impacts will increase. In order to avoid or reasonably lessen these impacts, a highly coordinated transportation system including street and highway improvements, bus transit, parking and non-motorized (paths, bikeways, and cross-country trails) transportation modes will be needed. Minimizing automobile usage in favor of a more non-motorized and mass transit oriented transportation system will greatly improve traffic circulation, avoid or effectively reduce growth anticipated impacts and greatly enhance the Loop's destination resort character.

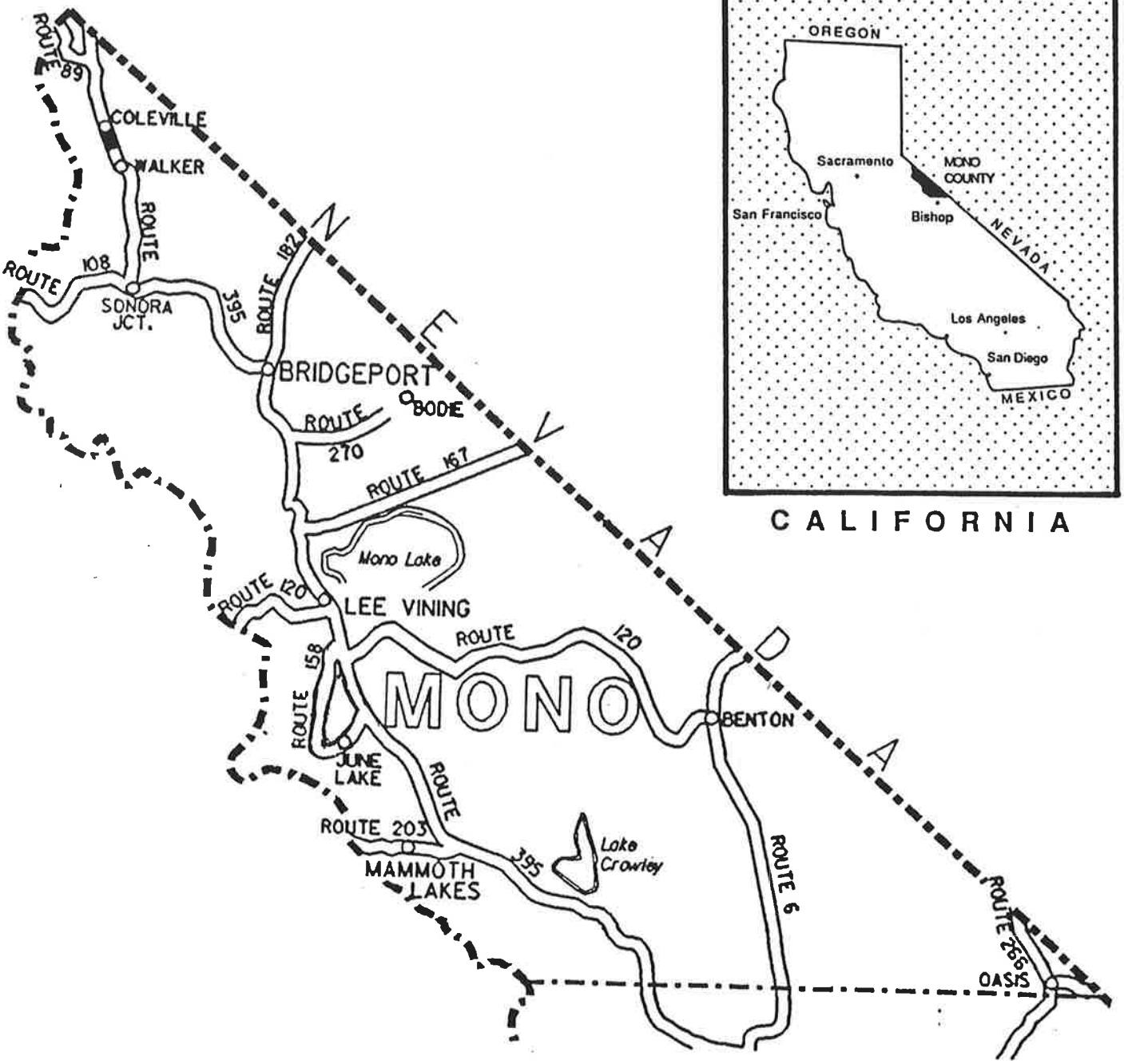
Four primary documents were referenced during this segment's preparation. They include: 1) **Mammoth/June Lake Transportation Plan, Phase II June Lake;** 2) **Mono County Regional Transportation Plan, 1986;** 3) **Caltrans District 9 Route Concept Report, Route 158;** 4) and **June Lake Loop General Plan (1974).**

II. SETTING

A. STATE ROADWAYS

Regional access to the June Lake Loop is provided by U.S. 395 and State Route (S.R) 158 (Figure 23). U.S. 395 carries traffic to and from the metropolitan areas of Southern and Northern California, while S.R. 158 is a 15.8 mile loop road functionally classified as a major collector. With the exception of a 6.5 mile section between the S.R. 203 turnoff at Mammoth Lakes and the California Department of Transportation (Caltrans) Crestview maintenance station, all of U.S. 395 has been improved to four travel lanes between Big Pine and June Lake. Completion of the remaining two lane section is scheduled for the fall of 1990.

Ingress and egress to the June Lake Loop from U.S. 395 is via S.R. 158, also known as Boulder Drive. This 15.8 mile long two-lane highway extends westerly from its southern junction with U.S. 395, loops around and re-intersects with U.S. 395 approximately six (6) miles north of the south junction. The roadway allows for speeds of 35 to 45 mph, except in those areas where traffic capacities are reduced because of minimal road width, lateral clearance, turning movements in intersections, on-street parking, pedestrian travel, cross traffic, sight distance and/or flooding.



north

FIGURE 23
REGIONAL ACCESS

SOURCE: CALTRANS, 1990.

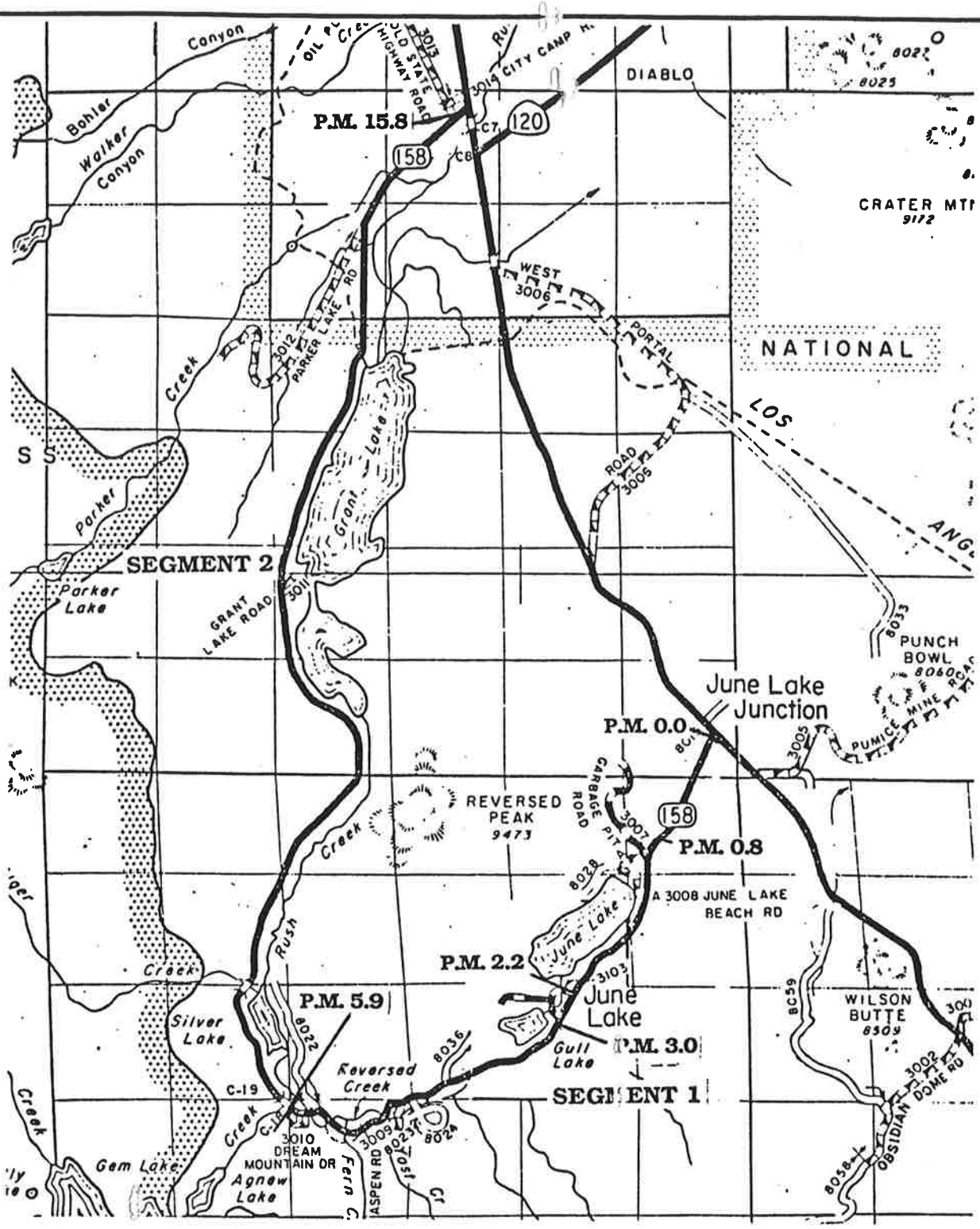
A **Route Concept Report**, prepared for S.R. 158 by Caltrans' District 9 Transportation Planning Branch in 1986, projects travel demand for a 20 year planning period, establishes level of service goals, and identifies the nature and extent of improvements needed to reach those goals. In this report, S.R. 158 is described in two segments. Segment 1 is from the South Junction with U.S. 395 to a point approximately 5.9 miles southwest (post mile 0.0 to 5.9). Segment 2 extends from post mile (P.M.) 5.9 to the northern junction with U.S. 395 at PM 15.8 (Figure 24).

Six levels of service have been selected for application in identifying the conditions existing under various speed conditions on state highways. Table 12 describes these service classifications and some of their characteristics.

The existing level of service (LOS) for segments I and II of S.R. 158 are D-35 mph and, C-40 mph respectively. As of August 1986, conditions on S.R. 158 reflected no capacity concerns. Traffic volumes for the period 1984 through 1986, as collected by Caltrans at the June Lake and Grant Lake Junctions, are shown in Table 13. Volumes recorded during prior years are inaccurate according to Caltrans' traffic personnel and are not included in Table 13.

While current conditions reveal no capacity concerns, future S.R. 158 traffic volume projections indicate that a 1.4 mile section will exceed threshold capacity by 1995, and that all of Segment I will have reached threshold capacity by 2005. In time, the current D-35 mph LOS will be downgraded to LOS E-25 to 30 mph.

Maintaining the current LOS (D-35) will require specific improvements between P.M. 0.8 to 2.2, 2.2 to 3.0 and 3.0 to 5.87. Post mile 0.8 to 2.2, (the section of S.R. 158 along June Lake) is on a steep side slope where little pad room exists for needed width expansion. Accidents are a concern from P.M. 2.15 to 3.04, (the June Lake central business district) where 82% of all accidents involve parked/parking vehicles. Accidents are also a concern from P.M. 3.04 to 5.87 where 67% of all accidents involve "ran-off-road" vehicles. The accidents occurring per million vehicle miles (MVM) on Highway 158 between P.M. 2.15 and P.M. 5.87 exceed the threshold level for this type of facility. The Route Concept Report states that it will be extremely difficult to correct these deficiencies because of the numerous economic and environmental constraints inherent in each improvement project. Segment II (P.M. 5.9 to 15.8) is not projected to experience any capacity problems, consequently the C-40 mph LOS will apply for the 20 year planning period.



north

FIGURE 24
STATE ROUTE 158

SOURCE: CALTRANS.

LEGEND

SEGMENT 1 -- P.M. 0.0 to P.M. 5.9
CENTRAL BUSINESS DISTRICT -- P.M. 2.2 TO P.M. 3.0
SEGMENT 2 -- P.M. 5.9 TO P.M. 15.8

TABLE 12 -- TRAFFIC CLASSIFICATIONS AND CHARACTERISTICS

Level of Service

A. A condition of free flow and low volumes with high speeds. Traffic density is low with speed controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles and little or no delay.

B. Stable flow exists with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their own speed and lane of operation. Reductions in speed are not unreasonable with low probability of traffic flow being restricted.

C. Still a zone of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass.

D. Unstable traffic flow is approaching, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds.

E. Operation is at lower operating speeds than in Level "D" with volumes at or near the capacity of the highway. Flow is unstable with speeds in the neighborhood of 30 mph. There may be stoppages of momentary duration.

F. This is forced flow operation at low speeds where volumes are below capacity. These conditions usually result from vehicles backing up from downstream restrictions. Speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

One of the most critical transportation problems facing the June Lake Loop is winter access. During the late fall, winter and early spring, Caltrans removes snow and otherwise maintains S.R. 158 from its South Junction (P.M. 0.00) to the Rush Creek Hydro Electric Plant (powerhouse) near Silver Lake (P.M. 5.87). The remaining 9.9 miles, from the powerhouse to the north junction, are not plowed due to avalanche conditions which prevail for approximately four and one-half months each winter season. When this section is officially closed all traffic must enter and exit June Lake via the South Junction. Along S.R. 158 between the Oh! Ridge turnoff and the Village, the terrain bordering S.R. 158 contains two avalanche chutes which have historically produced severe snow slides. Consequently, the route is subject to closure during periods of imminent avalanche danger or following slides which physically block the road. Closures average 14 hours, although closures exceeding 36 hours are not uncommon.

TABLE 13 – ROUTE 158 TRAFFIC VOLUMES

Area	Year	ADT[1] Peak Hour[2]	Peak Mo.[3]	Annual[4]
June Lake	1984	230	1250	1200
Junction So.	1985	240	1300	1250
Jct. Rte. 395	1986	180	1350	1250
Grant Lake	1984	340	1550	600
Junction No.	1985	350	1600	620
Jct. Rte. 395	1986	100	1000	640

[1] Average Daily Traffic (ADT) as used in Table 13 is defined as the traffic volume on a road measured by actual counts or projected on the basis of the functional classification and the number of developed parcels. ADT is based on traffic counted or projected for a fixed time period, usually 6 AM to Midnight.

[2] Peak Hour - The hour during which the heaviest volume of traffic occurs.

[3] Peak Month - The month in which the heaviest volume of traffic occurs.

[4] Annual - Average for calendar year.

Source: Caltrans, 1984, 85 and 86.

The potential for avalanche events is significant and when avalanches do occur, all vehicular traffic into and out of the Loop stops. This effectively isolates residents and visitors from outside medical, material and emergency resources, except those provided by snowmobile, snowcat or helicopter.

Current avalanche control along S.R. 158 consists of monitoring and scheduled shooting of the avalanche zones (P.M. 1.1 to 2.1) with a strategically placed recoilless rifle located on the northwest side of June Lake. When possible, these shootings are scheduled during non-peak traffic periods to minimize road closures. Temporary closures are still necessary to clean up the road but this program minimizes the severity and inconvenience of avalanches.

Since the June Lake Community is dependent on tourism for its economic stability, the threat of and/or isolation resulting from avalanches will continue to result in financial losses to area businesses and set backs to community growth and imageability. Considerable concern has also been raised over the daily bussing of school children through avalanche zones. In light of the

imminent danger to human safety and adverse impacts to the overall economy of the community, the 1986 **Caltrans District 9 Route Concept Report for S.R. 158** suggested that alternatives be considered to ensure continuous access to and from June Lake during periods of prolonged storm activity. These alternatives included: 1) the partial realignment of S.R. 158; 2) construction of highway snow sheds and; 3) a limited use alternative access road.

Further study of the proposed alternatives, by Caltrans, reached the conclusion that Alternative 2, the construction of snow sheds over highway 158, about two miles west of Route 395, would be the most feasible. Subsequently, this project has been programmed into the State Transportation and Improvement Plan.

B. COUNTY ROADS

There are currently 8.6 miles of county-maintained roads in the June Lake Loop, 6.03 miles of which are paved (Table 14). Most of the paved road sections are located in the immediate vicinity of the June Lake Village and provide circulation between residential, commercial and recreation centers. The entire system consists of two-lane roads, many of which exhibit minimal width and shoulder area as well as questionable structural integrity (Figures 25.A-D). The **Phase II, June Lake Transportation Plan** indicates that this road network does not provide adequate circulation for local traffic nor alternate routes which may be used in lieu of S.R. 158.

Road surface and shoulder repair, signing and striping and snow removal, as well as minor and major improvements such as road surfacing and alignment improvements, are currently provided by the Mono County Public Works Department. Operating revenues which support these services are provided through various state and federal revenue generating programs including state gas taxes, vehicle code lanes, timber receipts, federal and secondary funds, transportation allocations and motor vehicle license fee taxes.

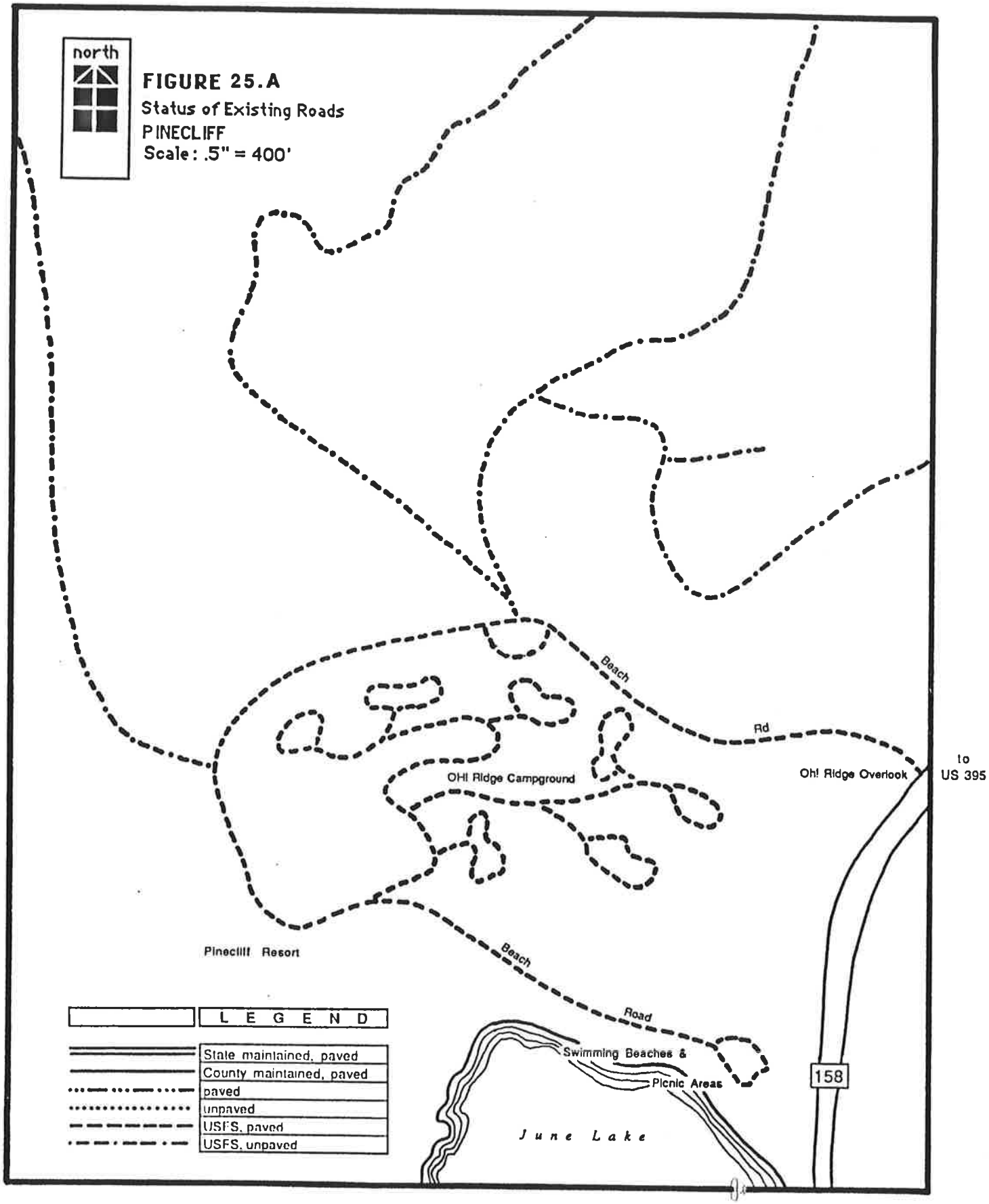
Financial constraints have forced Mono County into a difficult position regarding the acceptance of roadways into the County maintenance program. In recent discussions, the County Public Works Director indicated that new and/or existing roads constructed to applicable county road standards may or may not be accepted into the County's road maintenance system. The amount of state and federal subsidies available to the County has been decreasing both in current and constant dollars. In the future, the County will have less money available to maintain both its existing road system and any new roads. Unless additional monies become available for road maintenance, the acceptance of new roads into the County's road maintenance

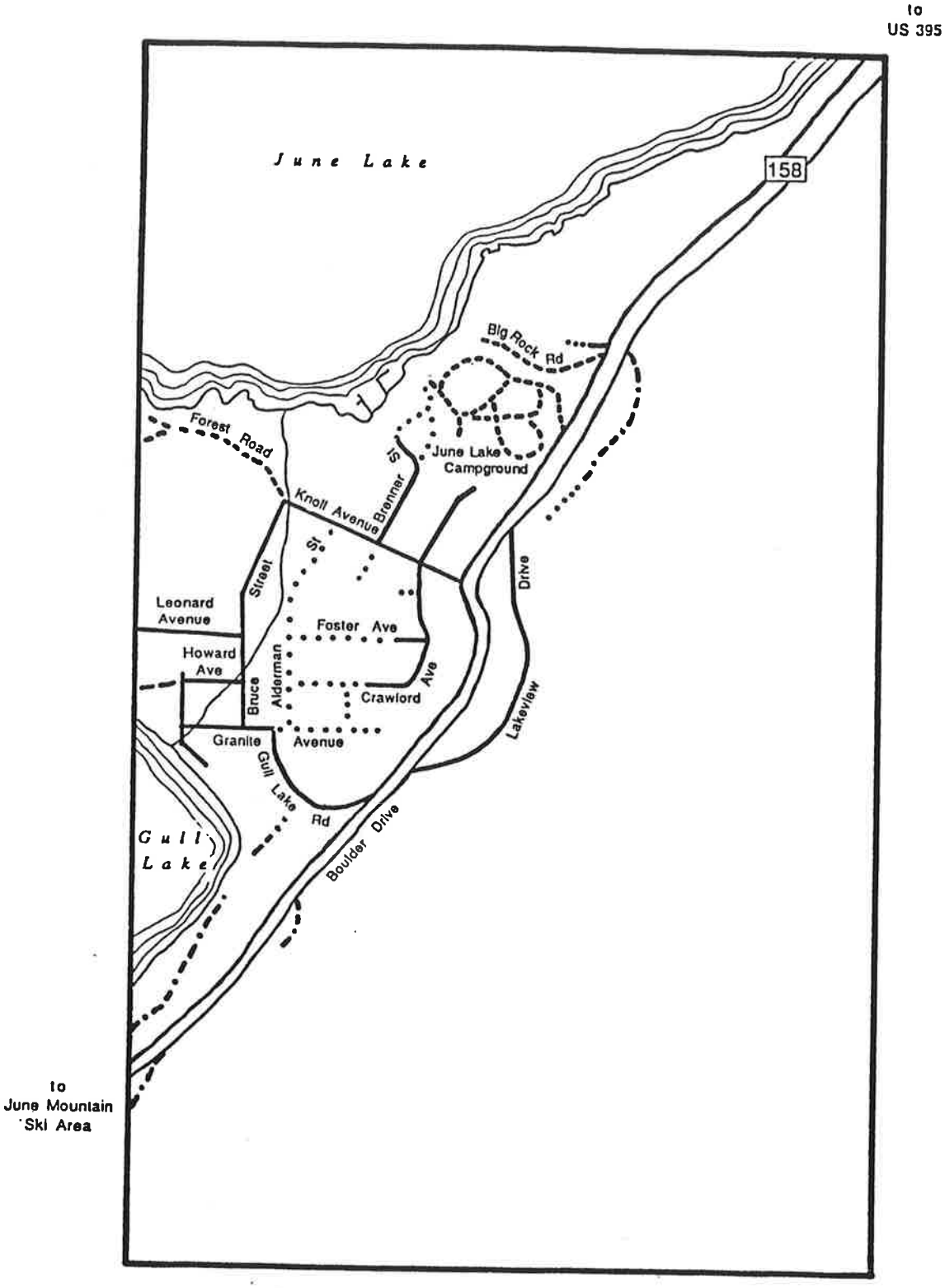
system could adversely impact the level of maintenance provided on other county roads.

TABLE 14 - COUNTY ROADS, FUNCTIONAL CLASSIFICATIONS AND STATISTICS

ROAD NAME	LENGTH IN MILES	PAVED MILES	USFS MILES	FUNCTIONAL CLASSIFICATION
Aspen Road	.23	.23		Collector
Big Rock Road	.12	.12	.12	Residential
Brenner Street	.11	.11	.05	Minor Arterial
Bruce Street	.39	.39		Minor Arterial
Crawford Avenue	.17	.17		Collector
Dream Mountain Dr	.2	.2		Rural
Forest Road	.42	.42	.42	Residential
Foster Avenue	.06	.06		Minor Arterial
Garbage Pit Road	1.11	1.11	1.11	Residential
Granite Avenue	.16	.16	.11	Residential
Grant Lake Road	.2	.2	.2	Residential
Gull Lake Camp-ground Road	.22	.22	.22	Rural
Howard Avenue	.09	.09	.04	Residential
June Lake Beach Rd.	.95	.95	.95	Residential
Knoll Avenue	.19	.19		Minor Arterial
Lakeview Drive	.3	.3		Residential
Leonard Avenue	.53	.53	.49	Minor Arterial
Lyle Terrace Road	.39	.06	.39	Residential
Parker Lake Road	2.67	.43	1.75	Rural
School Road	.09	.09	.09	Rural
TOTALS 20 Roads	8.6	6.03	5.94	

Source: Mono County Road Department.


north
FIGURE 25.A
Status of Existing Roads
PINECLIFF
Scale: .5" = 400'
Beach
Rd
Oh! Ridge Campground
Oh! Ridge Overlook
to
US 395
Pinecliff Resort
Beach
Road
Swimming Beaches &
Picnic Areas
158
June Lake
LEGEND
State maintained, paved
County maintained, paved
paved
unpaved
USFS, paved
USFS, unpaved

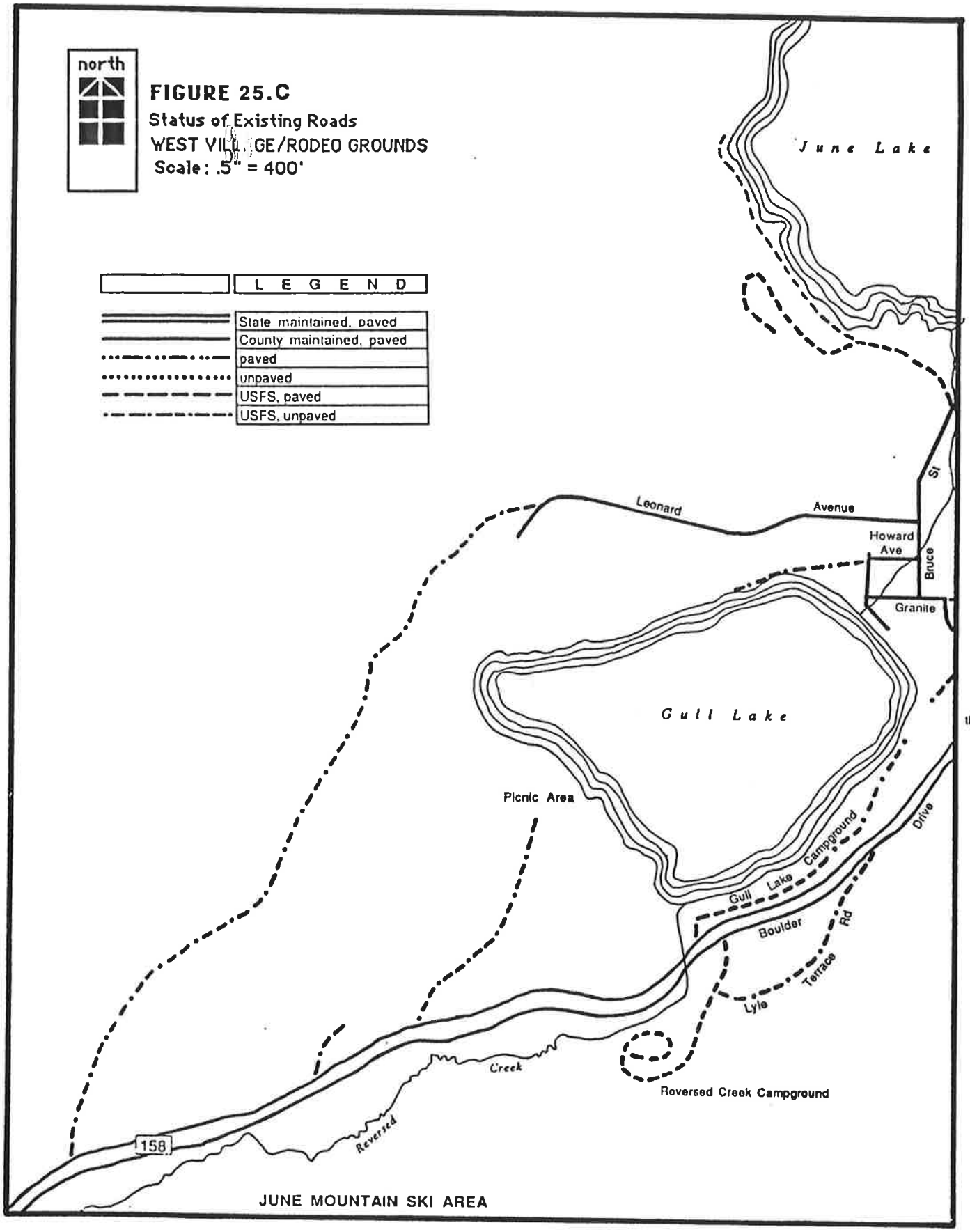


north

FIGURE 25.B

Status of Existing Roads
VILLAGE
Scale: .5" = 400'

LEGEND
State maintained, paved
County maintained, paved
paved
unpaved
USFS, paved
USFS, unpaved


north
FIGURE 25.C
Status of Existing Roads
WEST VILLAGE/RODEO GROUNDS
Scale: .5" = 400'
LEGEND
State maintained, paved
County maintained, paved
paved
unpaved
USFS, paved
USFS, unpaved
June Lake
Leonard
Avenue
Howard Ave
Bruce St
Granite
Gull Lake
to the Village
Picnic Area
Gull Lake Campground
Boulder Drive
Rd
Terrace
Lyle
Creek
Reversed
Reversed Creek Campground
158
JUNE MOUNTAIN SKI AREA
to Down Canyon

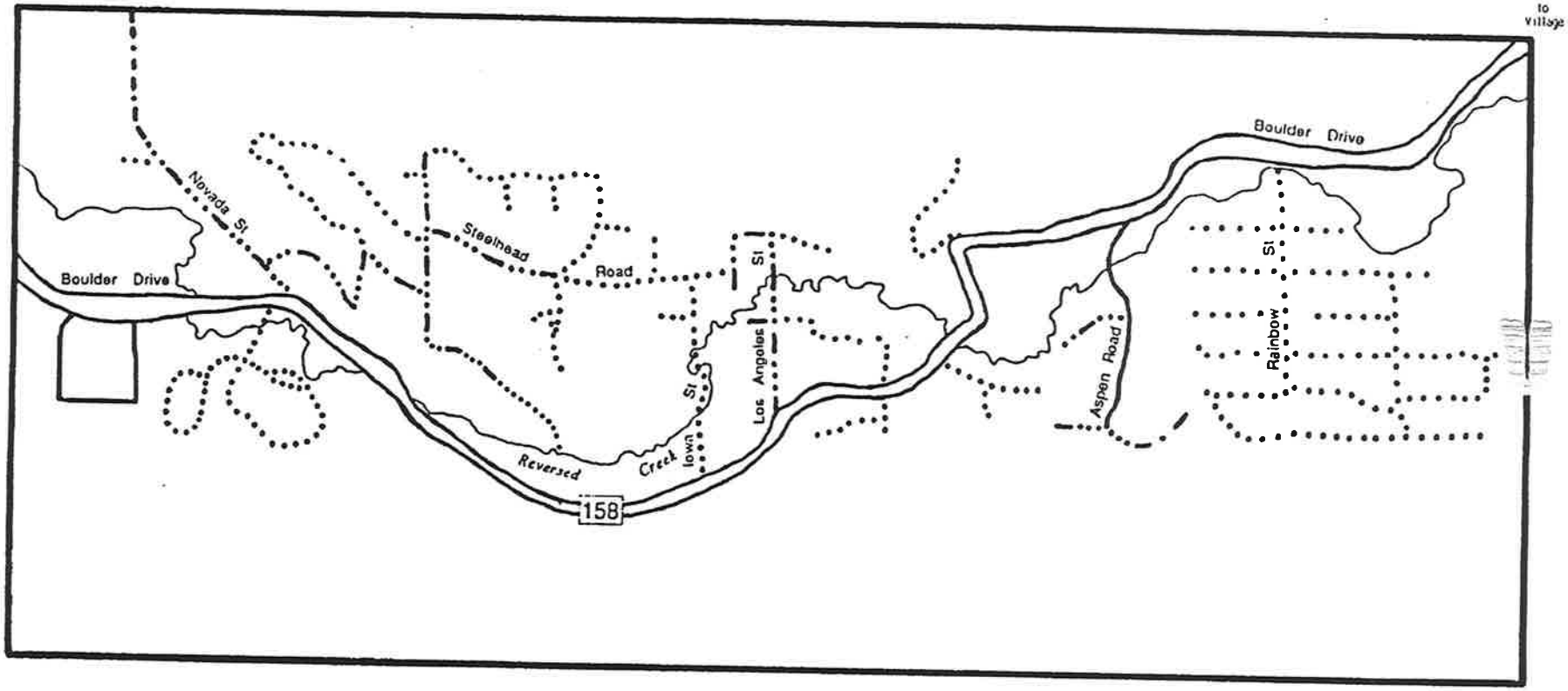


FIGURE 25.D
Status of Existing Roads
DOWN CANYON
Scale: .5" = 400'

LEGEND
State maintained, paved
County maintained, paved
paved
unpaved
USFS, paved
USFS, unpaved

C. NON-COUNTY PUBLIC AND PRIVATE ROADS

The majority of non-county public and private roads exist in the Down Canyon area (Figure 25.D). Included in this category are all roads within the Peterson and Clark Tract Subdivisions (Silver Lake Pines Tract 2, 4, and 5), the Silver Lake Forest Service Tract, and portions of the road systems within the Williams Tract subdivisions, Silver Lake Pines Tract 1 and June and Gull Lake Forest Service Tracts .

Many of the non-county public and private roads were developed under dated subdivision requirements and not designed for future circulation needs. The stated intent of the Silver Lake Pines Tracts was to offer lots for tent sites that would allow visitors to enjoy many summer recreational benefits. Based on this philosophy, the Silver Lake Pines Tracts were plotted with lot sizes of 25' X 100', 40' X 80' and 50' X 100'. All streets throughout the tracts were established at 25 feet in width, which was considered sufficient to allow each property owner access to his individual lot. To further complicate matters, the tracts were plotted in typical oblong lots and blocks without regard to topography. Many of the alignments for the legal subdivision "paper roads" were therefore impossible to follow because of the constraining terrain such as stream beds, rock outcroppings and slopes in excess of 60%. As a consequence, the majority of existing county and privately maintained roads were constructed without adequate consideration given to surfacing, width, shoulder area and drainage facilities.

The Mono County Public Works Department, in 1981, recognized the Loop's existing constraints to roadway construction and developed a special set of arterial/commercial and collector/residential road standards tailored to meet those constraints (Figures 26 and 27). These standards permit lower design speeds and narrower roads than in other areas of the county.

Major development projects have been able to comply with these standards, however the costs of upgrading the areas older roads will continue to preclude their improvement and ultimate acceptance into the County maintenance program. Additionally, owners of properties served by these roads will continue to bear all maintenance related expenses as public and private non-county road systems do not qualify for state and federal maintenance funding.

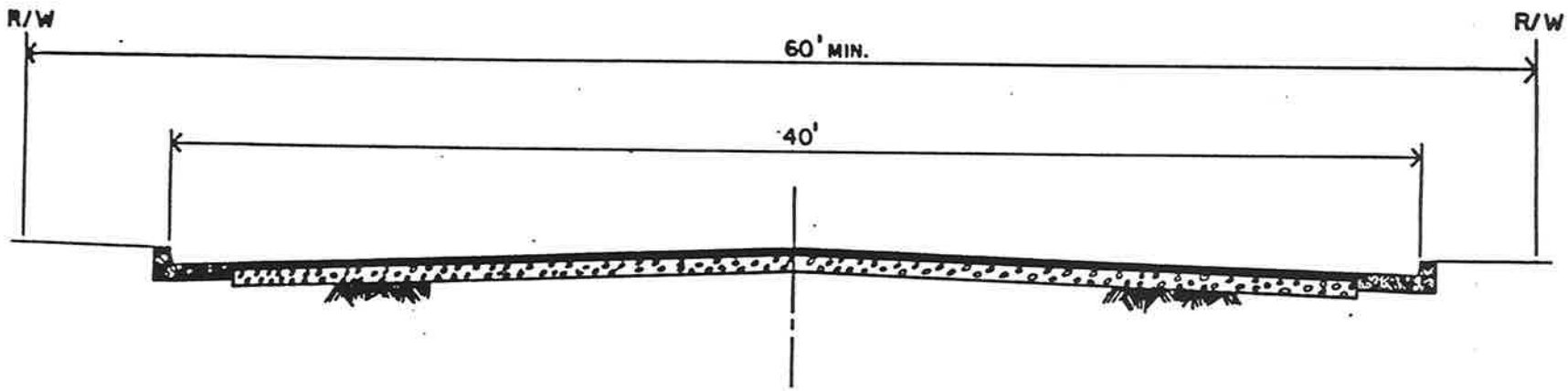


FIGURE 26
JUNE LAKE TYPICAL SECTION ARTERIAL/
COMMERCIAL

SOURCE: Mono County, 1981.

NOTES:

1. Shall be a County maintained road.
2. Serves as Arterial/Commercial area road.
3. Road section shall be .25' A.C. min. with sufficient CL-2 aggregate base to accommodate a T.I. of 8.5 min.

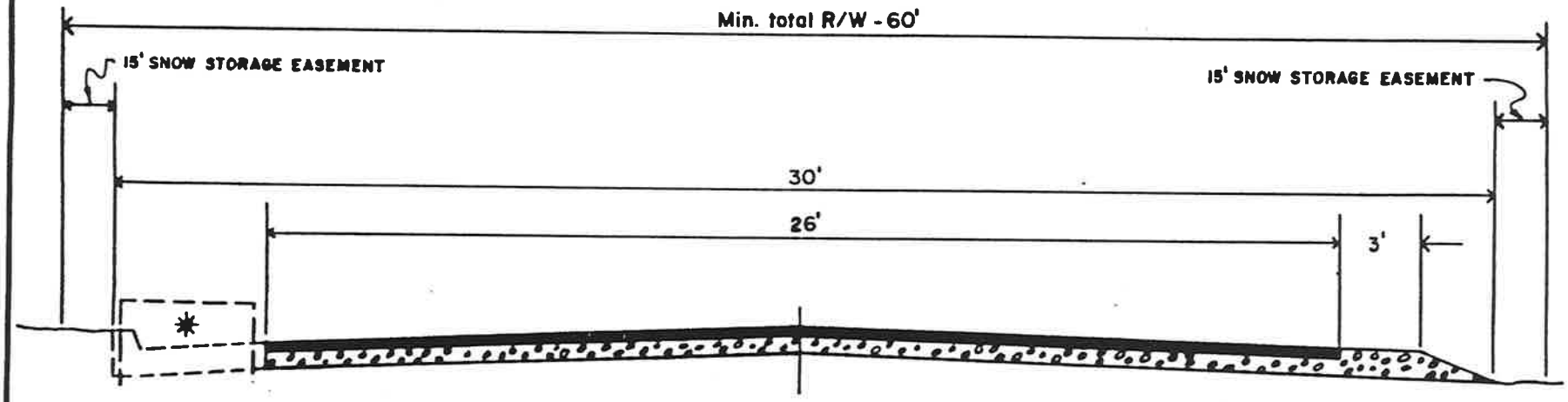


FIGURE 27
JUNE LAKE TYPICAL SECTION
COLLECTOR/RESIDENTIAL

SOURCE: Mono County, 1981.

NOTES:

1. May be a County maintained road.
2. Serves any number of residential lots, and functions as aresidential collector.
3. Road section shall be .25' A.C. min. with sufficient CL-2 aggregate base to accommodate a T.I. of 6.5 min.

D. NEED FOR ROAD IMPROVEMENTS

Regional, intercity and local travel to and from the June Lake Loop and June Mountain Ski Area, with the exception of tour buses and one local shuttle bus, is provided by automobile. Dependency on this mode of transportation often results in traffic volumes which exceed state and county road system design standards. Traffic volumes of the magnitude experienced on peak use days were not anticipated when much of the road system was originally developed and, as a consequence, congestion and other circulation related problems have grown beyond acceptable and desirable levels.

The Loop road system adequately serves the transportation needs of area residents and visitors on most weekdays. However, peak weekend and holiday traffic volumes can exceed the system's capacity. Of particular concern are the two major traffic flow periods associated with winter recreation activities at June Mountain. The first results from regional traffic that arrives on Friday nights and departs on Sunday afternoons. Regional travel is oriented to and from the south on U.S. 395, with peaks occurring in June Lake at approximately 10 p.m. and 4 p.m. respectively. The second and more significant peaking period occurs during relatively short time intervals in the morning (between 8 a.m. and 9:30 a.m.), afternoon (between 12 p.m. and 1 p.m.) and evening (between 4 p.m. and 5 p.m.) and is directly related to local and intercity travel between the ski area and lodging facilities. During the morning and afternoon periods, traffic originating from the Village, West Village, Mammoth Lakes, Lee Vining and other outlying locations converges in the central business corridor. Congestion and traffic safety concerns resulting from inadequate turning features at the Knoll Avenue and Gull Lake Drive intersections, on-street parking and auto/pedestrian conflicts are especially significant along this 0.2 mile, two-lane section of S.R. 158 and the County collector roads which feed into it. The same conditions, but to a greater extent, prevail during the evening rush hour period when traffic departs the ski area enroute to local and out-of-the-area lodging accommodations. Similar conditions prevailed, on a lesser scale, when the original June Lake Plan was prepared in 1974. The Plan established policies at that time for the development and/or improvement of public transit, parking, roadway and non-motorized trail system facilities. Most of these policies have not been implemented and traffic congestion persists during peak volume periods.

