

An aerial, black and white photograph of the Squaw Valley ski resort. The image shows a dense forest of evergreen trees, ski runs, and various buildings. The text is overlaid on the image in a stylized, outlined font. The entire image is framed by a decorative border consisting of a solid black line with a row of small white dots just inside it. On the left side, there are several thick, black vertical bars.

SQUAW VALLEY

GENERAL PLAN

FINAL

ENVIRONMENTAL

IMPACT REPORT

1983

SQUAW VALLEY GENERAL PLAN
FINAL
ENVIRONMENTAL IMPACT REPORT
SCH #81101205

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PREPARED BY
PLACER COUNTY PLANNING DEPARTMENT

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I N T R O D U C T I O N / S U M M A R Y

This Environmental Impact Report should be reviewed in conjunction with the 1982 Squaw Valley General Plan. The EIR discusses existing conditions within the Valley as well as possible impacts and applicable mitigation measures. The degree of specificity is necessarily general since no construction projects are being analysed.

The updated General Plan is intended to completely replace the Squaw Valley General Plan of 1972. The new plan contains the standard elements of a general plan and also development standards for all subsequent projects. The document is designed to provide future users with all the pertinent information they will need to determine development constraints, potential, and uses of land within Squaw Valley.

The Environmental Impact Report discloses certain areas where impacts will act as constraints for subsequent development activities. Among these are soils, avalanche hazard, drainage and flood control, water quality, traffic, and aesthetics. Mitigation measures have been incorporated into the General Plan to the extent that impacts associated with build-out will be substantially mitigated, or they are not of a significant nature.

G E O L O G Y

Environmental Setting

Geological characteristics of the Squaw Valley area are similar, in a general sense, to the geology of the regional area of the northern Sierra Nevada and the Lake Tahoe Basin area. However, because of topographic and geomorphic features of Squaw Valley, the area has characteristics that are unique and pose specific problems for developments. The peaks and headwater area of the valley consist of minor occurrences of older Mesozoic metamorphic rock, Mesozoic granitic rocks, and younger Tertiary volcanic rocks. These rocks range from hard, dense andesite flow rocks to blocky andesite agglomeritic mud flow rocks that have the appearance of cemented glacial moraine. The granitic rocks range from massive, hard rock to soft, highly decomposed sand like rock. Pleistocene glacial activity during two distinct periods mantle areas of steep slopes and form thick lateral and terminal moraines on the valley floor and along the walls of the valley. Subsequently, erosion deposits, in the form of outwash materials from the moraines and from the fine-grained lakebed sediments, formed thick sections of soil-like deposits with cobbles and boulders on the valley floor. The lakebed deposits principally underlie the valley floor and the marshy areas dissected by Squaw Creek but also occur in isolated, closed basins throughout the area. The lakebed sediments consist of clay, silt, and sand size materials of granitic and andesitic composition. The glacial deposits consist of clay to boulder size material of andesite and granitic composition, Matthews (1968 and 1972) and Biekeland (1963, 1964, and 1968) discuss the age of glaciation and recognition of Tahoe and Tioga stages of glacial activity in this area.

The Geologic units that are of greatest concern in developments within the valley are: Fractured andesite flow rocks and mud flow breccia that underlie steep slopes; moderately erodible lateral and terminal moraines on steep to moderately steep slopes; and highly erodible lakebed sediments and alluvium on moderate to steep slopes and the valley floor. Thin clay/loam and granular soils mantle much of the area - thin in the uplands and thin to moderately thick in the lowland areas. Rogers (1972) has classified the soils as predominantly andesitic in origin, but small or local areas have granular, granitic soils as well. The soils overlying the lakebed deposits in the valley are predominantly organic rich clay loams. The steep relief, geologic structure such as the contact between the younger volcanic rocks and the granitic rocks, the thick mantle of glacial material and the seismic activity of the general area require that consideration be given to the potential geological impacts resulting from developments. The recency of the 1966 Truckee-Boca earthquake and the more recent seismic event that occurred in the Kingvale/Soda Springs area clearly illustrate that earthquake activity is a geologic process that must be taken into account. An earthquake of magnitude seven (M7) or greater can be projected for the general area. Such seismic activity related to the Sierran frontal fault system on the east side of the Sierra Nevada is less than 25 miles from Squaw Valley. Greenfelder (IRPA, 1972) has projected a recurrence interval of about 110 years for a magnitude 7 earthquake within this 25 mile zone. While projections of recurrence intervals of moderate to large earthquakes can be expected to occur in a general area, the capability to predict such earthquakes is not yet perfected.

Impact

Impacts from proposed developments will vary considerably depending upon the location and type of developments. Developments on upland slope areas which include ski facilities and related facilities will potentially have impacts related to

slope stability, disturbance of surface water runoff and accelerated erosion conditions. In addition, modifications of the upland areas have a potentially damaging effect on groundwater conditions throughout the Squaw Valley area. Slope stability impacts include the effects of undercutting of steep slopes; initiating or reactivating unstable slide or rock avalanche areas including steep talus slopes (an area of potentially hazardous, unstable talus is located on the north side of the valley above the terminous of Apache Court and is shown on Plate 1, Geologic Map). Another area of potential slope failure is the steep artificial fill below the debris dam on the south side of Squaw Valley. Developments such as roads and ski lift construction, if not correctly engineered using engineering geologic criteria, could activate slope failure. Seismic activity during adverse climatic conditions (saturated or heavy snow pack conditions) could also result in slope failure problems. Erosion conditions range from moderate to severe on areas of moderate to high relief (Table 1). Construction of roads and ski facilities could alter existing conditions through modification of existing developments or by construction of new developments. The thin soil cover of clay/loam soils are highly susceptible to both sheet and rill (gully) erosion. Such erosive activity not only affects water quality and vegetation, but groundwater recharge as well. Under increased erosion activity, the existing natural sedimentary traps in meadow areas could be overloaded and result in accelerating downslope erosion. The existing debris dam on the south side of Squaw Valley could, under accelerated erosion activity or following a seismic event, result in slope failure and in rapidly accelerating erosion downslope.

T A B L E 1

GENERAL FEATURES THAT AID RECOGNITION OF ENVIRONMENTAL PROBLEMS
OF GEOLOGIC UNITS IN THE TAHOE BASIN AREA CALIFORNIA

(Risk Potential: H = High, L = Low, M = Medium)

GEOLOGY MAP ROCK UNIT	Erosion Potential	Siltation Potential	Seismic Hazard Potential	Degree of Consoli- dation	Relative Bearing Strength	Stream Channel Stability	Natural Landslide Slump or Rockfall Potential	Disturb. Landslide Slump or Rockfall Potential	Excavation (riparability) Charac- teristic	Source of Construc- tion Material (Fill)	Soil Creep
1 Qls Landslides & Rockfall	H	H	H	L	L	L	H	H	H	L - M	H
2 Qal Steam Alluvium	M - H	M	L - M	L - M	L - M	M - H	L	M	H	H	L
4 Qg Glacial Outwash	M - H	M - H	L - M	L	L - M	M	L - M	M	M - H	H - M	L
5 Qm ³ Tioga Moraines	M - H	M - H	L - M	L	L - M	M - L	M	H - M	H - M	M - H	L - M
6 Qm ⁴ Tahoe Moraines	M - H	M - H	L - M	L - M	L - M	M - L	M	H - M	H - M	M	L - M
8 TvP Mudflow & tuff breccias	M - H	M - H	M	M - L	L	M - L	M	M - H	M - H	M	M
7 Tv Volcanic undiffer	M	M	M - L	M	M	M	M	M - H	M - H	M	M
9 gr Granite undiffer.	L	L	L	H	H	H	M	L - M	L	M	L

(From Matthews and Burnett, 1971)

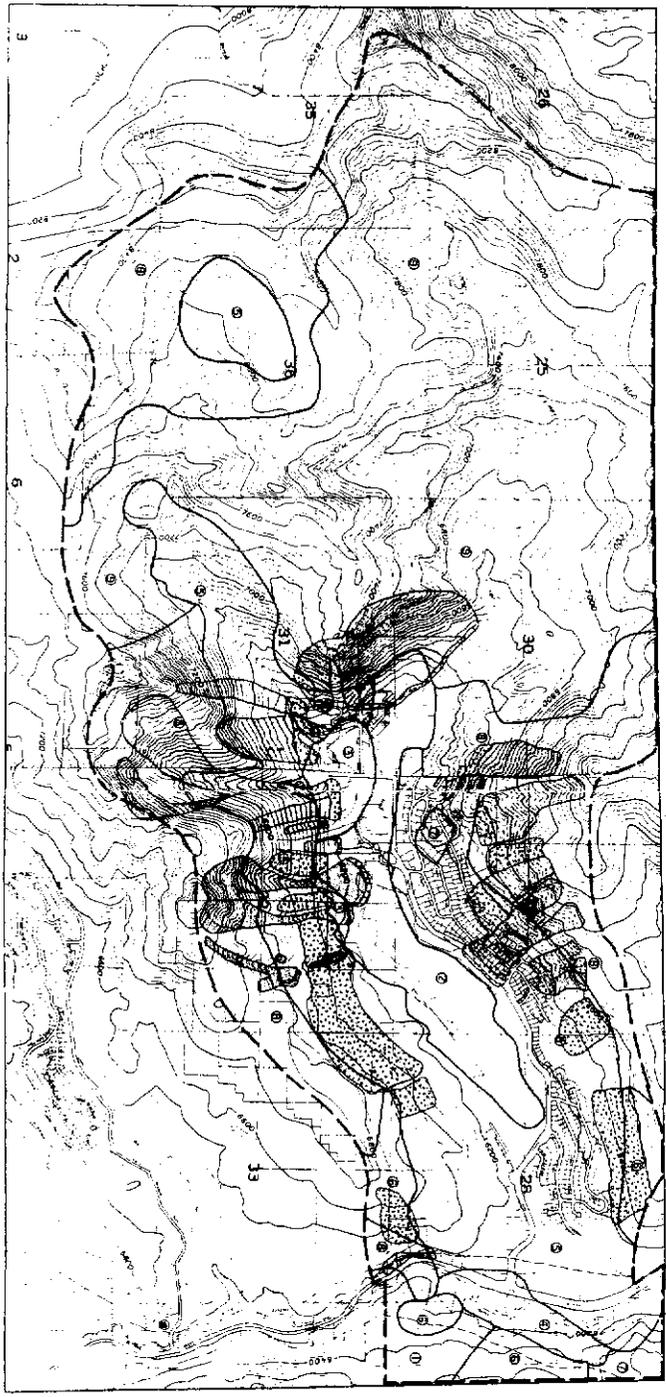
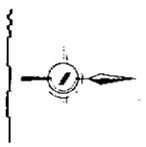
**SQUAW VALLEY
GENERAL PLAN
1983**

GEOLOGY & AVALANCHE HAZARD

- LEGEND**
- ① Landslide and debris flow
 - ② Stream deposited Alluvium
 - ③ Older stream Alluvium
 - ④ Top glacial outwash deposit
 - ⑤ Latest glacial moraine (Tonga)
 - ⑥ Older glacial moraine (Tewa)
 - ⑦ Volcanic flow deposit (Andesite)
 - ⑧ Volcanic deposit (mudflow breccia)
 - ⑨ Granitic intrusive rock

- AVALANCHE STUDY**
- High Hazard Area
 - Potential Hazard Area
 - No Hazard Area

2 3
 Traction Conspire
 Sheep Tracks or Rockfall Signs



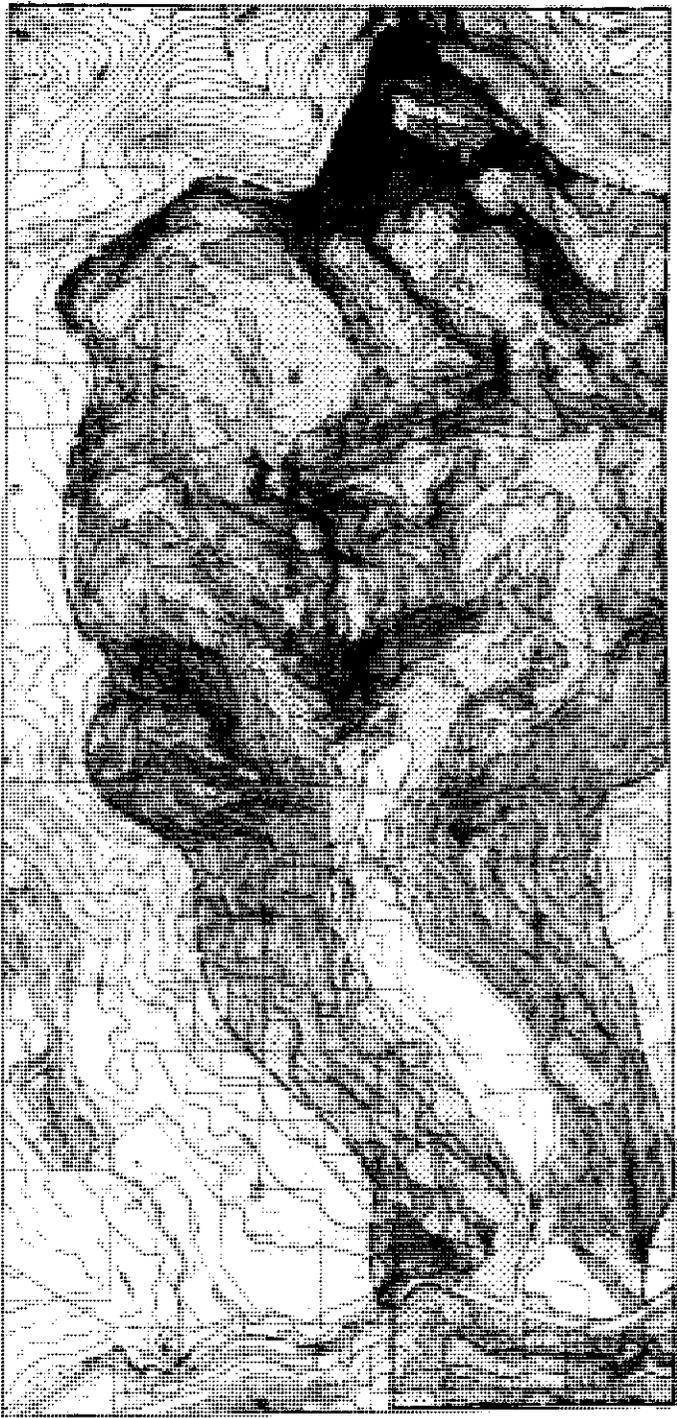
SQUAW VALLEY GENERAL PLAN (1)