E. TRANSIT SERVICE

One intercity transit system presently serves the June Lake area. The Inyo Mono Area Agency on Aging provides scheduled and demand responsive bus service for those needing transportation to areas in and outside Mono County. Round trips to Bishop and Carson City are offered each Wednesday and Thursday

respectively. Passenger eligibility is unrestricted. Stop-overs, drop-offs and pick-ups in town along each route as well as local transportation within the destination areas is included as part of the overall service.

The service, currently funded by state and federal programs including the State Local Transportation Fund and Federal Urban Transit Act, usually operates at or near capacity with senior citizens accounting for 90% of ridership. In the foreseeable future, continued operation of this service appears likely.

Inter-regional Transportation

Inter-regional transportation to and from the June Lake area is provided by Greyhound Lines, Inc.. Service is available to Reno and Los Angeles with short stop-overs at numerous towns along the route. North and southbound buses arrive at the June Lake junction flagstop at 1:30 a.m. and 11:00 a.m. each day. Current scheduling is not conducive to use by local residents for daily business activities or travel between local communities. The lack of station facilities at the junction flagstop and the distance from June Lake's population centers are also considered deterrents to use.

Non-scheduled regional and inter-regional transit service is also offered by private charter lines. Most originate from the Southern California region and provide round trip transportation for organized alpine ski groups. Senior citizen and other traveling groups also access the June Lake area by way of charter service tours during the summer.

June Mountain Ski Area (JMSA) provides scheduled employee van shuttle service between Bishop and June Lake. Ridership is restricted to ski area employees residing in Bishop.

Local Transportation

A local, privately-owned reservation service operates a courtesy van program providing inter-loop customer and guest transportation to and from the June Mountain Ski Area. Service is provided during the winter only with loosely scheduled morning, afternoon and early evening runs. Customer response to the service is reportedly good although actual use remains below capacity.

F. PARKING

The two areas exhibiting the greatest parking deficiencies are S.R. 158 in the central business corridor and near the June Mountain Ski Area. These deficiencies are most apparent during relatively short intervals on major weekend, holiday and special event

periods when automobile traffic volumes and associated commercial and recreational parking demands are greatest.

Central Business District

Customer parking in and adjacent to the Village's Central Business District is limited. The majority of structures within the business corridor are used as shops, stores, restaurants and/or for government services. Many of the structures were developed prior to the adoption of county ordinances requiring adequate on-site parking facilities. While more recent developments have been able to comply with these requirements, (about 162 off-street customer, employee and/or resident lot spaces are currently provided), other older establishments have not and cannot because of restricted land availability and other geographic constraints.

The owners, renters and leasors of these properties share 70 on-street spaces provided on either side of S.R. 158 between the north and south Lakeview Drive intersections. Customers often find it inconvenient to patronize these businesses especially during peak morning, afternoon and evening winter rush hour periods when parking and traffic congestion are most severe. The on-street parking problem is further aggravated when parking spaces in the immediate vicinity of these establishments are taken by customers patronizing businesses which provide adequate off-street lot parking. Operations of snow removal equipment during business hours by Caltrans and other snow removal techniques as practiced by certain property owners along the corridor also contribute to the overall problem. As discussed in the **District 9 Route Concept Report,** accidents are also a concern along the corridor where 82% of all accidents involve parked/parking vehicles.

Improving traffic flow through the central business corridor during peak volume periods may require developing and implementing a special on-street parking restriction program. While the prohibition of parking on S.R. 158 would benefit traffic flow and improve safety, such an action would likely be unacceptable to adjacent businesses that lack adequate off-street parking facilities.

The construction of public parking lots in the Village commercial core, in addition to on-street parking restrictions, may reduce traffic problems. Public parking may be necessary as development in the Village commercial core continues. Narrow roads (25' right-of-way) and small parcels in the Village will preclude the provision of parking facilities at or adjacent to new development. Off-site public parking facilities may be needed to fill this void. Besides improving traffic flow and safety, public parking lots may provide the first step in developing a pedestrian-oriented Village.

June Mountain Ski Area

The USFS indicates that parking facilities at the June Mountain Ski Area must be increased from the existing 750 spaces to 941 spaces in order to accommodate the planned expansion in skier capacity from 2,250 skiers at one time (SAOT) to 3,900 SAOT. This increase will provide parking to accommodate 84% of skier vehicles arriving on a maximum use day. This suggests that 3,260 skiers will access the ski area by private automobile, recreational vehicle or tour bus with the balance (640 skiers) arriving by way of local transit or other modes of public transportation, neither of which are currently provided. Parking demands exceeding the available 750 spaces have occurred on numerous occasions in the past. On these days, customers unable to find lot parking must park along the road shoulder of S.R. 158. Traffic congestion and safety hazards are significant during these events.

G. NON-MOTORIZED TRANSPORTATION FACILITIES

Except for a few USFS designated and maintained trails, formal transportation facilities to accommodate the needs and desires of walkers, hikers, bicyclists and cross-country skiers have yet to be developed within the June Lake Loop.

Summer bicycle and pedestrian traffic along existing roadways has increased in recent years. Residents and visitors who prefer this form of transportation currently travel on roadways which lack adequate safety features. Safety hazards are also evident during or following heavy winter snow storms when pedestrians find travel along plowed road sections more convenient than un-maintained or poorly developed walkways. These conditions are especially noticeable within the Village.

The types of bicycle, hiking and cross-country skiing facilities which residents and visitors would like to see developed in the June Lake area fall into three general categories: 1) safe routes for sightseeing, recreational exercise, transportation to and from places of employment, commercial areas, camping and day use picnic sites and recreation centers; 2) safe routes for children commuting between neighborhood, commercial and recreation centers; 3) safe routes for use by long distance bicycle riders and organized athletic event participants.

Besides the obvious recreational benefits, developing a comprehensive trail system would also serve to reduce traffic congestion by: 1) providing an alternative to automobile use and; 2) relieving existing pedestrian/bicycle/automobile safety conflicts.

Policies establishing the need and proposed environmentally acceptable routes for such a system were set forth in the original **1974 June Lake General Plan.** The USFS also identified specific

sites in their 1980 report entitled **An Environmental Assessment of a Proposed June Lake Loop Bicycle Path.** Past Regional Transportation Plan updates also contain listings of candidate projects and identify desirable bike paths and lanes to be provided under the jurisdiction of the USFS, Caltrans or Mono County.

The USFS bicycle path proposals are primarily Class I paths or paths physically separated from streets or highways. The proposed state and county bike paths are primarily Class II paths, bicycle lanes established along existing streets. Table 15 presents a more complete description of bicycle paths.

TABLE 15 -- BICYCLE PATH CLASSIFICATIONS

Class I: Bicycle paths which serve corridors not served by streets and highways and which offer opportunities not offered by the road system. Such paths can either provide for a unique recreational experience or serve as direct high-speed commute routes with minimal cross-flow of vehicles. The most common applications are along rivers, canals, utility rights-of-way, abandoned roadways or within or between parks. These facilities are often provided as part of planned developments.

Class II: Bicycle lanes established along streets where significant bicycle demand and distinct needs exist. Such lanes improve conditions for bicyclists in the designated corridors by providing for more predictable movements to bicyclists and motorists. An important function of Class II lanes is to better accommodate bicyclists along corridors where insufficient room exists. This is done by widening shoulders and/or prohibiting parking on given streets in order to delineate bicycle lanes.

Class III: Bicycle lanes similar to Class II facilities except that the shoulder area is shared with parked vehicles. These lanes should only be designated where no convenient alternative route exists and where necessary for route continuity. Implementation of a definitive non-motorized transportation plan would assure the development of a more pedestrian, bicycle and cross-country skiing oriented community.

Source: USFS.

H. AIR TRAVEL

Although the automobile remains the primary mode of inter-regional transportation to June Lake, air travel will continue to attract those travelers preferring this mode of transportation as a time saving alternative to the automobile.

The Mammoth/June Lake Airport, located approximately 20 miles south of June Lake, has been designated as a commuter airport by the Federal Aviation Administration (FAA). Airport facilities are owned and operated by the County. Scheduled commuter service is currently provided by Alpha Airlines. Air charter and auto rental services are also based at the airport.

The **1986 Mono County Transportation Plan** indicated that aviation travel is growing in Mono County and should continue to serve an ever increasing market as an economical, time-saving and energy efficient alternative to the automobile.

I. MEDICAL TRANSPORTATION

Paramedic/rescue service for June Lake and the surrounding area is provided by Mono County under the direction and supervision of the Mammoth Lakes Fire Protection District Fire Chief. Base station facilities are located at the June Lake Fire Station where a winterized mobile intensive care unit is manned on a 24 hour/day basis by a two man trained paramedic team. Mobile units respond to general emergency and mutual aid calls generally within one minute from the time the call is received. Travel time to emergency sites varies depending on distance, weather conditions and other related factors.

Medical air transport is also available in Mono County through both the Mono General Hospital in Bridgeport and Centinela Mammoth Hospital in Mammoth Lakes.

NOISE

I. INTRODUCTION

Increases in noise levels, related to increased vehicle travel, recreational activities and short-term construction activities may take place as June Lake expands. Currently, the Loop meets all state criteria for excessive noise levels. Visitors and recreationalists, expecting the quiet, calm of the mountains, could be affected by noise increases in the future.

II. SETTING

A. NOISE SOURCES

The **Mono County Noise Element** (1981) indicates that the major source of noise in June Lake results from automobile, truck and general aviation traffic. Other noise sources include general commercial and residential activities and recreational activities on land and water. The average noise levels associated with many of these sources are given in Table 16. Natural features contribute little to the sound levels in the Loop. Wind moving through the forest canopy produces noise levels of about 10 to 15 dBA[1]. Other natural phenomena such as thunder, rockslides and avalanches may generate levels above 50 dBA.

Automobile and Truck Noise

Noise associated with traffic depends on the time of day, the number of vehicles present and the roadway characteristics such as road surface, grade, speed limit, and size and type of surrounding noise buffers. In the June Lake area, heavily used roadways, including U.S. 395 and S.R. 158, are the major continuous sources of noise levels of 60 dBA or higher. Figures 28 and 29, developed as part of a 1981 noise study conducted by Mono County, show noise levels along sections of S.R. 158. The highest recorded levels, up to 70 dBA, occurred along sections of S.R. 158 between its intersection with north and south Lakeview Drive, in the central business district. While studies to determine noise levels in adjacent residential and commercial areas have not been conducted, it is assumed, based on similar Caltrans studies conducted in Mammoth Lakes, that ambient noise levels are less than 55 dB, a level considered generally acceptable for residential and commercial uses.

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1. A "dBA" is a measure of loud pressure level as recorded in decibels (dB) rated on an A scale. A 10 dB increase corresponds to a 10 times increase in loudness.

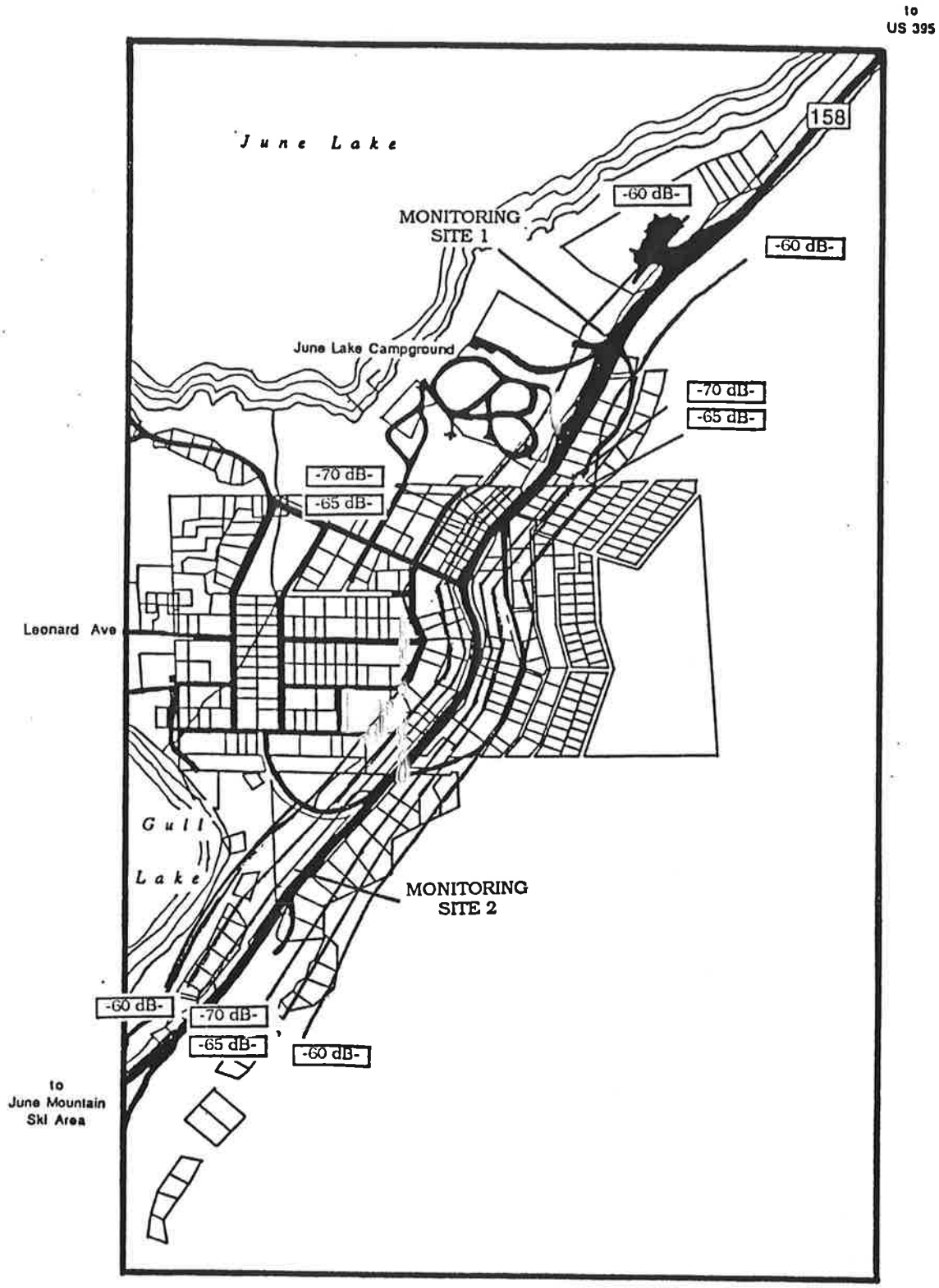
TABLE 16 – AVERAGE NOISE LEVELS (dB), EXISTING AND PROJECTED

From 50 Feet		From 1000 Feet	
SOURCE	**dB**	**SOURCE**	**dB**
Automobile		Aircraft	
Standard Sedan	64 - 76	Single Engine Prop	72-85
Compact	70 - 80	Multi Engine Prop	75 - 86
Sports Car	70 - 87	Commercial Prop	79 - 87
Pick up Truck	70 - 85	Executive Jet	84 - 95
2-3 Axle Truck	80 - 89	Turbine Light Utility Helicopter	69
4-5 Axle Truck	85 - 95		
Bus	70 - 87		
Motorcycle			
≤350cc	64 - 85		
>350cc	74 - 95		
Trail Bike	80 - 105		
Snowmobile	70 - 105		
Outboard Power Boat	65 - 90		
Inboard Power Boat	75 - 105		
Chainsaw	72 - 82		

Source: CA Transportation Plan Issue Paper II, Part III, Noise 7/76.

Aircraft Noise

There are two airports located near the June Lake planning area. The Lee Vining Airport, located some four miles north of the Loop, is a general aviation, non-commercial facility with an average of less than 25 operations per day. The larger Mammoth/June Lake Airport is located 20 miles to the south. According to the Mono County Noise Element a total of 103 private and small commercial flights originated from this facility in 1981. The distance between the Loop's residential and commercial centers and established flight paths ensures that neither airport contributes substantially to the ambient noise levels in June Lake. In addition to aircraft noise, the June Lake community is occasionally subjected to noise from helicopter use during ski lift construction work at June Mountain, and repair and improvement projects at the Rush Creek Hydroelectric Plant facilities. Occasional noise also occurs during mountain rescue flights, many of which originate from the June Mountain Ski Area parking lot.



LEGEND

-60 dB- NOISE CONTOURS

SITE 1		SITE 2	
dB[1]	FT[2]	dB[1]	FT[2]
60	120	60	295
62[3]	50	65	150
		70	85
		71[3]	25

1. Ldn -- Decbels.
2. Distance from centerline.
3. Actual field reading.

north

FIGURE 28
JUNE LAKE VILLAGE
NOISE CONTOURS

Scale .5" = 400'

SOURCE: Mono County, 1981.

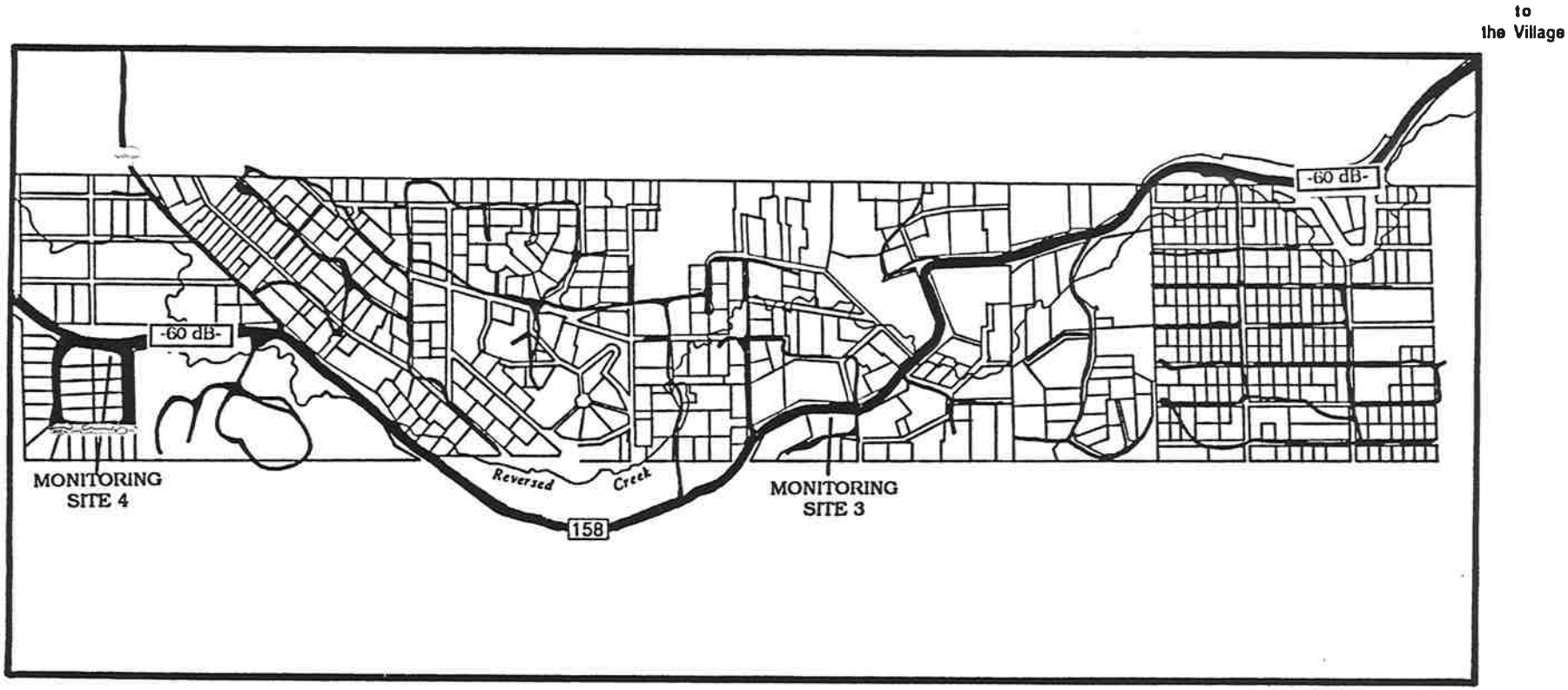


FIGURE 29
DOWN CANYON AREA
NOISE CONTOURS

Scale .5" = 400'

SOURCE: Mono County, 1981.

LEGEND

-60 dB- NOISE CONTOUR

SITE 3		SITE 4	
dB[1]	FT[2]	dB[1]	FT[2]
61[3]	25	53[3]	45

1. Ldn -- Decbels.
2. Distance from centerline.
3. Actual field reading.

Construction Activities

Building, utility, road and other construction related activities in the June Lake planning area normally occur during the summer season only. While often temporary in nature, these sources of noise are nonetheless intrusive and annoying, especially to persons residing or doing business at adjoining properties. Figure 30 indicates that the direct use of power tools, heavy equipment and machinery generates noise levels of up to 105 dBA at 50 feet.

Other Noise Sources

Other noise sources in the June Lake Loop stem from the continuous operations of turbines at the Rush Creek Hydroelectric Plant near Silver Lake, intermittent operations of commercial and private firewood processing equipment, outboard and inboard motors and off-road recreational vehicles, primarily motorcycles and snowmobiles (Table 16). These sources generally cause an increase in ambient noise levels where there are concentrations of buildings and people.

B. NOISE SENSITIVE RECEPTORS

Noise sensitive land uses as defined by state statute include schools, hospitals, rest homes and long-term medical and mental care facilities. The USFS considers all Wilderness, Scenic and Roadless areas within the Inyo National Forest to be sensitive to excessive noise levels. Land use compatibilities for community noise environments are given in Figure 31. Though not considered sensitive receptors, recreationalists and visitors to the Loop, expecting, a quiet, mountain experience, can also be adversely affected by noise levels exceeding background levels.

C. NOISE REDUCING POLICIES

The Noise Element of the Mono County General Plan addresses noise concerns in Mono County and sets forth goals, policies and implementation measures aimed at housing and maintaining acceptable noise levels. Mono County has also enacted Ordinances 79-47B, to prohibit excessive unnecessary and annoying noises from all sources subject to its police powers and 79-479, to limit construction or grading noise within 500 feet of residential and commercial occupancies to 7:00 am - 8:00 pm on weekdays and Saturdays and between 9:00 am - 5:00 pm on Sundays. In addition, the State has established noise standards for multi-family dwelling units through Title 25 of the California Administrative Code.

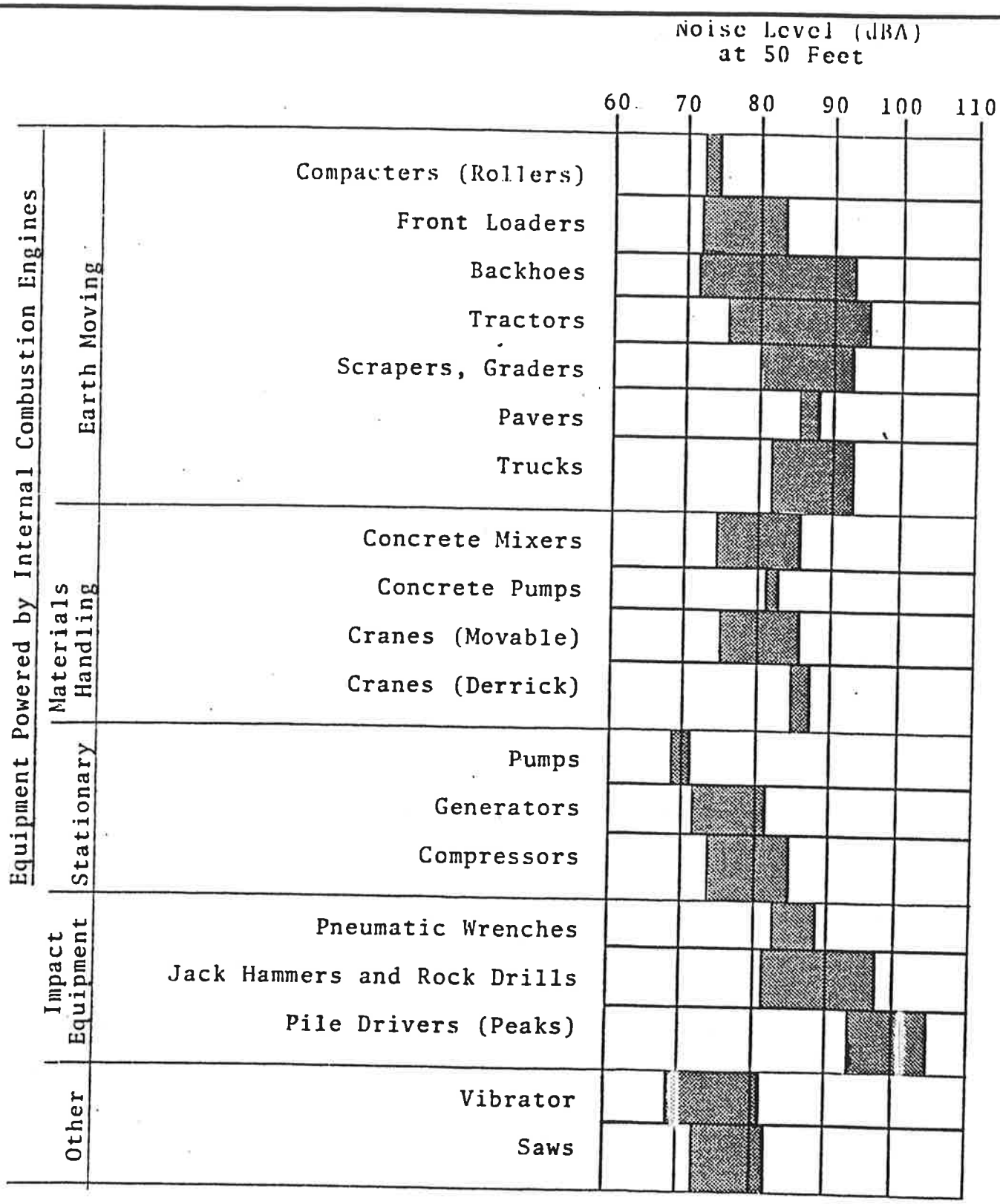
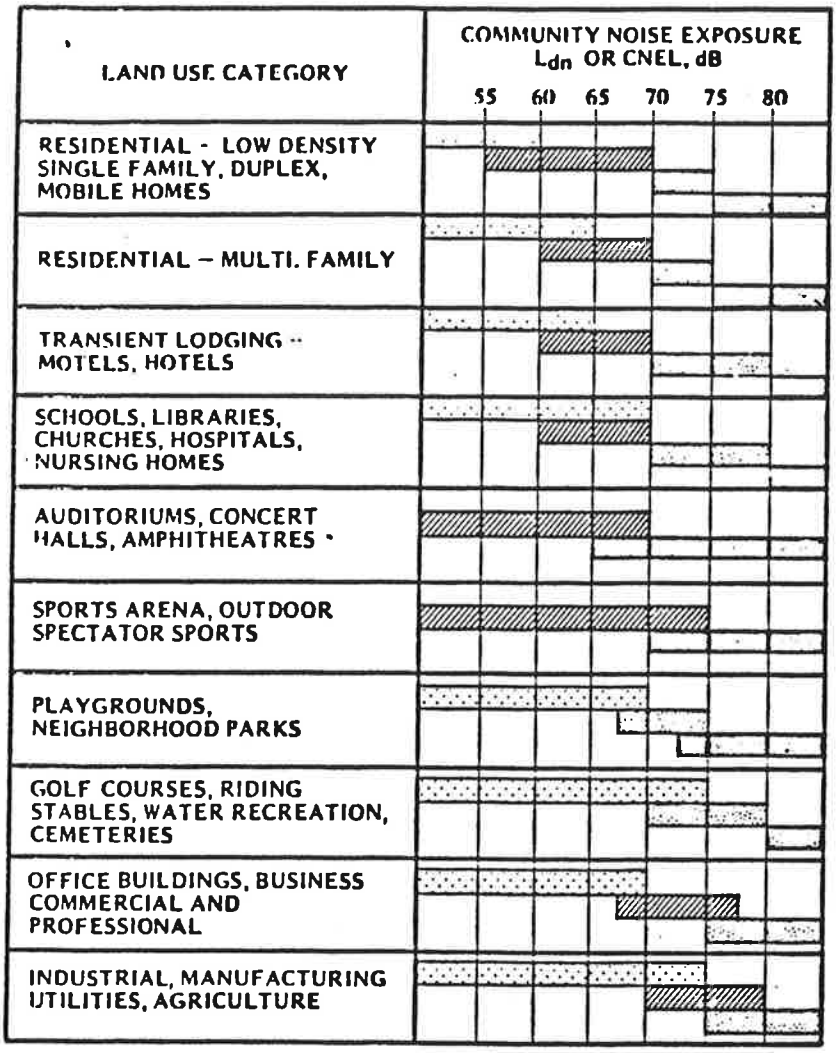


FIGURE 30
CONSTRUCTION EQUIPMENT NOISE LEVELS

SOURCE: Bolt, Beranek, and Newman, 1971.



INTERPRETATION

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

FIGURE 31
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS.

SOURCE: Office of Planning and Research, 1987.

COMMUNITY SERVICES AND PUBLIC INFRASTRUCTURE

I. INTRODUCTION

June Lake's rural nature and small population prevent direct access to community services normally found in more urbanized areas. General governmental services are provided by Mono County out of offices located in Bridgeport and Mammoth Lakes. Community services include general governmental services such as public works, planning, administration, health care and justice. Emergency services such as police and fire protection and paramedic services are discussed in the emergency services section of this document.

Public infrastructure refers to physical projects necessary to keep a community functioning properly. Public utilities, schools and community buildings normally fall into this category. This section does not discuss roads; information on roads can be found in this document's transportation section. Recreational facilities and areas, so vital to June Lake's economy, are also discussed in a separate section.

II. SETTING

COMMUNITY SERVICES

A. GENERAL GOVERNMENT SERVICES

General governmental services are provided by the County of Mono and various state and federal agencies. County services are available at the offices in Bridgeport, the county seat. The south County offices, located near and in Mammoth Lakes, also provide a limited number of services. Table 17 provides a brief overview of the services provided.

B. HEALTH CARE

The absences of public or private health care services in the June Lake Loop forces residents and visitors to travel to hospitals, clinics or doctor's offices located outside the Loop. In-patient, out-patient and emergency medical care services are available in the Town of Mammoth Lakes and Bishop, located 22 and 60 miles south of June Lake respectively. Mono General Hospital in Bridgeport, approximately 40 miles to the north, also provides similar services.

Public health care services are offered through the Mono County Health Department at medical facilities located in Mammoth

Lakes and Bridgeport. Immunization, family planning, child health examinations, blood testing, pregnancy testing, hearing and vision screening for pre-schoolers and many other health-related services are provided through the program.

In an attempt to re-establish medical services in June Lake, Mono County and the Community cooperated to fund the construction of a new medical office and treatment complex adjacent to the June Lake Community Center. Mono County applied and received state grant funding; the Community raised private contributions to augment the grant. The exterior of the center was completed in the winter of 1989; work continues on the interior. Once completed, the Mono County Health Department will offer health care services on a one day per week basis. The County is also attempting to lease the facility to a privately-owned and operated medical group capable of providing a full compliment of general and emergency medical services on a full-time basis. Negotiations with Alpine Clinic in Mammoth Lakes are currently in progress.

TABLE 17 -- GOVERNMENT SERVICES

AGENCY	SERVICE
Mono County	Administration Finance Public Works Parks and Recreation Welfare Planning Justice and Courts Animal Control Tax Collection Health Services Library Services
U.S. Postal Service	Mail Delivery
USFS	Managing National Forest Lands

PUBLIC INFRASTRUCTURE

A. COMMUNITY CENTER

Located adjacent to Gull Lake in the June Lake Village, the June Lake Community provides a central meeting facility and focal point of the community. The center is owned by the County and includes a large multi-purpose room complete with kitchen and restroom facilities. The center also houses the library and community thrift shop. A recent expansion will provide additional space for meetings, an expanded library and room for health care facilities.

B. PARK FACILITIES

The only designated community park within the June Lake Loop is located adjacent to the June Lake Community Center near Gull Lake. Park facilities are limited to a few picnic tables, swing sets, slides, a single tennis court, one basketball backboard and court located in the Community Center parking lot and a public restroom facility. Survey responses and discussions by the June Lake Citizens Advisory Committee have emphasized the need for additional community recreations facilities, particularly softball/soccer fields. Children and adults wishing to participate in these activities must travel to Lee Vining and Mammoth Lakes some eight and 20 miles from June Lake respectively. Temporary volleyball and basketball courts were established in the June Mountain parking lot by the June Mountain Ski Area in the summer of 1987. These facilities were removed prior to the 1987/1988 ski season to allow for needed parking space. Use of these facilities was reportedly minor.

Mono County and the USFS are currently working on acquiring and developing a park site on public lands north of the West Village. The park is planned to include a softball/soccer field and other facilities.

C. LIBRARY

Library service to the June Lake community is provided by the Mono County Library System whose main branch is located in Bridgeport. A local branch, located at the June Lake Community Center, is currently open to the general public on a two day per week four hours per day basis.

Even following the library expansion, limited building space of June Lake Branch limits the amount and diversity of library material directly available to the public. Books, articles, and any other library material unavailable at either the local or main branch can be acquired through the Mountain Valley

Library System operated out of Sacramento, California. Material available through the system will usually arrive within seven to ten days from the date of request.

In addition to material offered at the local branch, the Mono County Library System also distributes reading material through its "Bookmobile" program. This traveling branch of the library system makes scheduled stop at six locations throughout the Loop on alternate Wednesdays.

D. PUBLIC SCHOOLS

Primary and secondary education is provided by the Eastern Sierra Unified School at the Lee Vining Elementary School and Lee Vining High School facilities located in Lee Vining. Existing capacities and enrollments (1989) at each of these schools are contained in Table 18.

TABLE 18 -- SCHOOL CAPACITY AND ENROLLMENT, 1989

	Capacity	Enrollment
Lee Vining Elementary School (K-6)	130	97
Lee Vining High School (7-12)	125	63

Although Lee Vining schools are not currently overcrowded, other schools within the Eastern Sierra Unified School District are; the school district has consequently been formally identified as "impacted". As an impacted district, it possesses the authority to impose fees on new construction for capital outlay and permanent classroom construction (Mono County Code Section 15.09). Table 19 contains the district's fee schedule.

TABLE 19 -- EASTERN SIERRA UNIFIED SCHOOL DISTRICT FEES

Type of Unit	Per Unit Fee
1-Bedroom	$100.00
2-Bedroom	200.00
3-Bedroom	300.00
4-or more Bedrooms	500.00
Mobile Home	150.00

The **June Lake Residence Study** (1986), conducted by the June Lake Citizens Advisory Committee, indicated a significant number of residents rated existing school services as inadequate. Some parents, dissatisfied with the program, have transferred their children to the Mammoth Lakes Unified School District where educational and extracurricular opportunities are reportedly greater. Children and teenagers residing in June Lake and attending school in Lee Vining are bused to and from these facilities throughout the school year. Considerable concern has been expressed regarding winter travel through a known avalanche zone between the Village and Oh! Ridge lookout. During periods of extreme hazard or when the road is closed due to snow slides, children cannot attend classes. Missed time is made up by extending the school year in the spring.

Adult education opportunities in the general region are provided in Mammoth Lakes through the Mammoth Education Foundation. The program, which began in early 1990, offers general education classes through Cerro Coso Community College and upper division business courses through California State University, Bakersfield.

E. WATER SYSTEMS

The June Lake Public Utility District (JLPUD), which recently acquired the Williams Tract County Water District (WTCWD) service area, provides the bulk of water services in the Loop. Until recently, the JLPUD and WTCWD separately provided water for domestic use and fire suppression. With the recent acquisition of the WTCWD's service area, the JLPUD's service area extends from the western edge of the Down Canyon area to the north-east corner of June Lake. Areas not included in the boundaries but also served by the JLPUD include the Pine Cliff Trailer Park, Oh! Ridge Campground and June Lake Junction (Figures 32 and 33).

JLPUD Water Sources and Treatment Processes

Water for the JLPUD system is obtained from surface sources at Snow and Fern Creeks and an unnamed stream above the Peterson Tract. Water was also obtained from June Lake although recent capacity improvements at the Snow Creek source have allowed the JLPUD to remove the June Lake source from regular service. The June Lake source still supplements the Snow Creek source during periods of high demand.

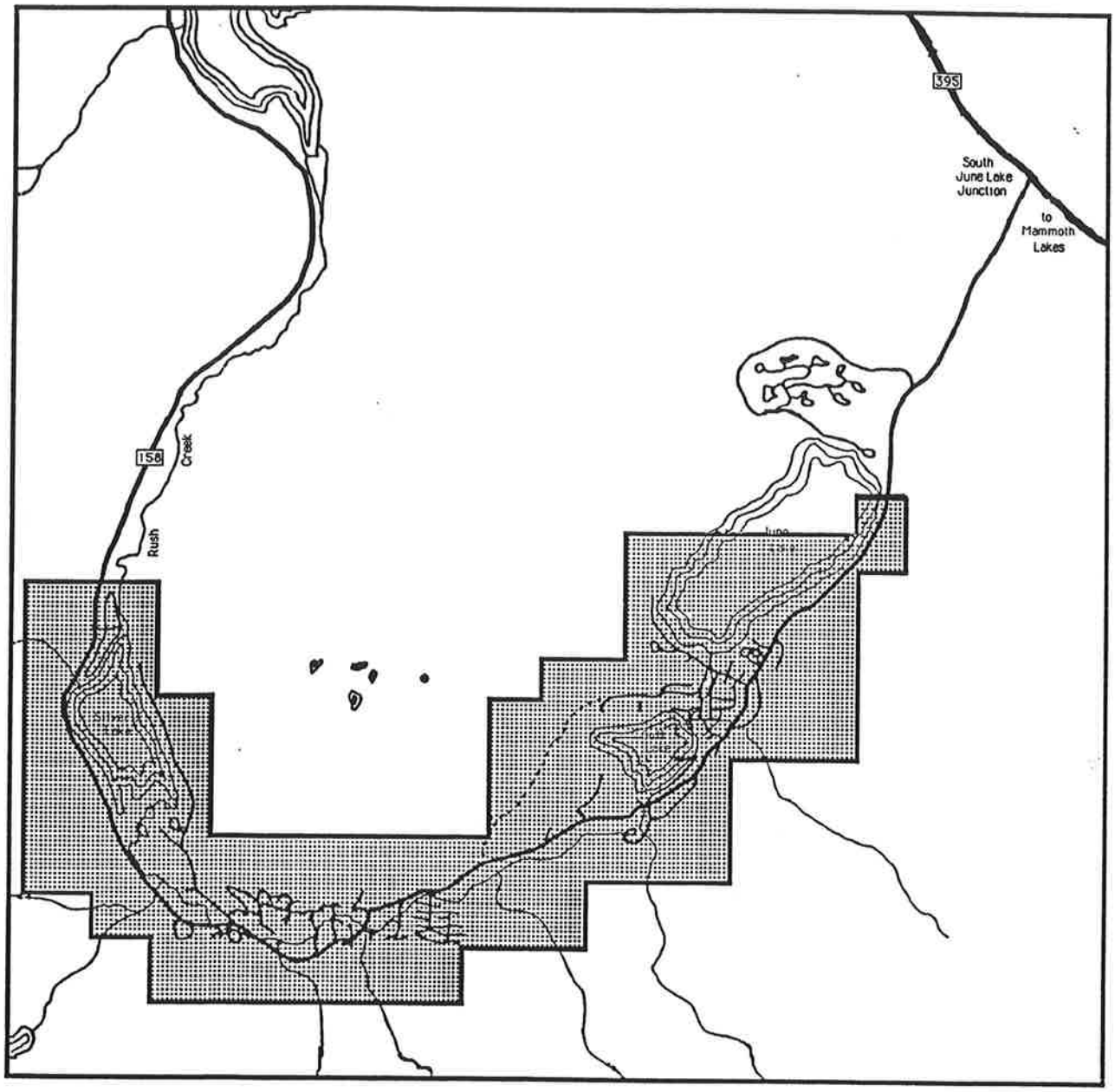
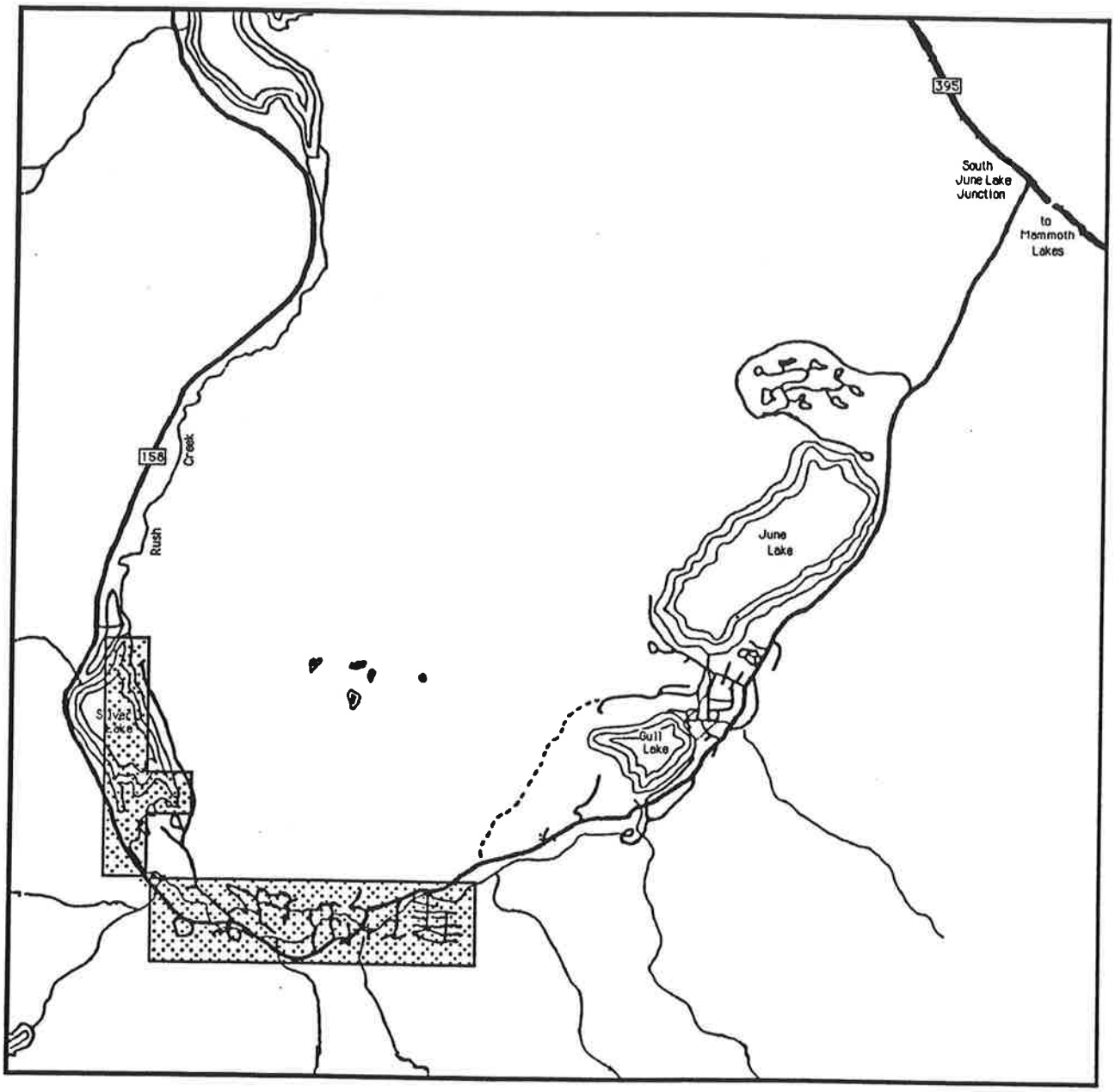


FIGURE 32
JLPUD SERVICE AREA
Scale: .5"= 1,400'

SOURCE: Mono County, 1987.