GEOLOGY

GEOLOGICAL CLASSIFICATIONS

DEVELOPMENT GUIDES

Q1s	Landslides & Debris flows	Only major slides are shown. These geologic units may be very unstable when disturbed. Extreme care should be exercised if any development in the area is considered. Extensive foundation testing should be required and plans reviewed by a qualified geologist.
Qal	Stream deposited alluvium	Extensive stream deposited alluvium in valley floor - mainly silt, cobbles and sand that is overlain by soil layer. Composition of material similar to that of glacial moraines and outwash. Relatively stable in natural state, but highly erodible when disturbed. Major recharge area for ground water and affected by sewage or septic disposal or outflow and surface run-off. Any disturbance will tend to affect the natural balance of the meadow. Older alluvium has similar problems.
Qal(0)	Older stream deposited alluvium	
Qg ³	Younger glacial outwash	Unconsolidated sand, silt, gravel and boulders that formed by erosion and outwash of glacial moraines - generally resistant to erosion in natural state, but has moderate erosion problems if disturbed. Under controlled conditions (geological and soils engineering) these rock units may be developed; however their topographic position may present poor location of sites.
Qm ³	Younger glacial moraine (Tioga)	Extensive deposits of these moraines mantle the lower portions of Squaw Valley. Deposits are moderately consolidated and consist mainly of sand, silt, cobbles, minor clay and boulders of very resistant volcanic and metamorphic rock and frost resistant boulders of granitic rock. These deposits are relatively stable in natural state but erosion problems when disturbed.
Qm ⁴	Older glacial moraine (Tahoe)	
Tv ^a	Older Volcanic flow rocks	Andesite volcanic flow rocks that are generally very tough resistant, stable rocks. Talus problems exist below steep slopes but are mainly the basaltic intrusive volcanic rocks, except where these rocks are extensively broken by joint fractures, there are no major rockfall problems.
Tv ^{a+p}	Older Volcanic flow rocks & mudflow breccia rocks	Mainly mudflow breccia deposits of loosely to well consolidated. Rock units are relatively stable in natural state; but when disturbed, stability may decrease considerable with mudslide and debris flow. These units may present major erosion problems.
Gr	Granite rocks	Oldest exposed basement rock. Physical conditions from moderately weathered to deeply weathered (dg). Prominent joint fractures commonly form nearly vertical cliff slopes to step-like pattern. Such areas are very poor construction site areas. More deeply weathered areas and those with shallow soils present major erosion and construction problems.



**SOLAW VALLEY
GENERAL PLAN**

1983

[SLOPE ANALYSIS]

LEGEND

- 0-5%
- ▨ 5-15%
- ▩ 15-25%
- 25% and over

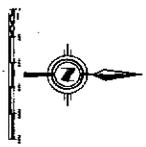


PLATE 2

Modification of the existing slope area without special care for existing natural and construction run-off channels can result in accelerated gully and sheet erosion downslope. Erosive action from uncontrolled run-off can have a disastrous effect on structures, the general land surface, and surface waters. In addition to impacts directly related to surface run-off and erosion, is the impact of degradation of recharge areas important to groundwater resources in the Valley area. Construction on, modification of, and sedimentation of natural recharge areas such as meadows and natural depression areas overlying fractured rocks in the subsurface, can substantially reduce surface percolation of water.

Mitigation

Development proposed in upland areas will involve excavation in rock and soil. Any disturbance will result in accelerated erosion and siltation of surface waterways, especially following periods of heavy precipitation or snowmelt run-off. Disturbance of natural drainage ways must be avoided and engineered berms and channels constructed to direct run-off to existing natural drainage ways. Cuts in steep, fractured rock, or in unstable rock must be avoided or adequate slope protection structures constructed to retain the slope. Steep side-hill slopes that have mantles of unconsolidated colluvium deposits, if modified by construction, will require slope stabilization structures to retain the slope and soil erosion structures to reduce rock and soil losses. Construction on areas of natural groundwater recharge should be avoided. Any construction should attempt to avoid excessive compaction of soils and disruption of natural drainage structures. Inflow of silt and clay laden waters from construction sites should be directed away from recharge areas. Design of retaining structures for slopes and for control of surface drainages must be designed with seismic considerations (especially under saturated conditions of rock and soil).

Construction of developments in the lowland areas of moderate to flat topography should follow similar considerations of upland areas. However, soil conditions range from coarse sands to fine silts with high soil erosion potential. Seismic concerns are not as severe as in uplands areas but must be considered in all design. Location of structures below steep talus slopes and thick colluvium covered slopes should be avoided or adequate slope protection techniques required. Stringent requirements for on-site retention of fine, silty soils by use of berms or other control structures are essential to reduce sedimentation of surface waters.

The geologic map is a reconnaissance map. Areas shown as glacial deposits indicate surface cover and the thicknesses vary throughout the area. The map is not intended for engineering or construction purposes.

See also the Mitigation Sections in Soils and Water Quality for additional detailed mitigation measures.

S O I L S

The following soils information, as compiled by the Soil Conservation Service, in conjunction with the U. S. Forest Service, reflects existing characteristics of each series within the plan area.

Borolls Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
AQB	Aquolls & Borolls	High

Borolls consist of moderately deep and deep somewhat poorly drained and moderately well drained soils on the periphery of wet meadows. The meadows occur in valleys and drainways. These soils form in residuum weathered from mixed alluvium. Slope ranges from 0 to 15 %.

The native vegetation is primarily meadow vegetation consisting of carex, juncas, and grasses. Elevation is 5,000 to 8,000 feet. The average annual precipitation is about 65 to 30 inches; the average annual air temperature is 40 to 52° F., and the average frost-free season is 25 to 200 days.

Typically, the surface layer is thick and dark with base saturation over 50 %. Textures are highly variable and range from coarse sandy to fine clays.

Permeability is slow to moderately slow and mottles are common in lower subsoil. Available water holding capacity (AWC) is low to moderate (greater than 3 inches). Runoff is slow to very slow.

Borolls are used mainly for range and wildlife grazing land. Grazing or travel on these soils is restricted to the times of year when the water table is low enough that the soils can drain or dry. They commonly develop on the gentle slopes above

the flood plains of broad drainages or meadows. Coarse fragments, both gravel and cobble size, are highly variable throughout with some profiles having more than 35 % by volume.

Fugawee Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
MRG	Fugawee Variant-Fugawee Complex	Moderate

The Fugawee series consists of moderately deep, well drained soils on mountainous uplands. These soils formed in residuum weathered from basic igneous rocks, principally latite and andesite flows. Slopes range from 2 to 75 %.

The vegetation is primarily high elevation mixed conifer, mostly red fir, white fir, Jeffrey pine, Lodgepole pine, and an understory of mountain whitethorn, greenleaf manzanita, prostrate manzanita, and squaw-carpet. Elevation is 6,000 to 8,200 feet. The average annual precipitation is about 35 to 60 inches, the average annual air temperature is about 38 to 46° F., and the average frost-free season is about 38 to 80 days.

Typically, the surface layer is dark brown sandy loam, about 2 inches thick. Weathered, fractured andesite is at a depth of 35 inches.

Permeability is moderate to moderately slow. Available water holding capacity (AWC) is low to moderate (3.5 to 5.0 inches). Runoff is medium to rapid and the erosion potential is moderate to high.

The major soil limitation is moderate soil depth (20 to 40 inches effective rooting depth). The fine textured subsoil remains moist late into the year and is subject to compaction. These soils (particularly the subsoil) are very susceptible to erosion from concentrated runoff. Runoff is intensified on compacted surfaces.

Jorge Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
JSG	Jorge-Cryumbrepts	Moderate
JWF	Jorge-WACA	High

The Jorge series consists of deep, well drained soils on mountainous uplands. These soils formed in residuum from volcanic flow rock of andesite, basalt, and latite. Slope ranges from 2 to 75 %.

The vegetation is primarily mixed conifer, mostly red fir, white fir, and Jeffrey pine. Elevation is 6,000 to 9,000 feet. The average annual precipitation is 35 to 60 inches, the average annual air temperature is 40 to 45° F., and the average frost-free season is 25 to 75 days.

Typically, the surface layer is brown sandy loam, about 6 inches thick. Effective rooting depth is greater than 47 inches.

Permeability is moderate. Available water holding capacity (AWC) is moderate (3.5 to 5.5 inches). Runoff is medium to rapid, and the erosion potential is moderate to high.

The major soil limitations are coarse soil textures modified by very high percentages of coarse fragments which result in a lowered available water holding capacity. The high amount of surface stoniness from volcanic flow rock may restrict timber harvest operations and make artificial regeneration difficult if not impossible.

Meiss Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
MIE	Meiss-Rock Outcrop	Moderate
MKE	Meiss-WACA Complex	Moderate
MKF3	Meiss-WACA Complex	High
MLG	Meiss-WACA Cryumbrepts, Wet Complex	High
MIG	Meiss-Rock Outcrop Complex	High

MIG3	Meiss-Rock Outcrop Complex	High
MHG	Meiss-Gullied Land Complex	High

The Meiss series consist of shallow, somewhat excessively drained soils on mountainous uplands. These soils formed in residuum weathered from andesitic rock. Slope ranges from 2 to 75 %.

The vegetation is primarily grasses, forbs and sentinel conifers, mostly squirreltail, wyethia, and red fir. Elevation is 6,000 to 10,000 feet. The average annual precipitation is about 50 to 80 inches, the average annual air temperature is 36 to 48° F., and the average frost-free season is 25 to 125 days.

Typically, the surface layer is pale brown, sandy loam about 19 inches thick. Hard volcanic rock is at a depth of 19 inches.

Permeability is moderately rapid. Available water-holding capacity (AWC) is very low to low (1.0 to 2.0 inches). Runoff is rapid to very rapid and the erosion potential is moderate to high.

Meiss soils are moderately productive range soils used for unimproved range. They are not capable of producing timber at 20 cubic feet per acre per year and are considered non-commercial. Major soil limitations are shallow soil depth (<20 inches effective rooting depth) and coarse soil textures which result in very low to low available waterholding capacity. Runoff from rock outcrop onto these soils when disturbed can cause severe erosion. These soils reach field capacity rapidly and are capable of producing high amounts of runoff, which if allowed to concentrate and run onto adjacent disturbed soil surfaces, may also cause erosion. Once soil particles are detached they are easily transported because of their low bulk density (<1.0 gm/cc). Disturbance of these soils should be kept to a minimum. These soils are used for wildlife habitat and watershed.

Rock Outcrop

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
GRG	Rock Outcrop	--
GRE	Rock Outcrop	--
RTG	Rock Outcrop-Toiyabe Complex	High
RRG	Rock Outcrop-Granitic Tinker Complex	High
RSG	Rock Outcrop, Granitic-Tinker- Cryumbrepts	High
RVG	Rock Outcrop-Umpa Complex	High
VRG	Volcanic Rock Outcrop	--

Rock outcrop consists of exposures of bare granitic, metamorphic, serpentinitic or volcanic bedrock. Rock outcrop is found in association with soils that have formed in residuum weathered from different geologies. Some of the outcrops have been glaciated. Slope ranges from 2 to 100 %.

Rock outcrop supports only lower forms of plant life such as lichens and mosses and is considered barren of vegetation. Elevation is 1,800 to 9,500 feet.

Road construction is usually more difficult in areas of rock outcroppings, often leading to higher construction costs. Only some rock outcrops are suitable for aggregate sources. The granitic rock outcrops make a poor road base but when decomposed can be used as a component in some surfacing applications. Metamorphic, serpentinitic, andesitic and basaltic rock outcrops make a satisfactory road base when crushed. Concentrated surface runoff from rock outcrop can increase the erosion hazard on adjacent soils.

Rubble Land

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
STG	Rubble Land-Jorge Complex	--
SVG	Rubble Land-Rock Outcrop Complex	--

Rubble land consists of excessively drained colluvial areas made up of angular stones and cobbles from volcanic and metasedimentary rock outcrops. Some soil material is mixed with the colluvium. Slope ranges from 2 to 75 %.

Rubble land is barren except for very few conifers and widely scattered brush. Elevation is 3,500 to 9,000 feet.

Low available water holding capacity due to limited soil and the large amount of stones and cobbles are the main limitations to vegetation. Road construction across rubble land is not recommended due to raveling of materials. Rubble land is satisfactory as an aggregate source but the rock would have to be crushed for use as road base.

Tallac Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
TAE	Tallac very gravelly sandy loam	Moderate
TAF	Tallac	High
TBE	Tallac-Cryumbrepts, Wet Complex	Moderate
TBF	Tallac-Cryumbrepts, Wet Complex	High
THF	Tallac-Gullied Land Complex	High

The Tallac series consists of deep, moderately well drained soils on lateral and terminal glacial moraines and outwash. These soils formed in material weathered from glacial deposits. Slope ranges from 2 to 75 %.

The vegetation is primarily mixed conifers, mostly red fir, white fir, Jeffrey pine with some western white pine. Elevation is 5,500 to 9,000 feet. The average annual precipitation is about 40 to 80 inches, the average annual air temperature is about 39 to 45° F., the average frost-free season is 30 to 75 days.

Typically, the surface layer is very dark gray very gravelly sandy loam about 6 inches thick. Effective rooting depth is 40 to 60 inches.

Permeability is moderately rapid. Available water holding capacity (AWC) is low (2.5 to 3.5 inches). Runoff is slow to rapid, and the erosion potential is moderate to high.

Tinker Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
TIG	Tinker-Rock Outcrop, Granitic Complex	High
TIE	Tinker-Rock Outcrop, Granitic Complex	Moderate

The Tinker series consists of moderately deep, well drained soils on lateral and terminal glacial moraines and outwash. These soils formed in material weathered from glacial deposits. Slope ranges from 2 to 75 %.

The vegetation is primarily semi-dense stands of conifers, mostly lodgepole pine, red fir and western white pine with an understory of huckleberry oak. Elevation is 6,000 to 8,600 feet. The average annual precipitation is 50 to 80 inches, the average annual air temperature is 38 to 46° F., the average frost-free season is 25 to 75 days.

Typically, the surface layer is brown cobbly loam about 5 inches thick. Effective rooting depth is 22 to 40 inches.

Permeability is moderately rapid. Available water holding capacity (AWC) is very low (1.5 to 3.0 inches). Runoff is medium to rapid, the erosion potential is moderate to high.

Umpa Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
UOE	Umpa-Rock Outcrop Complex	Moderate
UOG	Umpa-Rock Outcrop Complex	High
UMF	Umpa very stony sandy loam	High

The Umpa series consists of moderately deep, well drained soils on mountainous uplands. These soils formed in residuum weathered from coarse grain andesite rock. Slope ranges from 2 to 75 %.

The vegetation is primarily high elevation mixed conifers, mostly red fir, white fir, and western white pine. Elevation is 7,000 to 8,500 feet. The average annual precipitation is about 35 to 50 inches, and the average annual air temperature is about 38 to 42° F., and the average frost-free season is 25 to 75 days.

Typically the surface layer is dark brown stony loam about 3 inches thick. Weathered andesite is at a depth of 24 inches.

Permeability is moderately rapid. Available water holding capacity (AWC) is low (2.5 to 4.0 inches). Runoff is medium rapid and the erosion potential is moderate to high.

Waca Series

<u>CODE</u>	<u>NAME</u>	<u>EROSION HAZARD</u>
WAE	WACA-Windy Complex	Moderate
WAF	WACA-Windy Complex	High
WBF	WACA-Cryumbrepts, Wet Complex	High
WEE	WACA-Meiss-Cryumbrepts, Wet Complex	Moderate
WEF	WACA-Meiss-Cryumbrepts, Wet Complex	High
WDF	WACA-Meiss Complex	High

The Waca series consists of moderately deep, well drained soils on mountainous uplands. These soils formed in residuum weathered from andesitic mud flows and rhyolitic tuff. Slope ranges from 2 to 75 %.

The vegetation is primarily semi-dense to dense stands of high elevation mixed conifers mostly Jeffrey pine, white fir, sugar pine, western white pine or stands of red fir. Elevation

is 6,000 to 9,500 feet. The average annual precipitation is about 35 to 80 inches, the average annual air temperature is about 36 to 42° F., and the average frost-free season is 25 to 125 days.

Typically, the surface layer is grayish brown sandy loam, about 7 inches thick. Weathered volcanic rock is at a depth of 32 inches.

Permeability is moderately rapid. Available water-holding capacity is low to moderate (3.0 to 5.0 inches). Runoff is medium to rapid, and the erosion potential is moderate to high.

Impacts

Construction activities on hillsides can cause a loss in soil stability and increase erosion through vegetation removal. Improperly winterized cut banks can result in extensive soil loss and, ultimately, water quality degradation. Soil erosion can also cause adverse aesthetic impacts if gullies and rills are formed on slopes or cut banks.

Mitigation Measures

Areas with slopes of 25 % or less can be satisfactorily developed if there are no other environmental problems and reasonable care is taken during construction. Slopes that exceed 25% should be retained in their natural condition.

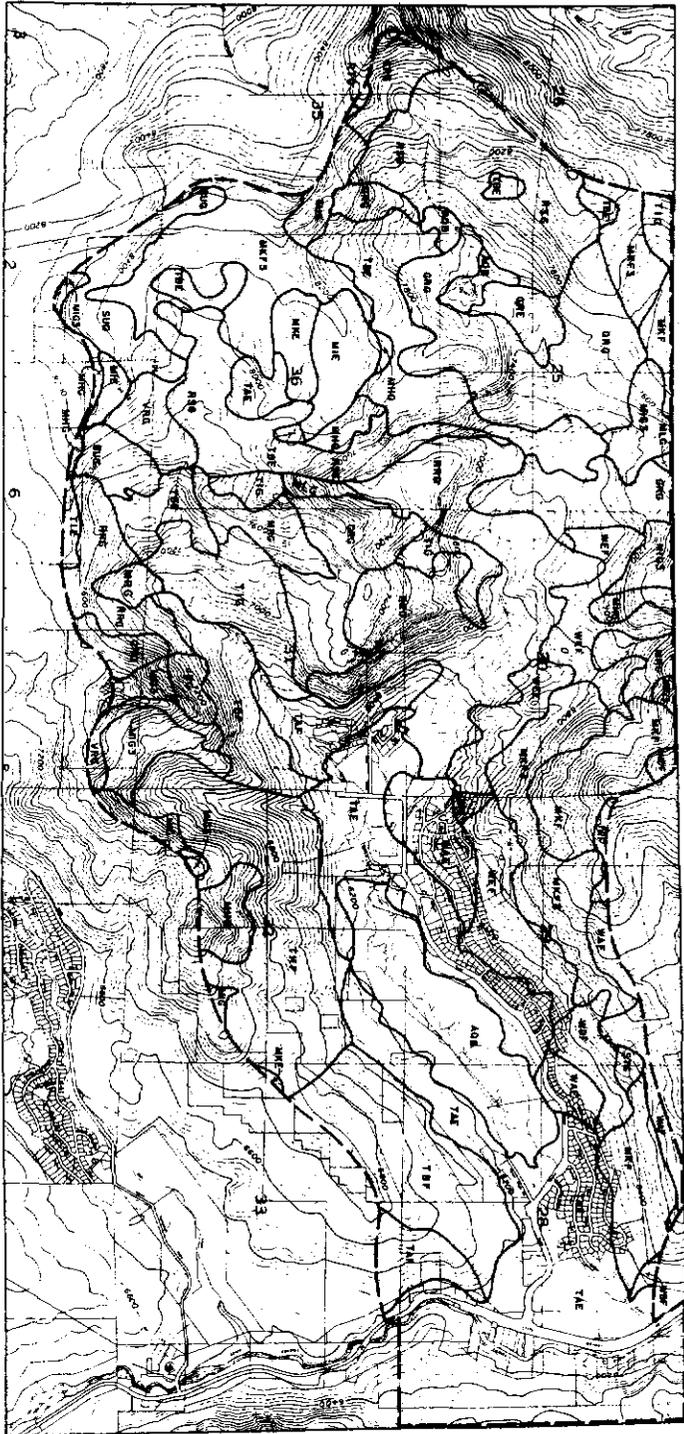
Based on erosion control measures in the General Plan and prohibition against development on slopes in excess of 25%, designation of community development is proposed only in areas of relatively small slopes due to the need for good road access, extensive parking facilities and proximity to public services and facilities.

HDR areas, which indicate where PUD's are supported and lot and block subdivisions discouraged, should be encouraged to reduce the land area disturbed by any given project.

Additional mitigation measures to minimize impacts of erosion include use of filtration trenches (where appropriate), minimizing clear-cut areas, revegetation of disturbed areas, and winterizing construction sites.

**SQUAW VALLEY
GENERAL PLAN**

1983



SOILS ANALYSIS

- AOB ADOLPHUS & BOROLLS SERIES
- ORGANIC/RICH ROCK OUTCROPS
- ROCK/VAO
- JSG JORGIE SERIES
- MIS MEISS SERIES
- MIS MEISS SERIES
- MIS MEISS SERIES
- MRC FLUGAMEE SERIES
- 576 RUBBLE
- TAL TALLAC SERIES
- TIG TINKER SERIES
- UO UMPA SERIES
- WAC WACA SERIES



PLATE 3

AVAILANCHE HAZARD

Setting

The objective of this section of the report is to delineate, as accurately as is possible within the limits of the avalanche art, avalanche hazard zones that lie within the Squaw Valley General Plan Area. The avalanche zones are shown on the accompanying Avalanche Zone Map (AZM)-(See Plate I).

The avalanche zones delineated on the Geology Map are products of analysis of:

1. The subject terrain and vegetation
2. Local snow-weather observations
3. Characteristics, sizes, runout distances, and frequencies of known avalanche events in the nearby area
4. Research and statistical analyses of known avalanche events elsewhere

The Avalanche Zones

The following quotation from the U. S. Forest Service Avalanche Handbook #489 describes guidelines and philosophy for delineation of avalanche zones which are now accepted and used in most areas of the United States. The quotation describes a three zone, or three color system:

"The three zones are: 'high hazard' (red), 'potential hazard' (blue), and 'no hazard' (white). The criteria for each zone are the estimated avalanche force and an estimate of the average time between avalanches. The latter is called the return interval of the avalanche. The three zones are defined as follows:

High Hazard (Red) Zone - This zone includes terrain exposed to frequent and powerful avalanches that satisfy either of the following:

- * Any avalanche with return interval of 30 years or less

* Avalanches with impact pressures of 3 t/m² or more and with a return interval of up to 300 years
Buildings and winter parking lots, generally, are not permitted in high hazard zones. Special bunkers may be installed for equipment.

Potential Hazard (Blue) Zone - This is the transition zone between high hazard and no hazard, and includes avalanches that are either small or infrequent.

* Avalanches with impact pressures less than 3 t/m² and a return interval from 30 to 300 years

Private homes may be erected in potential hazard zones if care is taken to design for the above forces. Schools, hospitals, lodges, and other buildings that encourage gatherings of people should not be erected. The local government is responsible for closure, evacuation, and rescue during periods of hazard.

No Hazard (White) Zone - Occasionally, the terrain may be affected by small airblast pressures, up to 0.1 t/m². There are no building restrictions with respect to the avalanche hazard."

With regard to impact forces, it is important to note that it is not considered economically feasible to construct wood-frame structures that will withstand impact forces greater than 1 t/m² (205 lbs. per square foot). Thus, structures in the blue zones will, logically, be of reinforced concrete or other reinforced masonry at least as high as the depth of expected avalanche impacts; or, will be otherwise protected. Other design factors, plus precise location and orientation of structures placed in blue zones are also important.

In analysis of the AZM, it is important to consider that, while estimates of return intervals of avalanches are given, the year or years in which return will occur cannot be predicted. For example, a site for which a thirty year return interval is given has an estimated one in thirty probability of

being struck each year, and this probability does not change when the event occurs. Thus, a site that is struck in 1981 cannot assume immunity in 1982.

Another important consideration: Where timber cover provides a measure of protection from avalanche, decimation of the timber by man or by nature usually results in an increased degree of avalanche hazard to the location previously considered protected.

Weather

Squaw Valley lies within one of the heavier snow zones in the lower 48 states. Intense snowstorms, accompanied by strong southwest winds, and occasional heavy winter rains must be expected to deposit great amounts of precipitation during any given winter. These weather patterns are known to cause very frequent avalanche hazard throughout the adjacent ski area from early in the snow season until late spring. Significantly more snow falls in the westerly parts of the Valley and in the ski area than in the easterly portions of the Valley; thus, the incidence of major avalanching is greater in those westerly areas.

Description

Squaw Valley is a U-shaped, east-west trending valley with north, south, and west perimeters composed of slopes and faces that often attain gradients within the range of steepness known to release large, destructive avalanches.