LEGEND

JLPUD District Boundaries



north

FIGURE 38
Former WTCWD Service Area

Scale: .5"=1,400'

SOURCE: Gram/Phillips Associates, 1983.

LEGEND

WTCWD Service Area

Water is treated using dual-media pressure filtering and chlorination processes prior to distribution. The district is presently considering improving its pre-treatment facilities in an attempt to enhance its overall treatment process. All water quality standards, as monitored by the State Department of Health Services, are currently met for all sources of supply.

JLPUD Distribution System

Prior to the annexation of the WTCWD, the JLPUD's service area roughly consisted of the June Lake Village and West Village areas. Facilities in these areas consist of 4", 6", 8", and 10" pipelines of varying types and ages. While capable of providing adequate flows for domestic usage, certain sections fail to meet acceptable fire protection standards. To correct this deficiency, a master water plan, prepared in 1983, recommends that all pipelines less than 8" in diameter be replaced and that all dead-end lines be looped. As has been the case in the past, line replacement will take place concurrent with new development or on an as-needed basis. The 1983 plan also set forth a long range plan for the construction of new facilities. The recently completed expansion of the Snow Creek plant and reservoir was one of the plan's recommendations.

Following the recent annexation of the Down Canyon area, the JLPUD acquired water facilities previously under the control of the WTCWD. Since 1985, the water systems serving the Down Canyon area, primarily in the Peterson and Williams Tract subdivisions, have been completely renovated. Major improvements included new diversion structures, transmission pipelines, treatment facilities, reservoirs, distribution pipelines and hydrants. These facilities are expected to adequately serve future development in the Down Canyon area.

Other Water Systems

Besides the JLPUD, seven smaller independent governmental and privately-owned and operated water systems exist in the Down Canyon area. They include the Four Seasons, Carson Peak Inn, Dream Mountain Resort, Rush Creek Hydroelectric Plant, Silver Lake Resort and Silver Lake Campground, Silver Lake Tract and Grant Lake Marina (Figure 34).

The Four Seasons Motel and Carson Peak Inn water systems provide water for customer use through wells that operate year-round. The Dream Mountain system provides domestic water service for small trailer park; water is diverted from an unnamed spring on the property.[1] Upper Rush Creek provides the domestic

[1] The JLPUD recently took over the operation of the Dream Mountain system.

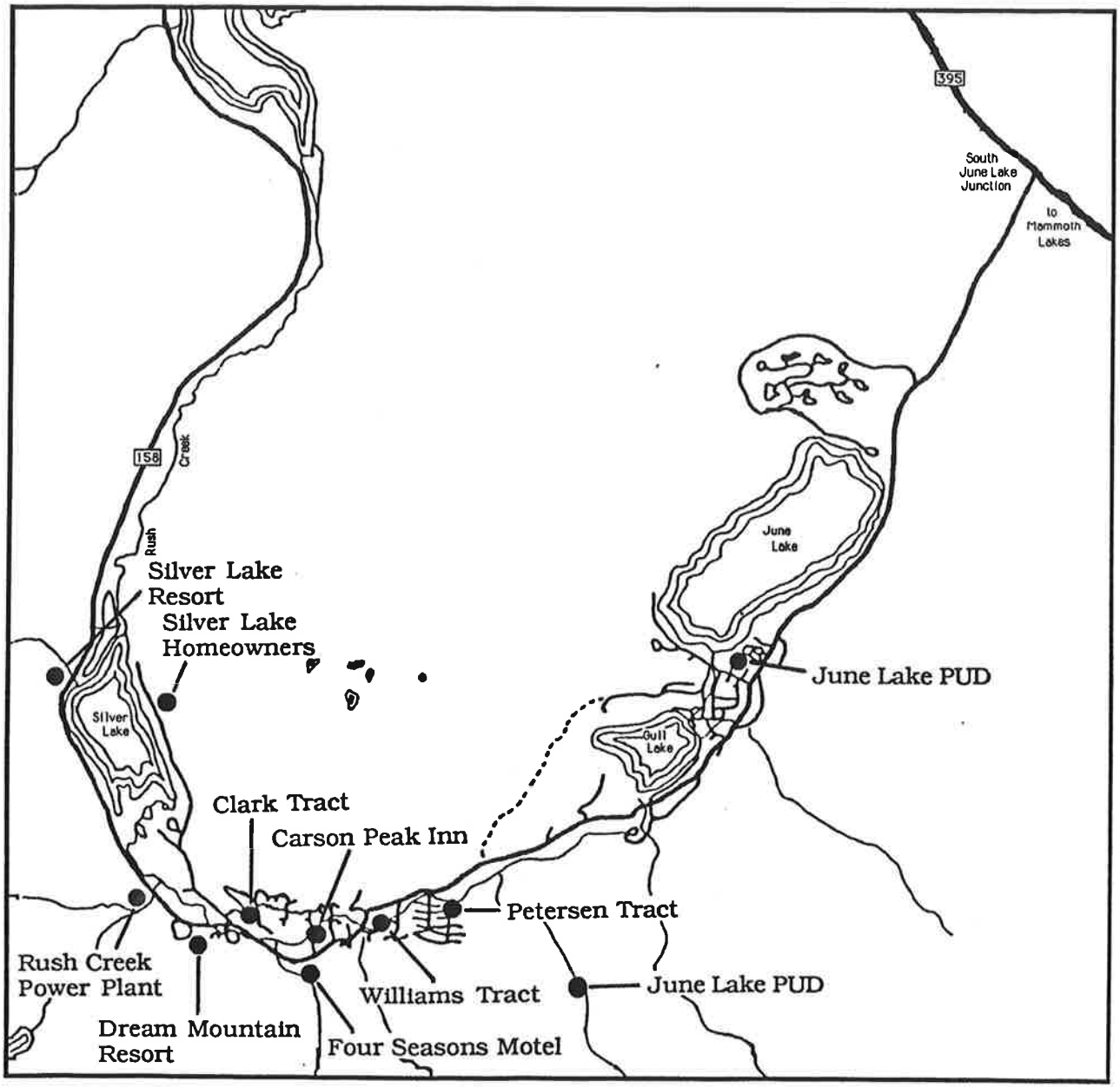


FIGURE 34
JUNE LAKE LOOP
PUBLIC WATER SYSTEMS
Scale: .5" = 1,400'

SOURCE: Gram/Phillips Associates, 1983.

NOTE: Grant Lake Marina not shown.

supply for employees of the SCE Rush Creek Hydroelectric Plant, while upstream employees rely on the Gem Lake Penstock to deliver Gem Lake waters. The Silver Lake Resort and trailer park, the Frontier Pack Station, and summer homes on USFS lands located along the east shoreline of Silver Lake consume water diverted from Alger Creek. This system operates during the summer vacation season only and normally shuts down by October 31. A few homeowners use small secondary water systems which draw directly from Silver Lake after the seasonal termination of Alger Creek diversions. [2] The USFS operates and maintains five separate domestic water systems during the summer season only. Sources include Silver Lake, which provides water to the Silver Lake parking area restrooms, restrooms and water fixtures located in the Silver Lake Campground and Rush Creek below Silver Lake, which serves the Rush Creek #1, Aerie Crag and Grant Lake Overlook restroom facilities. The northerly-most loop water system is operated by the owners of Grant Lake Marina. This system diverts water from an unnamed spring located above and to the west of the Marina for the resort's trailer park, restaurant, restrooms/shower facilities and the owner's single-family residence. This system is also operated during the summer season only.

Production records for these water systems have not been kept. Increases in water supply demands created by additional growth should not be a concern as the specific areas serviced by these systems have reached their maximum growth potential.

LADWP

The Los Angeles Department of Water and Power uses its Grant Lake reservoir and associated facilities to store and export waters originating in and around the June Lake Loop. A more complete discussion of the department's facilities and impacts on natural resources is contained in the water resources section.

F. JLPUD WATER RIGHTS AND WATER SERVICE CAPABILITIES

June Lake Village, West Village and Rodeo Grounds

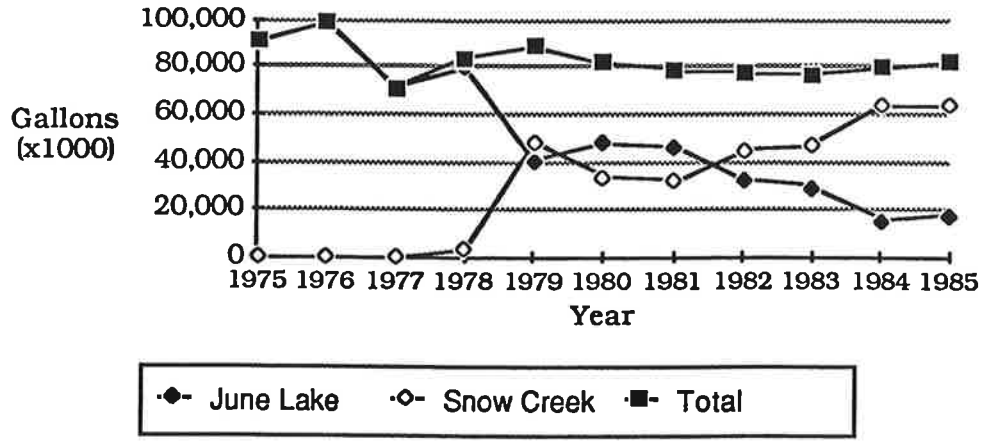
The JLPUD has documented domestic and municipal rights totaling 0.74 cubic feet per second (cfs) combined from June Lake and Snow Creek to service the Village and West Village/Rodeo Grounds areas. The Snow Creek right is subject to minimum flow releases below the diversion dam; no minimum lake level restrictions apply on June Lake. Under the pending State Department of Health Services Water Permit, water diversions from June Lake are limited to periods when the Snow Creek

[2] The JLPUD is arranging for the Silver Lake Tract to connect to the District's water system.

source cannot meet full demands. The 0.74 cfs provides an average diversionary flow of 332 gallons per minute (gpm) which is equivalent to 478,241 gallons per day (gpd). In addition to the District's permits and licenses, the USFS has allotted an additional 0.19 cfs (85 gpm) for serving several campgrounds and other USFS operated facilities. These rights also apply to June Lake and Snow Creek. The total domestic and municipal water right of 0.93 cfs (0.74 cfs plus 0.19 cfs) equals a combined flow of 601,033 gpd. The District also has a right to 0.34 cfs for fire protection purposes from the same sources.

The Snow Creek system, with its recent improvements, has a capacity of approximately 350 gpm or 504,000 gpd, while the June Lake system can provide an additional 250 gpm or 360,000 gpd. Flows from the June Lake system are limited to critical (low Snow Creek supply) situations only. Table 20 contains the amount of water supplied for the individual sources. The overall yearly supply has remained fairly constant, while water taken from the individual sources has changed. Total water use peaked at approximately 99 million gallons in 1978. Since then, water usage has declined to a low of approximately 77 million gallons in 1983, rising slightly to approximately 82 million gallons in 1985. Prior to 1977, the June Lake source provided all of the water to the Village and West Village area. After 1977, the Snow Creek source came on line to supplant June Lake as the main source of water to the area.

TABLE 20 – WATER SUPPLY BY SOURCES

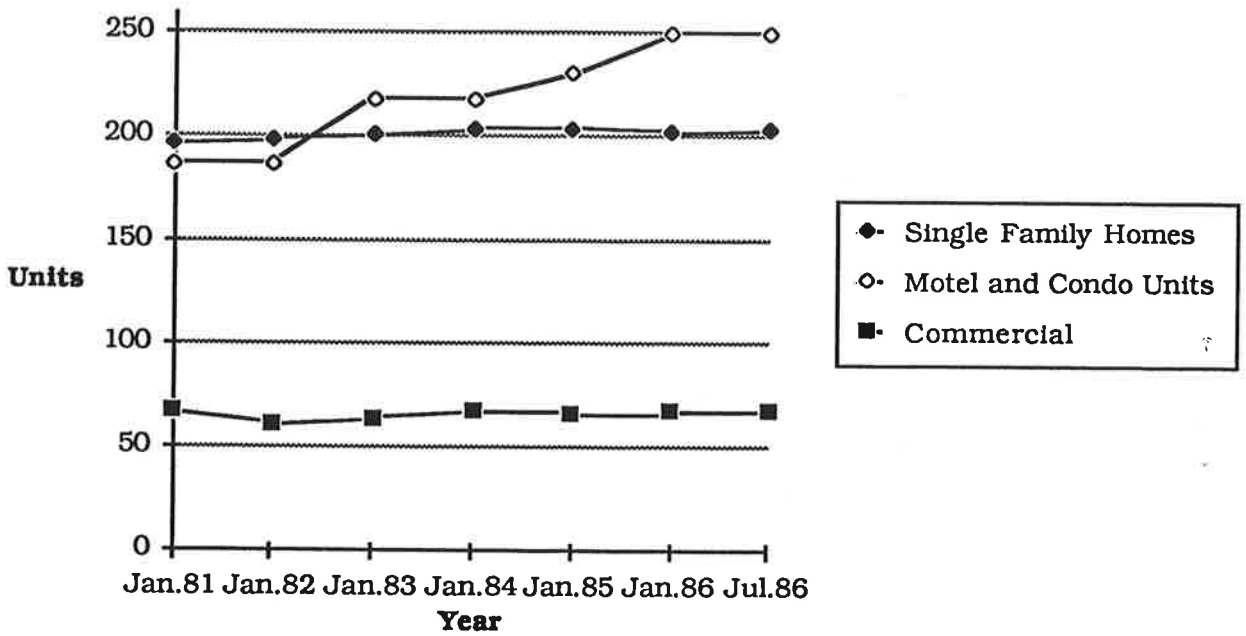


Source: JLPUD, 1986.

Water Demands in the Village and West Village/Rodeo Grounds

Table 21 shows service connections to the JLPUD system between the years 1981 to mid-1986. As the table shows, service connection growth within the District has been slow since 1981. Single-family home, and motel and condominiums connections increased by 7 units and 63 units, respectively, over the six year period. Connections for commercial uses did not change.

TABLE 21 – JLPUD SERVICE CONNECTION GROWTH

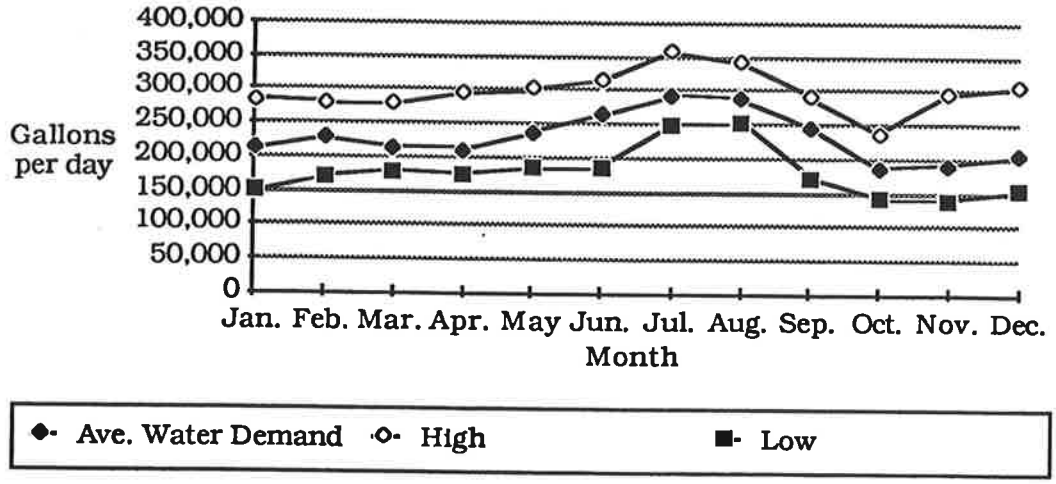


Source: JLPUD, 1986.

Peak Demands for Village and West Village/Rodeo Grounds

June Lake's popularity as a recreation and vacation area creates large fluctuations in demand and peak capacity concerns. The average daily demand peaks during the summer and winter seasons and tapers off in the fall, roughly between the summer fishing/camping and winter skiing months. Table 22 shows the average monthly demand in gallons per day for the years 1975 - 1985. It also shows the monthly highs and lows. Large variations in demand may be caused by a number of factors including weather conditions, which influence both summer and winter recreation and vacation visitor activity, and the economy.

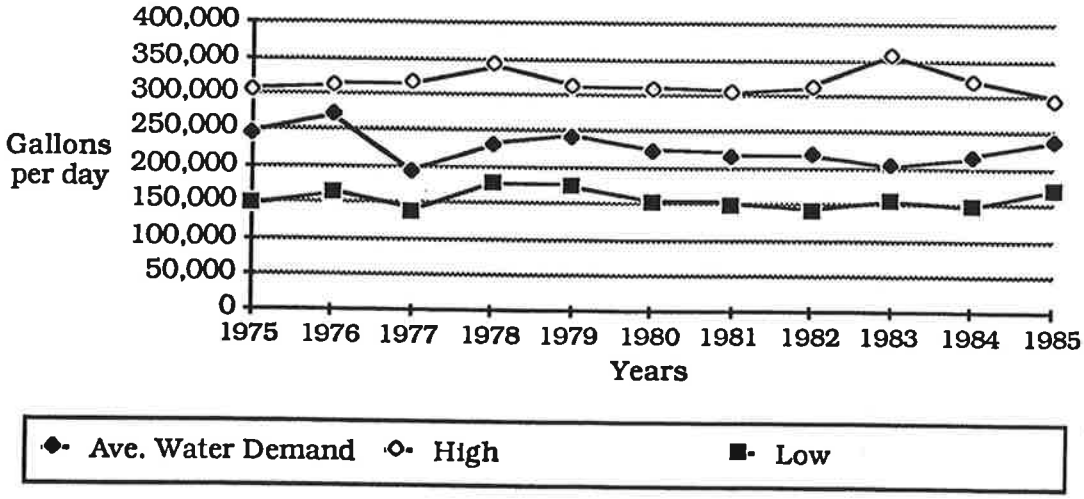
TABLE 22 - MONTHLY WATER DEMAND 1975-1985



Source: JLPUD, 1986.

Table 23 shows the annual highs, lows and average water consumption for the years 1975 to 1985. As the table indicates, the annual average water demand has decreased slightly in recent years. The area's water demand is greatly influenced by the number of visitors; the permanent population's water demands constitute a relatively small portion of the total water demand.

TABLE 23 - YEARLY WATER DEMAND 1975 - 1985



Source: JLPUD, 1986.

Estimated Future Demands

Table 24 shows the calculated water demands for the Village and West Village over the 10 year period, 1975 -1985. Water demands for the estimated 85 developed acres in the Village and West Village and USFS permitted uses such as cabins, resort areas or boat marinas averaged 229,337 gpd or 83,708,000 gallons per year. By subtracting the water usage of USFS permittees, the total average day demand was calculated at 209,063 gpd for the 85 acres of land currently developed.

TABLE 24 -- ESTIMATED WATER DEMANDS, VILLAGE AND WEST VILLAGE

Total Annual Demand - 1975 to 1985

	Gallons
Total ave. daily demand including USFS	229,337
Total yearly demand including USFS	83,708,000
Less USFS water allowance [1]	7,400,000
Total Annual Demand	76,308,000

Present Water Demands

	Total (85 acres)		Per Acre	
	gpd	gpm	gpd	gpm
Average Day	209,063[2]	145	2,459	1.7
Max. month ave. Day	267,600[3]	186	3,148	2.2
Max. single Day	418,126[4]	290	4,919	3.4
Peak Hour[5]		435	---	5.1

1 1983 figure for USFS water demands. Analysis assumes USFS demands have remained unchanged since 1983.
2 Total Annual Demand less USFS/ 365 days (76,308,000/365= 209,063).
3 Average Day x 128%.
4 Average Day x 200%.
5 Average gpm x 300%.

Source: Boyle Engineering, 1983 and JLPUD, 1986.

Using Table 24 as the basis for water usage, estimated future demands were calculated on an area basis or gallons/acre/day rather than attempting to correlate water demand with fluctuating populations. The equivalent of 209,063 gpd or 2,459 gpd/acre (209,063 gpd/85 acres), the daily average over the 10 year study period for developed areas, was used to estimate the future anticipated demands. Water demands estimated in Table 25 were

based on current property ownership/land use patterns, land use designations of the proposed June Lake Area Plan and future land exchange areas. Land exchange areas include 90 acres in the Rodeo Grounds and 20 acres in the Pine Cliff area. Acreage in the June Lake Village, as proposed in the General Plan up-date, is expected to decrease due to a proposed reversed land exchange on the southern slopes overlooking the June Lake Village. Water used by USFS facilities but provided by the JLPUD is not expected to changed from 7,400,000 gallons per year or 20,274 gpd.

TABLE 25 - ANTICIPATED FUTURE DEMANDS
VILLAGE, WEST VILLAGE/RODEO GROUNDS AND PINE CLIFF

Development	Total Area (Acres) [1]	Ave. Daily Demand (gpd) [2]	Max. 30-Day Demand (gpd)[3]	Max. Daily Demand (gpd)[4]	Peak Flow (gpm) [5]
Village	70	172,130	240,982	344,260	359
West Village	55	135,245	189,343	270,490	282
Rodeo Grounds	90	221,310	309,834	442,620	461
Pine Cliff	20	49,180	68,852	98,360	102
USFS	---	20,274	28,384	40,548	42
TOTAL	235	598,139	837,395	1,196,278	1246

[1] Village -- assumes a proposed 8 acre land exchange and 19 acre reversed land exchange take place (81 + 8=89 - 19 =70).
[2] Total Annual Demand less USFS/ 365 days /acres (76,308,000/365= 209,063/85 = 2459 gpd/acre).
[3] Average gpd x 140%
[4] Average gpd x 200%
[5] Average gpd x 300%/1440 min. per day.

Source: Boyle Engineering, 1983.

At buildout, water usage is anticipated to average 598,139 gallons per day while peak-day per month and peak-day per year estimates are anticipated to be 809,011 gpd and 1,155,730 gpd, respectively. The JLPUD's water rights from Snow Creek and June Lake can produce an average flow of 601,033 gpd, an amount capable of providing for present and estimated near future demands, but inadequate to meet projected ultimate future water demands.

Additional water rights from both June Lake and Snow Creek, if available, may be needed to compensate for these shortages. Developing groundwater sources to supplement surface supplies

and implementing water conservation measures are other measures that could be taken to provide additional water.

Down Canyon

Prior to 1990, the Williams Tract County Water District and smaller private water purveyors provided Down Canyon water supplies (Figure 32 and 33). In 1990, the JLPUD acquired the WTCWD service area and took over the responsibility of providing water service in the Down Canyon area. Down Canyon's water supplies are diverted from surface water sources at Fern Creek, located above and to the south of the Clark Tract, and from an unnamed stream located above the southeast corner of the Peterson Tract. Both sources originate within the Reversed Creek Subunit of the Rush Creek Basin. Neither diversion, to date, has flow measuring equipment installed, so no data related to flow characteristics have been generated.

The total amount of water for which appropriative permits have been issued by the California Department of Water Resources Division of Water Rights, for the Peterson, Williams and Clark Tracts is shown in Table 26 **In October of 1990, these rights were consolidated under JLPUD.**

TABLE 26 -- EXISTING DOWN CANYON WATER RIGHTS

Water User	Application. No.	Permit (License) No.	Source	Amount (gpd)*
June Lake Public Utility District	17120	10837	Spr.	13,000
	20349	10838	Fern Ck.	15,000
	11892	7350	Springs(s)	62,000
	12060	7352	Unn. Str.	84,015
	5425	2039	Unn. Str.	3,000
	9432	4358	Unn. Str.	16,157
	26192	18199	Unn. Str.	19,388
			Total	212,560
Pending Rights	**28608**		**Fern Ck.**	**161,568**
	28609		**Fern Ck.**	**193,882**
				355,450
			Total with pending rights	**568,010**

* gpd = Gallons Per Day

The Down Canyon area, in general, has a lower development density than that of the June Lake Village. The Down Canyon area consists predominantly of single-family homes mixed with a few multiple-family units. Scattered pockets of commercial lodging uses such as cabins, lodges, and motels border S.R. 158. Single-family dwellings, used by both seasonal and permanent residents, comprised 270 units out of the total of 412 units in the Down Canyon area. Motel units and cabin/lodge uses were the second and third most represented groups with 56 and 55 units, respectively. Multiple-family units and trailers round out the existing housing stock with 18 and 13 units, respectively. Table 27 contains a summary of the Down Canyon's existing housing stock.

The WTCWD's estimated water consumption for the Down Canyon area's existing population, unlike the June Lake Village, was based on the expected population rather than on a per-acre basis. The number of people per housing unit was calculated by multiplying the expected number of people per unit by the number of units. The expected number of people per unit varies with the type of unit. The estimated maximum populations were calculated to reflect 100% occupancy, while the average populations are based on 40% occupancy for commercial units and 75% occupancy for residential units. Although water usage varies with the type of unit however, for this analysis, an average figure of 125 gallons per capita per day (gcd) was used.

TABLE 27 – ESTIMATED WATER CONSUMPTION, DOWN CANYON

Development	Unit	Person/ Unit	Est. Population Max.	Est. Population Ave.	Water Use Factor (gcd)	Water Consumption Max. (gpd)	Water Consumption Ave. (gpd)
Single-Family	270	3.0	810	608	125	101,250	76,000
Multiple -Family	18	3.0	54	40	125	6,750	5,000
Cabin/Lodge	55	2.5	138	55	125	17,250	6,875
Motel/Hotel	56	2.5	140	56	125	17,500	7,000
Trailers	13	2.5	32	13	125	4,000	1,625
TOTALS	412	--	1,174	772	--	146,750	96,500

Source: Gram/Phillips, 1983.

Estimated Future Water Demands

Based on proposed land uses for the Down Canyon area, the ultimate population in the area is projected at 2,488 people (Table 28). The table assumes multiple-family units make up the majority of new housing units constructed, although single-family residences will remain the most popular type of unit.

Motels are expected to increase slightly while cabins and lodges are expected to decline; hotels may also be constructed.

Future water demands are calculated here the same way that the estimated existing water demands were calculated.

TABLE 28 – ESTIMATED WATER DEMANDS, DOWN CANYON

Development	Unit	Person/ Unit	Est. Population Max.	Est. Population Ave.	Water Use Factor (gcd)	Water Consumption Max. (gpd)	Water Consumption Ave. (gpd)
Single-Family	437	3.0	1,311	983	125	163,875	122,875
Multiple -Family	290	3.0	870	652	125	108,750	81,500
Cabin/Lodge	33	2.5	82	33	125	10,250	4,125
Motel/Hotel	90	2.5	225	90	125	28,125	11,250
TOTALS	850	--	2,488	1,758	--	311,000	219,750

Source: Gram/Phillips, 1983.

Table 29 provides a summary of the 1983 and future (beyond 1983) water demands. The estimated 1983 average and maximum daily demands of 96,500 gallons and 146,800 gallons, respectively, from Table 27 were used as the starting point for future water usage calculations. Figures for the estimated average and maximum daily demands at buildout in the year 2003 are found in Table 29. Projected water demands are meant to provide a range of estimates to size and design water facilities correctly; they are not meant to predict water usage exactly.

TABLE 29 – 1983 to 2003 WATER DEMANDS, DOWN CANYON

DEMAND CRITERIA	1983	1993	2003
Average Daily Demand, [1] gpd	96,500	176,900	219,750
Maximum 30-Day Demand, [2] gpd	120,600	221,100	274,700
Maximum Daily Demand, [3] gpd	146,800	259,400	311,000
Peak Hourly Demand, [4] gpm	268	491	610
Fire Flow, gpm	2,000	2,000	2,000

[1] Average Daily Population X 125 gcd
[2] Average Daily Population X 125 gcd X 125%
[3] Maximum Daily Population X 125 gcd
[4] Average Daily Demand X 400%/1440 min per day.

Source: Gram/Phillips Associates, Inc., 1983

Down Canyon Supply and Demand

Future water supplies depend on the water rights acquired from the State. **Recently, the JLPUD consolidated water rights owned by existing Down Canyon entities. These rights, listed in Table 26, amount to 212,560 gpd. The JLPUD is still in the process of acquiring additional Down Canyon water rights which would amount to 355,450 gpd. Once the JLPUD secures the pending water rights, its total supply would equal 568,010 gpd.**

The JLPUD's 212,560 gpd may be sufficient to meet the area's projected maximum 30-day demand of 274,700 gpd at full buildout. Theoretically, the minimum design capacity of water systems should equal the maximum 30-day daily demand. Water rights owned in the Down Canyon area would allow the JLPUD to meet this criteria, however resort areas tend to have peaking problems where for three or four day stretches water demands will reach the maximum daily system demands. Under these conditions, water facilities should be designed to meet the maximum daily demand and not the maximum 30-day demand. The water rights owned in the Down Canyon area (212,560 gpd) would thus fall short of the predicted maximum daily demands of 311,000 gpd. **Should the JLPUD acquire the pending water rights, however, the district would have adequate supplies to meet the predicted maximum daily demands in the Down Canyon area.**

As mentioned previously, neither of the Down Canyon surface water diversions have flow measuring equipment installed. Determining the quantity of water available from these sources under varying climatic conditions will require the construction and operation of flow measuring stations upstream at the diversion structures. Measuring water supplies would serve to inform the District on possible supply deficiencies. Plans for developing alternative sources, if needed, could then be planned in advance of development demands which would exceed existing supply capacities.

Conclusions -- June Lake Village, West Village and Rodeo Grounds, and Down Canyon

The analysis of the water demands and supplies available for all developed areas of June Lake indicate that a surplus exists at the current level of development. In the June Lake Village adequate facilities exist for the distribution of domestic supplies although distribution facility improvements such as increased storage and water line construction will be necessary to provide adequate fire flows. Providing water to the West Village and Rodeo Grounds areas will require extending distribution facilities and constructing additional storage facilities. Upgrading treatment facilities from the June Lake source and obtaining additional

water rights will also be necessary to provide for development as June Lake expands. In the Down Canyon area, collecting information on both water sources and water usage will be necessary to more accurately assess the JLPUD's water service capabilities. Upgrading distribution and treatment facilities will also be necessary. In both areas, existing water supplies appear to be adequate for additional near future demands. However, additional water rights and facility improvements will be necessary as the community nears buildout.

G. WASTEWATER FACILITIES

Treatment System

The June Lake Public Utility District operates and maintains a loop-wide sewage system (Figure 31). Sewer facilities consist of 4", 6" and 8" gravity collectors; 12" and 15" interceptors; 4", 8", 10", 12" and 14" force mains; 34 sewage lift stations; a one million gallon per day (mgd) extended aeration activated sludge sewage treatment plant; and four evaporation/percolation effluent disposal ponds. Treatment facilities are located west of U.S. 395, approximately a mile and half south of the north junction of U.S. 395 and S.R. 158.

Wastewater Generation and System Capacity

Records indicate that the community currently generates an average daily sewage flow of 250,000 gpd or approximately 25% of the treatment facility's design capacity. Following a few pump station modifications and oxidation ditch aeration system improvements, the District believes the system has adequate capacity to meet the area's sewer needs at full buildout.

H. STORM DRAINAGE

Past development activities conducted under limited local and state control have resulted in moderate to significant increases in runoff from impervious surfaces. While increases in runoff have occurred, drainage improvements have not taken place. Instead, drainage improvements have been installed by individual property owners in response to site-specific conditions and drainage problems. In most areas, lands are currently drained by sheet flow to existing roads and unlined ditches. Culverts at road crossings, where they do exist, have been installed without proper design considerations, often resulting in ponding or other adverse effects. Fast moving sheet flows off impervious surfaces sometimes uncover underground utilities constructed within road rights-of-way and during severe rainstorms surface flows have flooded developed areas and washed-out roads. In addition, uncontrolled runoff has accelerated erosion on adjoining lands

and increased the sediment and nutrient levels in local water bodies, particularly Gull Lake. The discharge of oil and other petroleum products from developed lands and local roadways, may also be contributing to the degradation of surface and ground waters. As development continues there will be an increase in land coverage by impervious surfaces and an overall increase in runoff during spring snow melts and heavy or extended summer rainstorm periods.

See Gull Lake Chart

Existing Storm Drains

The only storm drainage system in the Loop exists in the June Lake Village. Concurrent with the improvement of S.R. 158 through the Village central business corridor, Caltrans constructed a network of grates, catch basins and underground culverts to catch and divert runoff. Water, soils, petroleum products and other materials carried in the runoff are collected, transported and ultimately discharged into an open drainage canal which starts between Crawford and Raymond Avenues and flows into the open channel [3] running between June and Gull Lakes. A smaller system, which collects runoff on Crawford Avenue, is also connected to the state system.

Potential Storm Drain Improvements

In 1982, the Mono County Public Works Department conducted a preliminary study of the June Lake Village's drainage problems. The study outlined two alternatives for correcting drainage deficiencies. Alternative 1 called for a comprehensive, areawide drainage system including street and curb construction, improvements to the channel between Gull and June Lakes and installation of a significant amount of underground conduit. Alternative 2 involves a series of localized drainage improvements consisting of surface drainage channels and streets with curb and gutters. Cost estimates in 1982 were $1,000,000 and $250,000, respectively.

The open channel between June and Gull Lake, the backbone of both drainage alternatives, currently collects natural and man made surface and subsurface drainage flows out of June Lake and the June Lake Village meadow area. In its current configuration, the channel is extremely susceptible to pollution and could lead to the further degradation of Gull Lake's water quality. Other problems attributed to its open condition include stagnation from low flows, instream plant growth, blockages from the

[3] Recent discussions with the California Department of Fish and Game (DFG) and United States Department of Agriculture, Forest Service (USFS) indicate that Reversed Creek between June and Gull Lakes has insignificant aquatic-riparian habitat and recreational resources values. As a result, it can be concluded that the creek's primary function should be providing overflow and drainage for June Lake and the June Lake Village respectively.

accumulation of debris in narrow sections and winter ice-damming.

The June Lake Citizens Advisory Committee recommended two options to enhance the channel's value as a drainage channel, to eliminate ongoing water quality problems, and to resolve existing land use conflicts resulting from its present alignment. The first proposal would leave the channel in its natural state while improving its shape to enhance flow characteristics. The second proposal would enclose the channel and change its alignment to roughly parallel Alderman and Granite Streets. Either alternative would necessitate constructing a sedimentation basin/**treatment system** upstream of Gull Lake to prevent the deposition of silt and other contaminants.

Storm Drainage and Flood Control Maintenance

Presently, storm drain and flood control facilities in the Loop are not maintained, operated or improved on a regular basis. The Mono County Public Works Department has provided emergency storm drain or flood control services.

I. TELEPHONE SERVICE

Continental Telephone Company (CONTEL) provides telephone service for the June Lake Community. Approximately 650 service connections are in use at the present time. In 1989, Contel replaced the existing electronic switching with a digital switching system. This improved system has the capacity to handle up to 10,000 lines and to provide expanded custom call features including call forwarding, call waiting, speed calling and three-way calling.

Contel has estimated that demand for phone service will increase by approximately three to four percent per year. At this rate of growth and the relatively large capacity of the new digital system, Contel does not anticipate any significant problems in meeting customer phone service demands at community buildout.

J. SOLID WASTE

Solid waste generated in the community is presently disposed of at a municipal dump site located northeast of the U.S. 395 and S.R. 120 junction, about eight miles from the June Lake Village. The LADWP leases the site to the County, on a 20 year renewable basis. A private contractor under agreement with the Mono County Department of Public Works maintains and operates the site. The facility's remaining useful life is estimated at around 50 years.

Curbside refuse service is not provided due to the community's relatively low housing density and extreme costs associated with such a program. Private contractors provide bin service and garbage removal from residences contracting for services. Residents and businesses not contracting for service use private vehicles for hauling.

K. HAZARDOUS WASTE

The amount of hazardous waste generated in Mono County is not well understood at the present time. During the preparation of the County's Hazard Waste Management Element and Master Environmental Assessment, estimates indicated that 600 tons of hazardous wastes were generated county-wide in 1986. The estimates identified small quantity generators and households as the major contributors of hazardous wastes. Small quantity generators produced an estimated 90% of the waste, while households generated the remainder. By weight, the major sources of hazard wastes in the County include lead-acid batteries, cleaning solutions (organic solvents and inorganic liquids) and spent motor oil.

New development in June Lake is anticipated to generate a hazardous waste stream that is similar to the rest of the County. Estimates on quantiy of wastes anticipated have not been generated, although new development in the June Lake area is not anticipated to greatly increase the amount generated. Operations likely to produce hazardous wastes include small quantity generators such as the Ski Area, vehicle maintence stations (service stations and garages), dry cleaning and laundry operations and construction industry contractors. Households are also anticipated to generate hazardous wastes.

SOCIAL AND ECONOMIC RESOURCES

I. INTRODUCTION

The following provides a brief overview of June Lake's population, employment and income levels, land use and housing.

II. SETTING

A. POPULATION

Mono County's population increased by 113% between 1970 and 1980, from 4,016 persons to 8,577 persons. The tremendous expansion of the ski industry in the 1970s is the primary reason for the increase in population. The population in Mammoth Lakes, a popular ski resort community located approximately 15 miles south of June Lake, grew by 198% during that time period and increased its share of the County's population from 17% to 46%.

Recent population estimates prepared by the California Department of Finance (DOF) indicate that Mono County's population growth rate will slow from the 1970 rates. Recent DOF estimates show that the County's rate of growth will level out at about 1.3% per year and indicate that in the year 2000, the county population will reach 10,600 persons (DOF, 1986).

June Lake -- Permanent Population

Second home owners and seasonal workers complicate accurately estimating June Lake's permanent population. According to a special survey, June Lake's population in 1965 was 463 or 12.1% of the County's total. The 1980 Census revealed that the population was 761 persons or 8.87% of the County's total population. In 1985, two population surveys provided dratically different results. The **June Lake Residence Survey,** prepared by the Citizens Advisory Committee and Planning Staff, estimated that the Loop contained 650 persons, while the Department of Finance estimated a population of 816 persons. The **June Lake Residence Survey** involved door-to-door interviews with each permanent household and was assumed to be more accurate than the State's population estimates. The Survey figures were used as the basis for population estimates.

Table 30 provides future population estimates for June Lake. Population calculations in the table assume that June Lake's population will grow at the same rate as the County or at a moderate rate of 1.3% per year.

TABLE 30 – PROJECTED PERMANENT RESIDENT POPULATION AT BUILDOUT

	YEAR					
	1985	1990	1995	2000	2005	2010
Expected Population June Lake Loop [1]	650[2]	693	740	789	842	898

1 Assumes annual growth rate of 1.3 %.
2 Based on **June Lake Residence Survey,** 1986. .

Summer Peak Population

June Lake's resort/tourism economy causes wide fluctuations in the population. In 1985, the **June Lake Resident Survey** revealed that of the 535 households in the Loop, permanent residents occupied 232 households, while seasonal residents occupied 303. The majority of seasonal residents use their homes during the summer months. In addition to seasonal and permanent residents, short-term visitors also influence population fluctuations. The Loop's population peaks during the summer when the majority of the population is comprised of seasonal second home owners and short-term visitors. Summer time populations are influenced by the availability of USFS campsites, summer homes and privately-owned recreational campground/trailer parks that are closed during the winter but opened during the summer. Peak population estimates are contained in Table 31. This table assumes that people enjoying summer time activities in the Loop spend the night in the Loop; day users are excluded from the population calculations. 4,445 people are estimated to stay in the Loop during summer peak periods.

Winter Peak Population

Winter peak populations are estimated to be roughly 60% of summer peak populations. The closure of USFS and private campgrounds during the winter and the USFS policy of prohibiting winter usage of USFS permittee homes accounts for the difference. USFS permittee homes equal about 20% (105/468) of the Loop's single-family housing stock. Table 32, shows the existing housing stock and estimated peak winter population of 2,564 persons. Though the winter peak figure is much lower than the summer peak figure, population concentrations during the winter are expected to be higher since campgrounds and the northern half of the Loop are closed.

TABLE 31 – ESTIMATED 1990 SUMMER PEAK POPULATION

HOUSING TYPE	UNITS	PERSON/ UNIT [2]	TOTAL
SFR	486	2.6	1,264
Condominiums	102	4.2	428
Apartments	78	2.9	226
Mobile Homes	85	2.3	196
Motels	219	3.3	723
TOTAL	970[1]		2,837

CAMPGROUND	SITES	PERSON/ SITE [3]	TOTAL
Oh! Ridge Campground	144	3	432
Pine Cliff Trailer Park	200	3	600
June Lake Campground	22	3	66
Gull Lake Campground	17	3	51
Reversed Creek Campground	18	3	54
Silver Lake Campground	65	3	195
Grant Lake Campground	70	3	210
TOTAL	536		1,608
LOOPWIDE TOTAL			4,445

SOURCES:
1. June Lake Public Utility District 1988.
2. Quad Consultants, 1983. **Monoplan Winter Population Survey 1893.** Figures were adjusted to reflect the following occupancy rates: SFR -- 80%; Condominiums -- 90%; Apartments and Mobile Homes -- 100%; and Motels -- 95%.
3. Sedway/Cooke, 1974. **June Lake Loop General Plan.** A 100% occupancy rate was assumed.

During the winter, day users of June Mountain increase the day time population of June Lake. A typical way to measure this demand is to compare the community's ability to accommodate residents and visitors and the anticipated number of skiers. The method commonly used compares the relationship of SAOT (skiers at one time) to PAOT (persons at one time). SAOT is defined as all persons engaged in downhill skiing on a specific day while PAOT is defined as all persons in the community on a specific day, including residents, visitors, skiers, shoppers, and workers. According to the **Mammoth Lakes/June Lake Winter Population Survey Report of 1983,** non-skiers in June Lake greatly exceeded downhill skiers; the ratio was 1 SAOT to 13.76 PAOT. This means that for one person downhill skiing, nearly 14 would be engaged in some other activity. This ratio is unusually

high for a ski resort area; in Mammoth Lakes the ratio was 1 SAOT to 1.63 PAOT. It should be noted that the survey took place before the purchase and the subsequent up-grading of facilities at June Mountain by Mammoth Mountain. With the improvements, the ratio of SAOT/PAOT should decrease.