The south side of the valley, east of Papoose Peak, consists largely of terrain that is broken by short, steep pitches and terraces. This area is generally densely timbered except at isolated sites and where man has removed trees. If the existing timber remains in place, no fast, long-running avalanches are expected here; however, numerous short-running, local slides on open slopes may be large and powerful enough to bury persons and/or to damage standard wood-frame structures. Similarly, when extreme avalanche conditions exist, snow may flow like a slurry, even though the dense timber, on steeper parts of

this slope, developing sufficient mass and force to bury persons and/or to damage woodframe structures. These latter events will occur extremely rarely.

Beneath and adjacent to Papoose Peak, two well-defined gullies convey avalanches to the valley floor and out onto level ground. Avalanches from the larger of the gullies have crossed Squaw Creek. At the Olympic ski jump, potentially dangerous avalanches are known to fall down to the jump outrun. At Red Dog ski lift, continuing removal of tree cover from once heavily timbered slopes now allows avalanches that originate at the 7,000' level to fall to the valley floor.

The north side of the valley is, generally, less densely treed than the south side. Vegetative cover consists largely of open, brush-covered slopes, alternating with moderately dense to open tree cover. The horizontal profile is broken by several gully systems, the two most prominent of which occasionally funnel snow-in-motion toward the existing subdivision. Avalanches from the open slopes, largely due to their southerly, wind-beaten aspect, are less common than from the gullies, but have, on occasion, loosed slides into the subdivision at several points.

Where the north-side slope swings to the north into the canyon of the North Fork of Squaw Creek, slopes fall steeply, generally, through open timber, toward a portion of the subdivision and toward Olympic Village. Due to the southwesterly aspect, relatively small amounts of unstable snow accumulate here; but when severe avalanche conditions exist, slides may fall to terraces and shallow terrain a short distance above the valley floor and into a portion of the subdivision.

Terrain to the west of the North Fork of Squaw Creek consists of a narrow strip of gently rising terrain that abruptly steepens to rise to the ridge-like crest of a prominent granite formation known locally as the Rockpile. Avalanches here fall regularly from open slopes and deeply incised gullies to the valley floor. Occasional slides cross the creek. When deep snow cover coincides with severe avalanche conditions, avalanches will

reach, and will probably damage, a large structure, presumably condominiums, that presents a broad front to the avalanche slope at the juncture of Squaw Peak Way and Squaw Peak Road.

Beneath the south shoulder of the Rockpile rises Granite Chief Road, which winds its way to the 6,400' elevation, terminating in a cul-de-sac just north of the original Squaw Valley chairlift line. Terrain above the road is mostly steep to very steep. A broad-backed, wind-swept ridge that falls from the high shoulder down through the homesite area protects much of this zone. Less heavily wind-affected snow accumulation zones alongside the ridge occasionally release potentially destructive avalanches; thus, infrequent avalanche hazard from these zones threatens portions of the road and a number of the houses that border it. An avalanche from Katy's Nose on KT-22 once crossed Squaw Creek and approached the cul-de-sac.

It should be noted that numerous, isolated sites within the avalanche zones, that are specially favored by terrain configurations, are avalanche-free. Location and precise definition of these sites requires specific site study.

Further Comment Regarding the Avalanche Zones

The avalanche zone boundaries, shown on the AZM, are accurately drawn. In this mapping, no attempt is made to delineate small, sluff zones where small avalanches may bury persons traveling on foot, skis, snowshoes, or snowmobile; thus, the AZM should not be used for route finding by skiers or other travelers.

The hazard zones, shown on the AZM, are based on reasonably foreseeable snow and weather conditions. Should cataclysmic or unprecedented conditions occur in the area, avalanches may affect areas beyond the red or blue zones. The probability of such occurrence is considered so small that it is disregarded.

Impacts

Much of the already-developed lands in Squaw Valley are threatened by varying degrees of avalanche hazard. In most

instances, the threat will be apparent only during extreme avalanche conditions -- periods of sustained heavy snowfall, or heavy rainfall onto unconsolidated snow are the two most common extreme conditions in Squaw Valley. These conditions may occur during any snow season; but an individual homesite may not be affected for many years. Thus, the element of risk is difficult to define; and, to the individual homeowner, may appear reasonable when balanced alongside other risks he accepts routinely, such as his daily venture into commuter traffic.

A number of residents indicated that they did know of the avalanche threat to their homes; but simply accept it, and state that they "will probably go away and stay somewhere else" during high avalanche hazard conditions. The impression was that those residents, at least, feel that the value of having their property is worth the risk of occasional hazard.

Mitigation Measures

Various methods of reducing or eliminating the hazard to individual homesites are available, ranging from direct structural reinforcement to installation of earthen barriers or to other terrain modification methods. Direct structural reinforcement methods can be applied to any structure, but may be very expensive. Earthen barriers and/or terrain modification are applicable where the natural terrain configurations are favorable, and where the barrier or modification will not cause increased hazard to neighboring properties. Specific site study, as proposed in the General Plan, is necessary for determination of, and design of, the most effective and economical protection systems for the individual sites.

In high hazard zones, no buildings or winter parking facilities are permitted; in potential avalanche hazard areas, only summer recreational facilities are permitted in the plan. Lodges, schools, residences, or any buildings which encourage a gathering of people should not be constructed in these areas and are not permitted based on the General Plan. Summer recreation facilities could be considered.

Tree removal within any of the avalanche zones must be carefully planned to avoid the creation of long continuous openings that could enhance avalanche movement. This must be considered prior to the issuance of tree cutting permits within any area of Squaw Valley. The construction of ski lifts and trails must carefully allow for avalanche control where appropriate, and avoidance of some areas where control is not feasible.

CLIMATE

Setting

Climate of the Squaw Valley region is controlled to a great extent by its location within the mountainous Sierra Nevada. There, mountains channel the prevailing westerly winds; frontal storms are influenced to the extent that locations only a short distance apart can experience widely varying amounts of snow and rainfall. Temperatures can vary over even smaller distances due to differences of vegetation, soils, water, and rocks.

During the summer, skies are usually clear, although thunderstorms may develop in the afternoon. Frontal passages may produce some cloudiness and wind but usually little precipitation. The westerly winds, modified locally by the terrain, usually persist with occasional flows from the south to southwest. At night, air will tend to flow down the canyons with the flow reversing during the day due to daytime heating.

Frontal systems pass through the region as often as twice each week during the winter. These systems produce most of the yearly precipitation (usually occurring as snow) between November and April.

Severe weather is often associated with the passage of storm systems, especially during the winter. Winds in exposed areas occasionally exceed 50 miles per hour during blizzard conditions occurring in the winter months; south or southwest winds of 80 miles per hour have been recorded at the top tram station. Thunderstorms may be expected in the area about 15 days each year, although they are usually relatively mild. Occasionally they may produce short periods of heavy rainfall and light to moderate winds.

Temperatures at Squaw Valley range from cool to cold through the year, except for occasional warm spells in the late summer. The average 32° F growing season is about 60 days. Precipitation is moderate, concentrated in the winter months, and

falls primarily as snow. Snow buildup very seldom exceeds six feet on the valley floor, although in some areas on the upper slopes of the valley, drifts accumulate to 40 feet.

Temperature

Summer daytime temperatures are usually mild, often cool at night. Afternoon highs in the upper 70's are common during the summer months of June through August and minima are usually in the high 30's to low 40's. Extremes have reached 90° to 91°F in June, July, and August. Minimum readings average in the middle teens during the winter months with maxima during this period in the high 30's or low 40's. Sub-zero temperatures are uncommon during any time of the year; the all time low of -20° F was recorded in February. The average date of the last 32°F temperature is about June 20, and the first in the fall is probably around the 15th of August.

The warmest temperature is typically associated with a subsidence condition in late summer restricting air movement within the valley and permitting solar insolation to raise temperatures above normal values. The coldest weather is usually the result of a southward sweep of cold air escaping from the Great Basin to the northeast. As this circulation diminishes, radiation cooling further reduces nighttime temperatures. Coldest temperatures are found on the valley floor when cool air drains off the slopes, collects in the basin, and is further cooled by radiation loss during times of cold winds.

Precipitation

Winter precipitation, resulting from frontal storm activity, total about 200 inches of snow between the months of October and April. Total average snowfall at Squaw Valley Lodge is usually about 217 inches; on the slopes above 7,000 feet it will range up to about 240 inches. A general gradient runs along the valley from east to west, with increases in precipitation and snow to the west.

Conditions conducive to mass snow movements along the slopes of Squaw Valley build up during each snowstorm which occurs in the area. The prevailing winds during winter storms (south to southwest) cause snow cornice buildup on the lee slopes (north and northeast slopes). The accumulated snow, or a large portion of it, moves downslope destroying what lies in front of it until stopped by a loss of momentum or shallower slopes.

Squaw Valley has an extensive history of avalanche activity resulting in some damage to structures and facilities. Control measures, including explosive release devices, have limited damage in recent years. This subject is covered in more detail in the Avalanche Hazard section of this report.

Wind

Squaw Valley is aligned almost parallel with the prevailing westerlies which are the predominant winds of the region. Consequently, winds, at least on the upper slopes, will flow from west to east, and at times the velocity will be quite high. Wind speeds on the upper slopes will probably average about 15 to 20 miles per hour with high winds of 30 to 40 miles per hour being common in the afternoon.

In the valley proper, winds are light and variable most of the time. The tendency for air to move upward as heating of the upper slopes takes place is opposed by the westerly flow of winds over the ridge to the west.

During winter months, the valley floor occasionally experiences winds that sweep down out of the mountains and move through the valley at high velocities. A downslope movement of cold air draining to the valley floor is sometimes reinforced by the west winds.

During storms, winds would primarily arrive in the area from the south to southwest and local winds would be channeled down the valley toward the open end to the east.

Relative Humidity and Cloudiness

During winter months, relative humidity would probably be quite high through most of the day and average between 70 and

80%. The warmer temperatures of the summer months and the lack of any significant precipitation would result in average relative humidity values of about 40% in the afternoon. During thunderstorm activity, common to the warm months, relative humidity may rise for short periods during thunderstorm activity. Extensive cloudiness prevails during the winter season as the frontal systems pass through the area. Clouds may block sunshine almost 60% of the time during this season.

Inversions

Low level inversions, the poorest conditions for dispersion of pollutants, are common in mountain valleys such as Squaw Valley. Typically, they develop at night when cold air drains from the surrounding slopes and accumulates on the valley floor and they persist until either heating occurs during the day or strong winds cause them to break up. There are no data available to define the frequency of occurrence or the persistence of the inversion conditions or the air quality presently associated with them in Squaw Valley.

Impacts

The construction of artificial structures in a natural setting necessarily modifies the radiation and water balance, as well as wind flow patterns of the site. The impact of these modifications within the Plan area will be minor, and impacts beyond the boundaries of the Plan will not be significant.

Mitigation

None are deemed necessary or advisable at this time.

A I R Q U A L I T Y

Setting

The study area lies within the boundaries of the Mountain Counties Air Basin and is under the jurisdiction of the Placer County Air Pollution Control District (APCD). The APCD has primary responsibility for the control of stationary sources of air pollution. Control of mobile sources is the responsibility of the California Air Resources Board (ARB) and the U. S. Environmental Protection Agency (EPA).

The Federal Clean Air Act (CAA) of 1970 established a national program for the attainment and maintenance of air quality standards. Subsequently, the EPA developed National Ambient Air Quality Standards (NAAQS) for 6 air pollutants: Oxidant, carbon monoxide, suspended particulate, oxides of nitrogen, sulfur dioxide, and hydrocarbons. Primary standards are designed to protect human health whereas secondary standards are those levels of air quality necessary to protect the general public welfare, vegetation and property (Table 3 lists the NAAQS).

The 1977 amendments to the CAA require the State and EPA to identify the status of all areas in regards to the attainment of the NAAQS. For those areas that exceed any NAAQS,

TABLE 3
 AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards ¹		National Standards ²			
		Concentration ³	Method ⁴	Primary ³	Secondary ³	Method ⁷	
Oxidant ¹⁰	1 hour	0.10 ppm (200 ug/m ³)	Ultraviolet Photometry	--	--	--	
Ozone	1 hour	--	--	240 ug/m ³ (0.12 ppm)	Same as Primary Standard	Chemiluminescent Method	
Carbon Monoxide	12 hour	10 ppm (11 mg/m ³)	Non-Dispersive Infrared Spectroscopy	--	Same as Primary Standards	Non-Dispersive Infrared Spectroscopy	
	8 hour	--		10 mg/m ³ (9 ppm)			
	1 hour	40 ppm (46 mg/m ³)		40 mg/m ³ (35 ppm)			
Nitrogen Dioxide	Annual Average	--	Saltzman Method	100 ug/m ³ (0.05 ppm)	Same as Primary Standards	Gas Phase Chemiluminescence	
	1 hour	0.25 ppm (470 ug/m ³)		--			
Sulfur Dioxide	Annual Average	--	Conductimetric Method	80 ug/m ³ (0.03 ppm)	--	Paraosaniline Method	
	24 hour	0.05 ppm (131 ug/m ³)		365 ug/m ³ (0.14 ppm)	--		
	5 hour	--		--	1300 ug/m ³ (0.5 ppm)		
	1 hour	0.5 ppm (1310 ug/m ³)		--	--		
Suspended Particulate Matter	Annual Geometric Mean	60 ug/m ³	High Volume Sampling	75 ug/m ³	60 ug/m ³	High Volume Sampling	
	24 hour	100 ug/m ³		260 ug/m ³	150 ug/m ³		
Sulfates	24 hour	25 ug/m ³	AHHL Method No. 61	--	--	--	
Lead	30 day Average	1.5 ug/m ³	AHHL Method No. 54	--	--	--	
	Calendar Quarter	--	--	1.5 ug/m ³	1.5 ug/m ³	Atomic Absorption	
Hydrogen Sulfide	1 hour	0.03 ppm (42 ug/m ³)	Cadmium Hydroxide Stractan Method	--	--	--	
Hydrocarbons (Corrected for Methane)	3 hour	--	--	160 ug/m ³ (0.24 ppm)	Same as Primary Standards	Flame Ionization Detection Using Gas Chromatography	
Vinyl Chloride (Chloroethene)	24 hour	0.010 ppm (26 ug/m ³)	Gas Chromatog- raphy (ARB staff report 78-8-3)				
Ethylene	8 hour	0.1 ppm	--	--	--	--	
	1 hour	0.5 ppm	--	--	--	--	
Visibility Reducing Particles	1 observation	In sufficient amount (8) to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%			--	--	--
APPLICABLE ONLY IN THE LAKE TAHOE AIR BASIN:							
Carbon Monoxide	8 hour	6 ppm (7 mg/m ³)	NDIR	--	--	--	
Visibility Reducing Particles	1 observation	In sufficient amount (8) to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%			--	--	--

the State must submit a plan to the EPA which provides for the attainment of the primary standard by December 31, 1982 or by December 31, 1987, if it can be demonstrated that attainment by the earlier date is not possible. Squaw Valley is within the midportion of Placer County, which was designated as a non-attainment area for ozone on September 12, 1979.

Meteorology

Climate. Topography plays a major role in determining the weather conditions in Squaw Valley. The valley is situated at an elevation of 6,200 feet and is surrounded on three sides by high mountains that rise approximately 9,000 feet above mean sea level. These mountains create downslope movements of cold, dense air which can form an inversion in the lower levels. An inversion is a situation where the air near ground level becomes colder (and therefore more dense) than the air masses above it. Vertical mixing then ceases and a temperature inversion forms. These inversions occur frequently in the winter and inhibit the transport and dispersal of pollutants. Vertical mixing depths measured in the Tahoe area average less than 500 feet and inversion conditions occur about 250 days per year (Ref. 9).

Long term data to substantiate the potential for inversion formation in Squaw Valley is minimal. However, Sierra Environmental Monitoring conducted a temperature sounding in the Valley on November 24, 1974. The data they collected, presented in Table 4 indicated that there was a substantial inversion layer present over the Valley on that day and that it was approximately 2,000 feet thick. Table 5 indicates that stable meteorological conditions occur frequently during all months of the year. This data establishes the fact that poor conditions for the dispersal of pollutants do occur in the Plan Area.

Precipitation in Squaw Valley averages 49 inches annually (Ref. 10). Because of the summer-dry, winter-wet precipitation trend in the Sierra Nevada, the cold season corresponds to the wet season and most of the precipitation falls as snow. Approximately 55-70% of the average annual preci-

precipitation falls during the four-month period of December through March. At elevations below 6,500 feet, about 80% of this precipitation normally is snow; at elevations 8,000 feet and higher, the percentage of winter precipitation falling as snow is close to 100% (Ref. 9).

The relatively long summers are cool; the mean maximum temperature is 78° F with mean lows of 40° F. Winters are cold with mean maximums and minimums of 38° F and 18° F respectively. The temperatures, which are mild for this elevation, are attributable to:

1. The high amount of winter sunshine - approximately half of the total possible hours.
2. The mild Pacific air masses that enter the area in winter.

TABLE 4

SOUNDINGS OF SQUAW VALLEY
ON NOVEMBER 24, 1974

Location	(ft. msl) Elev.	Sounding ($^{\circ}$ C)		
		Run 1	Run 2	Run 3
		Time 0640-0700 pst	Time 0827-0847 pst	Time 1022-1032 pst
Base Station	6269	-6.5	-5.7	+0.7
1st Hanger	6551	-4.5	-3.7	+1.5
2nd Hanger	6903	-2.4	-0.7	+2.2
Tower 1	7523	-0.9	-0.1	+2.8
Cable Mid-Pt.	7631	-0.7	+0.5	+3.1
3rd Hanger	7663	-0.7	+0.8	+4.4
4th Hanger	7788	-0.4	+3.7	+6.5
Tower 2	7913	+0.5	+5.9	+6.5
5th Hanger	7989	+2.3	+6.5	+6.7
6th Hanger	8059	+3.5	+6.5	+7.0
Top Station	8129	+5.3	+6.7	+7.1

TABLE 5

FREQUENCY OF STABILITY CLASS OCCURRENCE
OBSERVED AT SQUAW VALLEY FIRE STATION
JANUARY 1972 THROUGH SEPTEMBER 1974

Season Year	Very Stable	Stable	Neutral	Unstable	Very Stable	Total
Spring						
1972	4	36	27	16	9	92
1973	5	34	29	21	3	92
1974*	2	16	10	2	0	30
Total	11	86	66	39	12	214
Rel. Freq.	5.1%	40.3%	30.8%	18.2%	5.6%	100%
Summer						
1972	11	57	19	5	0	92
1973	7	59	23	2	1	92
1974	11	56	22	2	1	92
Total	29	172	64	9	2	276
Rel. Freq.	10.5%	62.3%	23.2%	3.3%	0.7%	100%
Fall						
1972	5	26	36	11	13	91
1973	8	32	20	23	8	91
1974*	7	18	3	1		29
Total	20	76	59	35	21	211
Rel. Freq.	9.5%	36%	28%	16.5%	10%	100%
Winter						
1972	4 (6.9)	21 (36.3)	14 (24.1)	10 (17.2)	9 (15.5)	58
1973	5	27	20	26	11	89
1974*	2	17	18	16	5	58
Total	11	65	52	52	25	205
Rel. Freq.	5.4%	31.7%	25.3%	25.4%	12.2%	100%
TOTAL	71	399	241	135	60	906
REL. FREQ.	7.8%	44%	26.7%	14.9%	6.6%	100%

* May only. March & April data not available.

** September only.

*** February & March only. January data not available.

SOURCE: "Squaw Valley Master Plan Air Quality Evaluation", Sierra Environmental Monitoring, December 1974.

3. The high elevation and, consequently, clear upper air allows maximum insolation.

Wind directions in the Valley are dependent upon the Pacific marine flows and the passage of winter storms from the Alaska Gulf.

Data taken by the Squaw Valley Ski Corporation at a station located at the top tram station (elevation 8,129 feet) indicates the wind blows primarily from the South-Southwesterly direction. Table 6 presents a summary of wind data recorded for 2 years at the Squaw Valley station.

Air Pollutants and Their Sources

The following section discusses the different types of pollutants, their sources, and their effects upon human receptors.

Oxidant. Photochemical oxidants are several different pollutants (most notably ozone and a group of chemicals called peroxyacylnitrates, or PAN) which are not emitted directly from specific sources, but are formed in the air by chemical reactions between nitrogen oxides and volatile organic compounds, such as

TABLE 6

SUMMARY OF WIND SPEED AND DIRECTION FROM TOP TRAM,
SQUAW VALLEY

MONTH	SPEED (MPH)		DIRECTIONS	
	AVERAGE	RANGE	PREDOMINANT	WINDOW
September 72	10-15	0-40	S	E-W
October 72	10-15	0-30	SE	E-W
November 72	10-15	0-60	SW	E-W
December 72	15-20	0-55	SW	E-W
January 73	20-25	0-70	SW	E-W
February 73	10-15	0-40	S	E-W
March 73	10-15	0-45	W	E-N
April 73	10-15	0-40	W	E-N
May 73	10-15	0-30	S	SE-SW
June 73	10-15	0-30	S	S-W
July 73	10-15	0-30	S	E-W
August 73	5-10	0-40	SW	W-E
September 73	5-10	0-60	E	N-S
October 73	5-10	0-40	SE	E-W
November 73	5-10	0-60	W	N-S
December 73	10-15	0-70	SW	W-E
January 74	10-15	0-60	SE	W-E
February 74	10-15	0-80	S	E-W
March 74	10-15	0-80	SW	E-W
April 74	5-10	0-60	S	E-W
May 74	0-5	0-60	SE	E-W
June 74	0-5	0-40	W	W-S
July 74	5-10	0-60	W	W-S
August 74	0-5	0-30	SW	N-S
September 74	0-5	0-20	SE	E-S
October 74	0-5	0-40	SW	E-W
November 74	0-5	0-50	SW	E-W

gasoline vapors, chemical solvents, and combustion products of various fuels. Since this reaction is stimulated by sunlight, peak conditions occur during the summer. Areas such as Los Angeles or Sacramento, with abundant sunlight and large traffic volumes, are most likely to have high oxidant levels.

Exposure to oxidant severely irritates the mucous membranes of the nose and throat and impairs the normal functioning of the lungs. The EPA criteria document for oxidant states that impairment of performance in student athletes occurred over a range of hourly oxidant levels from 0.03-0.3 ppm (Ref. 8). The primary standard for ozone is 0.12 ppm.

Increased frequency of attacks in some people with asthma have been observed when hourly averages of 0.05-0.06 ppm were measured. Eye irritation occurs at once in people upon exposure to 0.10 ppm concentrations; this is equivalent to an hourly concentration of 0.03-0.05 ppm. Damage to vegetation has occurred at levels of 0.05 ppm, maintained for four hours.

Nitrogen Dioxide. Nitrogen Dioxide (NO_2) is one of a family of nitrogen oxides. Those oxides important to air pollution usually come from high-temperature combustion. Nitrogen dioxide plays a major role in the atmospheric reactions which produce photochemical oxidants (smog) and is primarily responsible for smog's yellow brown color. Continued or frequent exposure to high levels of NO_2 can cause pulmonary edema. Individuals with chronic bronchitis and emphysema may have their symptoms aggravated.

Sulfur Dioxide. Sulfur Dioxide (SO_2) is one of a number of sulfur containing compounds found in the atmosphere. It enters the air primarily from the combustion of coal and oil. Sulfur dioxide reacts in the atmosphere to form other compounds such as sulfuric acid, sulfates, and sulfites. These compounds can be irritating to the respiratory system. Additionally, research has linked high concentrations of sulfur oxides and

particulate matter to increased respiratory disease morbidity among children and individuals with heart and lung disease (Ref. 7).

Particulates. Total Suspended Particulate (TSP) is the general term for particles found in the atmosphere. In addition to soot and dust, particulates are composed of organic matter and compounds containing sulfur, nitrogen, and metals. When airborne particles are inhaled, they may irritate the respiratory system or damage the clearance mechanism of the lungs, thereby contributing to respiratory diseases much the same way as gaseous pollutants do.

Carbon Monoxide. Carbon Monoxide (CO) is a byproduct of the incomplete combustion of fuels - most notably by cars and trucks. In some urban areas, automobiles account for over 99% of CO emissions. In some cases, such as the Tahoe Basin, the problem is highly localized with only a few roadways experiencing high concentrations. In other cases, such as the Los Angeles Metropolitan area, the problem is spread throughout the central core area and along major commuter corridors.

Inhaled, carbon monoxide enters the bloodstream and binds chemically to hemoglobin, the substance that carries oxygen to the cells. This reduces the amount of oxygen delivered to all tissues of the body. The percentage of hemoglobin inactivated by CO depends on the amount of air breathed, the concentration of CO in the air and the length of exposure. CO weakens the contractions of the heart, reducing the amount of blood pumped to the various parts of the body and, as a result, reduces oxygen available to the muscles and organs. In a healthy person, this effect significantly reduces the ability to perform physical exercise. In an individual with heart disease, who is unable to compensate for the decrease in oxygen, this effect can be life threatening. Individuals with anemia, emphysema, and other lung disease, as well as those living at high altitudes, are likely to

be more susceptible to the effects of CO. Even at relatively low concentrations, CO can effect mental functions, visual acuity, and alertness.

Existing Air Quality. Air monitoring activities in Squaw Valley have been minimal, resulting in a small data base with which local air quality can be assessed. For a regional air pollutant such as oxidant (measured as ozone) concentrations measured in areas close to Squaw Valley give a reasonably accurate estimation of the oxidant level in the Valley itself. Cal Trans monitored oxidant levels from May 31 to September 25, 1978, immediately west of Tahoe City. During this period a maximum concentration of 0.09 ppm was recorded. The average ozone concentration recorded was 0.06 ppm. Neither the State nor the Federal oxidant standards (0.10 and 0.12 ppm respectively), were exceeded during this sampling period. In 1979, the Nevada Department of Environmental Protection's Incline Village monitoring station recorded a maximum ozone value of 0.08 ppm with an average yearly concentration of 0.038 ppm. Additionally, in 1980, the Air Resources Board's South Lake Tahoe (Park Avenue) station also recorded a maximum value of 0.08 ppm, with an average concentration of 0.032 ppm. The source of this ozone is most likely in-Basin motor vehicles since terrain and airflow characteristics prevent significant transport of ozone into the Basin from the Sacramento Valley (Ref. 4).