Day use visitation associated with the June Lake Mountain Ski Area is expected to increase as the Mountain expands its current operations. At present, the Ski Area has a capacity of 2,250 SAOT. The Ski Area recently received USFS approvals to expand to 3,900 SAOT, and the **Inyo Forest Plan** recognizes an ultimate potential for 7,000 SAOT at June Mountain. By comparing the up-hill capacity of the Mountain (2,250 SAOT) and the estimated peak population of 2,564, it is evident that June Lake's accommodations would barely meet the needs of the current level of skiers. When non-skiers (PAOT) are added, the demand for over-night facilities clearly outstrips the supply. This leads to a daily in-migration of skiers, often from Mammoth Lakes, during the morning and an out-migration after the lifts close.

TABLE 32 - ESTIMATED 1990 WINTER PEAK POPULATION

HOUSING TYPE	UNITS	PERSON/ UNIT [2]	TOTAL
SFR	381	2.6	991
Condominiums	102	4.2	428
Apartments	78	2.9	226
Mobile Homes	85	2.3	196
Motels	219	3.3	723
TOTAL	381 [1]		2,564

SOURCES:
1. June Lake Public Utility District 1988. USFS permittee homes were subtracted out of the available winter time housing (486-105=381 units).
2. Quad Consultants, 1983. **Monoplan Winter Population Survey 1893.** Figures were adjusted to reflect the following occupancy rates: SFR -- 80%; Condominiums -- 90%; Apartments and Mobile Homes -- 100%; and Motels -- 95%.

Estimated Peak Population at Buildout

Peak population estimates for the developed and potentially developable areas as designated in the June Lake Area Plan are contained in Table 33. Estimates are based upon the proposed future land uses and the estimated population densities of the various community areas. Based upon the land use policies contained in the Plan, the estimated peak period visitor population is 10,817 persons at full buildout. The Down Canyon

and West Village/Rodeo Grounds areas are expected to house the majority of the population, 4,959 persons and 4,205 persons, respectively. This population estimate assumes the full development of all private lands; it does not account for usage of cabins or camping facilities located on National Forest lands. It also assumes an 85 percent occupancy rate of all housing units.

Assuming that the number of campsites and USFS permittee cabins remains constant, an additional 1,881 persons (campground users 1,608 plus summer cabin permittees, 273), for total of 12,698 persons can be anticipated. This assumes that new housing development will attract more people to the area rather than shift the historic users of the area to different types of accommodations. It is anticipated that this scenario could only occur after the USFS opens their camping and permittee housing areas during the summer.

TABLE 33 -- PROJECTED BUILDING INTENSITY AND PEAK POPULATION DENSITY

AREA	ACRES	DENSITY [1]	UNITS	PERSON/UNIT [2]	PAOT [3]
June Lake Village	70[5]	9	630	3.1 [4]	1953
Down Canyon	253 [6]	7	1771	2.8	4959
EXCHANGE AREAS					
West Village	55	10	550	2.9	1595
Rodeo Grounds	90	10	900	2.9	2610
Pine Cliff	20	0	0	0	0
TOTALS	488		3,851		10,817

[1] Density, in Units per Acre, is a measure of building intensity. Higher densities represent more intensive land uses.

[2] Number of people occupying a housing unit at one time during peak periods. Numbers reflect the proposed land uses, particularly the type of housing units expected to be developed. Also assumes all private lands will be developed and land uses will be the most intensive possible under the proposed land uses.

[3] People at One Time.

[4] Source: Quad Consultants. 1983. **Mammoth Lakes/June Lake Winter Population Survey Report.** Quad numbers were used as bench marks for the person per unit rates. Rates were based on anticipated future land uses. Occupancy figures assume an average vacancy rate of 15%.

[5] Assumes a proposed 8 acre land exchange and a 19 acre reversed land exchange takes place (81 + 8 = 89 - 19 = 70).

[6] Assumes a proposed 30 acre land exchange and limited development on 60 acres of the Silver Lake Meadow takes place. In calculating the number of people per acre, the 60 acres of the Silver Lake Meadow were omitted (283 + 30 = 313 - 60 = 253).

Population Characteristics

The following discusses the population characteristics of June Lake including ethnicity, age structure, and household size. Information on June Lake's resident population was compiled using information from the 1980 U.S. Census, 1989 **June Lake Redevelopment Feasibility Analysis** and the 1985 **June Lake Residence Study and Visitor Survey.** Visitor information was gathered from the 1983 **Mammoth Lakes/June Lake Winter Population Survey Report** and 1985 **June Lake Visitor Survey.**

Ethnicity

The ethnic composition of June Lake is shown in Table 34. In 1980, 94.1 % of the population was White, 2.5% was native American and 2.9% was Spanish/Hispanic. 1992 projections show a similar structure.

Information on the ethnic composition of the visitor population has not been collected.

TABLE 34 – ETHNICITY 1980 AND 1992

	1980 CENSUS		1992 PROJECTED	
RACE	NUMBER	% OF TOTAL	NUMBER	% OF TOTAL
White	738	94.1%	813	93.5%
Black	1	0.1%	2	0.2%
American Indian	20	2.6%	18	2.1%
Asian/Pacific Islander	2	0.3%	2	0.2%
Spanish/Hispanic	23	2.9%	35	4.0%
TOTAL	784	100%	870	100%

SOURCE
U.S. Census, 1980.
M.R. Farrell & Associates, Inc., 1989.

Age Structure

The age structure of Mono County in 1980 reveals that the median countywide age of 27.5 years is one of the lowest in the state. The population of June Lake replicates this pattern. Table 35 contains the age structure of June Lake residents for 1980 and estimates for 1992. In 1980, the median age was 27.5 years, while in 1992 the age is expected to increase slightly to 28.8 years. The median age of males, 54% of June Lake's population, is slightly lower than that of females. 1992 estimates predict that the ratio of males to females and the slight difference in the median age will not change.

Breaking the population into age groups reveals that the majority of the population, 56% in 1980 and an estimated 58% in 1992, falls into the middle age category of 18 to 44 years of age. Those younger than 18 years represented 25% of the population in 1980. 1992 estimates indicate that the percentage of those younger than 18 years will remain the same, although the number of infants (0 to 5 years) is expected to increase. Older adults, those between 45 to 64, represented 17% of the population in 1980; this group is anticipated to decline slightly to 15% of the population in 1992. Senior citizens, those over 65 represented 2% of population in 1980 and are expected to decline to 1% in 1992.

TABLE 35 -- AGE STRUCTURE PERMANENT POPULATION

	1980 CENSUS		1992 PROJECTIONS	
AGE(YEARS)	PERSONS	% OF TOTAL	PERSONS	% OF TOTAL
0-5	74	10%	109	13%
6-13	74	10%	75	9%
14-17	41	5%	28	3%
18-44	428	56%	486	58%
45-64	129	17%	123	15%
Over 65	15	2%	12	1%
TOTAL	761	100%	833	100%

SOURCES: U.S. Census, 1980 and M.R. Farrell & Associates, Inc., 1989.

In designing the 1986 **June Lake Residence Survey,** the Citizens Advisory Committee expressed concern that the age structure information contained in the 1980 census was outdated and inaccurate. The 1986 Survey sought to update and clarify the Census information. Table 36 contains the survey results.

When the results of the 1986 Survey are compared to the 1980 Census information major differences in the age structures are shown. In the under 18 category, or the school-aged population, the 1986 Survey showed that 40% of the population fell into this category as opposed to the 25% reported in the 1980 Census. The percentage of senior citizens also differs with the 1986 Survey reporting a 6% share of the population and the 1980 Census only 1%. The 1986 Survey found that middle-aged adults (18-40) represented 44% of the population, a smaller share than the 56% reported by the 1980 Census.

A small portion of the differences between the study results pertaining to the middle-aged and elderly categories could be explained by the method of comparing of inconsistent categories. The 1986 Survey grouped middle-aged individuals into an age classification of 19 to 40 years old, while the Census used a classification of between 18 to 44 years old. Elderly individuals

in the 1986 Survey were classified as those over 62; the Census used 65 years of age as the cutoff. The differences in age classifications could account for a slight difference in the population distribution, but should not account for the differences between studies.

A few problems could result from the discrepancies between studies. Understating the number of school-aged children in the Loop could under estimate the need for school facilities in June Lake, while understating the population of elderly could result in under estimating the need for social services. An overstated middle-aged population could indicate a greater economically active population than what actually exists.

TABLE 36 -- AGE STRUCTURE PERMANENT POPULATION 1985

AGE -- YEARS	PERSONS	% OF TOTAL
0 - 4	32	7%
5 - 12	122	27%
13 - 18	25	6%
19 - 40	199	44%
41 - 62	49	11%
Over 62	25	6%
TOTALS	452	100%

SOURCE: June Lake Residence Survey, 1986.

The age structure of visitors to both Mammoth Lakes and June Lake during the 1983 ski season is shown in Table 37. The survey indicated that the median age-group was between 20 and 34 years old, 39.4% in Mammoth Lakes and 36.2% in June Lake. In comparing the age structures of the two areas, June Lake exhibits a higher proportion of young children (0-9 years), 13.1% compared to 7.4% for Mammoth Lakes. It also exhibits a higher share of those over 55, 10.3% compared to 6.3% for Mammoth Lakes. The higher percentage of young children may indicate that a greater number of families visit June Lake. June Lake, which does not have the same ski town reputation as Mammoth Lakes, may also hold greater appeal for those over 55.

TABLE 37 – AGE STRUCTURE VISITOR POPULATION

AGE (YEARS)	MAMMOTH LAKES % OF TOTAL	JUNE LAKE % OF TOTAL
0 - 4	3.7%	6.5%
5 - 9	3.7%	6.4%
10 - 19	15.4%	12.1%
20 - 34	39.4%	36.2%
35 - 54	31.5%	28.5%
Over 55	6.3%	10.3%
TOTALS	100%	100%

SOURCE: Mammoth Lakes/June Lake Winter Population Survey Report, 1983.

Household Size

Household size estimates vary with the source of information. According to the 1980 Census, there were 326 households in June Lake. The average size of each household was 2.3 persons. 1992 estimates by M.R. Farrell & Associates, Inc. predict that June Lake will contain 357 households, with an average household size of 2.34 persons.

In 1985, as part of the **June Lake Residence Survey**, the June Lake Public Utility District estimated that there are 535 households in the June Lake area, 232 of which are occupied by permanent residents. The average household size was estimated to be 2.8 persons overall, with 3.1 persons per household in the Village and 2.4 persons per household in the Down Canyon area. Based upon the number of households and the person per household estimates, the 1986 **Residence Survey**, calculated that about 650 full-time residents inhabited June Lake.

The **Mammoth Lakes/June Lake Winter Population Survey Report** (1983) collected information on the household sizes of short-term visitors. The Survey found that the size of visitor households varied with the type of unit. Condominiums at 4.69 persons per unit contained the largest number of people per unit, while single-family residences with 3.29 persons per unit were low. Table 38 contains the number of people found per type of unit.

TABLE 38 -- AVERAGE DWELLING UNIT OCCUPANCY

UNIT	PERSONS/UNIT
Condominiums	4.69
Single Family Residence	3.29
Motel/Lodge	3.51
Mobile Home [1]	2.27
Apartment [1]	2.87
Recreational Vehicle [2]	1.0

SOURCE: Mammoth Lakes/June Lake Winter Population Survey Report, 1983.

[1] Mobile homes and apartments were assumed to house permanent residents.
[2] Recreational vehicles were excluded from visitor housing because few areas are available during the winter.

B. EMPLOYMENT AND INCOME

June Lake's work force reflects the community's resort/tourism orientation. According to the 1986 **June Lake Residence Survey**, most residents were employed in the following fields: personal, entertainment and recreational services; retail trade; construction; and government. Other types of jobs included homecare and childcare services, artists, researchers and electricians. Retired people made up a significant number of respondents to the "other" category. Table 39 contains a break down of employment fields.

TABLE 39 – EMPLOYMENT FIELDS

EMPLOYMENT SERVICES	FULL-TIME	% TOTAL	PART-TIME	% TOTAL
Government	15	9%	5	7%
Education	7	4%	2	3%
Construction	25	14%	7	10%
Personal, Entertainment and Recreation Services	55	32%	22	31%
Health Services	8	5%	2	3%
Finance, Insurance, Real Estate	12	7%	4	6%
Communications, Public Utilities	3	2%	2	3%
Retail Trade	25	14%	5	7%
Transportation	1	1%	4	6%
Business and Repair Services	7	4%	7	10%
Homemaker	5	3%	6	8%
Other	11	6%	5	7%
TOTALS	174	100%	71	100%

Source: June Lake Residence Survey, 1986.

Places of Employment

The majority of respondents, 62% of the total, live and work in June Lake. Fourteen percent worked in Mammoth Lakes and 7% worked in Lee Vining. Some June Lake residents identified locations as distant as San Francisco and Los Angeles as places of employment.

Employers and Work Force

June Lake's largest employer, the June Mountain Ski Area, employs 125 people during the winter and retains 50 employees year round. The proposed expansion from the present capacity of 2,250 SAOT to 3,900 SAOT is anticipated to enlarge the ski area's

work force. Other employers in the Loop include lodging establishments, restaurants, retail stores, recreational services, and other services. The majority of establishments employ fewer than 10 employees; many are owner operated. On the average, the June Lake Residence Survey indicated that 1.4 persons per household were employed. Multipling the existing households in June Lake, 232, by 1.4 working persons per household, results in an estimated permanent work force of 325 persons.

Income

Income levels of June Lake residents reflect the area's service sector orientation and its relatively lower wages. Table 40 contains a brief summary of annual income characteristics for Mono County and June Lake. On the average, the median income of households (non-related individuals living together) in June Lake was significantly less than the county-wide figures. The difference between the average and median (50% level) incomes in June Lake seems to indicate that the majority of the population makes relatively low wages while a smaller part of the population earns more and pulls up the average.

TABLE 40 – YEARLY INCOME, 1980

INCOME	MONO COUNTY	JUNE LAKE
Per Capita	$ 8,590	$ 8,513
Median Household	$ 16,928	$11,896
Average Household	$ 20,997	$19,783
Median Family	$ 20,217	$13,100
Average Family	$ 25,447	$25,596

Source: M.R. Farrell & Associates, 1989; U.S. Census 1980.

C. LAND USE

The June Lake community has five distinct areas. Primarily concentrated in the Loop's southern half, these areas are Pine Cliff, the June Lake Village, the West Village/Rodeo Grounds, the Down Canyon area and the Silver Lake Meadow area. Numerous factors, such as environmental constraints and differing stages of development, have given each area an unique identity and, therefore, its own set of problems and development potential. The following provides a brief synopsis of each area's existing development (See Figures 35.a-f). Table 41 contains the acreage of each area under the Updated Plan.

Pine Cliff

Located off of Highway 158 and removed from most of the Loop's development and scenic resources, the Pine Cliff area presents a special opportunity for development. Presently, a portion of the Pine Cliff area is used for recreational camping and for gravel mining and processing operations. The remainder consists of relatively flat lands supporting sage brush and scattered pines. Future growth will require obtaining National Forest lands or special use permits.

June Lake Village

The Village is recognized as the Loop's commercial-residential center and its most vital component. The Village contains the Loop's general store and post office along with a few restaurants, motels, commercial offices and retail stores. The meadow area between June and Gull Lakes contains a mix of trailer parkers, single-family homes, condominium projects, motels and vacant lots. However, like many urban downtowns and older community areas, the June Lake Village could use rehabilitation and additional development. Some of the problems in the Village include: incompatible neighboring land uses, inadequate drainage, an inadequate circulation system, inadequate parking, small lots and fragmented ownership. Environmental constraints, such as avalanche hazards originating from the north facing slopes overlooking the Village, and steep slopes in the same area, also hinder development.

West Village/Rodeo Grounds

The 145 acres of the West Village/Rodeo Grounds represents the largest portion of undeveloped private land in the June Lake Loop. A five acre condominium project is the only development in this area. Future development in this area is expected to provide housing and entertainment facilities for visitors, and additional housing, recreational and community facilities for residents. The interruption of scenic vistas along Gull Lake's backshore and along Highway 158 near June Mountain, steep slopes, and other environmental constraints, may limit

development in this area. The potential to dilute or adversely impact the Village's Commercial Core is also another consideration.

Down Canyon

Seasonal and year-round single-family residential use is the predominate land use in the Down Canyon area. A few pockets of commercial development and lodging establishments also border S.R. 158. In general, the majority of the private land in the Down Canyon area has been developed; scattered pockets of undeveloped land would allow for more homes and for additional commercial development along S.R. 158. Steep slopes, riparian woodland habitat, a high groundwater table, wetlands and other environmental constraints, together with inadequate transportation facilities, and the neighborhood's desire to maintain the area's existing character, may hinder development.

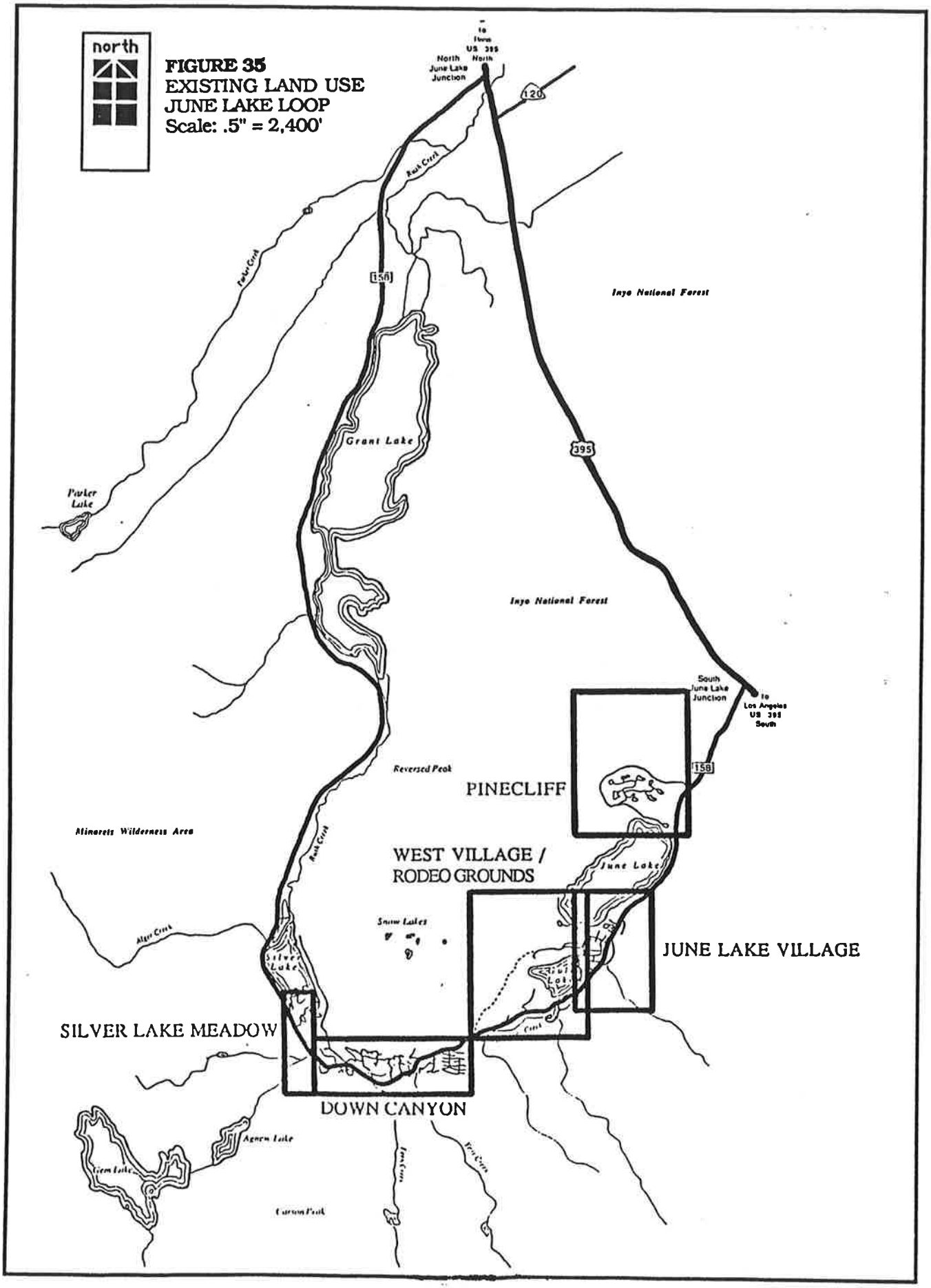
Silver Lake Meadow

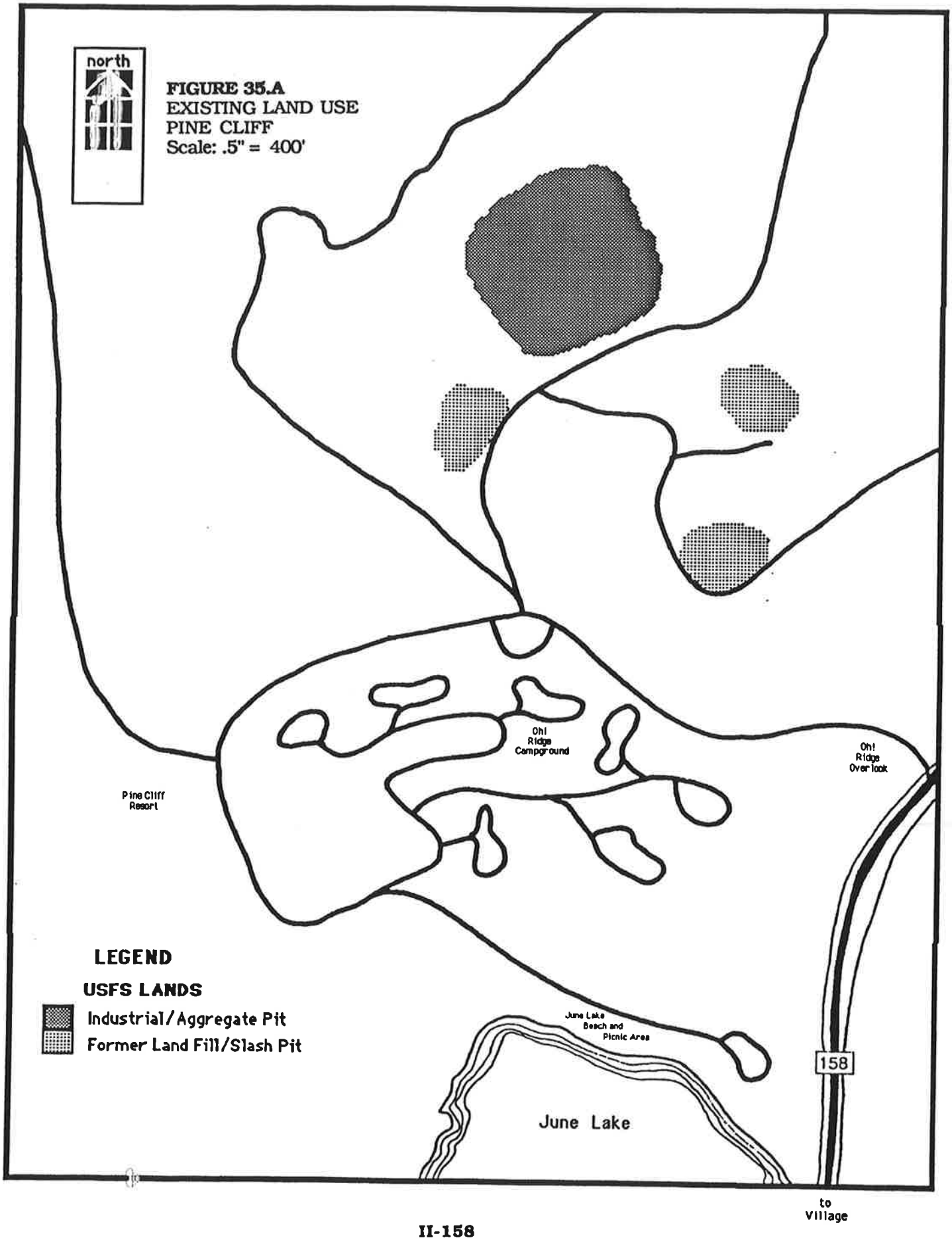
The Silver Lake Meadow consists largely of potential and identified wetlands, and as a result, the area's development potential is limited by strict federal wetland development guidelines. These requirements will allow for limited development of non-wetland areas with the balance of the land retained in its natural state.

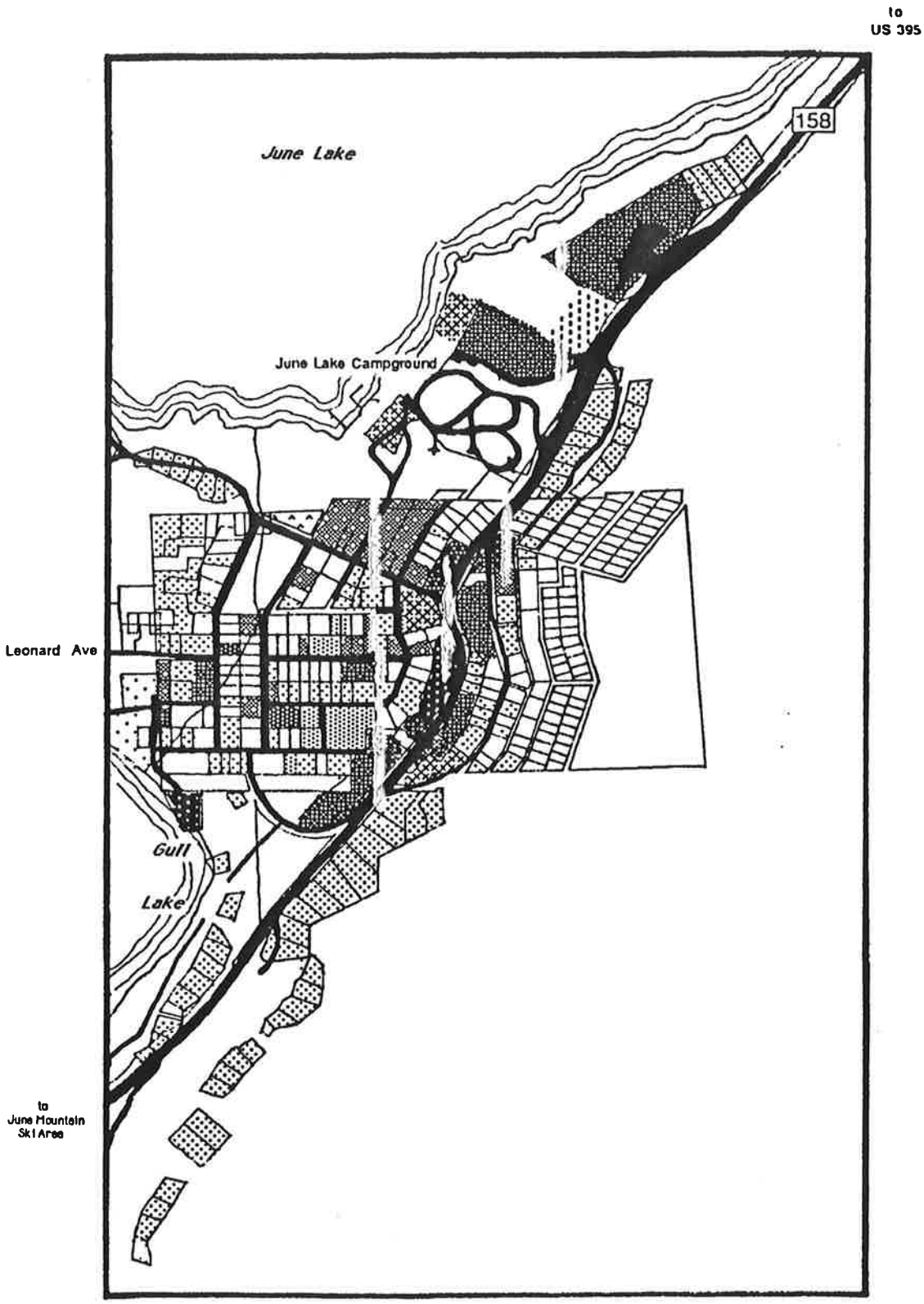
TABLE 41 – INVENTORY OF PRIVATE LANDS

AREA	ACRES	% OF TOTAL
Pine Cliff	20[1]	4
Village	70[2]	14
West Village/ Rodeo Grounds	145[3]	30
Down Canyon	193[4]	40
Silver Lake Meadow	60[5]	12
TOTALS	488	100 %

1 ~20 acres are proposed for USFS land exchange.
2 ~11 acres are proposed for exchange into National Forest Lands.
3 ~90 acre parcel going through USFS land exchange process.
4 ~30 acres are proposed for USFS land exchange.
5 ~60 acres, located in the Silver Lake Meadow has limited development potential.


north
FIGURE 35
EXISTING LAND USE
JUNE LAKE LOOP
Scale: .5" = 2,400'
North June Lake Junction
120
158
395
Inyo National Forest
Grant Lake
Parker Lake
Inyo National Forest
South June Lake Junction
Reversed Peak
PINECLIFF
158
Minarets Wilderness Area
WEST VILLAGE / RODEO GROUNDS
June Lake
Snow Lakes
Silver Lake
JUNE LAKE VILLAGE
SILVER LAKE MEADOW
DOWN CANYON
Agnew Lake


north
FIGURE 35.A
EXISTING LAND USE
PINE CLIFF
Scale: .5" = 400'
Oh! Ridge Campground
Oh! Ridge Overlook
Pine Cliff Resort
LEGEND
USFS LANDS
Industrial/Aggregate Pit
Former Land Fill/Slash Pit
June Lake Beach and Picnic Area
158
June Lake
to Village

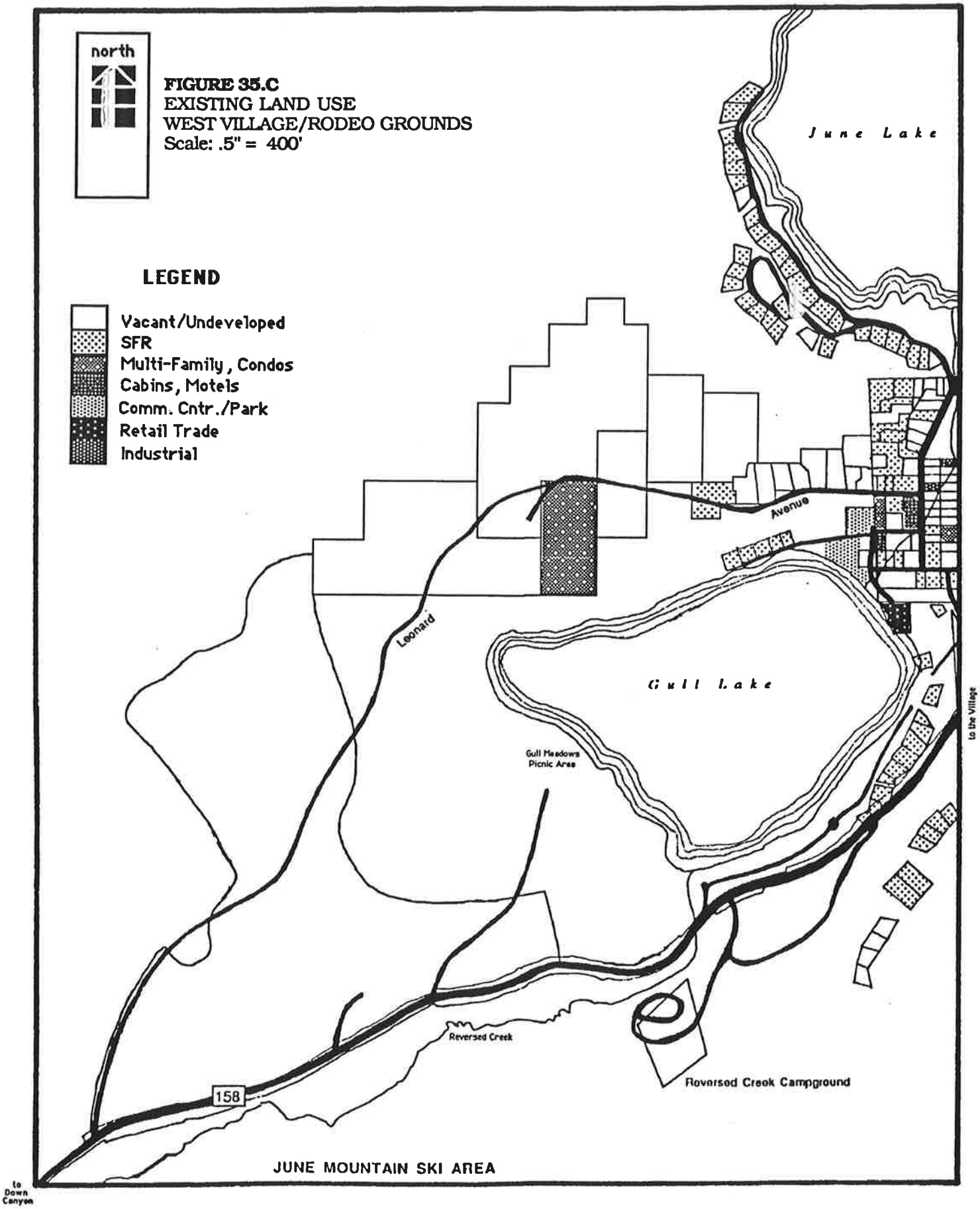


LEGEND

- Vacant/Undeveloped
- SFR
- Multi-Family, Condos
- Trailers
- Cabins, Motels
- Mixed Use
- Comm. Cntr./Park
- Restaurant/Resort
- Retail Trade
- Services
- Fire Station/PUD
- Industrial
- Open Space

north

FIGURE 35.B
EXISTING LAND USE
JUNE LAKE VILLAGE
Scale: .5" = 400'


north
FIGURE 35.C
EXISTING LAND USE
WEST VILLAGE/RODEO GROUNDS
Scale: .5" = 400'
LEGEND
Vacant/Undeveloped
SFR
Multi-Family, Condos
Cabins, Motels
Comm. Cntr./Park
Retail Trade
Industrial
June Lake
Avenue
Leonard
Gull Lake
Gull Meadows Picnic Area
to the Village
Reversed Creek
Reversed Creek Campground
158
JUNE MOUNTAIN SKI AREA
to Down Canyon

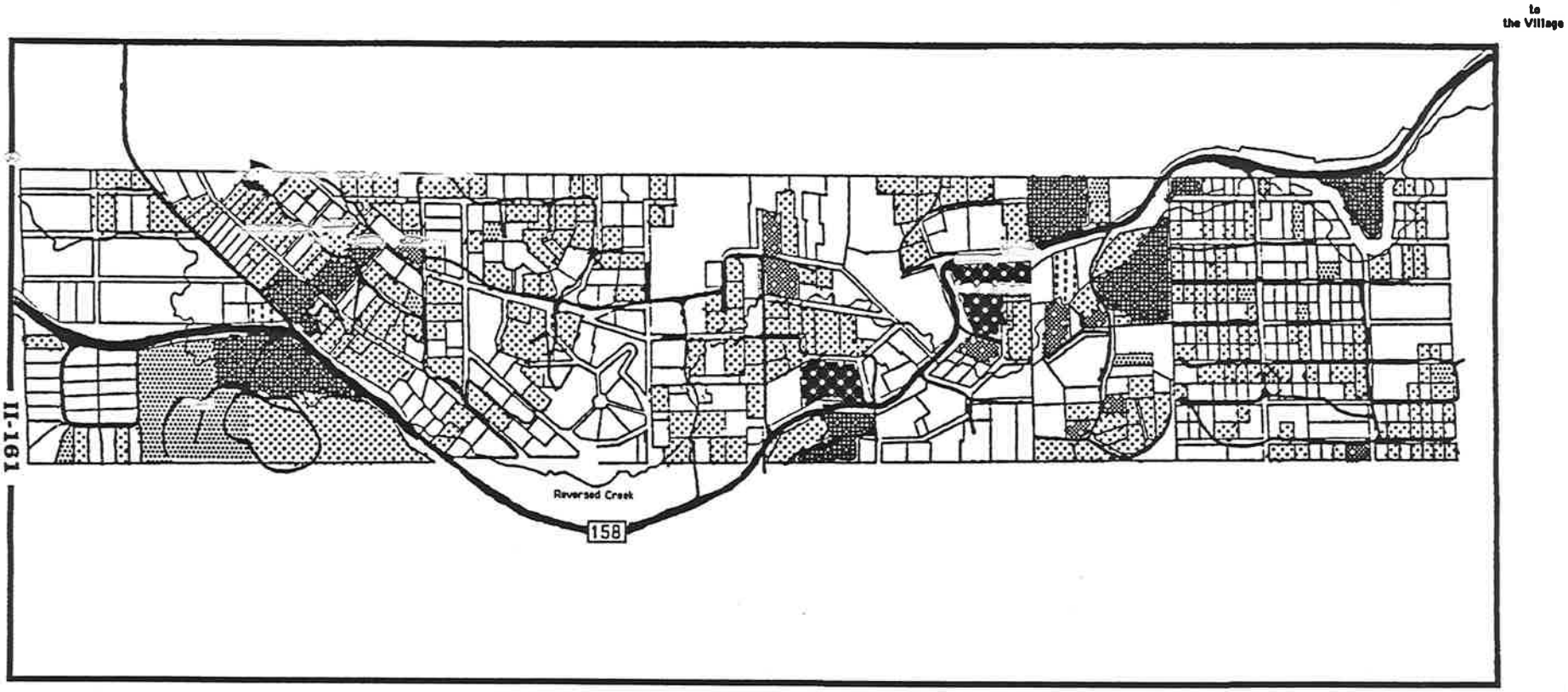


FIGURE 35.D
EXISTING LAND USE
DOWN CANYON
Scale: .5" = 400'

LEGEND

- Vacant/Undeveloped
- SFR
- Multi-Family, Condos
- Cabins, Motels
- Trailers
- Neighborhood Commercial
- Restaurant/Resort

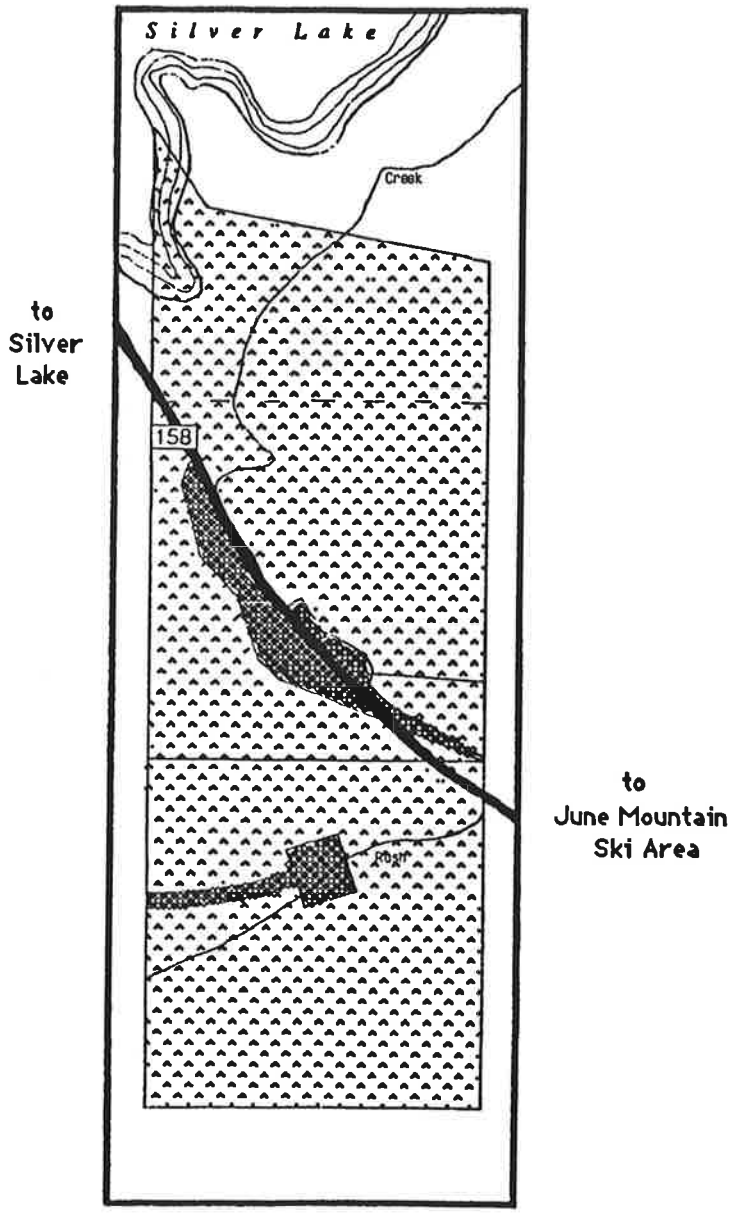


FIGURE 35.E
EXISTING LAND USE
SILVER LAKE MEADOW
Scale: .5" = 400'

LEGEND

Natural Habitat Protection
Public Facility

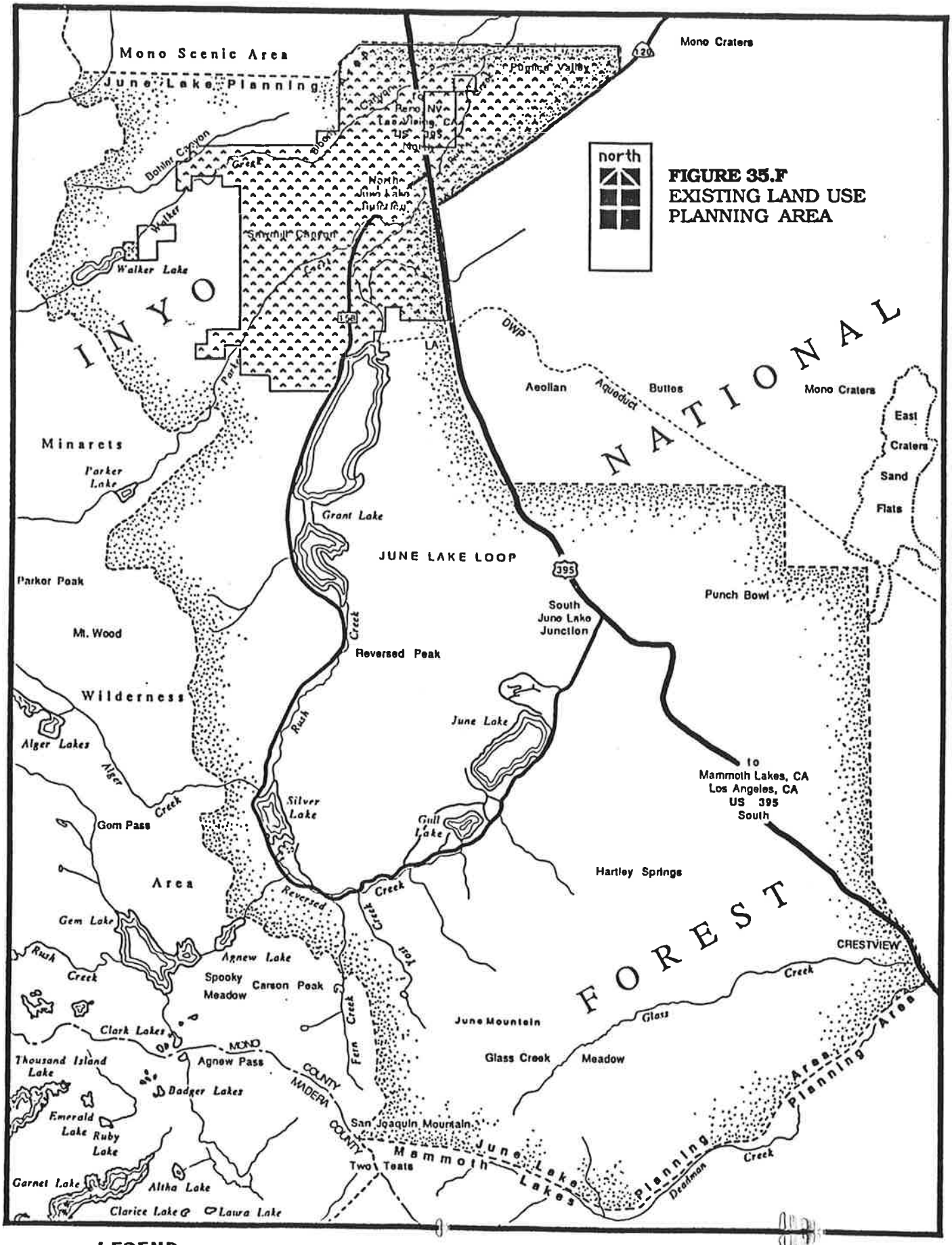


FIGURE 35.F
EXISTING LAND USE
PLANNING AREA

D. HOUSING

Housing issues facing June Lake include a general housing shortage for both residents and short-term visitors and a discrepancy between the type of housing provided and the expectations of winter visitors. The availability of affordable housing for purchase and rental is also a growing problem.