Total Suspended Particulates (TSP) were measured in Squaw Valley using Hi Volume Samplers in the winter of 1971. The highest concentrations recorded during the 8-1/2 week sampling period was 50 mg/m³.

Ambient monitoring for carbon monoxide has not been done in Squaw Valley. Due to the lack of actual monitoring data, the Air Resources Board was asked to run a model for 3 sites in the Valley. The model years were 1981 and 1990 and traffic volumes were projected using current growth rates and density permitted under the 1972 General Plan. Table 7, on the following page, summarizes the results:

TABLE 7

Caline 3 Model Results: All Concentrations in PPM

Model Year: 1981

<u>Location</u>	<u>Max. 8 Hr.</u>	<u>Max. 8 Hr.</u>
Squaw Valley Rd. & Hwy. 89	27.4	19.2
Squaw Valley Rd. & Bridge	37.6	26.3
Squaw Valley Rd. & Parking Lot	21.4	14.9
Federal 1 hr. Standard:	35 ppm	
Federal 8 hr Standard:	9 ppm	

Model Year: 1990

Squaw Valley Rd. & Hwy. 89	11.9	8.3
Squaw Valley Rd. & Bridge	15.4	10.8
Squaw Valley Rd. & Parking Lot	8.9	6.3

The results indicate that there are currently 8 hour violations of the Federal CO standards at all locations and that 1 hour violations are also occurring in the vicinity of the Bridge. Additionally, the 1990 results show that 8 hour violations will continue to occur in the area of the Bridge and that the 8 hour concentrations in the other areas, though not in excess of the Standard, will be substantial. The conclusion that can be reached from these results is that residents along Squaw Valley Road are being exposed to high levels of CO, significantly in excess of the Federal Standard, that such exposure occurs for extended time periods during the winter season and that it will continue to occur in the future. Finally, as development increases in the Valley, annual CO levels will increase as traffic volumes grow, creating a year around CO problem.

Visibility

General. The effects of air pollution are visually perceptible as a result of the following interactions in the atmosphere:

Light Scattering

- by molecules of air
- by molecules of water
- by particles

Light Absorption

- by gases
- by particles

Light scattering by gaseous molecules of air (rayleigh scattering), which cause the blue color of the atmosphere, is dominant when the air is relatively free of aerosols and light absorbing gases. Light scattering by particles is the most important cause of visual range reduction. Fine solid or liquid particulates, whose diameters range from 0.1 to 1.0 millimicrons, are most effective per unit mass in scattering light.

Anthropogenic contributions to visibility impairment result from the emission of primary particulate matter (such as ash, shot, dust, water droplets) and of pollutant precursors that are converted in the atmosphere into the following secondary species:

- nitrogen dioxide (NO₂) gas from emissions of nitric acid (NO)
- sulfate (SO₄) particles from nitric oxide emissions
- organic particles from hydrocarbin emissions

Secondary sulfate, nitrate, and organic particles have a dominating effect on visual range reduction because these particles range in size 0.1 to 1.0 millimicrons in diameter.

Research conducted in the Tahoe Basin in 1973-1976 by Thomas A. Cahill of U. C. Davis found that the most significant cause of visibility reduction was the presence of atmospheric aerosols, largely man made, with the major sources being automobiles.

Potential Impacts

Existing Visibility. Squaw Valley is an area that is categorized as having superior visibility; that is visibility which is greater than 25 miles when relative humidity is less than 70%. Visibility maps for California list a median Spring time visibility of 60 miles in the area of Squaw Valley (See Figures 1 & 2) (Ref. 9). However, the high humidity present in the winter, combined with the increased aerosol emissions from motor vehicles and residential fuel combustion can reduce visibility significantly. Under worst case situations, especially in the presence of an inversion, haze and fog formation can reduce visibility to less than 3 miles (Ref. 10).

No historical visibility data is available for Squaw Valley, however, qualitative observations by residents state that the visibility in Squaw Valley is less than it was ten years ago (Ref. 2). Unless mitigated, additional growth in the Valley, with its concomittant increase in vehicular and residential fuel combustion emissions, will further reduce visibility.

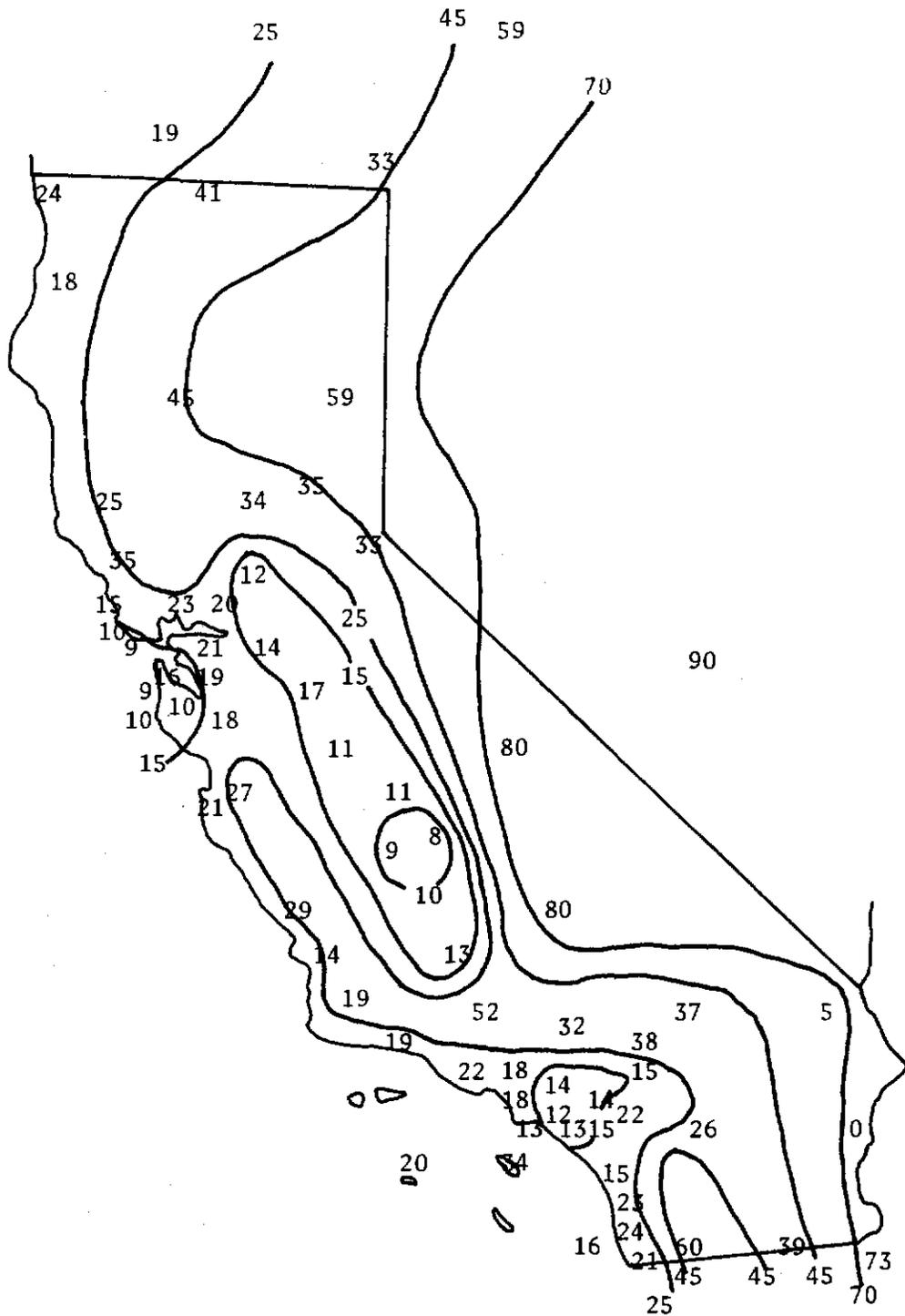


Figure 1 Winter (Jan-Mar) median 1 PM visibilities and visibility isopleths for California, all values expressed in miles.

Source: "Visibility in California, Final Report", Technology Service Corporation, July 1980

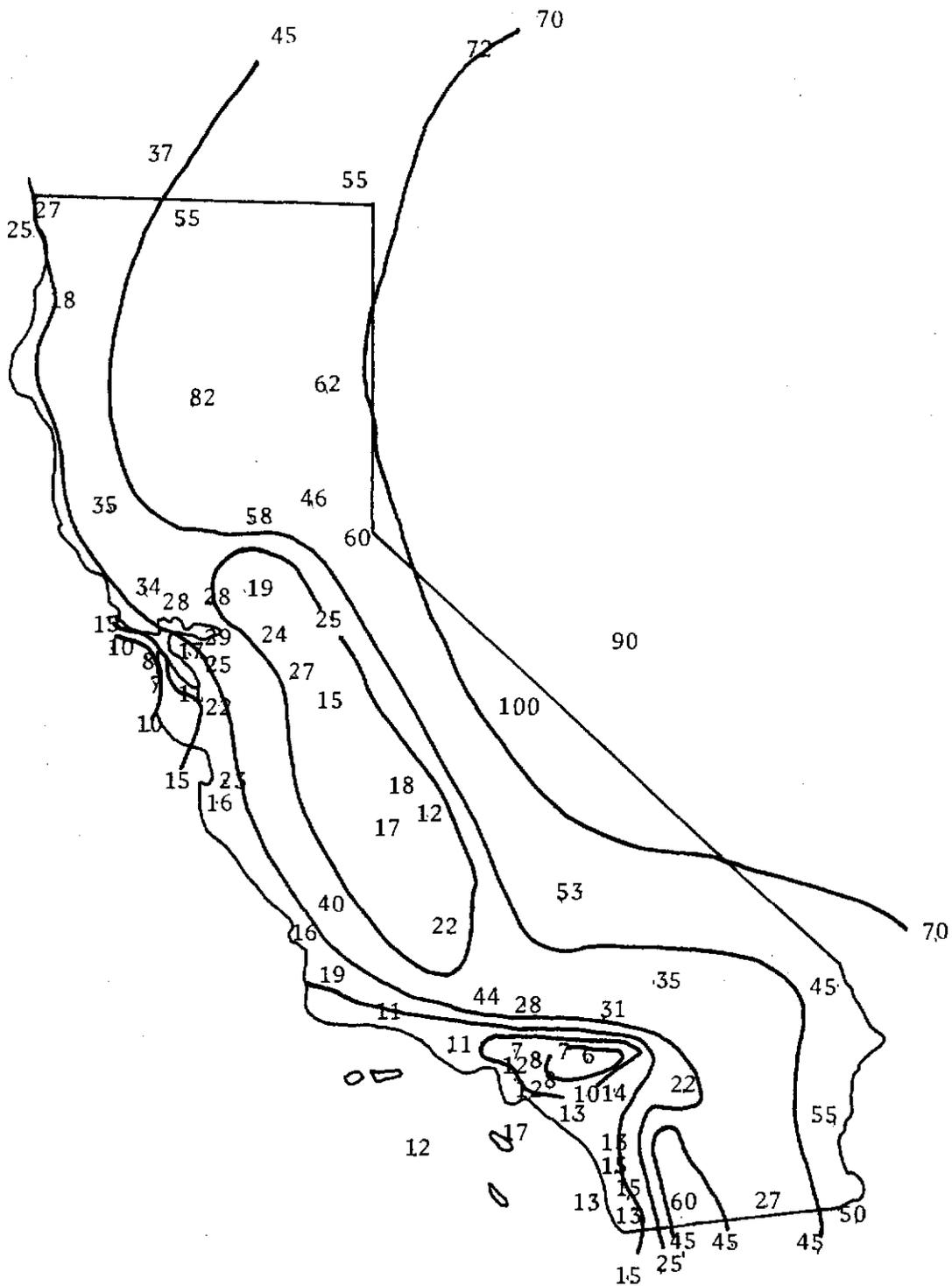


Figure 2 Spring (Apr-Jun) Median 1 PM visibilities and visibility isopleths for California, all values expressed in miles.

Source: "Visibility In California, Final Report."
Technology Service Corporation, July, 1980.

Secondary Impacts of Wood Combustion

Due to the energy crisis there has been an increased interest in heating appliances using solid fuel, especially wood. With this increased use has come increasing concern over the health related impacts of wood combustion. Research include not only respiratory irritation compounds such as carbon monoxide, nitrogen oxides, sulfur oxides and particulates, but also carcinogenic compounds as well. Effects of these pollutants are usually more pronounced in high altitude environment such as that of Squaw Valley.

An increase in the residential development of Squaw Valley will result in a significant increase in wood combustion. Cumulatively, the emissions from this source represent a large source of air pollution. This becomes more important when the topography and meteorology of Squaw Valley are considered. Therefore, some form of regulation of these wood fired appliances is both justified and necessary if it is assumed that the protection of human health is a valid and essential goal.

However, there are constraints to regulating wood combustion that appear currently to be insurmountable. A probable control program would involve certification of new solid fuel appliances, i.e., requiring emissions or combustion efficiency standards, as motor vehicles are now required to do. The testing necessary to evaluate solid fuel appliances now on the market has not been done on any systematic or widespread basis. Limited information is available for those few appliances which have been tested for emissions. At this time, manufacturers are only testing for safety and heating efficiency. Therefore, District staff has no method of determining whether a stove proposed for installation would in fact meet the as yet to be determined standard.

The California Air Resources Board, Oregon Department

of Environmental Quality and others are in the process of evaluating the emissions from wood fired appliances. Test results will not be available for at least 1 year. Therefore, until such time as specific standards can be developed and substantiated by test data District staff proposes that solid fuel appliance emissions in Squaw Valley be reduced by encouraging:

1. The use of catalytic equipped or high combustion efficiency appliances.
2. The limitation of the use of solid fuel appliances in high density commercial residential developments.
3. The prohibition of solid fossil fuel use in Squaw Valley.

The District staff recognizes that the above measures are incapable of mitigating the potential air pollution problems from the solid fuel emissions in Squaw Valley. At such time when the requisite information becomes available, District staff will propose an ordinance to limit emissions from such appliances.

SQUAW VALLEY GENERAL PLAN
WOOD FIRED APPLIANCE EMISSION ANALYSIS

Current 1982 Development:

Peak Use Residential Capacity

	<u>People/Unit</u>	<u>Total Pop.</u>
400 Single Family	3.5	1,400
280 Hotel Rooms	2.0	560
300 Apt/Condos	2.0	600
 Total Peak Use Population:		 2,500 (+/-)

Proposed Allowable Peak Use Population:

Growth:	12,000	
	- <u>2,500</u>	
	9,500	New overnight residents at buildout

Assuming that the average dwelling unit will have 2.5 people using it, the number of additional units needed can be calculated:

$$9,500 \text{ people} / 2.5 \text{ people unit} = 3,800 \text{ additional units}$$

If 90% of the new units have woodstoves or some wood fired appliances, then the total units affected by this ordinance =

$$3,800 \times .9 = 3,400 (+/-)$$

Wood fired heating appliances emit a variety of pollutants including particulate matter, carbon monoxide, hydrocarbons, and oxides of nitrogen. The following is a comparison of the pollutant emissions from low efficiency and high efficiency heating appliances burning oak wood:

<u>Emission Factors:*</u>	<u>Fuel Rate, Lb/Hr</u>	<u>Fuel</u>	<u>Part.</u>	<u>CO</u>	<u>THC</u>	<u>NOX</u>
Low Efficiency	6.57	Oak	45.66	95.5	20.5	14.1
High Efficiency	7.00	Oak	25.7	20.4	.49	--

Pollutant Emissions

Particulate:

Low Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 45.66 lb/ton fuel X 1/2000 =
77.6 ton/yr

High Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 25.7 lb/ton fuel X 1/2000 =
43.7 ton/yr

Difference: 34 ton/yr + (44%)

Carbon Monoxide:

Low Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 95.5 lb/ton fuel X 1/2000 =
162.4 ton/yr

High Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 20.4 lb/ton fuel X 1/2000 =
34.7 ton/yr

Difference: 127.7 ton/yr (79%)

Total Hydrocarbons:

Low Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 20.5 lb/ton fuel X 1/2000 =
34.8 ton/yr

High Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X .49 lb/ton fuel X 1/2000 =
0.8 ton/yr

Difference: 34 ton/yr (98%)

Nitrogen Oxides:

Low Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 14.1 lb/ton fuel X 1/2000 =
24 ton/yr

High Efficiency 3,400 units X $\frac{1 \text{ ton fuel}}{\text{unit}}$ X 0 X 1/2000 = 0

Difference: 24 ton/yr (100%)

Note: Any mixture of low efficiency stoves and fireplaces will increase emissions, since fireplace emission rates are much higher.

*California Air Resources Board Report C-80-02 7, "Emissions From Residential Fireplaces", April, 1980.

Mitigation

Mitigation measures designed to protect and enhance the air quality of Squaw Valley must accomplish two tasks: 1) Reduce CO levels to concentrations within the State and Federal Standards and 2) Reduce the quantity of visibility reducing aerosols. Squaw Valley does not have the industrial stationary sources which are most often the target of control strategies. Therefore, any mitigation measures must be aimed at the two major sources of pollution in the Valley: The automobile and residential fuel combustion. The following measures are proposed to mitigate air quality impacts associated with the development of Squaw Valley:

1. Reduce allowable residential and commercial densities as outlined in the traffic section of the General Plan.
2. Implement the Squaw Valley Capital Improvements Plan.
3. Limit wood combustion appliances in future commercial residential development.
4. Restrict further ski lift development unless traffic impacts can be mitigated as proposed in the Traffic & Parking Sections of the General Plan.

DRAINAGE AND FLOOD CONTROL

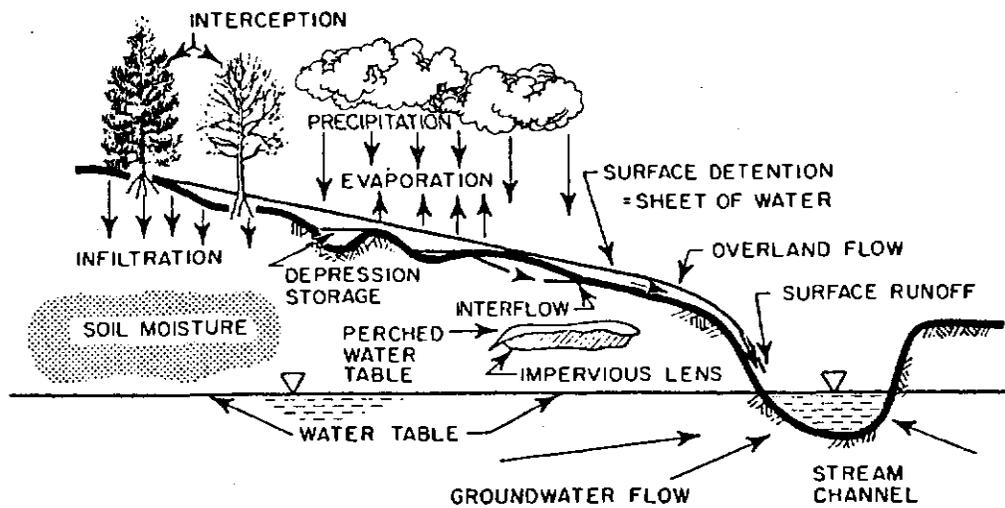
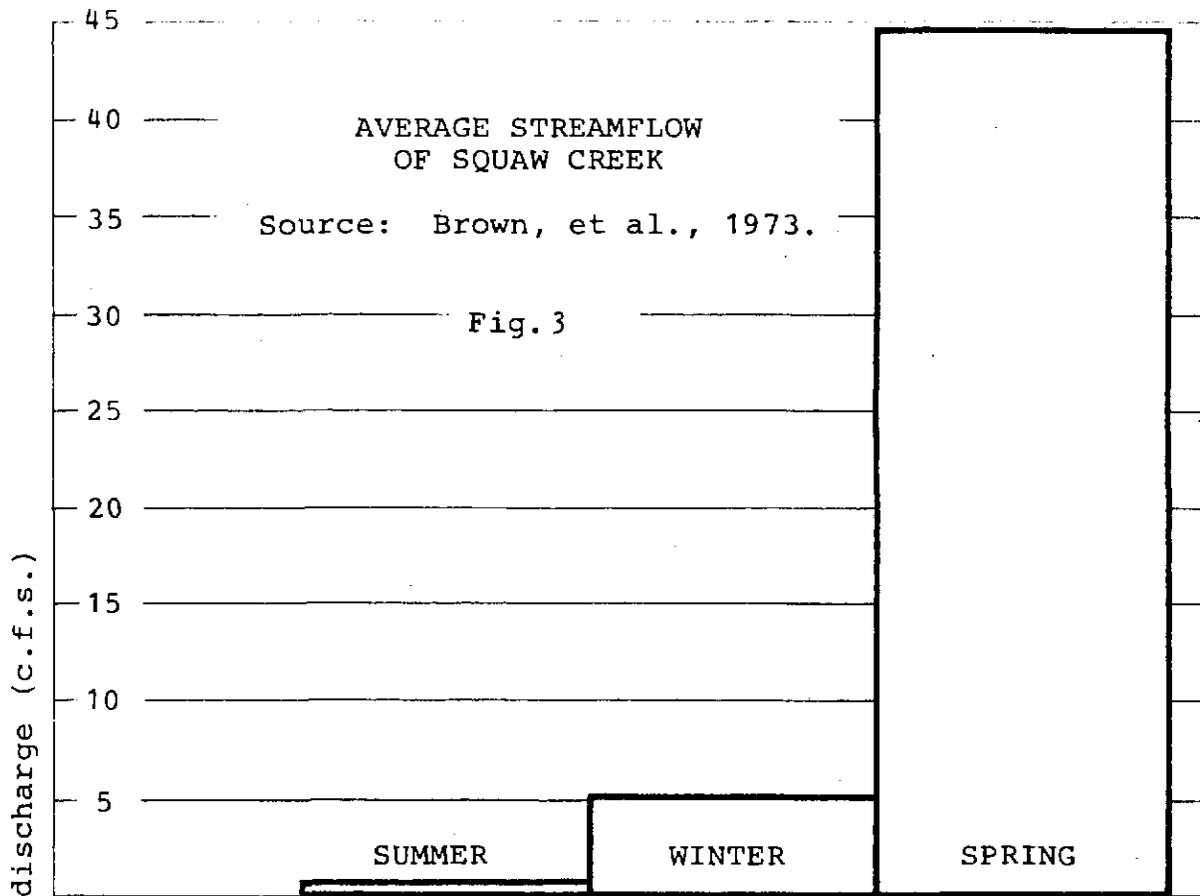
Setting

Squaw Valley is drained by Squaw Creek, a 7.94 square mile (5,100 acres) watershed, tributary to the Truckee River on the east slope of the Sierra Nevada. No permanent stream gaging stations exist on Squaw Creek, but Brown, et al, (1973), have made periodic discharge measurements in conjunction with a water quality study. Their data are reported by flow periods rather than days or months. The summer low flow periods are the months of August through October, winter low flow is November through March, and snow melt is the period April through July. Their streamflow data are summarized in Figure 3. That streamflow is primarily derived from snowmelt is indicated by higher spring discharges. The increase during the winter is probably due to early winter rains and mid-winter snowmelt.

The movement of water through a natural hydrologic system is cyclic, that is, moisture evaporated from the ocean is dropped on the land surface as rain or snow, is then subjected to certain natural and man-caused losses, and finally returns to the ocean as streamflow where the cycle repeats itself (Fig. 4). This process occurs in the Truckee River basin (of which Squaw Creek is a part) except that the water does not return to the ocean but instead goes to Pyramid Lake which has no outlet to the sea. The water in this closed basin, however, is still subject to natural evaporation and transpiration losses and man-made diversions so that water levels in Pyramid Lake are falling. For ease in understanding, the Squaw Valley watershed will be described in terms of the hydrologic cycle. This way, it maybe easier to understand how the various components of the watershed interact.

Approximately 76% of the total annual precipitation falls during the winter low flow period. As can be seen in Figure 3, this water does not appear at the watershed mouth (at Hwy 89) until the snowmelt period (April through July) when approximately 88% of the total annual streamflow occurs. This

indicates that most of the winter precipitation falls as snow and is stored in the snowpack. Snow course data collected in Squaw Valley through 1970 indicates that approximately 49 inches of water is contained in a 117 inch snowpack (California Department of Water Resources, 1971). As the snow falls, a portion of it is intercepted by the forest and later redistributed by the wind. While it is in the trees and as it is being redistributed, the snow is subjected to sublimation losses and some of it would be blown out of the watershed. The significance of sublimation losses in the Squaw Creek basin is unknown but is probably small. A portion of the snow blown off the trees is redeposited in the ski trails in the watershed.



SIMPLE REPRESENTATION OF THE RUNOFF CYCLE

Source: Gray, 1970.

Fig. 4

While on the ground, the snow is subject to evaporation losses. Smith and Halverson (1971) have summarized some of the studies done on evaporation in the Lake Tahoe basin and that data should be applicable to the Squaw Creek basin. Kittredge (Smith and Halverson, 1971) suggested monthly evaporation losses of 0.01 inches in December, 0.07 inches in January, 0.12 inches in February, 0.20 inches in March, 0.15 inches in April, and 0.04 inches in May, for a total evaporation loss of about 0.6 inches. West (Smith and Halverson, 1971) estimated evaporation losses at the Central Sierra Snow Lab near Truckee of 0.5 to 1 inch in a dense forest to 1 to 1.5 inches in forest openings. Evaporation losses on ridge tops exposed to high winds may have losses near 4.5 inches per snow season. These losses are important as they represent potential savings that could be realized from a program of snowpack management to augment the water yield from the basin. If two inches of snow could be saved over the entire basin, this would represent an additional 850 acre-feet of water yield from the watershed.