Single-family homes, including permittee cabins on National Forest Lands, are the Loop's predominant type of housing. Approximately half of the 970 total units are single-family homes. Motel units (cabins and lodges included) comprise about 22.5% of the total, while condominiums, apartments and mobile homes are each approximately 10% of the total. Table 42 contains a summary of the existing units.

TABLE 42 -- EXISTING HOUSING STOCK

TYPE	# OF UNITS	% OF TOTAL
SFR	486	50.1
Condominiums	102	10.5
Apartments	78	8.0
Mobile Homes	85	8.8
Motels	219	22.6
TOTALS	970	100.0

Source: June Lake Public Utility District, 1988.

Housing Construction

June Lake's relatively small private land base and weak economic climate have limited the amount of housing developed. In recent years, conditions have begun to change, primarily as a result of the recent acquisition of the June Mountain Ski Area by the Mammoth Mountain Ski Area and the subsequent improvements. Coupled with the existing strong summer season, an anticipated improved winter season has begun to rejuvenate June Lake's economic outlook. However, as of early 1990, improvements to the ski area, have not been followed by the immediate expansion of lodging facilities; new development has consisted of single-family homes and remodeling of existing homes (Table 43).

Planned or future residential and/or commercial lodging development in 1990 includes an 11-unit condominium project under construction, another that is in the preliminary permit stage and one hotel project that has received planning permits. If planned projects are any indication of the future, housing growth, especially in the West Village and Rodeo Grounds areas, is anticipated to increase in the 1990s.

TABLE 43 -- BUILDING PERMIT SUMMARY, JUNE LAKE 1989

Type of Project	Number
Single-Family Residence	8
Additions	9
Remodel	1
Decks	3
Misc.	4
TOTALS	25

SOURCE: Mono County, 1990.

Condition of Existing Housing Stock

A sizable proportion of June Lake's housing stock was developed over twenty years ago. Although most June Lake residents and visitors consider the housing stock to be of good condition, a housing survey conducted in 1981 concludes that a number of local units need rehabilitation. The **June Lake Residence Survey** indicated that 87% of the respondents considered their housing to be in good or excellent condition. A study conducted by the Inyo-Mono Association of Governmental Entities in 1981 concluded that 81% of June Lake's housing units needed major rehabilitation or replacement.

Lack of Winter Housing

The Loop's summer resort orientation has resulted in the construction of housing primarily catering to summer visitors. This housing includes rustic summer cabins and smaller lodges. As a result, little housing exists which is capable of meeting the expectations of winter visitors.

USFS -- Summer Homes

Another problem during the winter is the unavailability of permittee housing on National Forest Lands. As illustrated in Figure 35, six pockets of USFS permittee summer homes containing a total of 105 units are clustered around June, Gull and Silver Lakes. USFS policy prevents winter occupation of these homes. As a result, 105 (22%) of the Loop's 498 single-family homes sit vacant during the winter months.

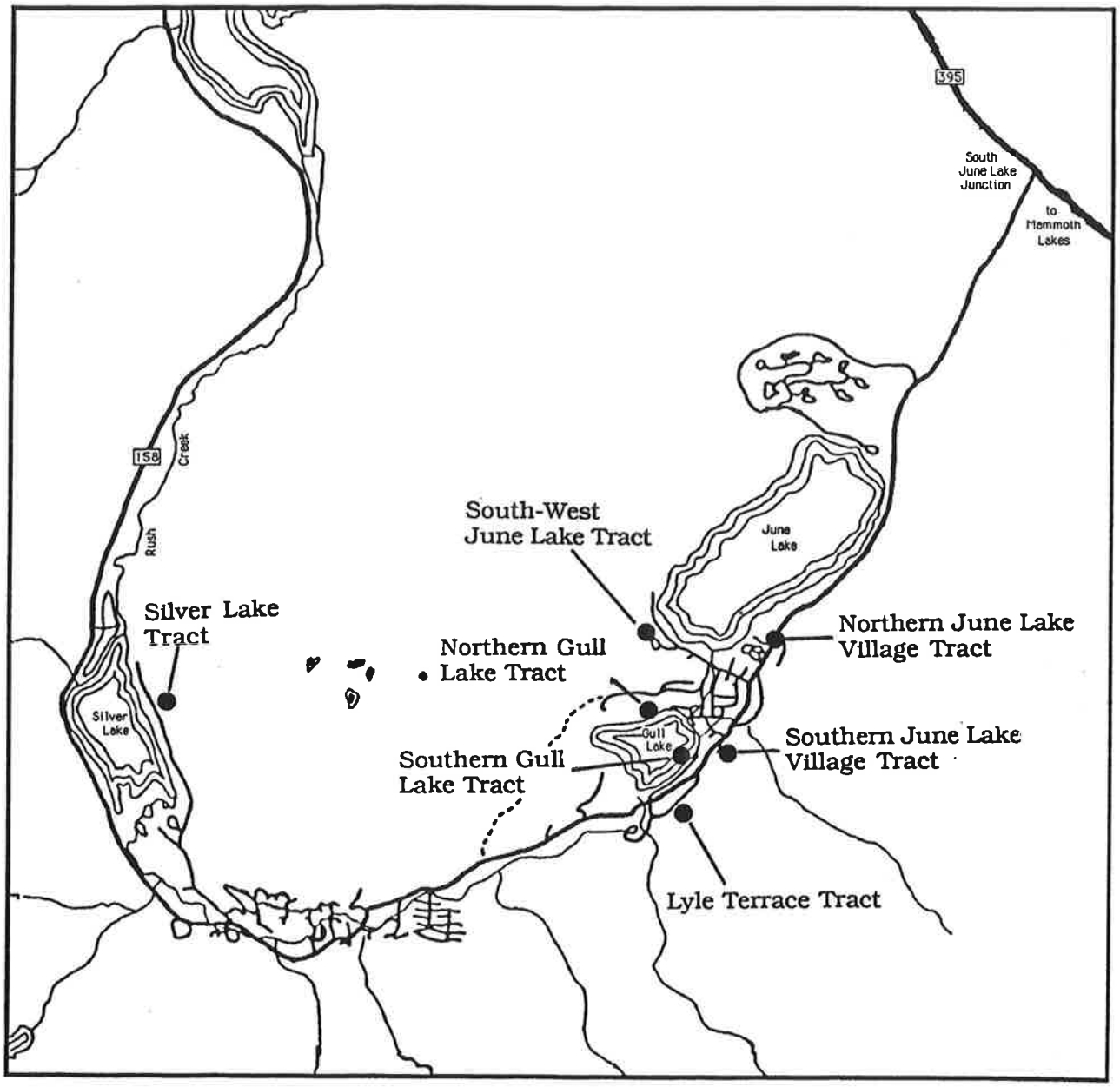


FIGURE 36
USFS SUMMER
PERMITTEE HOMES
Scale: .5" = 1,400'

SOURCE: Sedway/Cooke, 1974.

Affordable Housing

The need for affordable housing is increasing in June Lake. The limited availability of private land, the desire to maintain the area's single-family character and a housing market primarily geared to visitors and second-home owners leads to a lack of diversity in the housing stock and a lack of affordable housing for residents. Relatively low wages, coupled with the highest housing costs in the unincorporated area of Mono County, also contribute to the shortage of affordable housing. Over-crowding (generally defined as over 1.01 persons per room) and over-expending for housing result from shortages in affordable housing. According to the **June Lake Residence Survey** (1986), 33 percent of June Lake households spend over 30 percent of their monthly income on housing. The United States Department of Housing and Urban Development (HUD) uses 30 percent of gross household income as the maximum level of income that should be spent on housing.

Tables 44, 45, 46 and 47 provide general information on housing costs in June Lake. Tables 44 and 45 compare housing costs with the incomes of June Lake households. In both cases, the tables indicate that housing prices are clearly beyond the means of the average June Lake household. Similarly, Tables 46 and 47, illustrate the same imbalance for renters. Table 46 shows typical monthly rents, and Table 47 shows the monthly rent that income groups can afford to pay. A major consideration that does not appear in the Tables is the shortage of long-term rental units in June Lake.

TABLE 44 – RANGES OF HOUSING PRICES

Price	Interest Rate	Monthly [1] Payment	Income [2] Required	Income[3] % of Median
$129,000				
(Typical	9%	$ 934	$37,369	237%
3-BR Home)	10%	$1,040	$41,615	264%
	11%	$1,106	$44,225	281%
$108,000				
(Low end	9%	$ 782	$31,283	198%
2-BR	10%	$ 853	$34,117	216%
Condo)	11%	$ 926	$37,025	235%

NOTES:
[1] Assumes 10% down payment; excludes monthly property tax and insurance payments.
[2] Income required for monthly payments equal to 30% of gross monthly income.
[3] Based upon 1987 estimated June Lake Median Income of $15,762 (M.R. Farrell & Associates, 1987).

TABLE 45 – HOUSING PRICES NEEDED FOR RESIDENT OWNERSHIP

	Payment	Interest Rate	Maximum Price
Median Household Income $15,762	$395	9%	$48,968
	$395	10%	$43,968
	$395	11%	$41,374

TABLE 46 – RANGES OF MONTHLY RENTS

	Low	High
Single-Family Homes	$350	$700
Other Rental Units [1,2]	$350	$700

[1] Includes apartments, condominiums, triplexes and duplexes.
[2] June Lake does not have many rental units making data collection on monthly rents difficult.

Source: Ronci, Art. June Lake Properties. Personal Communication. 1989.

TABLE 47 – AFFORDABLE RENTS

Household Income Class	Income[1]	Monthly Rent[2]
Very Low (at or below 50% of median household income)	$ 7,896	$ 197
Low (at or below 80%)	$12,634	$ 316
Median (at or below 100%)	$15,792	$ 395
Moderate (at or below 120%)	$18,950	$ 474

[1] Income based upon 1987 estimated June Lake Loop Household median income, $15,792/year.

[2] Monthly Rent (including utilities) equals 30% of monthly gross income.

Source: M.R. Farrell & Associates, 1989

Areas of Affordable Housing

Presently, the June Lake Village contains the majority of the Loop's affordable housing stock. Mobile homes and mixed use buildings with apartments over commercial establishments comprise most of the affordable housing. The Down Canyon area contains a few duplexes.

Fair Share Requirements

California Government Code Section 65584 requires individual communities to provide their fair share of the region's affordable housing. In a 1985 **Housing Needs Plan**, the State of California Department of Housing and Community Development found that Mono County will need to provide 643 units for very low, other low and moderate income households.[1] Very low income households are classified as those households earning less than 50 percent of the County's median income. Other low income households earn between 50 and 80 percent of the median County income, while moderate income households earn between 80 and 120 percent of the median income.

The percentage of low and other low income households in June Lake is anticipated to increase due to the expansion of June Mountain and other facilities such as hotels and motels, restaurants and commercial areas to accommodate additional visitors.

Assuming that June Lake continues to contain approximately 32 percent of the existing housing units in the unincorporated area of the County and that housing distribution patterns countywide do not change, then June Lake's fair share of housing would be 206 units[2]. Table 48 contains a complete break down of housing units required by each income group.

---

[1] State wide criteria for distinguishing between income groups.

[2] The state does not have fair share requirements for above moderate income households.

TABLE 48 – ESTIMATED HOUSING UNITS NEEDED BY INCOME GROUP 1985 TO 1992

Income Group	County-wide [1] Units Needed	June Lake [2] Units Needed
Very Low	217	69
Other Low	208	67
Moderate	218	70
Above Moderate	347[3]	0[3]
TOTALS	990	206

Sources:
1 Department of Housing and Community Development, Housing Needs Plan 1985.
2 Assumes June Lake continues to provide 32% of the County's unincorporated area's housing units.
3 The state does require have fair share requirements for above moderate income households.

ORGANIZATIONS AND PERSONS CONTACTED

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III.
JUNE LAKE 2010: JUNE LAKE AREA PLAN

IV.
ENVIRONMENTAL IMPACT ANALYSIS

ENVIRONMENTAL IMPACT ANALYSIS
FOR
JUNE LAKE 2010: JUNE LAKE AREA PLAN

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ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

INTRODUCTION

After a preliminary review of potential environmental impacts associated with the Updated Plan, the Mono County Planning Department determined that an Environmental Impact Report (EIR) would be prepared for the Updated June Lake Area Plan (See the EIR's Introduction Section for a discussion on the Notice of Preparation, Initial Scoping Process and Comments).

FORMAT OF ENVIRONMENTAL ANALYSIS

The environmental impact analysis section discusses potential impacts in the same order as the environmental setting section. The impact section is divided into two parts. The first part briefly summarizes potential environmental impacts. The second part summarizes the objectives, policies and actions in the **June Lake 2010: June Lake Area Plan** designed to mitigate potential impacts.

VEGETATION

POTENTIAL IMPACT 1

Developing the June Lake community to the level specified in the June Lake Area Plan would require the removal and replacement of large areas of natural vegetation.

The removal and/or conversion of vegetation would occur in the Rodeo Grounds, the West Village, potential land exchange areas in the Down Canyon and Pine Cliff areas, and in infill areas of the Down Canyon and Village. The Rodeo Grounds contains approximately 90 acres of undisturbed and undeveloped lands. Developing this area would require removing large areas of sagebrush and numerous Jeffrey pines. Though substantial impacts on vegetation could occur in this area, impacts on sensitive or endangered plant species would not occur since the USFS, based upon a vegetation study, excluded areas that contained sensitive or endangered plant species from the land exchange.

The West Village is primarily undeveloped, although prior land uses such as sewer ponds and land fills have greatly disturbed the vegetation. Potential land exchange areas in the Down Canyon area consist primarily of sagebrush habitat. Impacts on vegetation in the Down Canyon's future land exchange areas would be minimized through the USFS land exchange proceedings which would require extensive field surveys for sensitive plant species. If species are found in the area, the USFS would retain the inhabitated area plus an adequate buffer in public holdings. The proposed Pine Cliff land exchange areas include lands currently used for gravel mining operations and solid waste disposal. Since this area is partially disturbed, new development would remove less vegetation than on an undistrubed site.

Removing existing vegetation could have secondary effects on important resource values such as wildlife, water supply and quality and visual quality. Natural vegetation, in addition to providing wildlife habitat, plays an important role in catching and filtering stormwater runoff and snowmelt. It prevents erosion and helps to retain soil moisture by providing a protective cover. Vegetation also helps maintain the Loop's scenic quality by providing distinct visual contrast and by screening developed areas.

POTENTIAL IMPACT 2

Expanding the housing and recreational facility base would attract additional visitors to the area and increase the usage of lakeshores and streams. This additional usage could cause trampling of vegetation and soil compaction. Secondary effects such as surface water contamination and increased erosion could result. Most of the disturbance would occur in areas adjacent to developed lands and recreational facilities, where use is anticipated to be greatest.

POTENTIAL IMPACT 3

Increased water diversions for local water consumption could impact streamside riparian habitat and, if groundwater sources are developed, lower water tables and impact the overlying vegetation.

Although the existing developed water sources will provide water for the community for many years into the future, new water sources will be needed to provide for the anticipated future

buildout. Developing new water sources will require strict compliance with existing environmental laws which are designed to prevent or lessen impacts of new water projects.

Data on June Lake groundwater resources has not been adequately collected by the local water agencies. Prior to developing groundwater sources, additional information on the quantity of groundwater available and on environmental impacts would need to be collected. Future groundwater development projects would be subject to existing environmental laws.

MITIGATION MEASURES

Community Development Element, General Section
- Objective A, Policy 2, Action 2.1.
- Objective B, Policy 1, Action 1.1.
- Objective C, Policy 2, Action 2.1 and 2.2.
- Objective G, Policy 1, Action 1.3 and 1.4.
- Objective H, Policy 1, Action 1.4.

Open Space and Conservation Element, General Section
- Objective A, Policy 1, Action 1.1 to 1.6.
- Objective A, Policy 2, Action 2.1 to 2.3.

Open Space and Conservation Element, Environmentally Sensitive Lands Section
- Natural Habitat Protection District Policies.
- Stream-side Zone Policies.
- Potential High Groundwater Table Areas Policies.

Open Space and Conservation Element, Water Resources Section
- Objective B, Policy 1, Action 1.1.
- Objective B, Policy 2, Action 2.1 and 2.2.
- Objective B, Policy 3, Action 3.1.
- Objective B, Policy 5, Action 5.1 to 5.8.
- Objective C, Policy 1, Action 1.1 to 1.5.
- Objective C, Policy 2, Action 2.1 and 2.2.
- Objective C, Policy 3, Action 3.2.

Tourism Element, General Section
- Objective A, Policy 2, Action 2.1 and 2.7.
- Objective A, Policy 3, Action 3.1

WILDLIFE

POTENTIAL IMPACT 1

Additional development and the corresponding increase in outdoor recreation would disturb wildlife habitat in areas within or adjacent to community areas.

The degree to which wildlife use of these habitats is altered will depend on the present use and condition of the habitat, the type of development that will occur, and the amount and type of habitat affected. Most development would occur in the West Village and Rodeo Grounds areas. These areas were surveyed by the USFS for potential special status wildlife species prior to exchange into private ownership; these studies did not find any special status species. In addition, after carefully surveying the property, the USFS retained potentially sensitive wildlife habitats in the Rodeo Grounds.

MITIGATION MEASURES

Community Development Element, General Section
- Objective B, Policy 1, Action 1.1.
- Objective C, Policy 2, Action 2.1 and 2.2.
- Objective H, Policy 1, Action 1.4.
- Objective I, Policy 1.

Open Space and Conservation Element, General Section
- Objective A, Policy 2, Action 2.1 to 2.3.

Open Space and Conservation Element, Water Resources Section
- Objective B, Policy 5, Action 5.1 to 5.3.

Tourism Element, General Section
- Objective A, Policy 2, Action 2.1 to 2.7.
- Objective A, Policy 5, Action 5.1 to 5.3.
- Objective A, Policy 6, Action 6.1 and 6.2.
- Objective A, Policy 7, Action 7.1 to 7.3.
- Objective F, Policy 1, Action 1.1 to 1.2.

WATER RESOURCES

Surface Waters

POTENTIAL IMPACT 1

New development would alter the existing surface hydrology by replacing existing vegetation and permeable natural surfaces with impermeable surfaces. Associated grading and earthwork would also alter drainage patterns. An increase of impermeable surfaces could lead to additional sheet flows of stormwaters and snowmelt, and cause increased erosion, sedimentation of streams and lakes, and increases in pollutant loads. Short-term construction impacts such as erosion from construction sites and unimproved roads could also add significant amounts of sediment and silt to water bodies.

POTENTIAL IMPACT 2

The intensification of existing land uses could generate additional pollutants such as oil, grease and other petroleum products, solid waste and road cinders. These pollutants could be carried into the waterways and could degrade surface and groundwater quality.

POTENTIAL IMPACT 3

A significant increase in direct runoff to Reversed and Rush Creek caused by additional impermeable surfaces would result in unnaturally high streamflows. Under certain conditions, these higher than normal flows would cause streambank erosion, the re-suspension of settled solids and the loss of habitat for resident populations of trout and insects.

POTENTIAL IMPACT 4

An increase in runoff over the surface and shoulders of unimproved dirt roads in the Down Canyon residential areas would result in the deposition of significant amounts of silt and other sediments in Reversed Creek, Rush Creek and Silver Lake.

POTENTIAL IMPACT 5

Sheet flow caused by increases in impermeable surfaces over unprotected and unimproved road sections would cause excessive damage to both road shoulders and road surfaces. Uncontrolled runoff over paved sections would cause premature degradation and failure of improved sections.

POTENTIAL IMPACT 6

Poor water circulation in Gull Lake and contaminants caused by development adjacent to Gull Lake are degrading the lake's fish habitat. Additional pollutant loads could lead to algae blooms and fish die-offs from oxygen starvation.

Subsurface Waters

POTENTIAL IMPACT 7

Increases in impervious surface coverage resulting from new development would reduce infiltrations from snowmelt and rainfall. A significant reduction in infiltration rates would eventually cause a lowering of local and downstream groundwater tables which could adversely affect groundwater dependent vegetation, spring flow and spring-dependent biological resources and domestic well water users. Groundwater quality would also be affected if flow reductions resulted in increases in mineral concentrations.

MITIGATION MEASURES

Community Development Element, General Section
- Objective H, Policy 1, Action 1.4.

Open Space and Conservation
- Objective A, Policy 1, Action 1.1, 1.3 and 1.4.

Open Space and Conservation Element, Environmentally Sensitive Lands Section
- Stream-side Zones Policies
- Potential High Groundwater Table Areas Policies

Open Space and Conservation Element, Water Resources Section
- Objective B, Policy 5, Action 5.5, 5.7 and 5.8.
- Objective C, Policy 1, Action 1.1 to 1.5.
- Objective C, Policy 2, Action 2.1 to 2.2.
- Objective C, Policy 3, Action 3.1 and 3.2.
- Objective C, Policy 4, Action 4.1 and 4.2.
- Objective C, Policy 5, Action 5.1 and 5.2.

CLIMATE & AIR QUALITY

POTENTIAL IMPACT 1

Climatic impacts are not anticipated.

POTENTIAL IMPACT 2

Development permitted under the Draft Area Plan Update would increase the number of wood burning fireplaces and stoves in the June Lake area, resulting in increases in the emissions of carbon monoxide, gaseous organic compounds and particulate matter. Air pollution associated with vehicle use, such as internal combustion engine exhaust and dust re-entrainment from road travel, would also increase as a result of resident and visitor population growth.

Currently, air pollution is not considered a serious problem in June Lake. The most significant sources of air pollution are emissions from wood burning devices, automobile exhaust and re-entrainment of particulate matter. Winter temperature inversions which trap and concentrate emissions compound air pollution problems. Adverse impacts to air quality are anticipated to occur during winter mornings when temperature inversions are common, and when cold weather starting, traffic congestion and short duration trips occur. Air pollution caused by dust re-entrainment from vehicle traffic would be most prevalent during winter road cindering, and summer travel on dry unimproved dirt roads.

POTENTIAL IMPACT 3

Construction activities that involve earthwork have the potential for generating significant amounts of windblown dust. Disturbed soils, soils stockpiled for future construction work, and other construction activities which affect soil stability are subject to dispersal and suspension when exposed to high winds. Areas with direct wind exposure would be more susceptible to dust emissions than those with topographical, vegetative or other natural or manmade wind buffers.

MITIGATION MEASURES

Open Space and Conservation, General Section
Objective A, Policy 1, Action 1.4

Open Space and Conservation, Water Resources Section
Objective C, Policy 2, Action 2.1 and 2.2.

Open Space and Conservation, Air Quality Section
Objective D, Policy 1, Action 1.1 to 1.5.
Objective D, Policy 2, Action 2.1 to 2.4.
Objective D, Policy 3, Action 3.1 to 3.2.

Circulation Element, West Village/Rodeo Grounds Section
Objective D, Policy 1, Action 1.1.

Circulation Element, Down Canyon Section
Objective E, Policy 1, Action 1.1 and 1.2.

Circulation Element, Alternatives to Automobile Transit Section
Objective G, Policy 1, Action 1.1 and 1.2.
Objective G, Policy 2, Action 2.1.
Objective G, Policy 3, Action 3.1 and 3.2.
Objective H, Policy 1, Action 1.1.
Objective H, Policy 2, Action 2.1.
Objective H, Policy 3, Action 3.1.

Circulation Element, Parking Section
Objective I, Policy 5, Action 5.1 and 5.2.

Tourism Element
Objective E, Policy 1, Action 1.1.

GEOLOGY AND SOILS

POTENTIAL IMPACT 1

The Loop's soils are moderately to highly susceptible to erosion and are subject to high erosion potentials when disturbed. The West Village and Rodeo Grounds contain the largest remaining undeveloped parcels of private land. Developing these areas would require extensive earthwork that would significantly increase the potential for soil erosion both during and following construction. Limited development on steeper portions of the Loop would also create similar problems.

POTENTIAL IMPACT 2

Lengthening dirt roads to support new development and associated traffic would lead to additional erosion. Currently, uncontrolled runoff along unimproved dirt roads in developed areas causes soil erosion. Roads serve as drainage channels during snowmelt and summer rainstorm periods as integrated storm drainage facilities do not exist in most developed areas. Depending on the volume and speed of runoff, soil erosion on dirt roads has been and will continue to be significant. Development of additional impervious surfaces in these areas and runoff from and onto road surfaces will intensify the problem.

MITIGATION MEASURES

Open Space and Conservation, General Section
Objective A, Policy 1, Action 1.4

Open Space and Conservation, Water Resources Section
Objective C, Policy 2, Action 2.1 and 2.2.
Objective C, Policy 3, Action 3.1 and 3.2.
Objective C, Policy 5, Action 5.1 and 5.2.

Circulation Element, General Section
Objective B, Policy 2, Action 2.1 to 2.3.

Circulation Element, Down Canyon Section
Objective E, Policy 1, Action 1.1 and 1.2.

NATURAL HAZARDS

POTENTIAL IMPACT 1

By increasing the number of June Lake residents and visitors, new development will increase the risks of natural hazards to life and property.

Natural hazards in the June Lake area include wildland fires, earthquakes, volcanic episodes, floods, avalanches and geologic hazards. The impacts of these hazards are lessened by the location of private land in hazard free zones. The implementing strigent Building Codes minimizes seismic impacts while special engineering requirements in historic avalanche zones also mitigates avalanche impacts. The likelihood of advanced warning greatly lessens the risks of natural hazards associated with wildland fires, floods, avalanches or volcanic episodes.

MITIGATION MEASURES

Safety Element, General Section
- Objective A, Policy 1, Action 1.1 and 1.2.
- Objective A. Policy 2, Action 2.1.
- Objective A, Policy 3, Action 3.1 and 3.2.
- Objective A, Policy 4, Action 4.1.
- Objective A, Policy 6, Action 6.1 to 6.2.
- Objective A, Policy 7, Action 7.1.
- Objective C, Policy 1, Action 1.1.
- Objective C, Policy 2, Action 2.1.

Safety Element, Geologic, Seismic, and Flood Hazards
- Objective F, Policy 1, Action 1.1 and 1.2.
- Objective F, Policy 2, Action 2.1 to 2.3.
- Objective F, Policy 3, Action 3.1 and 3.2.
- Objective F, Policy 4, Action 4.1.
- Objective F, Policy 5, Action 5.1 and 5.2.
- Objective F, Policy 6, Action 6.1 and 6.2.
- Objective F, Policy 7, Action 7.1.

Safety Element, Volcanic Hazards
- Objective G, Policy 1, Action 1.1 and 1.2.

Safety Element, Avalanche Hazards
- Objective H, Policy 1, Action 1.3 to 1.4.
- Objective I, Policy 1, Action 1.1.
- Objective I, Policy 2, Action 2.1 to 2.2.

Safety Element, Fire Police and Emergency Services
- Objective J, Policy 1, Action 1.1.
- Objective J, Policy 2, Action 2.1 and 2.2.
- Objective J, Policy 2, Action 2.1 and 2.2.
- Objective K, Policy 1, Action 1.1.
- Objective L, Policy 1, Action 1.1.

ENERGY RESOURCES

POTENTIAL IMPACT 1

The level of development allowed under the Updated Plan will increase the short-term and long-term demand for energy resources. Short-term energy consumption will increase during the construction phase, while long-term energy requirements will be necessary for additional recreational facilities, lighting and space and water heating. Gasoline consumption for residents and visitors will also increase.

Significant impacts on energy resources are not anticipated as a result of the Updated Plan. The quantity of electrical energy consumed by community expansion and by the expansion of the June Mountain Ski Area will increase. The existing Southern California Edison (SCE) Rush Creek Hydroelectric Plant can provide for additional demands once an electrical substation is developed closer to the June Mountain Ski Area and the Rodeo Grounds.

MITIGATION MEASURES

Community Development Element, Community Infrastructure Section
Objective A, Policy 1, Action 1.5.

VISUAL RESOURCES

POTENTIAL IMPACT 1

New development will change the existing visual character of June Lake. Developing the West Village will impact views from Gull Lake and from S.R. 158 at selected points. Development in the Rodeo Grounds may impair the natural scenic qualities along S.R. 158 between the Village and the Down Canyon area. The extensive use of exterior lighting and lighting leaking from structures could also impact night-time visual quality.

The visual policies of the Inyo National Forest Plan will limit the extent of visual impacts on National Forest lands surrounding the community. Outside of the private land base, few visual impacts associated with new development will occur. The drastic elevation change between the canyon's floor and the rim of the canyon will greatly reduce the perceived size of new developments. In the Rodeo Grounds and Down Canyon areas, the short viewsheds created by the winding highway, roadside vegetation and the predominance of the outer canyon wall should lessen visual impacts.

POTENTIAL IMPACT 2

Fluctuating water levels at Grant Lake prevent the growth of riparian vegetation and expose previously watered lakeshore areas. The lack of riparian vegetation and the exposed lakeshore detract from the lake's scenic qualities.

POTENTIAL IMPACT 3

New development along S.R. 158, a county-designated scenic highway, could detract from the area's visual/scenic quality. It could also affect the area's recreational economy as many visitors form an impression of June Lake from traveling along S.R. 158.

MITIGATION MEASURES

Community Development Element, General Section
Objective B, Policy 1, Action 1.1.

Community Development Element, Community Design Section
Objective A, Policy 1, Action 1.1 to 1.3.
Objective A, Policy 2, Action 2.1 to 2.3.
Objective A, Policy 3 Action 3.1 to 3.2.
Objective B, Policy 1, Action 1.1 to 1.2.
Objective B, Policy 2, Action 2.1 to 2.7.
Objective B, Policy 3 Action 3.1 to 3.3.
Objective C, Policy 1, Action 1.1 to 1.2.
Objective D, Policy 1, Action 1.1 to 1.3.
Objective D, Policy 2, Action 2.1.
Objective D, Policy 3, Action 3.1 and 3.2.

Tourism Element

Objective F, Policy 1, Action 1.1 and 1.2.
Objective F, Policy 2, Action 2.1.

CULTURAL RESOURCES

POTENTIAL IMPACT 1

Past studies have indicated that the June Lake Loop contains a number of valuable cultural resource sites. New development would have a potential for damaging important and sensitive cultural resource sites.

The USFS requires cultural resource studies prior to exchanging public lands into private ownership. When these studies detect significant cultural resource deposits, the USFS retains these lands in public ownership. The Loop's largest undeveloped areas, the Rodeo Grounds and West Village, were studied for cultural resources; the studies proved negative. Impacts on cultural resources would most likely result by people scavenging on public lands surrounding the private land base.

MITIGATION MEASURES

Community Development Element, General Section
- Objective A, Policy 1, Action 1.1 and 1.2.
- Objective A, Policy 2, Action 2.1.
- Objective B, Policy 1, Action 1.1.

Open Space and Conservation Element, Cultural Resources
- Objective F, Policy 1, Action 1.1 to 1.5.

EMERGENCY SERVICES

POTENTIAL IMPACT 1

The anticipated increase in residents and visitors generated by new development could impact the ability of the police, fire protection and emergency service agencies to maintain or improve current service levels.

MITIGATION MEASURES

Safety Element, Fire Police and Emergency Services
- Objective J, Policy 1, Action 1.1.
- Objective J, Policy 2, Action 2.1 and 2.2.
- Objective J, Policy 2, Action 2.1 and 2.2.
- Objective K, Policy 1, Action 1.1.
- Objective L, Policy 1, Action 1.1 and 1.2.
- Objective L, Policy 2, Action 2.1.
- Objective M, Policy 1, Action 1.1.
- Objective N, Policy 1, Action 1.1 and 1.2.
- Objective N, Policy 2, Action 2.1.

TRANSPORTATION

POTENTIAL IMPACT 1

Portions of the existing road system will not be adequate to accommodate future anticipated traffic volumes. Congestion will be significant on peak weekends and holidays, especially during the winter when peak traffic volumes from the June Mountain Ski Area are greatest.

Roadway improvements to enhance regional and local access will be needed. Improvements along S.R. 158 between Post Mile 0.8 and Post Mile 5.87 are needed to maintain a D-35 mph level of service and to lessen the impacts of avalanches and rockfalls from the steep slopes overlooking June Lake. New roads and roadway upgrades in the Village, West Village, Rodeo Grounds and Down Canyon will be necessary to improve internal circulation.

POTENTIAL IMPACT 2

During the winter, access into June Lake is limited to the southern section of S.R. 158 which currently experiences closures due to avalanches. Limited access to and from June Lake during the winter could jeopardize the health and safety of travelers as well as impact the Loop's economic health.

POTENTIAL IMPACT 3

Future growth and development will increase road use in the Down Canyon area and will result in an increased need for road improvements and maintenance to prevent the deterioration of road and travel conditions. Most Down Canyon roads are privately-owned, unpaved, narrow, unsigned and without adequate drainage facilities. These substandard road conditions have prevented their acceptance into the County Road Maintenance System.

Local and Regional Transit

POTENTIAL IMPACT 4

New development will increase the need for an interloop and regional transit system.

The lack of public transportation between local and regional commercial and recreation centers leaves June Lake residents and visitors with no alternative to automobile transit. Even after completing certain road and circulation system improvements and providing new parking facilities, the local road network would not be capable of accommodating peak hour traffic flows. For this reason, as well as to prevent increased levels of air and noise pollution, the need for developing a transit system will increase as the community grows.

POTENTIAL IMPACT 5

The absence of pedestrian trails and bicycle paths forces residents and visitors, traveling by foot or bicycle to use roadways, which create a safety hazard. Community growth and development will increase the demand for these forms of circulation, worsening existing safety hazards, and reducing capacities for motorized traffic.

Parking

POTENTIAL IMPACT 6

Skier capacity expansion at June Mountain and new development within the community will necessitate the construction of additional parking facilities.

Parking demands currently exceed available spaces during peak periods, especially in the June Lake Village central business corridor and the June Mountain Ski Area. The lack of adequate parking facilities aggravates traffic flow through the central business corridor, creates traffic safety hazards and may reduce shopping opportunities at area businesses. Providing parking facilities for future Village commercial development may be difficult due to limited land availability and the 25 foot road right-of-ways. The lack of parking at the June Mountain Ski Area forces skiers to park along S.R. 158 which creates safety and traffic flow problems. Increases in the skier capacity at June Mountain will require additional parking and possibly transit service.

Snow Removal

POTENTIAL IMPACT 7

New development and growth will increase snow removal problems, especially in the central business corridor, by increasing traffic flows, increasing the demand for on-street parking and reducing the areas currently available for snow storage.

Snow removal on S.R. 158 in the central business corridor, between 8:00 am and 5:00 pm, causes traffic delays and parking problems for customers attempting to patronize business in the area as well as for through traffic. The loss of snow storage areas on the west side of S.R. 158 in the central business district will result in increased traffic and parking problems if hauling occurs during business hours. New development in other areas will reduce the areas currently available for snow storage and will create similar, though less acute, problems.

MITIGATION MEASURES

Community Development Element, General Section
- Objective E, Policy 1, Action 1.2.
- Objective I, Policy 2, Action 2.1.

Open Space and Conservation Element, Air Quality Section
- Objective D, Policy 1, Action 1.1 to 1.5.

Circulation Element, General Section
- Objective A, Policy 1, Action 1.1 and 1.2.
- Objective A, Policy 2, Action 2.2.
- Objective A, Policy 3, Action 3.1.
- Objective A, Policy 4, Action 4.1 and 4.2.
- Objective A, Policy 5, Action 5.1 to 5.2.
- Objective B, Policy 1, Action 1.1.
- Objective B, Policy 2, Action 2.1 to 2.3.

Circulation Element, Village Commercial District Section
- Objective C, Policy 1, Action 1.1 and 1.2.
- Objective C, Policy 2, Action 2.1.
- Objective C, Policy 3, Action 3.1 to 3.3.
- Objective C, Policy 4, Action 4.1 to 4.2.

Circulation Element, Down Canyon Section
- Objective E, Policy 1, Action 1.1 to 1.2.

Circulation Element, Alternatives to Automobile Transit
- Objective G, Policy 1, Action 1.1 and 1.2.
- Objective G, Policy 2, Action 2.1.
- Objective G, Policy 3, Action 3.1 and 3.2.
- Objective H, Policy 1, Action 1.1.
- Objective H, Policy 2, Action 2.1.
- Objective H, Policy 3, Action 3.1.
- Objective H, Policy 4, Action 4.1 to 4.3.

Circulation Element, Parking Section
- Objective I, Policy 1, Action 1.1.
- Objective I, Policy 2, Action 2.1 and 2.2.
- Objective I, Policy 3, Action 3.1 and 3.2.
- Objective I, Policy 4, Action 4.1 and 4.2.
- Objective I, Policy 5, Action 5.1 and 5.2.
- Objective I, Policy 6, Action 6.1.
- Objective I, Policy 8, Action 8.1.

Circulation Element, Winter Conditions Section
- Objective K, Policy 1, Action 1.1.
- Objective K, Policy 2, Action 2.1 to 2.4.
- Objective K, Policy 3, Action 3.1 and 3.2.
- Objective K, Policy 5, Action 5.1 and 5.2.
- Objective K, Policy 6, Action 6.1 and 6.2.

NOISE

POTENTIAL IMPACT 1

Impacts associated with development, such as additional traffic, short-term construction noise and increased recreational activities/events would raise the existing ambient noise level.

Maintaining the existing ambient noise level is an extremely important element in retaining the Loop's recreational appeal. The ability to enjoy the area's outdoor recreation activities without the disturbance of loud and obtrusive noises is important to the community's quality of life and tourist economy.

MITIGATION MEASURES

Significant increases in the ambient noise level are not anticipated with the level of development allowed under the Updated Plan. Noise controlling measures are not contained in the Updated Area Plan; they can be found in Chapter 10.16, Noise Regulation, of the Mono County Code and in the Mono County Noise Element.

COMMUNITY SERVICES AND PUBLIC INFRASTRUCTURE

COMMUNITY SERVICES

General Government Services

POTENTIAL IMPACT 1

New development and the resulting increase in resident and visitor populations will increase the need for government services in June Lake.

Mono County, the agency primarily responsible for providing these services, will receive additional property, sales, and bed tax revenues that should help offset the financial burden of providing these services. Increases in demand on the United States Postal Service and the United States Forest Service could also occur, although adverse impacts to those agencies are not anticipated.

Health Care

POTENTIAL IMPACT 2

New development and the resulting increase in resident and visitor populations will increase the need for healthcare and emergency medical services in June Lake.

Mono County recently built a health care facility in June Lake that is anticipated to handle additional health care demands created by new development.

PUBLIC INFRASTRUCTURE

Community Center/Library Services

POTENTIAL IMPACT 1

New development would increase the demands on the existing June Lake Community Center and library system.

The County's recent expansion of the June Lake Community Center/Library is expected to accommodate additional demands.

Park Facilities

POTENTIAL IMPACT 2

The expanded resident population will place additional demands on the existing Gull Lake Park facilities.

Public Schools

POTENTIAL IMPACT 3

Developing to the level specified in the Draft Plan may require the expansion of existing school facilities.

At full buildout, the Plan calls for a resident population of approximately 898 persons.[1] Assuming that the existing resident population is 690 persons, the anticipated growth over the next 20 years will be 208 persons. Using a multiplier of 1 school-aged child per 4.8 adults, the number of additional school-aged children would be 43.

Water Systems

POTENTIAL IMPACT 4

Additional development may require the development of additional water sources and distribution facilities to meet water needs at full buildout.

The JLPUD anticipates that its existing water rights and water distribution systems can adequately serve new growth. As June Lake nears the buildout specified in the Plan, the district will need to acquire additional water rights and to develop new distribution facilities.

Wastewater Facilities

POTENTIAL IMPACT 5

New development will increase demands on existing wastewater treatment facilities.

The JLPUD reports that the wastewater treatment system is operating at about 25% of its design capacity. Following a few modifications to the collection lines and to the sewage disposal plant, the JLPUD believes its facilities have the capacity to meet the community's needs at full buildout.

Storm Drainage

POTENTIAL IMPACT 6

New development and the intensification of uses in developed areas will increase surface runoff and the input of contaminants into lakes and streams.

June Lake has evolved with few storm drainage improvements. As June Lake develops, additional storm drain facilities will be necessary to handle additional surface runoff. New

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[1] The estimated population figure at full buildout (898) assumes that June Lake's population will increase at an annual growth rate of 1.3%. New development in the West Village and Rodeo Grounds could cause June Lake to grow faster than the County-wide projected annual growth rate of 1.3%. The faster growth rate would increase the anticipated buildout population and place additional demands on school facilities by increase the number of school-aged children.

development in undeveloped areas will need to provide drainage facilities. Drainage improvement projects will also be needed in developed areas.

Electrical Systems/Telephone Service

POTENTIAL IMPACT 7

The anticipated population increase will place addition demands on the electrical distribution and telephone systems.

Southern California Edison and CONTEL have planned for and are in the process of developing facilities to accommodate the projected growth.

Solid Waste

POTENTIAL IMPACT 8

Under the Updated Plan the generation of solid waste is expected to increase. However, even with the anticipated increase, the projected life expectance of the Pumice Valley landfill is 44 years.

Hazardous Waste

POTENTIAL IMPACT 9

The level of new development allowed under the Updated Plan is anticipated to increase the generation of hazardous waste.

The Updated Plan does not contain policies pertaining to hazardous wastes. It relies on Mono County's Hazard Waste Management Element, now in draft form, to mitigate impacts related to the generation and disposal of hazardous wastes.

MITIGATION MEASURES

Community Development Element, General Section
Objective H, Policy 1, Action 1.1 to 1.4.

Community Development Element, Community Facilities Section
Objective A, Policy 1, Action 1.1.
Objective A, Policy 2, Action 2.1.
Objective A, Policy 3, Action 3.1.
Objective B, Policy 1, Action 1.1 and 1.2.
Objective C, Policy 1, Action 1.1.
Objective D, Policy 1, Action 1.1.

Community Development Element, Community Infrastructure Section
Objective A, Policy 1, Action 1.1 to 1.5.
Objective B, Policy 1, Action 1.1 and 1.2.

Open Space and Conservation Element, Water Resources Section

Objective B, Policy 1, Action 1.1.
Objective B, Policy 2, Action 2.1 and 2.2.
Objective B, Policy 3, Action 3.1.
Objective B, Policy 4, Action 4.1 and 4.2.
Objective B, Policy 5, Action 5.1 to 5.8.
Objective C, Policy 1, Action 1.1 to 1.5.
Objective C, Policy 2, Action 2.1 and 2.2.
Objective C, Policy 3, Action 3.1 to 3.4.
Objective C, Policy 4, Action 4.1.
Objective C, Policy 5, Action 5.1 and 5.2.

Open Space and Conservation Element, Solid Waste Element

Objective E, Policy 1, Action 1.1 to 1.3.
Objective E, Policy 2, Action 2.1 to 2.2.

Recreation Element

Objective A, Policy 1, Action 1.1 to 1.8.
Objective A, Policy 2, Action 2.1 and 2.2.
Objective B, Policy 1, Action 1.1 and 1.2.
Objective B, Policy 2, Action 2.1.

SOCIAL AND ECONOMIC RESOURCES

Population

POTENTIAL IMPACT 1

The anticipated growth in both resident and visitor populations would place an additional burden on existing community infrastructure and services. Growth would also impact the character of June Lake as well as the usage of surrounding National Forest Lands and outlying recreational facilities.

The growth allowed for under the Updated June Lake Area Plan would differ slightly from the growth allowed for under the existing 1974 Plan. The existing plan calls for a peak population of approximately 10,500 persons; the Update calls for a peak population of 12,700 persons. The difference in peak population sizes can be attributed to the Update's slightly larger private land base of 488 acres compared to 318 acres in the existing plan.

Employment and Income

POTENTIAL IMPACT 2

The level of development permitted under the Updated Plan would increase employment opportunities and may increase household incomes. The majority of the jobs created will be in the service sector, primarily in retail sales, entertainment and lodging and recreational activities. Other jobs may be created for service professionals, mechanics, contractors and other construction industry workers. The increase in population would help to lessen fluctuations in business activity and would assist in establishing a year-round economy. This is considered a positive impact and no mitigation is necessary.

Land Use

POTENTIAL IMPACT 3

The conversion of undeveloped lands to developed lands would be the primary land use change as a result of the Updated Plan.

Undeveloped areas currently slated for development include the West Village/Rodeo Grounds, new areas in the Down Canyon, and possibly the Pine Cliff area. Existing restrictive development policies for the Silver Lake Meadow are retained in the Updated Plan.

POTENTIAL IMPACT 4

Extensive new commercial development in the West Village/Rodeo Grounds may impact the Loop's current commercial center in the June Lake Village.

POTENTIAL IMPACT 5

The County and local Special Districts such as the June Lake PUD, Eastern Sierra Unified School District and June Lake FPD may lose a portion of property tax revenues if a Redevelopment District is formed in the June Lake Village.

Future increases in tax revenues from sales taxes or transient occupancy taxes may in the long-run help offset the loss of property tax revenues to the County. Special Districts, during the Redevelopment Agency formation process, may negotiate with the Agency to retain a portion of the property tax revenues.

Housing

POTENTIAL IMPACT 6

New recreational facilities associated with the June Mountain Ski Area expansion and the Rodeo Grounds/West Village development would increase the need for short-term visitor accommodations.

POTENTIAL IMPACT 7

Expanding the range of local recreational opportunities will attract additional visitors and probably increase the demand for second homes and visitor accommodations. Housing prices and the demand for affordable housing, especially for low and moderate income permanent and seasonal workers, will also increase.

MITIGATION MEASURES

Community Development Element, General Section
- Objective A, Policy 1, Action 1.1 and 1.2.
- Objective A, Policy 2, Action 2.1.
- Objective B, Policy 1, Action 1.1.
- Objective C, Policy 2, Action 2.1 and 2.2.
- Objective D, Policy 1, Action 1.1 and 1.2.
- Objective D, Policy 2, Action 2.1 and 2.2.
- Objective H, Policy 1, Action 1.1 to 1.4.
- Objective I, Policy 1, Action 1.1.

Community Development Element, Housing Section
- Objective A, Policy 1, Action 1.1.
- Objective A, Policy 2, Action 2.1.
- Objective B, Policy 1, Action 1.1 and 1.2.
- Objective B, Policy 2, Action 2.1 and 2.2.
- Objective B, Policy 3, Action 3.1 and 3.2.
- Objective B, Policy 4, Action 4.1 to 4.8.
- Objective B, Policy 5, Action 5.1.
- Objective B, Policy 6, Action 6.1 to 6.3.
- Objective B, Policy 7, Action 7.1 to 7.3.
- Objective B, Policy 8, Action 8.1 and 8.2.
- Objective B, Policy 9, Action 9.1 to 9.3.
- Objective B, Policy 10, Action 10.1.

Objective B, Policy 11, Action 11.1.
Objective C, Policy 1, Action 1.1 to 1.3.

Tourism Element
Objective B, Policy 1, Action 1.1 to 1.3.
Objective B, Policy 2, Action 2.1 and 2.2.

REGIONAL ISSUES

Additional Development Pressures

POTENTIAL IMPACT 1

New development could increase pressures to develop vacant private lands and National Forest Lands adjacent to the community.

Development in June Lake as allowed under the Updated Plan could create pressures to develop June Lake's marginal private lands such as steep hill slopes and wet meadow areas. It could also have regional implications by inducing growth in the area near Walker Lake, in the Mono Basin and in the Upper Owens River watershed.

Regional Effects

POTENTIAL IMPACT 2

By attracting additional visitors, particularly in the winter, new development in June Lake could affect adjacent communities, especially Lee Vining.

Potential benefits could include increased demand for local short-term accommodations during the winter and expanded year-round job opportunities for local residents. However, increasing June Lake's workforce to accommodate additional visitors without developing an adequate supply of affordable housing for purchase and rental housing could increase housing costs in surrounding communities and impact existing residents. June Lake workers living in outlying communities will be forced to commute to work. This will result in additional traffic congestion and air quality impacts in June Lake. Labor shortages may also occur if workers living out of June Lake are cutoff in the event of an avalanche closure of S.R. 158.

Regional Water Impacts

POTENTIAL IMPACT 3

The development of additional domestic water facilities to service new development could impact June Lake's water resources and the water flowing into Mono Lake.

June Lake's existing water sources will provide for development in the immediate future. As the Loop reaches buildout as specified in the Plan, additional water sources will be necessary. The impacts of water diversions on the Loop and on Mono Lake are not well understood at this time.

Regional Schools

POTENTIAL IMPACT 4

The growth of June Lake's population could impact school facilities located in Lee Vining and the Town of Mammoth Lakes.

June Lake's projected school enrollment at buildout is 43 new students. The figure assumes June Lake's population will grow at an annual rate of 1.3%. New development in June Lake has the potential to increase June Lake's population at a faster rate than the rest of the County. If this occurs, the anticipated school-age population will be greater than the projected 43 students at buildout.

MITIGATION MEASURES

Community Development Element, General Section
- Objective A, Policy 1, Action 1.1 and 1.2.
- Objective A, Policy 2, Action 2.1.
- Objective B, Policy 1, Action 1.1.
- Objective C, Policy 1, Action 1.1 and 1.2.
- Objective D, Policy 2, Action 2.1 and 2.2.
- Objective H, Policy 1, Action 1.1 to 1.4.

Community Development Element, Housing Section
- Objective A, Policy 1, Action 1.1.
- Objective B, Policy 1, Action 1.1 and 1.2.
- Objective B, Policy 2, Action 2.1 and 2.2.
- Objective B, Policy 3, Action 3.1 and 3.2.
- Objective B, Policy 4, Action 4.1 to 4.8.
- Objective B, Policy 5, Action 5.1.
- Objective B, Policy 6, Action 6.1 to 6.3.
- Objective B, Policy 7, Action 7.1 to 7.3.
- Objective B, Policy 8, Action 8.1 and 8.2.
- Objective B, Policy 9, Action 9.1 to 9.3.
- Objective B, Policy 10, Action 10.1.
- Objective B, Policy 11, Action 11.1.
- Objective C, Policy 1, Action 1.1 to 1.3.

Community Development Element, Community Facilities Section
- Objective A, Policy 1, Action 1.1.
- Objective A, Policy 2, Action 2.1.

Community Development Element, Community Infrastructure Section
- Objective A, Policy 1, Action 1.1 to 1.5.

Open Space and Conservation Element, Water Resources Section
- Objective B, Policy 1, Action 1.1.
- Objective B, Policy 2, Action 2.1 and 2.2.
- Objective B, Policy 3, Action 3.1.
- Objective B, Policy 4, Action 4.1 and 4.2.
- Objective B, Policy 5, Action 5.1 to 5.8.

SIGNIFICANT ENVIRONMENTAL EFFECTS

The Updated June Lake Area Plan would result in a number of significant environmental effects.[1] The significant effects listed below, however, can be mitigated through the implementation of the Updated Plan's policies and actions. The section entitled Unmitigatible Significant Environmental Effects describes the significant unmitigatible effects. In addition to conforming with policies and actions of the Updated Plan, new development would also have to conform with the California Environmental Quality Act. The following provides a list of the anticipated significant, but mitigatible, environmental effects:

1) An increase in the number of people exposed to natural hazards such as fires, seismic events, and geologic events.
2) Increases in resident and visitor populations.
3) Increase the demand for emergency services.
4) An increase in the need for affordable housing in June Lake and surrounding communities.
5) An increase in demands on existing summertime recreational facilities. Additional usage may cause environmental damage especially along sensitive shorelines and streamside zones.
6) A decrease in air quality.
7) An increase in the ambient noise level caused by increased traffic and population density.
8) Impacts on cultural resources.
9) Water resource impacts caused by additional domestic water consumption.

The impacts listed above are anticipated under the assumption that June Lake reaches full buildout as described in the Updated Plan. The significant effects described would be a result of changes in the existing conditions of June Lake. The Plan Update would not call for a significant difference in the level of development allowed under the existing 1974 Plan.

NATURAL HAZARDS

The level of development specified in the Draft June Lake Area Plan would expose additional residents and visitors to natural hazards such as fires, seismic events, volcanic episodes, geologic events and avalanches. Without adequate mitigation, natural hazards could cause significant impacts in June Lake. Policies contained the Area Plan Update, the County General Plan and the Uniform Building Code contain measures to lessen dangers from natural hazards.

The Plan Update's policy to construct an alternative access roadway north of June Lake is a mitigation measure common to all alternatives. The roadway would provide an additional escape route should an orderly mass evacuation of the Loop be necessary.

Wildland fires could cause significant impacts on structures and property in June Lake. Advanced warning of an on-coming fires would allow for evacuations and minimize the loss of life. Policies contained in the Updated Plan to help mitigate fire impacts include the annexation of the the Down Canyon area into the June Lake Fire Protection District and the construction of a Down Canyon fire station. The Plan also calls for coordination with the

[1] Significant: "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, except economic or social changes by themselves.

California Department of Forestry and Fire Protection District and other agencies to a develop fuel modification program around developed private lands.

Seismic hazards are reduced by the implementation of County Building Code structural standards and the requirement for soil compaction test in cases where fill is used or in areas subject to soil liquifaction in seismic events. The implementation of Alquist-Priolo Special Study Zone policies which limit construction in fault rupture zones would also minimize risks. The proposed lower density land uses in the Area Plan would promote the construction of two or three story wood framed buildings. This type of construction is capable of withstanding seismic episodes with little damage as the events of the early 1980s indicated.

Geologic hazards may influence two areas of private land in June Lake. The area overlooking Gull Lake south of S.R. 158 and West of the Village, which contains Forest Service permittee summer homes, is subject to impacts caused by falling rocks. The Updated Plan designates the area for exchange into private ownership and would limit land uses to single family homes. The Plan would also limit the disturbance of vegetation which acts as a buffer for falling rocks, call for the disclosure of the hazard to parties purchasing the property and require engineering studies to determine the extent of the hazard and to provide adequate mitigation. The second hazard area parallels a section of S.R. 158 in the Down Canyon area. More specifically, the active debris fan which could produce mudslides following infrequent high intensity events of rain or snowmelt, occurs on the southern side of S.R. 158 from Los Angeles Street west to the eastern portion of the Dream Mountain Resort. Mudslides primarily damage property and pose a low risk to human health. Mitigation measures contained in the Plan which are similar to those for the active rockfall area, would reduce impacts to a level of insignificance.

POPULATION INCREASES

Population increases of both year-round residents and visitors are anticipated under the level of development allowed in the Draft June Lake Area Plan. Most of the anticipated growth would occur in the Rodeo Grounds and West Village. Infill development in the Down Canyon area and in the June Lake Village would also occur. The peak population is expected to increase from the current level of 4,445 persons to 12,698 persons at full buildout; the resident population is anticipated to increase from 690[2] persons currently to 898 persons at full buildout.

Additional people in the area would increase the demand on public services, roadways and recreational facilities. Impacts on these facilities would be addressed and mitigated in the project review process for new development. Adequate mitigation will be required of new developments that would create large population increases. Development in the West Village and Rodeo Grounds areas, where most development is anticipated to occur, will be coordinated through the preparation of a single Specific Plan. The Specific Plan and associated environmental analysis would ensure that the cumulative impacts of development in the West Village and Rodeo Grounds area are addressed in a comprehensive and integrated manner. Specific Plans will also be required for future land exchange areas containing undeveloped lands of greater than five acres.

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[2] June Lake's resident population widely varies depending upon the information source. The 1986 **June Lake Residence Survey** was used as the basis for population estimates.

EMERGENCY SERVICES

New development would substantially increase the demand for emergency services including fire protection, search and rescue and police services.

Under the Updated Plan, the peak population is anticipated to increase from the current level of 4,445 persons to 12,698 persons at full buildout; the resident population is anticipated to increase from 690 persons currently to 898 persons at full buildout. The large influx of visitors into the area would create additional demands for emergency services. The expansion of June Mountain Ski Area may also increase the demand for emergency services.

The Updated Plan requires new development to mitigate impacts during the development review process. Currently, Mono County provides law enforcement, and search and rescue services. Increased service demand would be partially offset by increases in property, sales and transient occupancy taxes collected from new development. If these revenues fail to cover the increased service costs of new development, the Plan contains policies to mitigate fiscal impacts.

The Plan mitigates increased demands for fire protection services by calling for the annexation of the Down Canyon area into the June Lake Fire Protection District and constructing a Down Canyon fire station. Fire mitigation fees levied on new construction would also offset the financial costs of higher service demands.

AFFORDABLE HOUSING

The level of development allowed under the Area Plan Update is anticipated to expand the workforce. New workers will likely be employed in lower paid service sector jobs and will require affordable housing for purchase or rental housing. Affordable and rental housing in June Lake is currently in short supply, and new demands could compound the problem. According to a State Department of Housing and Community Development Study and the assumption that June Lake will continue to contain 32% of the County's housing, 206 affordable housing units will be required by 1992.

The Updated Area Plan contains policies that would require employers to provide employee housing in proportion to the size of the anticipated work force. In the June Lake Village, a mixed use area is designed to allow for the construction of combined commercial/residential structures. Density bonuses for affordable units and managers units are also provided. Should the housing situation worsen, the Updated Plan would call for the County to create a housing authority or develop an exclusionary zoning policy.[3]

SUMMER RECREATIONAL FACILITIES

The amount of development allowed under the Draft Area Plan will increase the usage of recreation areas and in turn could impact sensitive resources. Sensitive areas such as streamside zones and lakeshores would be impacted by an increase in recreational demand. Trampling of riparian vegetation and soil compaction may occur, this in turn could cause increases in soil erosion and sedimentation into water bodies. Litter could also be a problem.

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[3] Exclusionary zoning would require all new housing projects to contain a certain percentage of low income units.

Impacts would be greatest near developed recreational areas such as parks, trails, campgrounds and day use and picnic areas, where activity and use is concentrated.

Policies in the Draft Area Plan would prevent significant impacts to recreational facilities by calling for the expansion of recreational opportunities. A June Lake trail/bicycle path system, and community and neighborhood parks are included in the Plan. These improvements would be funded by the enactment of a parkland dedication ordinance which would require new development to dedicate lands for recreational facilities or to contribute to a recreational facility fund. The Plan would also encourage the County to work with the USFS in developing additional recreational opportunities. New development, particularly in the West Village/Rodeo Grounds Specific Plan Area, would help broaden the range of developed recreational amenities by constructing swimming pools, jacuzzis, walking paths and tennis courts. Additional shopping or entertainment opportunities would help to disperse pressures. The June Lake recreational base will also benefit from the addition of streams. The recent court decision calling for the DWP to re-water and maintain adequate streamflows in Lower Rush, Parker and Walker Creeks will augment the existing recreational base by providing additional fishing opportunities.

AIR QUALITY

The level of development allowed under the Updated Plan has the potential to degrade the Loop's excellent air quality. Additional wood burning devices, automobile exhausts and suspended particulate matter combined with winter temperature inversions may lead to air quality impacts.

Updated Plan strategies to minimize air quality impacts focus on three areas: reducing inter-loop automobile traffic, reducing wood burning devices and promoting the use of cleaner burning ones, and improving dirt roads. The Updated Plan would reduce automobile traffic by encouraging the development of pedestrian-oriented facilities. This would call for locating housing and lodging in close proximity to recreational and entertainment facilities in the Village and in the West Village/Rodeo Grounds Specific Plan area, and providing convenient pedestrian facilities. Providing direct ski lift access to concentrated use areas such as the Rodeo Grounds and June Lake Village, developing multi-purpose trail facilities, and providing mass transit during the winter are also encouraged in the Plan.

Air quality impacts caused by wood burning devices would be lessened by reducing the number of wood burning devices in commercial lodging/multi-family projects, by encouraging the use of cleaner burning wood devices and by promoting public awareness on the efficient operation of wood burning devices.[4] The use of passive solar energy, especially in the West Village/Rodeo Grounds Specific Plan area, is also encouraged

Dust entrainment from dirt roadways would be reduced by improving road conditions. The Plan calls for new development to construct paved roadways that meet the County's road standards or to fund off-site roadway improvements, for the Local Transportation Committee to address local circulation needs and alternative funding mechanisms for road improvements and maintenance, and for the County to study various roadway management alternatives for improving and maintaining private roads.

[4] The efficient operation of wood burning devices reduces emissions of air pollutants.

NOISE

June Lake's ambient noise level is anticipated to increase as result of the level of development allowed under the Updated Plan; levels would increase although not to nuisance levels or levels that would exceed Mono County's noise standards. Most noise in June Lake results from travel along U.S. 395, S.R. 158 and on surface streets. Noise levels are also influenced by higher population densities, activity levels and short-term construction activities. Noise levels are anticipated to increase most in the June Lake Village, Rodeo Grounds and West Village.

Both short-term and long-term increases in noise levels are anticipated. Short-term noise associated with construction would mitigated by noise controlling measures in the County's Noise Element and in Ordinances 79-47B and 79-479. Increases in long-term noise levels would be related to greater human activity levels and could be related to increased traffic. Locational controls and adhering to the noise abatement construction standards from Title 25 of the California Administrative Code would minimize increases in ambient noise levels. The Plan designates the June Lake Village and Rodeo Grounds for commercial development while it limits commercial development in the Down Canyon area. Limiting the extent of commercial activities in the Down Canyon will help to reduce noise impacts on the predominantly single-family area. Noise impacts on the Village's single-family area, located on the northern boundaries, would be lessened by the land use designations of commercial lodging, high and mixed uses instead of more intensive commercial development. The Plan also calls of the establishment of corporate yards or light industrial uses. Once an area is developed, incompatible uses such as wood processing operations or equipment storage/repair area in the Village, could be relocated.

The effects of traffic on the ambient noise level is unclear. Noise levels are expected to increase as residential traffic off of S.R. 158 increases. Noise from S.R. 158 could increase then eventually decrease as travel speeds are reduced due to traffic congestion. Noise levels fluctuate with traffic speeds; as speeds increase noise increases and as they decrease, noise levels decrease.

CULTURAL RESOURCES

Past studies have indicated that the June Lake Loop is rich in cultural resource deposits. Development to the level specified in the Updated Plan has the potential to significantly impact resources during and following construction. New development has the potential to uncover and disturb undiscovered sites, while inducing visitation will increase scavenging on surrounding public lands.

The USFS land exchange process and policies in the Updated Plan should mitigate impacts on cultural resources. The USFS land exchange procedure requires a cultural resource study prior to a land exchange. If the survey uncovers significant deposits of cultural resources, the USFS will retain ownership of site along with an adequate buffer. This policy helps prevent lands with important cultural resource deposits from passing into private ownership. In existing areas of private land, the Plan has incorporated CEQA requirements which contain strict guidelines that would require new construction to avoid cultural resource sites. If cultural resources are discovered during construction, all work shall stop until an expert determines the significance of the find and/or prescribes actions to mitigate impacts. The Plan also calls for a comprehensive study to identify and catalog cultural sites in the June Lake Planning area.

LOCAL AND REGIONAL WATER RESOURCES

Supplying water to the level of development allowed under the Updated Plan could impact water resources in and around the June Lake Loop. Mono Lake and tributary streams could be impacted by future upstream diversions in June Lake, especially under drought conditions.

Water diversion impacts could be significant without the mitigation measures contained in the Updated Area Plan. Objective B of the Water Resources Section acknowledges the importance of water resources to the environment and the local economy. The objective calls for "the development of local water resources to meet future domestic needs in a manner that maintains and protects the natural environment." Policies in the Plan call for: the development of a diversified water system that can withstand drought periods without undue harm on the environment; the preparation of a comprehensive water management plan to guide water use, the construction of new water supply facilities and to minimize environmental impacts; and the promotion of water conservation efforts to delay or avoid the construction of new water distribution facilities. The Plan also recognizes the importance of Mono Lake and of other surface waters to the Loop's tourist based economy and calls for the protection of these resources.

UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

Implementation of the Updated June Lake Area Plan is anticipated to have the following unmitigatible environmental effects:

1) Conversion of vegetation to impermeable surfaces and related secondary water quality impacts.
2) Visual impacts along the backshore of Gull Lake, along S.R. 158 bordering the Rodeo Grounds and the Down Canyon areas and in the conditionally developable Pine Cliff area.
3) An increase in traffic along S.R. 158 and other surface streets.
4) Increase the number of people exposed to avalanches and to severe volcanic episodes.
5) A reduction of the Loop's wildlife habitat.

The significant impacts described above would occur on existing environmental conditions if the Updated Area Plan is instituted. However, when compared to the potential environmental effects of the existing Plan, the Updated Plans' impacts would be very similar.

These unavoidable impacts are to be expected when allowing the development of a "moderately-sized, self-sufficient, year-round community" in a natural setting such as the June Lake Loop. The Plan's anticipated environmental impacts are limited by prioritizing community expansion areas to areas adjacent to established community areas. This policy will avoid leap frog development by preventing the unnecessary expansion of roads and other infrastructure, and to limit environmental disturbance to lands surrounding established areas.

LOSS OF VEGETATION

Converting vegetation to impermeable surfaces is considered a significant impact of the Updated Area Plan. Most of the disturbance will take place in the Rodeo Grounds and West Village and in areas of infill development in the Village and Down Canyon areas. Other potential areas of impact are the Specific Plan Areas located adjacent to the Down Canyon area and in the Pine Cliff area. Impacts of disturbing and replacing vegetation with impermeable surfaces will result in increases in surface runoff from stormwaters and snowmelt. Although Plan policies and the regulations of the Lahontan Regional Water Quality Control Board should mitigate most impacts, surface runoff is anticipated to carry contaminants such as petroleum products, rubber, cinders, nutrients, sediments and litter into water bodies. Some contaminants are anticipated to deteriorate water quality and speed the natural aging process of water bodies.

Removing vegetation and constructing impermeable surfaces over groundwater recharge zones could impact groundwater resources by reducing the extent of recharge, and risking contamination of the groundwater basin. A reduction in groundwater recharge may diminish flows into surface waters of the June Lake Loop. The filtering value of vegetation above groundwater basins could also be impacted by removing the natural vegetative covering. Without adequate filtering, groundwaters are at risk to surface contaminants reaching underground supplies.

VISUAL IMPACTS

Development in the Rodeo Grounds adjacent to S.R. 158 and in the West Village along the backshore of Gull Lake would cause visual impacts. Development in the Pine Cliff area and in the established community areas of the Village and Down Canyon may also have visual impacts. Visual impacts on Gull Lake would occur from urban development proposed on the lake's northern and eastern shores. Additional visual impacts along the lake's western shore were avoided by excluding this area from the Rodeo Grounds land trade. Impacts along S.R. 158 adjacent to the Rodeo Grounds are also anticipated. With the exception of the June Mountain Ski Area parking lot, the area between the Village and Down Canyon is currently undeveloped. The Rodeo Grounds fronts S.R. 158 along this section; development along the highway could cause visual impacts through the corridor. Intensifying land uses in the Down Canyon retail service center could affect views from S.R. 158 through the area and views from surrounding residential development.

Mitigation measures in the Updated Plan call for landscaping, design considerations and locational controls to minimize impacts. These policies would lessen potential visual impacts but not to a level of insignificance. Policies contained in the Updated Plan's Community Design Section would include the preparation and implementation of June Lake Design Guidelines, greater enforcement of the County's Sign Ordinance, visual screening for projects along S.R. 158 or in significant viewsheds from the Highway, and the undergrounding of powerlines. Specific Plans required for the West Village and Rodeo Grounds and in potential exchange areas five acres or larger would also minimize visual impacts by allowing for land use flexibility and visual policies.

TRAFFIC AND CONGESTION

The level of development allowed under the Updated Plan will increase traffic congestion and lower travel speeds along S.R. 158 between the South June Lake Junction and the SCE Hydroelectric plant. Travel speeds in this section are anticipated to decrease from 35 mph to 25 or 30 mph. Road improvements along this section will be difficult as the highway runs along a narrow bench overlooking June Lake and through the June Lake Village and the Down Canyon area. Impacts on S.R. 158 north of the SCE Hydroelectric plant are not anticipated.

Additional traffic and congestion is anticipated for many of the local roadways. Most roadways are substandard in width and unpaved. Movement through the June Lake Village to the Down Canyon and to the West Village and Rodeo Grounds will grow increasingly difficult as traffic volumes increase, particularly under winter conditions. Travel along unpaved, privately maintained roadways in the Down Canyon would also worsen unless roads are upgraded.

The Updated Plan contains several mitigation measures to improve traffic flows into and through the June Lake Village along S.R. 158. All mitigation measures will require coordination with Caltrans since S.R. 158 is a state highway. The proposed mitigation measures contained in the Updated Plan include: constructing a secondary access road through the June Lake Village; constructing off-street parking in the June Lake Village and restricting on-street parking during peak travel periods; constructing a secondary access route directly into the West Village; improving access from the Village to the West Village and Rodeo Grounds; and working with Caltrans to mitigate the avalanche hazards on S.R. 158. Road and parking improvements in the June Lake Village may be facilitated by forming a redevelopment district or a benefit assessment district.

Private roadway improvements in the Down Canyon area will require collective action on the part of homeowners with assistance from the County or a Special District. The Updated Plans calls for numerous funding alternatives such as forming assessment districts, collecting mitigation fees or promoting sales tax initiatives, to improve existing private roadways.

The Plan's non-specific traffic mitigation measures include the promotion of a pedestrian-orientation by developing housing in close proximity to recreational/entertainment facilities and by promoting alternative transit modes. Pedestrian trails, bicycle/cross-country ski trails and shuttle bus service are measures contained in the Plan to encourage alternative transit and a pedestrian-orientation.

NATURAL HAZARDS

Significant impacts from large avalanches and catastrophic volcanic eruptions could result as development allowed in the Updated Plan will attract a greater number of residents and visitors. In all but the most severe incidents, policy measures in the Updated Plan would minimize significant impacts to life and property. Significant impacts, however, can be anticipated from the most severe events.

Avalanches

Although avalanches originating from the steep canyon walls could impact many areas of the Loop, only three private land areas are in potential avalanche zones. These areas include the north facing slopes overlooking the June Lake Village and Gull Lake, the south-west facing slopes over-looking the area near the Hide-Away-Meadows subdivision and the north-east facing slopes overlooking the western corner of the Dream Mountain Subdivision. Of the identified areas, only the June Lake Village area would fall under development controls contained in Mono County's General Plan Safety Element Avalanche Policy. The County's Safety Element policies would substantially mitigate hazards in historic avalanche zones by limiting most construction to single-family uses. The policy would allow single family homeowners in historic avalanche areas to develop and occupy structures at their own risk. More intensive land uses may be permitted in historic avalanche areas, provided the development can be engineered to withstand potential avalanche impact forces. The Updated Plan seeks to reduce the number of structures constructed in the Village's historic avalanche area by designating the area for land exchange into public holdings.

The County's Safety Element would not fully mitigate avalanche impacts as it only applies to historic avalanche areas and permits development. Severe avalanche conditions could lead to avalanches in developed community areas in non-historic avalanche zones. Single-family homes in historic avalanche zones, as allowed under the Safety Element, could also be impacted.

Outside of community areas, residents or visitors could be impacted by avalanches as they travel along the portion of S.R. 158 overlooking June Lake. Avalanches in this section have cut off all access into the Loop. Under the Updated Plan, additional residents and visitors would be in the Loop and in danger of being stranded by avalanches. Additional visitors and residents would also travel through the avalanche path and through other avalanche paths outside of established community areas. Increasing the number of people exposed to avalanche dangers will increase the probability of an avalanche related accident.

Measures in the Updated Plan would reduce the possibility of avalanche impacts but not to a level of insignificance. The Updated Plan would call for the development of a secondary access

road along the northern side of June Lake or for road improvements along S.R. 158 that would lessen the possibility of avalanche closures. The Updated Plan also calls for the County to coordinate efforts with the USFS to ensure activities that concentrate or attract people are located outside of areas subject to severe avalanche risks.

Volcanic Episodes

The dormant Inyo-Mono chain would be the most likely source of a volcanic eruption. Volcanic episodes have occurred every 400 to 600 years on the average, although an eruption could occur at any time. If the eruption is moderate, the primary hazard would be from falling ash and debris. A catastrophic eruption would result in widespread devastation caused by pyroclastic flows of hot, gas-laden clouds of ash. Mud flows and floods could also occur if the volcanic episode occurs during the winter when snow is on the ground. Since the volcanic activity in the early 1980s, the USGS has been extensively monitoring volcanic activity in the Long Valley Caldera. Although the USGS can not predict the exact time of an episode, it is likely that advanced warning can be issued and evacuation procedures instituted.

WILDLIFE HABITAT IMPACTS

The level of development proposed in the Updated Area Plan would result in direct and indirect impacts on wildlife habitat. These impacts would be significant even with Updated Plan's mitigation measures. Direct impacts on wildlife habitat would include replacement for urban uses, while indirect impacts would consist of additional use of surrounding National Forest Lands and off-site disturbances. Impacts may also be caused by free roaming domestic animals.

Potential wildlife habitat impacts were minimized, although not to an insignificant level, by confining proposed community expansion to areas adjacent to established community areas. The one exception was the Pine Cliff expansion area which would occur east of Oh! Ridge on lands currently used for gravel mining or used previously for solid waste disposal. The Pine Cliff area's development would only occur after certain conditions are satisfied, and uses would be limited to corporate yards, gravel processing operations and other light industrial uses.

The USFS land trade process would lessen impacts by requiring wildlife habitat studies prior to land exchange. Under the 1976 Forest Land Policy and Management, the USFS is required to retain public lands with significant wildlife habitat values. Since most future development will occur on lands that have recently, or in the future, will go through the land exchange process, these lands have been surveyed for significant wildlife habitats. Impacts are also minimized by the Updated Plan limiting future land exchanges to areas adjacent to developed lands and to small portions of the Pine Cliff area. The Pine Cliff area, which is relatively flat and not limited by physical boundaries, could provide an extensive area for future community development. The Plan, however, limits development and only allows for industrial uses contingent upon certain findings.

Impacts on wildlife habitat caused by infill development in the Down Canyon area and the development of the Silver Lake Meadow would be substantial. Most of the larger undeveloped or under-developed parcels in the Down Canyon area contain potential wetland areas or stream-side riparian habitat. The impacts of development in these areas would be reduced by policies contained in the Updated Plan and Mono County's Zoning Code, but not to a level of non-significance. The Plan requires larger projects in potential wetland areas to contact agencies responsible for wetland protection. These agencies, as part of their wetland permit authority, would develop measures to minimize wetland impacts. Small projects in potential

wetland areas, on the other hand, would be exempted from review by outside agencies. Riparian corridors adjacent to streams, primarily Reversed and Rush Creeks, would be protected by the Updated Plan's and Mono County Zoning Code's stream-side setback requirements. However, new development would impact riparian habitat outside of immediate stream-side zones. On an individual basis, significant impacts on wetlands and riparian habitats by infill development would not occur, but considered cumulatively, the impacts would be significant.

Approximately 40 acres of private land that exists in the Silver Lake Meadow has been identified as a potential wetland area with extremely high wildlife habitat values. In addition, the DFG has identified the meadow as a major deer migration corridor through the June Lake Loop. Although the Area Plan minimizes development in this area, and calls for its exchange into public holdings or for purchase by land conservation groups, potential wildlife habitat impacts are still considered significant.

ALTERNATIVES TO THE PROPOSED PLAN

INTRODUCTION

CEQA requires the evaluation of a "range of reasonable alternatives to the project ... which could feasibly attain the basic objectives of the project ...." (CEQA Guidelines Section 15126d). The June Lake Citizens Advisory Committee (CAC) and Mono County Planning Staff designed and discussed various alternatives to the Proposed June Lake Area Plan. The proposed alternative, a hybrid of the various alternatives proposed, was developed from these discussions. Alternatives were evaluated on the following two broad criteria: the goal of allowing a level of development that would help June Lake grow into a "moderately-sized, self-contained, year-round resort community," and on the relative environmental impacts of each of the alternatives. Environmental impacts are considered in a separate section following the discussion of alternatives. The environmentally superior alternative and the selection of the preferred alternative are discussed at the end of the section.

More specific considerations used in analyzing the various alternatives were the ability of the alternative to stabilize and expand June Lake's economy, to increase the housing available for permanent residents and visitors, to minimize growth-inducing impacts and, to the extent feasible, to retain June Lake's existing character and the quality of its natural resources.

ALTERNATIVES ANALYSIS

The alternatives focus on the Loop's individual developable areas including the June Lake Junction, the Pine Cliff area, the June Lake Village, the West Village, the Rodeo Grounds, the June Mountain Base, the Down Canyon area and the Silver Lake Meadow. The alternative analysis proposed various land use intensities and developable acres of private land for each individual area. A few of the alternatives are speculative since National Forest Lands surround private land in the June Lake planning area and restrict the ultimate size of the June Lake Community. Under the General Land Exchange Act (1922) and the Federal Land Policy and Management Act (1976), the USFS would be directed to maintain public lands with high visual, habitat, wildlife or cultural resource values. Extensive land trade areas in and around the June Lake Community, especially in the Pine Cliff area, could have extensive impacts on sensitive resources and would probably not occur.

Potential projects common to all the alternatives include: a trail/bikeway system linking the various community areas and commercial/recreational centers; public parking areas in the Village; and adequate access to the West Village/Rodeo Grounds through the meadow area between June and Gull Lakes.

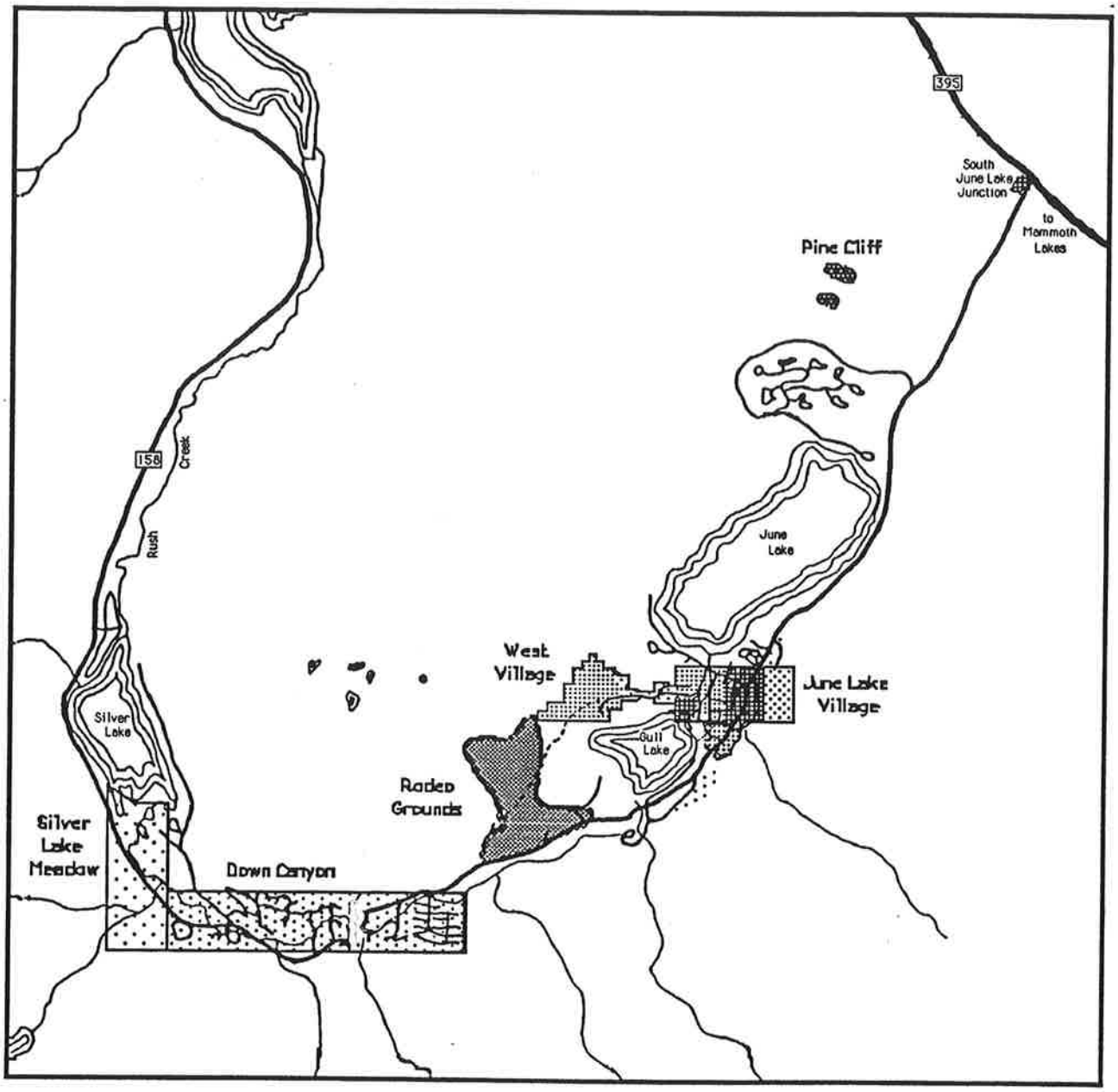
ALTERNATIVE 1 - NO DEVELOPMENT (EXISTING CONDITIONS)

DESCRIPTION

Existing development is primarily confined to the June Lake Village and the Down Canyon area. The West Village contains a single condominium project (38 units) and the Pine Cliff area is currently used for developed recreation near June Lake, and for gravel mining and processing operations farther east. The Rodeo Grounds, approximately 90 acres, is currently held in public ownership but is going through the land trade process. The June Lake Junction currently houses a multiple use convenience store that contains a gas station, small deli/cafe and grocery/household goods store. A single-family residence and a short-term rental trailer operation are also current land uses.

ANALYSIS

Retaining the existing conditions would require instituting growth restricting measures. In a resort area with an economy based on tourism and a present shortfall of approximately 600 beds for short-term winter accommodations, growth restrictions would not be feasible. Growth restrictions would also prohibit June Lake from reaching its proposed General Plan goal of a "moderately-sized self-contained, year-round resort community."



north

FIGURE 1
ALTERNATIVE 1
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Moderate Density
- Resort Commercial
- Commercial
- Industrial
- Natural Habitat Protection

ALTERNATIVE 2 – 1974 GENERAL PLAN (NO PROJECT)

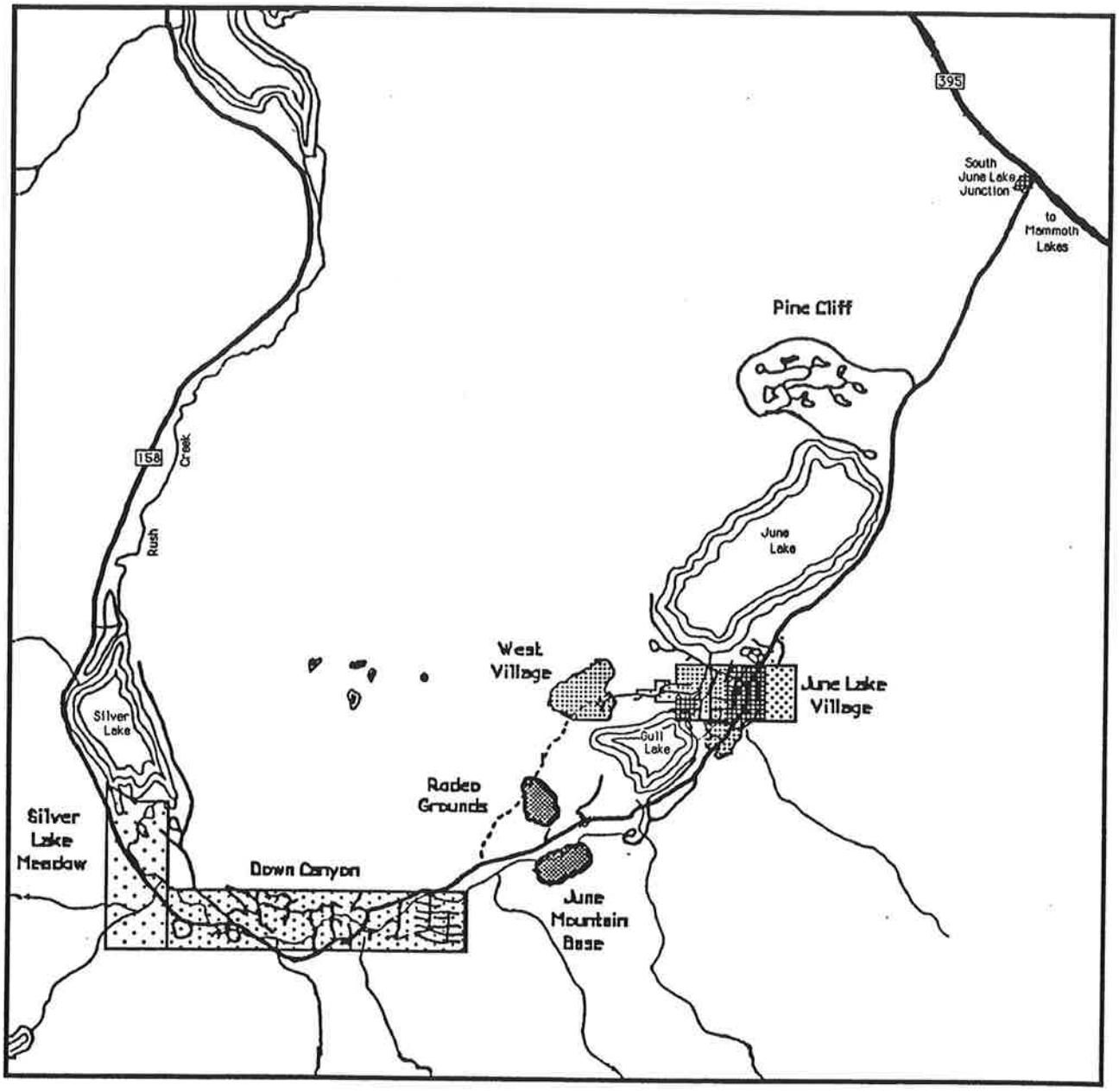
DESCRIPTION

The no project alternative would leave the existing 1974 June Lake General Plan in place. Under the 1974 June Lake General Plan, the private land base is projected to be 482 acres, 397 of which are currently in private holdings, and the projected peak period population at buildout is 10,500 PAOT (persons at one time). Private lands are concentrated in the June Lake Village (84 acres), the Down Canyon area (283 acres including 60 acres in the Silver Lake Meadow) and the West Village (30 acres). Proposed land exchanges are designated to occur in the West Village (26 additional acres), Upper Gull Lake Village (20 acres) and at the June Mountain Base (39). The June Lake Junction is planned to remain under USFS administration.

Under the 1974 Plan, the June Lake Village is designated as the Loop's commercial center and should contain the majority of the commercial development. The Down Canyon would contain largely single-family homes with one neighborhood resort commercial pocket located along S.R. 158. The Down Canyon would also contain a few scattered areas of higher density residential uses. The Silver Lake Meadow, a portion of the Down Canyon Area, is slated for preservation or for very-low intensity development. The West Village is designated for a mixture of single-family and condominium uses with a density of 10 to 12 units per acre. The area would be developed to depend on the June Lake Village for commercial and community services; only a limited area (8,000 sq. ft.) of commercial development is permitted. The Rodeo Grounds (Upper Gull Lake Village) is to be developed as a self-contained recreational village providing a mix of lodging, commercial, and recreational uses. A restaurant, several small shops and recreational facilities such as swimming and tennis are planned to accommodate both winter and summer time visitors. Commercial lodging uses up to densities of 26 units per acre and limited commercial uses, such as retail shops, and restaurants are proposed for the June Mountain Base area. The 1974 Plan is the only alternative to call for development at the June Mountain Base. The Pine Cliff area is not considered in the 1974 Plan.

ANALYSIS

The overall development direction provided by the 1974 Plan is maintained in the proposed Plan. However, the proposed plan simplifies the format and the policies found in the current plan. Implementing the existing plan is often difficult since it lacks internal consistency and contains extremely specific and at times outdated policy language. The existing Plan also calls for staging or phasing of development in the community areas. Rather than allowing June Lake to develop in response to market demands, the Plan sets specified levels of development that an area must achieve before development is allowed in other areas. These policies have not been consistently implemented and need to be amended. In the Plan, land exchanges in the West Village, Rodeo Grounds and June Mountain Base areas are all contingent upon the revitalization of the June Lake Village. The 15 plus years that have elapsed since the Plan's adoption have demonstrated the failure of this policy; the Village has yet to be revitalized. In addition, economic conditions have increased the pressure to develop private lands outside of the June Lake Village prior to its revitalization.



north

FIGURE 2
ALTERNATIVE 2
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Moderate Density
- Resort Commercial
- Commercial
- Natural Habitat Protection

ALTERNATIVE 3 -- SECOND HOME COMMUNITY

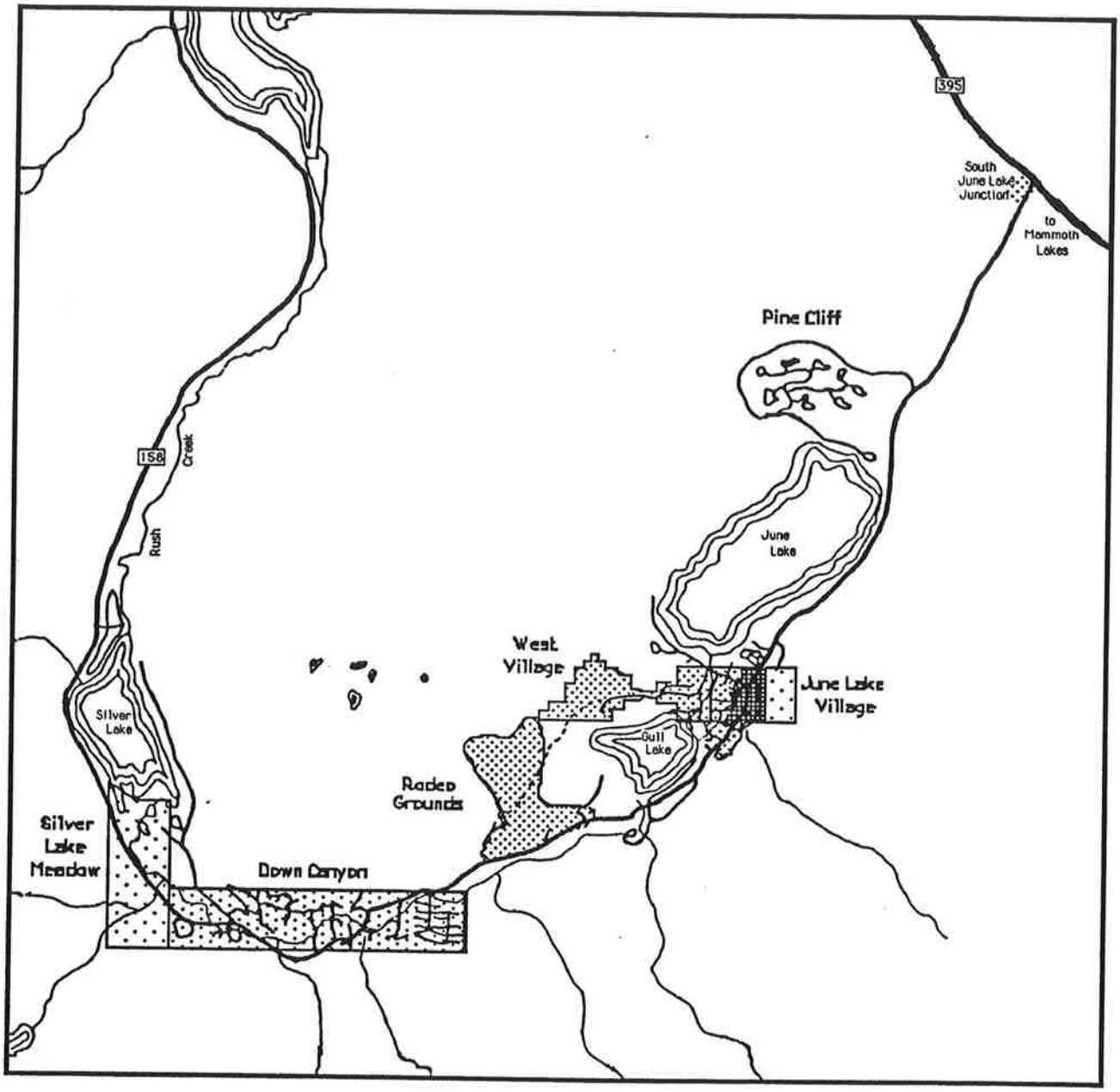
DESCRIPTION

This alternative reduces the Preferred Plan's (Alternative 5) proposed overall density by replacing higher density units with detached single-family homes. Development is encouraged in the Village (70 acres), West Village (55 acres), Rodeo Grounds (90 acres) and the Down Canyon (253 acres) area. Areas slated for little or no development include the mountainous southern portion of the June Lake Village, the Silver Lake Meadow, the June Mountain Base and the Loop Junction.

Under this alternative, the June Lake Village would serve as the Loop's commercial center and feature resort and neighborhood commercial uses along S.R. 158. In the meadow area between June and Gull lakes, single-family and low density multi-family uses are designated to replace higher density multi-family and commercial uses The lands on the eastern slope overlooking the Village would be proposed for exchange into National Forest Lands and designated for Open Space. The land use intensity of the Down Canyon area would be reduced by restricting development on 5,000 square foot lots and requiring parcel assemblage for homes on larger lots. Pockets of commercial development along S.R. 158 would be designated to provide neighborhood commercial and limited resort commercial services. No development would be allowed in the Silver Lake Meadow. In the West Village, single-family and low density multi-family uses are designated to replace medium density multi-family uses. Densities in the Rodeo Grounds would be reduced by substituting low and medium density uses for resort commercial uses. An industrial area, primarily for storage and equipment repair, and lands for recreational facilities would also replace resort commercial lands. No development is proposed for the Pine Cliff area and a small-scale USFS/Community Visitor's Center is proposed for the June Lake Junction.

ANALYSIS

This alternative was rejected because it would not create a moderately-sized, self-contained, year-round resort community. Instead, the June Lake Community would function as a bedroom community for Mammoth Lakes, as a second home community for absentee owners, and a limited resort area for visitors. The predominance of single-family homes would encourage second home ownership at the expense of short-term accommodations and affordable rental housing. During the winter, June Lake exhibits a shortage of short-term accommodations. This leads to many skiers and other visitors driving into June Lake during the day and spending their nights elsewhere, predominantly in Mammoth Lakes. By encouraging the construction of single-family homes, the imbalance between the June Mountain Ski Area's capacity and over-night accommodations will grow. This imbalance could prevent the expansion of commercial establishments in the Loop and the creation of a year-round economy. The day use pattern also prevents June Lake from fully capturing the economic benefits of tourism. In addition to a shortage of over-night lodging, the predominance of single-family homes would preclude the construction of long-term rental and seasonal employee housing. This could lead to a shortage of workers or to higher traffic loads along S.R. 158 when workers must commute from outlying communities. It would also add to the economic drain on the community as workers would spend their earnings in outlying communities.



north

FIGURE 3
ALTERNATIVE 3
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Commercial/Resort Commercial
- Open Space

ALTERNATIVE 4 – HIGH DENSITY CONCENTRATED RESORT

DESCRIPTION

This alternative calls for a private land base of 586 acres and development in the following areas: the June Lake Village (84 acres), West Village (54 acres), Rodeo Grounds (100 acres), Down Canyon (283) and Pine Cliff (65). It emphasizes developing the Village and Rodeo Grounds as the primary commercial areas, with the West Village and Down Canyon areas supporting residential uses and limited commercial development. The Pine Cliff area is designated for a park site and light industrial development. The June Lake Junction is not discussed.

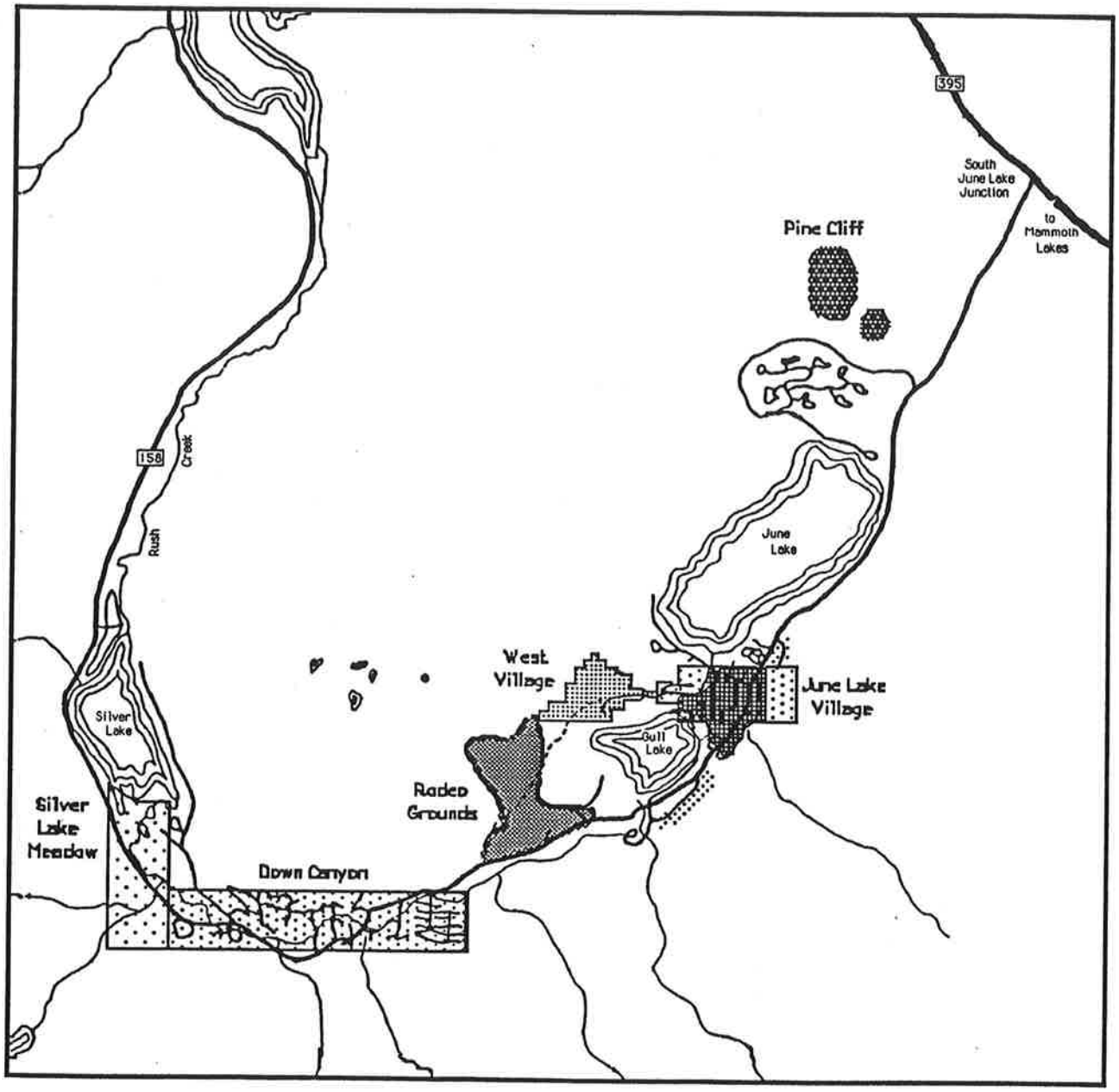
Most of the land in the June Lake Village, primarily in the meadow area between June and Gull Lakes, is designated for resort commercial uses. The commercial area would extend from S.R. 158 to Alderman Street between Knoll Avenue and Gull Lake Drive. The surrounding Village property is designated for medium density housing (10-15 units per acre). Private land located on the eastern hillslope over-looking the Village is slated for open space or as a possible land exchange area. The Down Canyon area is designated to retain its single-family residential character, while additional areas along S.R. 158 are designated for resort and neighborhood commercial uses. Additional commercial areas are designated to support the commercial areas in the Village and Rodeo Grounds; they are not designed for self-sufficiency. Little development would occur in the Silver Lake Meadow as it would remain in the natural habitat protection district. Medium density residential uses are proposed in the West Village, while the Rodeo Grounds is designated as a concentrated resort area. The resort area would allow for hotels and recreational facilities in a self-contained environment. Light industrial uses (50 acres) and a park and school site (15 acres) are planned for the Pine Cliff area. This area, along with the Rodeo Grounds, is proposed for exchange from National Forest Lands into private holdings. Specific Plans for the development of either area would be required before the lands were exchanged. The June Lake Junction was not considered.

ANALYSIS

This alternative was rejected for three reasons. The first was that the alternative designated too much land for commercial development when compared to the housing and recreational support base. The large amount of commercial development would restrict the development of resident and visitor housing. Without an adequate housing supply, commercial development would not have an adequate consumer base to support the planned amount of commercial development. The lack of housing would also encourage day use, where visitors would spend the day in the area, but their nights elsewhere. A better balance of housing, commercial development and recreational facilities would need to be provided to attract and retain visitors in the community, and to develop in to a year-round resort.

The second reason for rejecting this alternative was that large areas of commercial development would drastically change the character of June Lake. One of the objectives of the Plan Update was to allow for additional growth and development yet, try to maintain June Lake's existing character. By creating excessive amounts of additional traffic and congestion, large areas of commercial development would not conform to this objective.

The third reason was that the proposed uses in the Pine Cliff area may induce further community expansion. Once development in the Pine Cliff area is established, additional pressures to broaden the types of uses and the developed area could occur. In addition, the USFS has opposed expanding into the Pine Cliff area as it would impact the existing Oh! Campground and the Pine Cliff Resort. It would also create an island of private land in the middle of National Forest Lands, a practice contrary to the USFS's land exchange policies.



north

FIGURE 4
ALTERNATIVE 4
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Moderate Density
- Resort Commercial
- Commercial
- Industrial
- Natural Habitat Protection
- Potential Land Trade Area into Public Holdings

ALTERNATIVE 5 -- MODERATELY-SIZED, SELF-CONTAINED, YEAR-ROUND RESORT COMMUNITY (PREFERRED ALTERNATIVE)

DESCRIPTION

This is the preferred alternative as described in the **Draft June Lake 2010: June Lake Area Plan**. It calls for creating a moderately-sized, self-contained, year-round resort community. This alternative encourages development in the Village (70 acres), West Village (55 acres), Rodeo Grounds (90 acres), Down Canyon (253 acres) and Pine Cliff (20 acres) areas. Areas slated for little or no development include the mountainous southern portion of the June Lake Village, the Silver Lake Meadow, the June Mountain Base and the June Lake Junction. A total private land base of 488 acres is designated. Under this alternative, the plan calls for a resident population of approximately 900 persons and a peak period visitor population of approximately 12,700 persons.

The June Lake Village would continue to function as the Loop's commercial core. Commercial uses, however, would be limited to the area bordering S.R. 158. Most of the meadow area between June and Gull Lakes are designated for mixed uses, a combination of commercial establishments and residential uses. Higher density residential uses and single-family homes on the Village's rocky northern section would round out the proposed uses. The Down Canyon Area would emphasize single-family homes and pockets of moderate density residential uses along streets that provide adequate access. With the exception of two existing commercial areas, most of the commercial space Down Canyon is planned to be replaced by moderate density commercial lodging uses. Two land trade areas in the Down Canyon are designated to provide for additional single-family homes and public uses, such as a Down Canyon fire station, a neighborhood park, an elementary school site and industrial storage yard, primarily for snow removal equipment.

The West Village, which would be dependent on the June Lake Village and Rodeo Grounds for commercial and recreational services, is designated to contain a mixture of low and moderate density housing. Limited neighborhood commercial uses, to serve residents in the immediate vicinity, will be allowed. The amount of commercial development will be determined in the proposed West Village/Rodeo Grounds Specific Plan. A park/ball field on National Forest Lands adjacent to northern boundaries of the West Village private lands is also proposed for this area. Another potential use would be a small-scale industrial storage yard to house equipment serving the West Village and the June Lake Village.

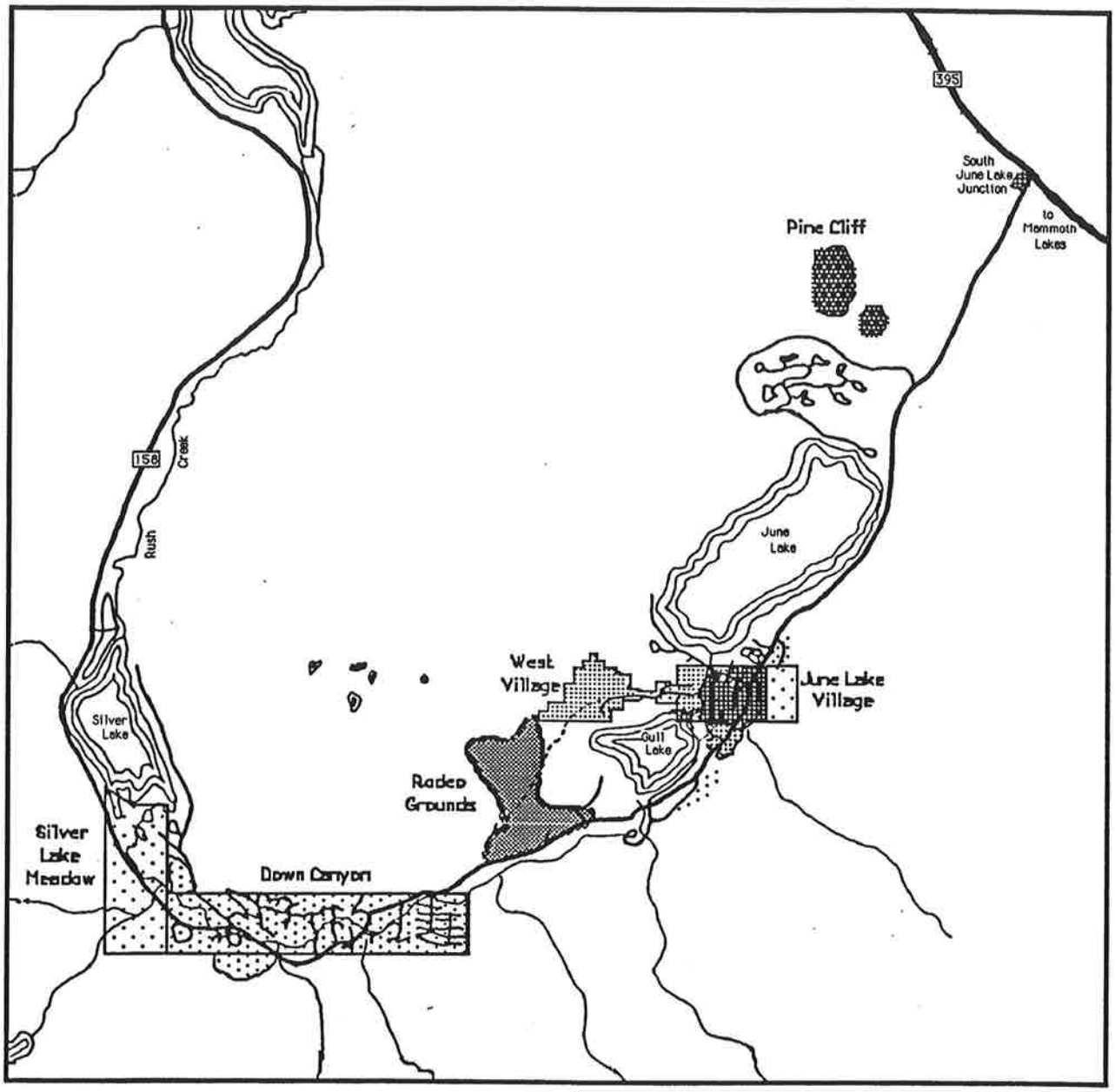
The Rodeo Grounds would serve as the Loop's second commercial node. This area would contain resort commercial uses, such as hotels, shopping areas and recreational facilities, a mixture of housing types including employee housing, an elementary school site and a limited industrial storage/repair area to serve the June Mountain Ski Area and the Rodeo Grounds. The industrial area would be isolated or heavily shielded from other uses. The proposed overall density is 10 units per acre for the West Village/Rodeo Grounds Specific Plan area.

The Pine Cliff area is designated for conditional development. Prior to developing this area, the Updated Plan calls for a land use study that must determine that uses proposed in the Pine Cliff area would be incompatible and inconsistent with land uses in existing community areas. Light industrial uses are anticipated in the Pine Cliff area, contingent upon finding that industrial uses can not be accommodated in other areas of the Loop. A park/ball field site, as an alternative to the preferred site in the West Village, is also proposed. A small scale USFS/Community Visitor Center is proposed for the June Lake Junction.

ANALYSIS

This preferred alternative is specifically designed to meet the Plan's overall goal of creating a "moderately-sized, self-contained, year-round resort community." This alternative would help roundout the local economy by providing for additional short-term visitor housing. Higher density housing in the Village, West Village/Rodeo Grounds, and portions of the Down Canyon should provide additional visitor accommodations, while not limiting the housing available for residents. Employee housing would be provided in the West Village/Rodeo Grounds Specific Plan area and long-term rental housing is provided for in the Village's mixed use district and in a few locations in the Down Canyon area. In addition to the potential to provide rental housing, the mixed use district allows for additional commercial/retail uses in the Village. The designation, while allowing for commercial uses, also limits the intensity of the commercial uses to smaller shops and other establishments similar to the types of uses existing along S.R. 158. More intensive commercial uses would be located in the Rodeo Grounds or along S.R. 158 where adequate circulation can be developed.

Development in the Pine Cliff area will depend on examining the existing land base and proving that adequate lands for such uses as a light industrial park do not exist elsewhere in the Loop.



north

FIGURE 5
ALTERNATIVE 5
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Moderate Density
- Resort Commercial
- Commercial/Mixed Use
- Industrial
- Natural Habitat Protection/ Reverse Land Trade Area

ALTERNATIVE 6 – DESTINATION RESORT

DESCRIPTION

This alternative calls for the Loop's full development by concentrating intensive resort uses in the Village, West Village, Rodeo Grounds and June Mountain Base, moderate development in the Pine Cliff area and low density development in the Down Canyon and Silver Lake Meadow areas. 682 acres are proposed for development. The private land is distributed as follows: June Lake Village (89 acres), West Village (55), Rodeo Grounds (90), June Mountain Base (35), Down Canyon (303), Pine Cliff (100) and June Lake Junction (10).

This alternative would feature the Village, West Village, Rodeo Grounds/June Mountain Base and Pine Cliff areas as four separate concentrated resort areas. Pockets of commercial development would line S.R. 158 in the Down Canyon area. The Pine Cliff area would contain a mixture of single and multi-family homes and commercial lodging facilities bordering an 18 hole golf course.

The June Lake Village would consist mainly of commercial uses designed to emphasize maximum land use intensities. The property along S.R. 158 and most of the meadow area would consist of commercial development, including a mixture of retail and entertainment areas and short-term lodging. Single-family residential uses, where feasible, would be allowed on the hill slope overlooking the Village and on the knoll overlooking June and Gull Lakes. Direct ski lift access to the June Mountain Chalet, based at a centralized parking area surrounded by hotel facilities, shops and restaurants, would anchor this concept.

The West Village would contain moderate density housing in the form of condominiums and hotel/motel uses. The housing would be planned to ring a retail or commercial center that would be adequately sized to support the recreational needs of visitors staying in the West Village. Development in the Rodeo Grounds and June Mountain Base would be related to the downhill skiing capacities of June Mountain. This area would be developed to provide direct ski lift access as well as entertainment centers containing restaurants, night-clubs, retail stores, indoor and outdoor recreational facilities. Full-service hotels and hotel condominiums should provide the majority of the housing for short-term visitors.

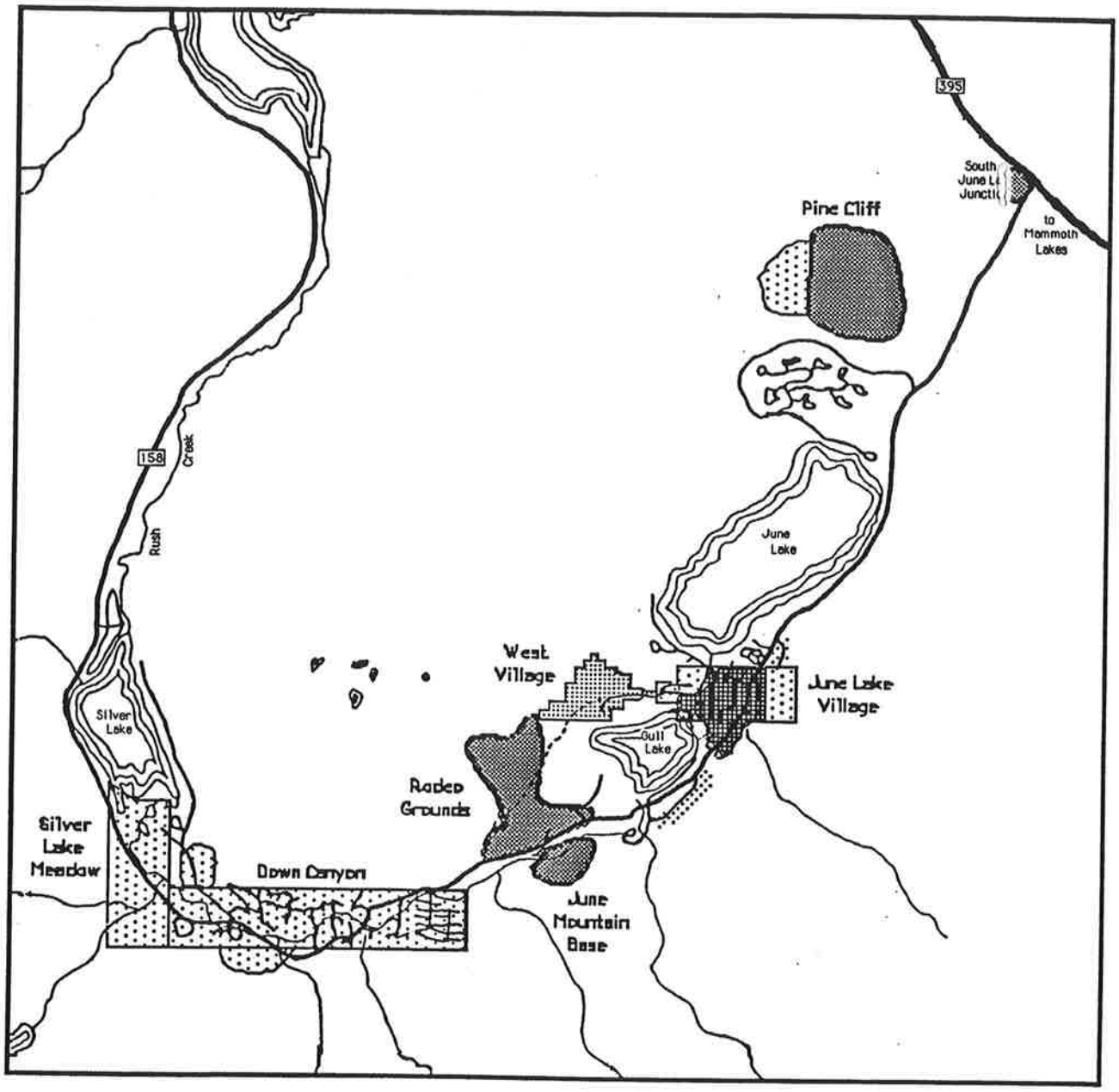
The Down Canyon would house most of the Loop's permanent resident population. Although single-family residential uses would remain the area's primary use, scattered pockets of high density residential uses would be planned in suitable areas. Suitable areas along S.R. 158 are planned for neighborhood and resort commercial uses, and higher density condominiums and full service hotels. Additional community uses, such as a Down Canyon fire station, neighborhood park, and a limited corporate yard for equipment storage are proposed on lands suitable for National Forest exchange. Low density residential uses would be allowed on the Silver Lake Meadow.

On the open and flat area east of Oh! Ridge, this alternative calls for Elementary and High School sites, a Community College with olympic training facilities, and a park and ballfield. An 18-hole golf course ringed by fairway homes and located near a centralized hotel, golf lodge and shopping and entertainment areas are also planned. Away from the golf course, tracts of single-family homes would be developed for permanent residents and seasonal employees. The June Lake Junction is planned for a full-scale USFS visitor/information center and a full-service hotel with associated recreational facilities.

ANALYSIS

This alternative was rejected for environmental and social considerations. The stated goal of the June Lake Area Plan is to create a "moderately-sized, self-contained, year-round resort community;" this alternative would result in a concentrated destination resort. Significant environmental impacts would result from this alternative. The alternative would result in significant environmental impacts in most of the Loop's private land and on large undeveloped tracts in the Pine Cliff, June Lake Junction and June Mountain areas. In addition, extensive development would disrupt the natural character of the June Lake Loop. Instead of a relatively small mountain village, a destination resort would be created. The change in character of the Loop would probably encourage part-time or permanent residents to move.

This alternative is highly speculative and, in all probability, would not occur. National Forest lands surrounding the June Lake community would contain development unless numerous land trades for community expansion are executed. The USFS would strongly oppose numerous land trades involving large tracts of public lands. The USFS would allow for some expansion in areas that would not affect the Loop's recreational resource values. This alternative would exceed that threshold.



north

FIGURE 6
ALTERNATIVE 6
Scale: .5" = 1400'

LEGEND

- National Forest Lands
- Single-Family
- Moderate Density
- Resort Commercial
- Commercial

ENVIRONMENTAL IMPACTS

In area's with adopted General Plans, CEQA requires the discussion of an alternative's environmental impacts on both the existing environment and relative to the existing Plan's future consequences. This section discusses environmental impacts on the existing conditions, then discusses impacts relative to the existing 1974 **June Lake General Area Plan.** Environmental effects on existing conditions are separated into individual resources and discussed on a general level. Although all resources were considered, the following focuses only on those that could change with the various alternatives. These resources or areas included: the circulation system, vegetation and wildlife, visual resources, housing, local economic conditions, community services, water quality and supply, recreation, and growth inducing impacts. Table 1 contains a matrix of the relative impacts of the anticipated conditions under the 1974 General Plan and under each of the alternatives.

IMPACTS ON EXISTING CONDITIONS

All of the proposed alternatives, with the exception of the no development alternative, will impact the existing conditions of June Lake. Only about 50% of the private land is currently developed and much of the developed land is underdeveloped or underutilized. The extent of the anticipated impacts will depend on the development intensity and size of the private land base of the alternative. Alternatives that provide for larger populations could cause greater disturbances to surrounding lands, wildlife and other natural resources. A larger private land base would also result in greater land disturbance impacts.

The following provides a brief summary on the anticipated impacts of the alternatives on the existing environment. The no development scenario will not be discussed as environmental impacts caused by new development will not occur.

CIRCULATION

All alternatives will increase traffic. Alternatives two, four and five would provide a better balance of visitor accommodations and recreational opportunities that could lessen traffic congestion impacts. Under these alternatives, visitors would be encouraged to recreate and stay over-night in the Loop. Currently, many winter visitors ski June Mountain then return to Mammoth Lakes for lodging and entertainment. This causes traffic problems along S.R. 158 during morning and afternoon peak periods. Expanding lodging accommodations and other facilities will encourage winter visitors to stay in the Loop, resulting in reduced peak period traffic on S.R. 158. On the other hand, increasing the number of visitors without improving the existing system, may create capacity problems on local roadways, increase the number of pedestrian/vehicle conflicts, and increase the need for additional parking.

VEGETATION AND WILDLIFE DISTURBANCES

The degree of wildlife and vegetation disturbance is related to the amount of land altered and the number of people using an area. All alternatives call for developing new areas. The most notable new areas slated for development are the Rodeo Ground, West Village and Pine Cliff areas. New construction would replace existing vegetation with structures, roadways and landscaped areas. It would also increase the number of people in an area which could lead to trampling of existing vegetation and soil compaction. Disturbed areas and impermeable surfaces could lead to additional stormwater and snowmelt runoff which in turn could increase erosion and sedimentation of water bodies.

VISUAL RESOURCES

All alternatives could impair visual resources by obstructing scenic views or altering the current natural conditions. Alternative six, the destination resort, will have the most severe visual impacts due to the large Pine Cliff development area and the development intensity proposed in other areas. The remaining alternatives are anticipated to have similar visual impacts, but at a lower level than alternative six. Locational controls, design guidelines, landscaping and visual screening could be used to minimize visual impacts.

HOUSING

The type and number of housing units will have a profound impact on the character of the community. Low densities could result in lower income households and seasonal workers being forced out of the Loop and replaced by absentee second home owners. Higher densities could change the Loop's character and lessen its recreational appeal. All development alternatives would change the composition of the existing housing stock. The second home alternative would not provide housing for the anticipated work force nor would it help improve the economy. The destination resort alternative would greatly enlarge the housing stock, but would probably reduce the Loop's appeal. The remaining alternatives, which provide for a mixture of housing types, would improve the balance between the recreational facilities, visitor accommodations and housing for the local work force.

LOCAL ECONOMY

The selected alternative should help stabilize the Loop's recreational economy and maintain June Lake's existing character and appeal. Growth, especially in the area of winter accommodations, should occur to balance out the economy, but not to the extent that it harms the Loop's current summer economic base. Under the existing conditions, the Loop's winter economy would not improve; the shortage of short-term accommodations would continue. The second home community alternative would increase the supply of housing, but not to a level in balance with the capacity of the Ski Area. Second homes have a higher vacancy rate than condominiums or hotels/motels and cannot be used for short-term accommodations. A second home community thereby limit the growth of the local economy by restricting the supply of visitor accommodations. The destination resort alternative could greatly benefit the economy by providing for a wider-range of recreational activities and accommodations. However, it could negatively impact the community by changing the existing character and environmental quality. Alternatives two, four and five would provide a balance of housing types that includes housing for residents, seasonal employees and short-term visitors. These alternatives would also provide a level of development that could support a viable self-sufficient economic base.

WATER QUALITY.

All alternatives that call for additional development pose the risk of degrading the Loop's water quality and negatively affecting the Loop's fishing opportunities. Development could disturb vegetation and replace permeable surfaces with impervious surfaces. Larger areas of impervious surfaces cause higher levels of stormwater and snowmelt runoff and could cause erosion and sedimentation of water bodies. Increased sedimentation of water bodies could also be caused by higher usage of sensitive the creek and lakeshore areas by people attracted by new development.

RECREATIONAL RESOURCES

All of the development alternatives will increase the use of recreational facilities. Increased use may impact streams and lakes, and wildlife and wildlife habitat. Protecting the recreational resources will require balancing the level of development with the Loop's resource capabilities. It will also require diversifying the existing recreational base to decrease user concentrations on more sensitive resources. Future development should compliment the existing natural recreational resources by providing additional recreational opportunities such as parks and ballfields, bicycle/cross-country trails, pedestrian paths, indoor recreational facilities, and entertainment/shopping areas. Diversifying the range of recreational activities will reduce the possibility of overuse and damage to recreational resources. The overall level of development must also be limited because at some point diversification will nolonger reduce user concentrations on recreational resources. The second home community alternative, by reducing the number of people attracted to the area, would have the least impact on recreational resources, while the destination resort would have the greatest. The remaining alternatives would fall between the extremes.

GROWTH INDUCING IMPACTS

All of the development alternatives will result in growth inducing impacts. Although numerous factors could cause growth inducing impacts, land trades or special use permit uses in areas outside of existing developed areas, the lack of physical boundaries surrounding private lands and the extension or expansion of public facilities such as water delivery or wastewater treatment systems would be primary causes.

USFS land trades or special use permit uses in the Pine Cliff area could result in the most intensive growth inducing impacts. Development in the Pine Cliff area would not be limited by physical boundaries like most lands in the Loop. Once development has occurred and public facilities have been established, restricting land uses and future land trades would be difficult. The proposed alternatives discuss a range of land uses in the Pine Cliff area. The area designated and the type of development proposed would result in varying levels of growth inducing impacts.

The second home community and the existing plan, by restricting development in the Pine Cliff area, would induce the least amount of growth. The destination resort alternative would greatly expand the private land base in the Pine Cliff area and would increase development pressures. The moderate density resort and the preferred alternative would have moderate growth inducing impacts. The moderate density resort alternative would result in greater growth inducing impacts by allowing for more expansion into the Pine Cliff area. The moderate density resort calls for 65 acres for light industrial uses and 15 acres for a park/school site, while the preferred alternative calls for an 20-acre light industrial site. The preferred alternative would also limit growth in the Pine Cliff area until existing private lands in the Loop have been studied and deemed incompatible for industrial uses.

RELATIVE IMPACTS

After discussing the impacts common to all alternatives, this section briefly discusses the impacts of each alternative relative to the existing **1974 June Lake General Plan** (Table 1). Relative effects are considered on the following eleven categories: 1) traffic; 2) disturbances to vegetation and wildlife; 3) visual impacts; 4) air quality; 5) housing; 6) local economy; 7) community services; 8) water quality; 9) recreation; 10) safety and; 11) growth inducing impacts.

TABLE 1 – RELATIVE IMPACTS OF ALTERNATIVES

IMPACTS	ALTERNATIVE 1 EXISTING CONDITIONS	ALTERNATIVE 2 1974 PLAN	ALTERNATIVE 3 SECOND HOME COMMUNITY	ALTERNATIVE 4 MODERATE DENSITY RESORT	ALTERNATIVE 5 PREFERRED	ALTERNATIVE 6 DESTINATION RESORT
TRAFFIC	Substantially reduce traffic.	Baseline; all impacts compared to this alternative.	Substantially reduce traffic.	Increase traffic.	Marginally increase traffic.	Substantially increase traffic.
	Substantially reduce parking demand.		Substantially reduce parking demand.	Increase parking demand.	Marginally increase parking demand.	Substantially increase parking demand.
	Substantially reduce pedestrian/vehicle conflicts.		Substantially reduce pedestrian/vehicle conflicts.	Marginally increase pedestrian/vehicle conflicts.	Marginally decrease pedestrian/vehicle. conflicts.	Increase pedestrian /vehicle conflicts.
VEGETATION AND WILDLIFE DISRUPTIONS	Substantially reduce.		Reduce.	Increase.	Marginally increase.	Substantially increase.
VISUAL IMPACTS	Substantially reduce.		Reduce.	Increase.	Increase.	Substantially increase.
AIR QUALITY IMPACTS	Substantially reduce.		Marginally reduce.	No change.	Marginally reduce.	Substantially increase.
HOUSING	Substantially reduce housing stock.		Displace low income residents & medium income buyers.	Decrease supply of long-term rental units in the June Lake Village.	Marginally increase supply of long-term rental housing.	Increase the number of housing units for all income groups.
	Reduce quantity of employee housing.		Substantially limit the quantity of employee housing.	Marginally decrease the quantity of employee housing.	Increase the quantity of employee housing.	Increase the quantity of employee and affordable housing.
	Substantially reduce supply of winter accommodations.		Reduce supply of winter accommodations.	Increase supply of winter accommodations.	Marginally increase supply of winter accommodations.	Substantially increase supply of winter accommodations.
LOCAL ECONOMY	Reduce level of economic activity.		Reduce level of economic activity. Self-supporting local economy not created.	Increase level of economic activity. Could create self-supporting economy.	Slightly increase level of economic activity. Could create a self-supporting economy.	Substantially increase economic activity. Create a self-supporting economy.
COMMUNITY SERVICES DEMAND	Substantially reduce.		Reduce.	Increase.	Slightly increase.	Substantially increase.
WATER QUALITY IMPACTS	Substantially reduce.		Reduce.	Marginally increase.	Marginally increase.	Substantially increase.
RECREATIONAL DEMAND	Substantially reduce.		Reduce.	Increase.	Marginally increase.	Substantially increase.
SAFETY	Reduce risks to life and property.		Reduce risks to life and property.	Marginally increase risks to life and property.	Marginally increase risks to life and property.	Substantially increase risks to life and property.
GROWTH INDUCING IMPACTS	Substantially reduce.		Substantially reduce.	Increase, particularly in the Pine Cliff area.	Marginally increase.	Substantially increase.

SELECTION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

All development alternatives would result in one or more significant environmental impacts. Significant impacts could include the replacement of vegetation with impervious surfaces, increases in traffic and traffic congestion, increases in population, growth inducing impacts, water supply and quality impacts, increases in the demand for affordable housing and visual impacts. The number of significant impacts will depend on the alternative selected; the existing condition alternative would not have any significant environmental impacts, while the destination resort would have numerous significant effects.

Aside from the existing condition or no development alternative, the environmentally superior development alternative would be the second home community. Although this alternative would have a private land base similar to other alternatives, the lower development intensity and a smaller peak populations would result in less environmental impacts. Even though this project is the environmentally superior alternative, four unmitigatible significant impacts area anticipated. The impacts would include the disturbance and replacement of vegetation by impervious surfaces, visual impacts, water quality and supply impacts, and traffic impacts. The impacts anticipated will result from new development in the Rodeo Grounds and West Village and from infill development in established community areas.

Alternative two, the existing 1974 Plan and Alternative three, the preferred Plan, are rated second and third with respect to the overall environmental effects. Both alternatives would call for higher development intensities than the second home community and would result in the same unmitigatible significant impacts. However, the two alternatives would result in a greater degree of significant impact than the environmentally superior alternative. The higher degree of significant environmental impact from the second and third ranked alternatives is related to their greater development intensity and abilities to accommodate larger numbers of residents and visitors.

SUMMARY OF CONCLUSION

The Plan Update is selected as the preferred alternative because it best met the goal of allowing June Lake to develop into a "moderately-sized, self-sufficient, year-round community." The Plan Update ranked third in the environmentally superior classification, yet it would result in the same significant impacts as the environmentally superior option.

The Update was preferred over the environmentally superior options of the second home community alterative and existing 1974 Plan alternative due to its focus on community needs. These needs include enlarging the supply of short-term rental units to balance with winter demands, providing for affordable/employee housing, reducing traffic impacts by encouraging alternative modes of transportation, minimizing growth inducing impacts and retaining the existing community character.

SHORT-TERM USE VS. LONG-TERM PRODUCTIVITY

The beneficial uses of June Lake's existing environment include its excellent air quality, its numerous recreational resources, its visual and scenic qualities and its quaint, mountain-village character. The level of development called for in the Updated Plan could affect these characteristics by committing large undeveloped areas, particularly the Rodeo Grounds and West Village, for future urban uses. New development could cause traffic congestion, employee housing shortages, water quality and supply impacts, a reduction in wildlife habitat and wildlife species, and increased demands on recreational facilities.

The specific impacts of new development on lands designated for urban uses will depend on future discretionary actions. Future actions will require developments sensitive to the environmental qualities of the areas slated for development. Approvals will also depend on the developers ability to build within the constraints of the Area Plan and associated regulations to mitigate development impacts.

The Updated Plan and the existing June Lake Plan would provide for similar amounts of additional development and result in comparable long-term effects. The two Plans call for development in the roughly the same areas; the Updated Plan allows development on more acres. The Updated Plan calls for additional development that is compatible to the existing scale and character of June Lake. It recognizes that June Lake's recreational and scenic resources form the basis of the economy and that destroying the natural resources will destroy June Lake's economic health.

NECESSITY OF PLAN UPDATE

State law requires periodic reviews and revisions to existing General Plans. Changing economic conditions, obsolete General Plan provisions, and inconsistencies in the existing Plan have provided the impetus for this Plan Update.

The economic conditions of June Lake have improved over the last three years creating a demand to meet the needs of additional visitors and residents. The purchase of the June Mountain Ski Area by the Mammoth Mountain Ski Area and subsequent improvements, have created additional pressures to provide for winter visitation. The current housing stock and commercial/retail operations are primarily oriented to the summer season and do not meet the needs of winter visitors. This shortfall creates a situation where skiers ski June Mountain but travel back to Mammoth Lakes for housing and entertainment. The Updated Plan is designed to help June Lake develop into a year-round resort by address this issue and numerous others.

IRREVERSIBLE ENVIRONMENTAL CHANGES

The level of development allowed under Updated Plan would result in an irreversible commitment of open space lands for urban uses. Most of the conversion would take place in the Rodeo Grounds and proposed land exchange areas adjacent to the Down Canyon area. The West Village and Pine Cliff areas are relatively disturbed from previous activities.

Development enabled under the Updated Plan would require the use of natural resources for building and construction. Materials would include wood, concrete, refined metals and petroleum products. Resources necessary to sustain development, such as water and hydroelectric power, would also be irreversibly committed.

Development in the backshore area of Gull Lake would change the visual qualities associated the area. The scenic corridor along S.R. 158 between Gull Lake and the Down Canyon area would also change as a result of development in the Rodeo Grounds. These anticipated changes are not unique to the Updated Plan, since the existing Plan allowed for development in those areas.

GROWTH INDUCING IMPACTS

The June Lake Area Plan Update calls for the development of June Lake into a self-sufficient, moderately-sized year round community. The Plan will induce the development of housing, lodging, commercial uses and recreational facility expansion. Specifically, the Plan's primary growth inducing impacts would be:

1) Inducing growth in the West Village and Rodeo Grounds areas, and other identified land exchange areas. Enlarging the existing community and potentially opening the Pine Cliff area to conditional development would cause a significant increase in peak populations.

2) Attracting more people into the area may induce expansion of recreational facilities including the June Mountain Ski Area.

3) Creating additional employment opportunities and an increase in the number of winter visitors may cause growth in surrounding communities, particularly Lee Vining.

COMMUNITY EXPANSION

The level of development allowed under the Updated Plan would induce growth in the Rodeo Grounds and West Village areas, in potential land exchange areas adjacent to the Down Canyon area and, potentially to a limited degree, in the Pine Cliff area. Growth is anticipated in private land areas where roads or public infrastructure is extended. The potentially developable areas are all included in the JLPUD Sphere of Influence. Large-scale growth in the Pine Cliff area, which does not contain physical boundaries like other areas in the Loop, could take place after initial uses are established. However, the Updated Plan restricts development in the area and would require the preparation of a Specific Plan and associated environmental studies.

The Plan will attract significant numbers of additional visitors and residents to the area. The current projected peak populations are approximately 4,445 persons; development under the Updated Plan will provide for a peak population of 12,698[1] persons.

When compared to the existing 1974 Plan, the Plan Update will not significantly increase the extent of new development or the anticipated population levels. Stagnant economic conditions have prevented development to the levels specified under the 1974 June Lake Plan. The anticipated peak summer visitor population under the existing 1974 Plan is between 10,455 to 10,825[2] persons. The Plan Update calls for a summer peak population of 12,698 persons and winter peak of 10,817 persons. The increase in peak population is attributed to the Update's larger private land base of 488 acres compared to the existing Plan's 318 acres.

National Forest Lands surrounding private lands in June Lake will ultimately limit growth inducing impacts. The Updated Plan limits growth inducing impacts by confining the area

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[1] Peak population calculations represent the maximum number of persons staying in the Loop on a single day. Calculations and assumptions are contained in the June Lake Master Environmental Assessment's population and housing section.

[2] The estimates, taken from the 1974 Plan, assume an average unit occupancy of of 3.7 persons per unit and 3 persons per campsite and trailer site. 10,455 persons assumes 2,335 units, 550 campsites and 240 trailer sites.

designated for community expansion. National Forest Lands not designated for potential exchange will likely not transfer into private holdings.

RECREATIONAL FACILITY DEMANDS

The expansion of the June Lake Community would also place additional demands on the recreational facilities in the June Lake area. Additional summer visitation may require the construction of additional USFS or private campgrounds. Expanding areas for shore fishing, developing additional hiking trails and bike paths may also be required. During the winter, pressure to accommodate additional downhill skiers may require expanding the June Mountain Ski Area as well as developing additional facilities such as x-country ski trails, snow play areas, ice skating areas and snowmobile areas.

GROWTH IN ADJACENT COMMUNITIES

Growth in surrounding communities, especially Lee Vining located 12 miles north of the south June Lake Junction, may occur as result of new development in June Lake. The primary growth related impacts in Lee Vining would be the demand for additional housing and related community services. Lower housing costs in Lee Vining coupled with June Lake's lack of housing for residents would increase development pressures on Lee Vining.

Development in June Lake would increase the number of jobs and expand the work force. If sufficient affordable short-term and long-term accommodations for rent and purchase are not developed, people working in June Lake may be forced to outside of the community. Currently, housing of any type is in short supply in June Lake. Attracting additional workers without providing additional housing will worsen the situation.

CUMULATIVE IMPACTS

The cumulative impact section contains a discussion on the impacts of individual projects in the June Lake vicinity. Projects analyzed alone may not have significant impacts, however if analyzed with other projects the sum of the individual impacts may create substantial cumulative impacts. In the June Lake Area, the impacts of the Area Plan and of the June Mountain Ski Area expansion were analyzed for cumulative effects.

JUNE MOUNTAIN SKI AREA EXPANSION AND AREA GENERAL PLAN

The June Mountain Ski Area currently operates at a capacity of 2,250 SAOT, although plans to expand to 3,900 SAOT have been approved by the USFS. According to the **Proposed June Mountain Development Plan**, expansion would require improvements in and around the existing June Mountain Ski Area to allow for an ultimate capacity of 7,000 SAOT. Base facilities for 7,000 SAOT would be divided between the existing June Mountain area and new construction in the Hartley Springs area. The Hartley Springs proposal is intended to relieve traffic congestion on S.R. 158 through the June Lake Village. Under this alternative, the June Mountain Ski Area would provide parking and other facilities for up to 3,900 SAOT, while the remaining skiers would access from Hartley Springs.

The proposed Ski Area expansion is anticipated under the June Lake Area Plan Update and would not increase the Plan Update's cumulative impacts. Currently, June Mountain's capacity exceeds the over-night accommodations available in June Lake; community growth to increase lodging and entertainment facilities is required to balance with the Ski Area's capacity. The **June Lake Area Plan** allows for a level of community development that, at full buildout, would exceed the anticipated capacity of June Mountain. The Area Plan also contains measures to coordinate future community expansion in the Rodeo Grounds and June Lake Village with the June Mountain Ski Area. Coordinated, planned development is anticipated to reduce traffic, maintain the Loop's air quality, minimize disturbances on permanent residents, provide employee housing and provide convenient access to recreational, entertainment, commercial and lodging facilities for visitors.

EFFECTS FOUND TO BE INSIGNIFICANT

CEQA requires that EIRs contain a brief statement explaining the various reasons that the proposed project's potential impacts were found to be insignificant. Two potential impacts of the June Lake Area Plan Update were deemed insignificant. The following provides a list of the anticipated insignificant environmental effects:

1) Climatic changes related to the conversion of vegetation to impermeable surfaces.
2) Additional demands on public infrastructure excluding roadways and water supply facilities.

CLIMATE

The level of development allowed under the Updated Plan would not cause climatic changes. In large urban areas, the removal of vegetation and replacement with impermeable surfaces can increase temperatures by retaining more solar energy. The anticipated amount of vegetation to be removed and replaced by impermeable surfaces in June Lake is not anticipated to cause climatic changes.

PUBLIC INFRASTRUCTURE

New development will increase the demand on existing public infrastructure including wastewater treatment systems, communications equipment and electrical transmission systems. The current systems have been designed to meet the Updated Plan's anticipated population with minor improvements.

V.
RESPONSES TO COMMENTS

PUBLIC REVIEW AND RESPONSE TO COMMENTS

PUBLIC REVIEW

The **Draft Environmental Impact Report** (EIR) and the **June Lake Area Plan** were circulated for both agency and public review; the review period lasted 60 days. Notices announcing the availability of the documents were placed in the local newspaper, were posted in the June Lake community, and were mailed to persons attending previous public meetings on the Draft Area Plan. Local and Federal agencies were mailed documents and the State Clearinghouse distributed copies to state agencies Documents were placed in local libraries in Bridgeport, June Lake, Lee Vining and Mammoth Lakes. The Planning Department offices in Mammoth Lakes and Bridgeport also had copies available for public review.

RESPONSE TO COMMENTS

Section 15088 of the CEQA Guidelines requires the Lead Agency to evaluate comments on environmental issues by persons having reviewed the Draft EIR. The Section requires the Lead Agency to identify the individual comments and make an effort to respond to specific comments and suggestions. Responses to comments can take the form of modifying the analysis in the Draft EIR, addressing new alternatives, correcting factual information and explaining why no response is warranted.

Nine Draft EIR responses, one from a federal agency, three from state agencies and five from individuals, were received. Comments discussed a variety of issues. In general, most concerns related to specific policies or land use designations in the Area Plan. Others provided additional information or suggested measures to clarify the material presented in the EIR. The content of the letters has been replicated in this section, and responses follow the respective comments in bold and italicized letters.

FEDERAL AGENCIES

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
2140 EASTMAN AVENUE, SUITE 100
VENTURA, CA 93003

December 17, 1990

Stephen Higa, Project Planner
Mono County Planning Department
HCR 79 Box 221
Mammoth Lakes, CA 93546

Dear Mr. Higa:

The Fish and Wildlife Service (Service) received the draft June Lake Area Plan and Environmental Impact Report (draft Plan) on December 5, 1990. Comments on the draft Plan were due December 7, 1990. We are unable to provide detailed comments at this time due to the late date at which we received the draft Plan and our personnel limitations. After a brief perusal of the draft Plan, we have noted that you may not have used the most current information available regarding endangered, threatened and candidate animal and plants. We have enclosed the current federal lists for your information.

Comment acknowledged. Subsequent conversations with the Service indicated that additional species were not added to the endangered, threatened and candidate list so the EIR was not amended.

The Service will continue to be involved in review of public notices for Clean Water Act Section 404 permits in the June Lakes Area. We encourage pre-application consultation with the Service in 404 issues whenever possible. If you have any questions, please contact Cat Brown of my staff at 805/644-1766.

Comment acknowledged. The Area Plan's Open Space and Conservation Section was amended to encourage pre-application consultation with the Service in cases requiring 404 permits.

Sincerely,

Judy P. Hohman
Acting Office Supervisor

Enclosures (3)

STATE AGENCIES

STATE LANDS COMMISSION
EXECUTIVE OFFICE
1807 13TH ST.
SACRAMENTO, CA 95814

November 20, 1990

TO: Dr. Gordon Snow
State Projects Coordinator
The Resources Agency
1415 Ninth Street
Sacramento, CA 95814

Mr. Stephen Higa
Mono County Planning Department
HCR 79 Box 221
Mammoth Lakes, CA 93546

Dear Dr. Snow:

Staff of the State Lands Commission (SLC) has reviewed the Draft Environmental Impact Report (DEIR) and June Lake 2010: June Lake Area Plan (SCH# 84112606 and 90020990).

By way of general background, upon admission to the Union in 1850, California acquired nearly 4 million acres of sovereign land underlying the State's navigable waterways. Such lands include, but are not limited to, the beds of more than 120 navigable rivers and sloughs, nearly 40 navigable lakes, and the 3 mile wide band of tide and submerged land adjacent to the coast and offshore islands of the State. These lands are managed by the SLC. The SLC holds its sovereign interest in these lands subject to the Public Trust for commerce, navigation, fisheries, open space, and preservation of natural environments, among others.

The proposed project area includes June Lake, Gull Lake, Silver Lake and Grant Lake, each of which contain sovereign State-owned lands as described above. The SLC is therefore a Responsible/Trustee Agency under the provisions of the California Environmental Quality Act (CEQA).

Both documents appear comprehensive. We have, however, the following comments that should be considered in finalizing both documents.

Page I-6

Include the State Lands Commission under "State" agencies.

The State Lands Commission was added to the list of "State" agencies.

Page I-11

The areas of Pine Cliff, West Village, Rodeo Grounds, Down Canyon and Silver Lake Meadow should be identified on the map, shown as Figure 2, for those who are not familiar with the area. Substituting the map shown as Figure 35, Page II-157, would accomplish this task.

Figure 2 was amended to as recommended.

Page II-19

For California, it is probably unnecessary to list either the American Kestrel (Falco sparverius) or the Barn Owl (Tyto alba) as having special status.

The above species were deleted from the list.

Page II-59

The section on volcanism probably understates the regional dangers. If, as some geologists believe, a true caldera-forming event took place, there would almost certainly be considerable loss of life, as well as property. Some relative probability of a caldera explosion in contrast to a general eruption should be included.

Comment acknowledged and the section was amended to include this information.

Page II-140

As an alternative, some discussion of collecting and treating the runoff would be appropriate in the EIR. It would clearly benefit June Lake and the channel to Gull Lake. While such an alternative may not be economically feasible, it should be considered at the EIR phase.

Comment acknowledged. The EIR has been amended to reflect the need for a drainage collection and treatment system upstream of Gull Lake.

We appreciate both the work that went into these documents and the opportunity to review them. If you have any questions, please contact Kirk Walker at (916) 322-0530.

Sincerely,

Dwight E. Sanders, Chief
Division of Environmental
Planning and Management

cc: Kirk Walker

CALIFORNIA DEPARTMENT OF TRANSPORTATION
500 SOUTH MAIN STREET
BISHOP, CA 93514

File: Mno-158-Var
SCH #90020990

November 15, 1990

County of Mono
Planning Department
HCR 79, Box 221
Mammoth Lakes, CA 93546

Attn: Mr. Stephen Higa

June Lake Area Plan and DEIR
SCH #90020990 (SCH #84112606)

We have reviewed the above referenced document and have the following comments:

The Plan and DEIR are comprehensive and very well prepared. The coordination efforts that will be carried on with Caltrans and other agencies is commendable and we look forward to working closely with you. As a means of avoiding surprises and disappointments by project proponents, we would like the opportunity of working with you and developers during project proposal stages.

You may want to remove references to Caltrans' participation in the construction or financing of an emergency access road north of June Lake from the Plan and DEIR. Recently a determination was made by Caltrans, after consultation with the USFS, that such an access would be environmentally and fiscally unfeasible.

Comment acknowledged. The June Lake Citizens Advisory Committee decided not to remove the reference in the Area Plan to keep this option open.

However, as a means to mitigate the potential for isolation of the June Lake community, in the event of an avalanche blocking State Highway Route 158, a "Snow Shed" is now programmed to be constructed over the highway about two miles west of Route 395.

Comment acknowledged. Possible construction of Snow Sheds has been added to the transportation section.

Thank you for the opportunity to review the Plan and DEIR and if you have any questions regarding these comments, please call me.

Very truly yours,

Andrew J. Zeilman, Chief
Transportation Planning Branch

AJZ:ac
cc: SCH

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA

MEMORANDUM

To: Dr. Gordon F. Snow
Assistant Secretary for Resources

Mr. Stephen Higa
Mono County Planning Department
HCR 79 Box 221
Mammoth Lakes, CA 93546

Date: November 15, 1990

Subject: Draft EIR for the June Lake Area Plan SCH#90020990

From: Department of Conservation-Office of the Director

The Department of Conservation's Division of Mines and Geology (DMG) has reviewed the Draft June Lake Area Plan and the Draft Environmental Impact Report (Draft EIR) for the June Lake Area Plan. The Draft EIR identifies the environmental impacts which could result from the adoption of the Draft Area Plan. The following reports were reviewed by DMG:

- Draft June Lake 2010: June Lake Area Plan, by the June Lake Citizens Advisory Committee, Mono County Planning Department, September 1990, SCH# 90020990.

- Draft June Lake Area Plan Environmental Impact Report, by the Mono County Planning, September 1990, SCH# 90020990.

Based on our review of these reports, we offer the following comments:

1. Potential impacts on mineral resources from implementation of the Draft Area Plan are not discussed in either document. For example, the Draft Area Plan identifies an aggregate pit and processing operation on the Existing Land Use Map for the Pine Cliff area (Figure 5.A). However, there is no discussion of impacts on this mining operation from the planned development in the area, nor of the impacts on the planned development from the mining operation.

Mining operations in the Pine Cliff area are occurring on National Forest lands. If the Pine Cliff property is exchanged from public holdings to private, the Area Plan calls for the preparation a Specific Plan and associated environmental documents. These documents will consider impacts of development on mining operations and the impacts of mining on future development.

Land uses decisions involving the June Lake Planning Area, made during this EIR process, have the potential for impacting existing mines and mining operations, and future mineral resources availability. Therefore, the Draft Area Plan should identify the mineral resource potential of the area and specify a policy for them. DMG recommends that the Final EIR contain a discussion of the mineral resource potential of the Planning Area, including an economic evaluation. The Final EIR should provide an analysis of the Impacts that the proposed Area Plan, if implemented, will have on the local and regional mineral resource supplies, and address the cumulative impacts that development will have on the long- and short-term supply of locally available mineral resources in the area.

The mineral resource potential and policies for the June Lake area are addressed in the Draft Mono County General Plan Mineral Resource policy, a document recently reviewed by your agency. Support documents for the Draft Mineral Policy include an economic evaluation.

The EIR for the Mineral Policy will address development impacts on the June Lake area's mineral resources.

2. In the Draft Area Plan, mitigation measures are to be implemented in areas where specified geologic and seismic hazards exist. Detailed maps showing the areas where these mitigation measures apply should be included in the Area Plan. The maps should be of a sufficient scale and detail in order to easily locate specific lots on sites relative to areas of known geologic and seismic hazards.

The geologic hazard and fault rupture zone maps are located in the EIR's Natural Hazard section. As you suggested in comment #4, the Area Plan and EIR will be distributed and used together.

3. The Draft EIR does not discuss the geologic and seismic hazards that may exist outside of the June Lake Loop area, yet within the June Lake Planning Area. For example, there is no discussion of the hazards which may affect the Walker Lake area, an area to be considered for more development. We recommend geologic and seismic hazards be identified in all areas where future development may occur and that methods to mitigate these hazards be made.

A review of the Alquist-Priolo Maps indicates that the Walker Lake area lies outside of the potential fault rupture zones. The Area Plan designates the Walker Lake area for development under the County's planned unit development ordinance. As part of the planned unit development process, geologic studies to identify hazardous areas, if deemed necessary, will be conducted.

4. The Draft EIR contains maps that are essential for locating geologic hazard areas that are discussed in the Safety Element chapter of the Draft Area Plan. Additionally, the Draft Area Plan contains the mitigation measures that apply to the impacts discussed in the Draft EIR. Because the Area plan and EIR appear to depend on one another, these documents should be distributed together when either one is requested.

Comment acknowledged.

If you have any questions regarding these comments, please contact Roger Martin, Division of Mines and Geology Environmental Review Project Manager at (916) 322-2562.

Dennis J. O'Bryant
Environmental Program Coordinator

DJO:RW:skk

cc: Roger Martin, Division of Mines and Geology
Rick Wilson, Division of Mines and Geology

INDIVIDUALS

MOUNTAIN ENVIRONMENTAL GROUP
P.O. BOX 384
MAMMOTH LAKES, CA 93546
(619) 934-2905

Mono County Planning Department
HCR 79 Box 221
Mammoth Lakes, CA 93546

Attn: Mr. Stephen Higa

Subject: June Lake Draft Area Update

Dear Mr. Higa:

I have reviewed the referenced document and would like to submit the following comments. I have some concerns regarding the development restrictions placed on the "Natural Habitat Protection District", and the overall handling of development on wetland areas. Specific comments follow.

1. (per page III-51) Under the description of allowable development in the NHPD, the plan limits total development to various percentages of the subject parcel, either related to total parcel area or total non-wetland area. Assuming that a parcel is considered 100% wetland (presumably a judgement reached by the Corps of Engineers, the federally responsible agency for construction involving wetlands) then a maximum of 2% of the total parcel area may be disturbed for all construction. I feel that 2% is unnecessarily restrictive, considering the fact that this is the only district in the June Lake Loop where development is restricted because of the presence of wetlands. If you are familiar with June Lake, you know that there are many areas within the Loop that support wetlands, and that wetlands are not limited to the Natural Habitat Protection District. While I agree that the NHPD is a quality area of natural habitat, primarily because it is 30+ acres of open space, there are many other areas in the Loop that support wetlands of equal (or greater) habitat value. Granted, these areas may be smaller than the NHPD parcels, however they are often much more diverse in terms of species composition and habitat structure. They too, provide food and cover for the wildlife of the June Lake Loop. I am not suggesting that all potential wetland areas in June Lake be subject to restrictions such as 2% maximum coverage limitations, but it appears that the properties in the NHPD are bearing the burden of protecting June Lake's remaining habitat while destruction of wetlands in other areas of the Loop continues unchecked. As an example; I watched with shock and disbelief this summer as an aspen meadow was virtually annihilated by construction of a condominium project. When I inquired with your office regarding this project, I was informed that the zoning allowed for this type of site disturbance, and that the Corps of Engineers was not interested in the project due to its small size. I find that most interesting because I have had the Corps out in the field at least twice to review an adjoining parcel to that project site that also contains an aspen meadow. Together, these parcels provided a significant habitat area. Although this development was conducted under the existing General Plan, it could still occur in the same manner under the Draft Update. If the County is truly concerned about wetland protection, then some kind of fair coverage restriction on development should be placed on all wetland areas in June Lake, regardless of their location or parcel size. This seems more equitable to me than the current process of allowing small parcels to be destroyed on a piecemeal basis and then setting such severe restrictions on the two parcels in the NHPD (and

that is all that is covered by this designation) so that any development in this district is essentially prohibited.

As an environmental professional, I am concerned that the natural character of the June Lake Loop be preserved. I am also concerned that development be allowed to occur in a sound manner. Considering the fact that any development in the NHPD still be subject to environmental review (via the Corps and other avenues), it would seem appropriate to allow a disturbance level that is fair to the landowner. I would suggest that a 4-5% total parcel area be allowed to be disturbed for development of lands within the NHPD. This is still significantly lower than the coverage levels of 40% permitted by the Plan for single family home development in other areas in the Loop. As another way to protect these properties, uses in the NHPD could be limited to those which would have the least amount of indirect effects on the surrounding open space areas. Often the indirect effects of development are more significant than the actual physical disturbance of the land.

Any development proposed for the NHPD should be subject to some form of environmental review. Obviously, the Corps will be involved, but other review should be required if necessary, and the level of review should be commensurate with the scope of the project proposed. This will provide the opportunity for agencies to comment on any proposed activity. If the project is not environmentally sound, then (assuming the system works) it should be subject to modification or should not be approved. This seems to be a more equitable way to handle the lands within the NHPD than the arbitrary disturbance limitations set forth in the Draft Update.

In designating land uses in the Plan Update, the June Lake Citizens Advisory Committee used four criteria: the existing land use of the property; the existing General Plan designation; the existing zoning; and compatibility with surrounding land uses. The Natural Habitat Protection District was carried over from the 1974 Plan in the Plan Update using this criteria.

The U.S. Army Corps of Engineers (Corps), the primary regulator of wetlands, enforces wetland protection policies. Under the Corp's existing nationwide permit system, projects which disturb less than one acre of wetlands are exempt from their review. This leads to the situation where piecemeal development on small parcels is allowed while larger parcels are held to the Corps permitting requirements. The Area Plan's wetland policies defer to the permit process of the Corps.

2. (per page III-51) In addition to the coverage limitation levels previously discussed, all development in the NHPD is further restricted to placement on pilings. While this may be a reasonable requirement for building construction, it again appears overly restrictive for road construction. If total disturbance is already limited to 2-5% (whatever is ultimately decided) then it seems that projects are being doubly penalized by the addition of this requirement. Please recall that this allowable disturbance includes all necessary grading and fill. Regardless if this disturbance takes the form of large buildings on pilings or small buildings on larger graded pads, it is still limited to a set percentage of the property. Although some argument may be made for pilings construction because it enables preservation of habitat underneath the structures, I have been told by the Corps that this habitat is not really preserved because it is devoid of sunlight and otherwise indirectly altered by the structure above it. In regard to this requirement, I would suggest that it be removed entirely, and replaced with requirements for the developer to coordinate closely with the Corps and the County to arrive at a development plan which is located and designed to be as environmentally sensitive as possible. That is, after all, what we are striving for.

The NHPD policies would allow for development in the district's non-wetland areas up to the alteration limitations in the Area Plan. Development of wetland areas in the NHPD would no longer be required to take place on pilings; this policy was removed from the Draft Area Plan. Development, however, would still be subject to the review and approval by the Corps and U.S. Fish and Wildlife Service.

I appreciate your consideration of these comments in your final revisions to he Draft document. Thank-you for this opportunity to comment.

Very truly yours,

MOUNTAIN ENVIRONMENTAL GROUP

Meg Saeli

cc: Mr. Don Rake

October 25, 1990

Stephan Higa, Project Planner
Mono County Planning Dept.
HCR 79, Box 221
Mammoth Lakes, CA 93546

RE: June Lake Draft, 2010
APN: 15-073-25

Dear Steve:

The new June Lake Draft addresses the above mentioned parcel with a land use designation of MFR-H (15 units per acre). The present land use is of a higher density. Equal to the 40 units per acre land use.

I would like to request that your advisory committee take this matter into consideration and reclassify to the density that presently exist. Thank you.

Comment acknowledged. The June Lake Citizens Advisory Committee at their 1-8-1991 meeting changed the land use designation from MFR,H to Commercial Lodging, High (CL,H).

Respectfully,

Robert Toomey
Lake Front Cabins
P.O. Box 696
June Lake, CA 93529

cc: Bill Waite

December 5, 1990

Stephan Higa
Mono County Planning Dept.
HCR 79 Box 221
Mammoth Lakes, CA 93546

RE: June Lake Draft, 2010
APN: 15-072-15

Dear Mr. Higa

The new June Lake Draft addresses the above mentioned parcel with a land use designation of MFR-H (15 units per acre). The present land use is of a higher density. Equal to the 40 per acre land use.

Comment acknowledged. The June Lake Citizens Advisory Committee at their 1-8-1991 meeting changed the land use designation from MFR,H to Commercial Lodging, High (CL,H).

I would like to request that your advisory committee take this matter into consideration and reclassify to the density that presently exists. Thank you.

Respectfully,

Richard & Tonya Ferguson
Haven Motel
P.O. Box 157
June Lake, CA 93529

December 5,1990

Stephen Higa
Project Planner
P.O. Box 8
Bridgeport, CA 93546

Dear Mr. Higa:

Thank you for the opportunity to respond to the Draft June Lake Area Plan. I appreciate all of the work you and members of the June Lake community put into this plan. Because of my own time constraints, I was not able to comment as extensively as I would have liked. Here are my comments.

1. Objective B under Policies II Community Development states: "Promote well-planned and functional community development that retains June Lake's mountain community character and tourist-oriented economy."

Objective A under the Open Space and Conservation Policy states: "Protect the Loop's natural environment by controlling new development in environmentally sensitive areas and by mitigating the impacts of development to the greatest extent practical."

Objective A under the Tourism Policy states: "Expand and diversify June Lake's tourist base to provide for the year round needs of multiple user groups, while maintaining the Loop's character and protecting its scenic resources."

These are only three of many objectives that state how important it is to: "retain(s) June Lake's mountain community character," "Protect the Loop's natural environment," and "maintaining the Loop's character and protecting its scenic resources." While the plan seeks to mitigate the effects of the extensive development it has planned, it can not, due to the size of its preferred alternative, achieve the objectives states above. Obviously, as shown by the number of times it is mentioned throughout the plan, June Lake's natural environment is much cherished by its community members and tourists.

Comment acknowledged.

Within the boundaries of the June Lake planning zone are areas of environmental sensitivity and scenic value. The plan recognizes the Silver Lake Meadow area as a sensitive area and as the "only area falling under this (Natural Habitat Protection District) designation." (Act 1.1 under the Natural Habitat Protection District page 89 Draft Plan.) I would also like to see the plan recognize the meadows surrounding Gull Lake, the grass area between June Mountain and the Petersen Track on HWY 158, the area bordering 158 near Fern Creek and behind the Four Seasons as environmentally sensitive and scenically valuable.

The Area Plan has assigned land use designations only to private land, or lands that are proposed for exchange in the planning area. The areas described are national forest lands managed by the USFS; the County does not have land use authority on national forest lands.

Under Community Development Policy 1 and Actions 1.1, 1.2; Policy 2 and Actions 2.1 Land trades are discussed. The plan recommends land trades of environmentally sensitive and of hazardous lands. Under the Open Space/Conservation element Policy 2 Action 2.1 it states: "Two areas, the Silver Lake Meadow and the hillslope lands overlooking the June Lake Village, are recommended for land exchange. If trades are not possible, limited compatible development should be allowed." The Silver Lake Meadows are recommended because of their scenic value; the hill behind June Lake Village is recommended because of its avalanche potential. I also think these areas should be recommended for land trades. I don't think that "if trades are not possible, limited compatible development should be allowed." The plan should set these areas aside as open space, unconditional open space. Because of their scenic value and location, lands east of Little Walker Lake should also be considered or encouraged to be a part of a land trade or purchase by a conservancy group.

Comments acknowledged.

Objective C under Community Development states: "Contain growth in and adjacent to existing developed areas, and retain open space buffers around each area." I support this objective and its accompanying policy that requires Specific plans for large projects. Under Objective A Action 1.1 it states: "Work with the Forest Service in identifying suitable lands for exchange or purchase. Lands in the West Village/Rodeo Grounds, Down Canyon and Pine Cliff areas should receive priority consideration. This program should respond to the changing needs and desires of the June Lake Community." After looking at the Figure 6.C on page 54 of the Draft Plan concerning Planned Land Use for the West Village/Rodeo Grounds area, it would seem that in encouraging this size of development, not only does the plan ignore its own objective to maintain the scenic values and natural character of June Lake, it also is ignoring the above Objective C. To fully develop the West Village/Rodeo Grounds area would not be retaining growth in and adjacent to existing areas. It looks as if it would be unrestrained growth with little allowance for open space buffers. I also think that Pine Cliff should remain as it is today, primarily open space with some light industrial. I realize it is a lower priority land trade, but to even consider developing there would be to guarantee leap frog development.

The goal of the Area Plan is that June Lake ultimately develop into a "moderately-sized, self-contained, year-round community." Inorder to achieve this goal, the Plan provides for development in the West Village and Rodeo Grounds areas. These lands have previously been, or are currently in the process of being, exchanged from federal into private ownership. In identifying these exchange lands, the Forest Service extensively studied the proposed sites and has avoided environmentally sensitive areas. The Forest Service has also retained substantial amounts of open space surrounding the land trade areas. June Lake is an island of private land surrounded by National Forest lands, the areas identified for exchange or conditional exchange plus the existing private lands will be the area open to community development. "Unrestrained growth" would be prevented by the existing land ownership pattern and the policies of the Plan which ensure that all future developments will comply with the environmental regulations of the County and State.

The Pine Cliff area is designated a "conditional development area" that is subject to further land use studies and environmental analysis. The potential growth inducing impacts of developing the area were responsible for designating the Pine Cliff area for "conditional development" rather than a land trade area. The Plan contains development standards that must be met before a land trade involving the Pine Cliff area is initiated.

I appreciate your efforts as stated under Solid Waste Objective E to encourage recycling by businesses in the community. The term "where feasible" should be eliminated from. Under

this same objective Policy 2 Actions 2.1 and 2.2, the words "Where feasible" should be replaced with "encourage" or "work with."

Comment acknowledged.

There are many other places within the document where the term "Where feasible" is used. This term is too subjective. Who will decide what is feasible? I appreciate the discussion of wetlands and commend the plan on its decision to recognize their importance and the importance of having them designated. Under the Open Space and Conservation/Natural Habitat Protection Policy 1 Action 1.3 it states: "Where feasible, locate development on lands devoid of environmentally sensitive habitats." This suggests that there will be times when environmentally sensitive lands will be developed because of lack of environmentally unsensitive lands. Action 1.2 under this same policy states: "Limit development in natural habitat zones to retain sensitive environments while allowing for compatible development." In the instance of wetlands, three scenarios have been created allowing for some development to occur under each one. Under Action 1.2, the plan should take a stronger stand and recommend against all development on environmentally sensitive lands and near and on all wetlands.

The "Where Feasible" would be decided by the decision makers reviewing a development project. In most instances, this will be the Board of Supervisors or the Planning Commission following public input and environmental analysis. The term "where feasible" allows decision-making bodies to prioritize the policies in the Plan to reflect the changing needs of the community. It also allows for some interpretation that would reduce the need to amend the Area Plan.

Again in the Open Space and Conservation policy 1 Objective A Action 1.2, 1.3, 1.4, it states three times "Where feasible." The "Where feasible" in these actions should be eliminated.

Comment acknowledged.

Under the Air Quality Policy 2 the reduction of wood stove pollution is discussed. I would like to see stronger policies included that call for the use of non-wood burning heating such as solar energy and central heating.

Comment acknowledged.

The development of the Hartley Springs area for skiing is an issue that will be brought before the public. The Draft June Lake Area Plan is supposed to deal with planning issues within its boundaries and is to reflect the consensus of its public. Policy 4 Action 4.2 under the Tourism Policies states that the June Lake Area Plan should "Encourage the USFS to consider expanding the existing ski area into Hartley Springs...." I think this action should be eliminated from the plan considering its subjectivity, lack of verified public consensus, and for the reasons stated above.

Comment acknowledged.

Finally, I understand the need to "revitalize" June Lake's economy. The plan's attempt to consider all elements is admirable and I commend it on its constant concern about the natural character of the June Lake area. The Preferred Alternative, while it seeks to provide a well rounded community, also will contribute to the breakdown of the scenic qualities so many of the June Lake residents said they wanted to maintain. The plan should designate more open

space and reduce the size of the proposed West Village/Rodeo Grounds developments. The plan should use firmer language in supporting its natural environment. Thank you for your efforts and for the opportunity to comment.

Comment acknowledged.

Sincerely,

Patricia J. Holland-Suppa
P.O. Box 372
Lee Vining, CA 93541

December 6, 1990

Mono County Planning Dept.
HCR 79 Box 221
Mammoth Lakes, CA 93546

Dear Sir:

I am writing again to express my concern and opposition to the proposed commercial zoning change for the Carson Peak Inn and the adjacent lot on the corner of Highway 158 and Los Angeles St. (Figure 6.D, page III-55).

I will again restate some of my objections to this rezoning:

Objective C, Policy 1 (page III-40) states "Encourage compatible development in existing and adjacent to neighborhood areas". The properties in question are on highway frontage but are also most definitely in a residential area among single family residences, namely my residence which borders on Lots 26-29.

Objective F (page III-41) states to "Protect existing and future property owners and minimize the possibility of future land ownership/use conflicts through the building and planning permit presses". By zoning this property commercial you are opening up the possibility for any number of uses that would conflict with the quiet residential tone of the neighborhood. It seems that this can be avoided right now in how you choose to zone this property. The Carson Peak Inn has been in operation for as long as I can remember under its current zoning classification but if it is changed to commercial zoning, what is to preclude the owner from buying a liquor license and changing it to a bar which includes live entertainment, or selling it outright to someone else who would do this. Mr. Higa writes in a letter to Ron Leuschner on March 8, 1990 that "if surrounding landowners object to a particular project at the Planning Commission or Board of Supervisor meetings, then in all likelihood, the project will be altered or in some cases even denied". I feel that we have better things to do with our time than attend Planning Commission and Board of Supervisor hearings in the FUTURE when this could be avoided in the PRESENT.

Comment acknowledged. The June Lake Citizens Advisory Committee at their 1-8-1991 meeting changed the land use designation from Commercial to Commercial Lodging, High.

Dating back to the 1975 June Lake Loop General Plan Environmental Impact Statement it is stated repeatedly to maintain the residential integrity of the Down Canyon area of June Lake.

I have lived in June Lake for 17 years. My husband and I own two homes in the village area of June Lake and if we desired to live in a commercial area we could have remained there. Six years ago, after having a child we decided to look for a more neighborhood type living experience so we invested all the money we had and purchased our home on Los Angeles Street.

Now this report tells me that we could end up living next door to an all night liquor store or gas station, so if you decide to rezone these parcels commercial, why don't you rezone my (contiguous) property commercial also and I can sell out and find a new neighborhood to live in.

Sincerely,

Linda Rossier

VI.
MITIGATION MONITORING PROGRAM

- To periodically review and suggest necessary adjustments and revisions to the Plan or its supporting documents. Such reviews shall occur at least once each year.

- To review and comment on planning projects proposed within the June Lake Planning Area. The CAC comments would be considered by the Planning Commission or Board of Supervisors prior to action on planning projects in the June Lake Area.

- To assist the Planning Department in conducting rezoning studies necessary to bring June Lake zoning into conformance with the Area Plan.

- To provide community input on capital improvement projects called for in the Plan.

- To assist the Planning Department in developing ordinances, regulations, and procedures for implementation of the June Lake Plan.

Mitigation measures will also be monitored during the general plan consistency review conducted by the Planning Department on each discretionary planning project proposed in June Lake. Building permits shall also be reviewed for compliance with Plan mitigation measures. The Mono County Planning Commission and Board of Supervisors will be responsible for certifying future environmental documents and granting discretionary project approvals in a manner consistent with the mitigation measures and policies of the June Lake Plan.

The time frames for monitoring are ongoing for the twenty year life of the Plan.

LEGEND: Alternative 2 Multimodal Map

scale of map: 1" = 20'-0"

- edge of paved roads, with and without curbs
- edge of travel lane
- center line of two way streets
- driveway ingress/egress
- outside edge of sidewalk
- crosswalk
- storm drain
- stop sign
- street light
- firehydrant
- private/community sign on pedestal or end supports
- private/community sign elevated on central post
- building
- fixed planter
- movable planters
- coniferous trees
- deciduous trees and large bushes
- stairs, handrails, and sidewalk
- bench
- pay phone

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