Water stored in the snowpack is released during the spring in response to increased solar radiation. Melt progresses from the lower to the higher elevation and from the south to the north aspects. While no quantitative data on melt rates are available for Squaw Valley, the U. S. Army Corps of Engineers (1956) did conduct intensive investigations of snow hydrology at the Central Sierra Snow Lab near Donner Pass, about 12 miles north of Squaw Valley. Their data indicate that runoff from the entire basin would not begin until about the middle of March. Daily melt rates would be about 0.2 inches on the first of April, 0.65 inches on the first of May, and 1.2 inches on the first of June. Isolated snowpacks may remain in the basin year round depending on the winters snowfall. These packs would contribute to the late summer streamflow.

Melt rates should not exceed infiltration rates except on barren rocky areas and possibly in meadows where the soils contain a greater percentage of clay-sized particles. As a rule, overland flow should not prevail in the watershed, rather the water should be detained in the soil mantle. Before runoff from

snowmelt appears in Squaw Creek, soil moisture deficits must be satisfied. Once that is done, streamflow increases in response to melt rates. It is during the snowmelt period that all ground water bodies are filled to capacity to sustain streamflow during the dry summer and fall months.

Precipitation may also occur as high intensity convectional storms during the summer. While no data are available describing these storms, their intensities, at times, may exceed infiltration capacities resulting in overland flow. The concern with overland flow centers around the time it takes for runoff water to reach a channel. The more rapidly water reaches a channel, the greater will be the peak flow. If the water infiltrates the soil mantle, it is detained and released to a channel slowly, resulting in a more gradual rise in discharge and lower peak.

Floods in the basin are caused by melting snow, heavy rains, or a combination of the two. Snowmelt floods are long duration events with large volumes of runoff. Snowmelt floods, while not an annual event, are more common than rain-generated floods. The rain floods generally occur as a result of large storms of moderate or heavy intensity rainfall over a period of several days. They can be aggravated by the presence of a melting snowpack and saturated ground conditions. These floods can be of shorter duration with a large volume of runoff resulting in a higher peak flow. These are generally considered as the more damaging type of flood. Another flood producing precipitation event would be the summer convectional storm. These storms typically are limited in their area extend, but produce floods characterized by relatively small volumes of water in a short period of time.

Since there are no gage records for Squaw Creek, flood stages and discharge are undefined. However, flood plain studies by the U. S. Army Corps of Engineers (1971) for the Truckee River give some indication of the magnitude of past and future floods. Table 8 summarizes the Corps' estimates of flow in the Truckee River and what the contribution may have been from both the Bear Creek and Squaw Creek drainages. Butler, et al, (1966),

developed a graphic method of estimating the magnitude of floods in the Great Basin based on watershed characteristics and the location of the watershed in the Great Basin. Using their procedures, the 50-year flood for Squaw Valley would be about 1,000 cfs.

The major groundwater reservoir in the valley lies beneath the meadow. Harrison Geological Services (1972) estimated the capacity of this aquifer as 4,284 acre-feet. The main recharge period is during the spring snowmelt. Water stored is used as domestic supply. William F. Jones, Consulting Engineers, have produced a report dealing with the geology of the meadow, a depth to groundwater map, and an analysis of drawdown effects. Their report is filed with the Placer County Planning Department.

The main Squaw Creek channel was channelized for the 1960 Winter Olympics. With the passage of time and lack of maintenance, the capacity of the channel has been reduced so that it cannot now pass its design flow. Raymond Vail and Associates have investigated the design flood and capacity of the existing channel and their report is available at the Placer County Planning Department.

Natural drainage in the core area has been radically altered by man's activities. The parking lot, streets, buildings, etc., have reduced infiltration capacities to zero so that all runoff occurs as sheetflow. In general, drainage is to Squaw Creek with minor amounts going directly to the meadow. This speeds up the runoff process so that Squaw Creek responds more rapidly to short duration storms in the valley.

SQUAW VALLEY GENERAL PLAN 1983

FLOOD PLAIN

LEGEND

100 YR. Flood Plain

Approx. Main-Mode Channel

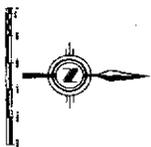
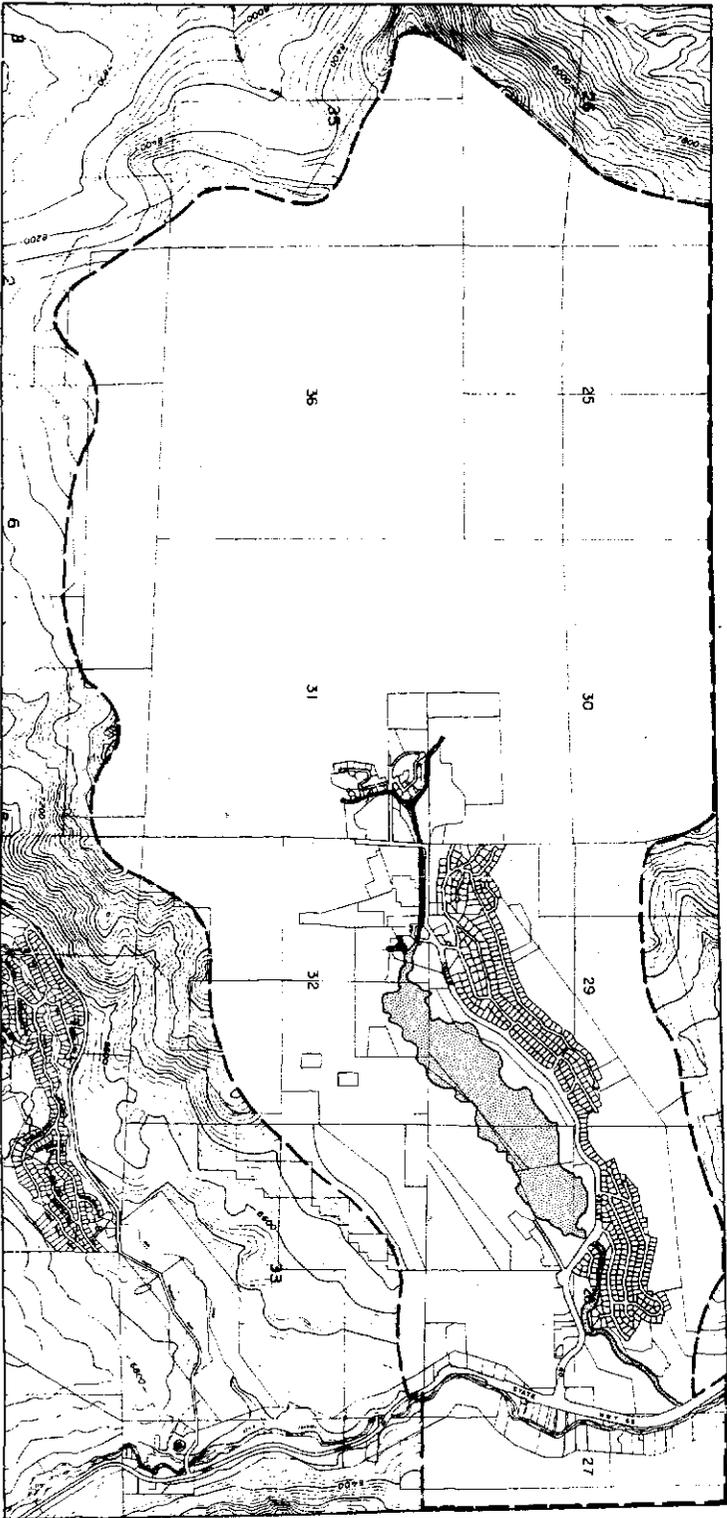


TABLE 8

FLOOD FLOWS IN THE TRUCKEE RIVER
AT VARIOUS POINTS BELOW LAKE TAHOE

Flood	At Tahoe City	At Alpine Meadows Road Bridge	Below Squaw Creek	Combined Squaw and Bear Creeks
February 1963	196	200	5,500	5,300
June 1969	2,620	2,650	2,700	50
IRF*	2,500	3,350	7,000	3,650
SPF**	3,000	4,350	9,000	4,650

* IRF - Intermediate Regional Flood: A flood with a recurrence interval of 100 years.

** SPF - Standard Project Flood: The largest flood that could occur under the most severe meteorologic and hydrologic conditions.

Source: U.S. Army Corps of Engineers, 1971

Impact

A detailed analysis was conducted concerning drainage & flood control for a project proposed for Mainline Properties of America entitled "Squaw Valley" in 1974. Since the area for development activities with this General Plan Update is actually less than what was analysed with that project, the original impact section is still pertinent as follows:

Raymond Vail and Associates (1974) have conducted a hydrologic investigation of Squaw Valley to determine the impact of the proposed development on flood flows and the extent of the floodplain on the valley floor (Plate 4). Their report is available for inspection at the Placer County Planning Department. In summary, they concluded that the proposed project would not increase the 100-year flood peak within or downstream of the project site. This is primarily due to the fact that all runoff originating on the property, from a design storm, would have passed through the channel system before runoff from the upper portions of the watershed reaches the project site. A storm path could occur in which upper watershed peak runoff would reach the main channel at the same time as village area runoff. This possibility, however, is a remote one, with the conjunctive probabilities being far in excess of the 1% change limits of the study. Were it to occur, the 40 cfs increase in peak flow due to complete coverage of the village area would amount to about 2.5% of the total peak flow (Raymond Vail and Associates, 1974).

Furthermore, the existing improved channel has more than adequate capacity to pass the 100-year flood following this and subsequent development in the valley. The existing channel capacity at a point midway between the two bridges in the vicinity of Blyth Arena is about 2,500 cubic feet per second (cfs) while the estimated 100-year peak flow following development is about 1,000 cfs. Figure XX shows the limits of the 100-year floodplain in Squaw Valley.

The capacity of the drainage system could be exceeded if a storm were to move from west to east through the watershed. In this instance, the arrival of the peak flow from the upper portion of the watershed would be synchronized with the peak flow

from the central village area, possibly resulting in an overtopping of the banks. The chance of this occurring, however, is remote.

The investigation revealed that the capacity of the outlet structure in the debris basin above the project has been severely reduced due to sedimentation and damage to the downstream conduit and channel sections. Without corrective action, there is a risk of overtopping the banks and subsequent damage to the Nevada Building area.

The groundwater table in the meadow will be drawn down less than five feet when buildout of the General Plan is complete and occupied and water is pumped from the water district's wells. The impacts from the drawdown will center around the effects on the meadow vegetation and, therefore, are covered in more detail in "Environmental Impact Assessment - Vegetation". Compaction of the aquifer due to dewatering is not anticipated because of the lack of extensive deposits of clay within the valley fill and its relatively small size.

Mitigation

The deficiencies identified with the outlet structures on the debris basin above the project site are being corrected, and downstream facilities should either be repaired, or replaced to accommodate the potential flows.

Erosion control measures should be implemented for areas with barren slopes on the ski hill, as well as any new areas where construction activities occur.

The annual snowmelt period in the spring will completely recharge the valley aquifer.

Reference is also made to the Erosion Control Section of the General Plan and Land Use Ordinance regarding drainage.

WATER QUALITY

Setting

Past development practices in Squaw Valley have contributed to the degradation of the quality of water in Squaw Creek and the Truckee River. It is the goal of this plan to improve the quality of water in Squaw Creek and its tributaries, to attain current water quality standards, and to protect the stream environment zone and Squaw Creek watershed as a whole.

Natural drainage patterns have been disrupted in Squaw Valley by development of the ski hill, parking area, subdivisions, mass grading, and the road network. The most damaging disturbances have resulted from the channelization of Squaw Creek from the Olympic Village area to the most westerly portion of the meadow, clearing and grading for the ski hill, and poorly designed and constructed drainage improvements for the main parking area. Apparent problems include: Slope and channel erosion, sedimentation, flooding, loss of vegetation, and loss of fisheries.

Impacts

Construction of additional ski lifts and trails, as well as construction of the additional dwelling units, will contribute to cumulative increases in the sediment load transported by Squaw Creek. The magnitude of this increase cannot be estimated with any degree of certainty because information

regarding phasing of construction, location and configuration of units, etc., is not available at the present time. It is anticipated, however, that the magnitude of these increases in the rest of the valley will be greater than for the village area because of steeper slopes. A significant percentage of the eroded sediments will be deposited in the meadow segments of Squaw Valley where they will contribute to the existing problems of increasing stream bed elevation. Increased peak flows associated with the additional area of impervious surface will increase the rate of bank erosion in those areas of the meadow that have experienced channel elevation changes due to sediment deposition.

Mitigation

This plan establishes as goals, both the restoration of disturbed drainage areas and the prevention of further disturbance to both the natural and man-made parts of the area's storm drainage system. Drainage channels identified on the Plan map shall not be altered. Such natural channels are recognized as a major constraint to development; development potential has not been allocated to parcels where flood plains make development difficult.

Maintenance of the streamside land having a direct effect on the ecology of the stream (the stream environment zone) is important to the suitability of a stream as a fish habitat. It is also important to the cleansing of spring run-off prior to its reaching the stream itself. The stream environment zone, here identified as the 100-year flood plain of the particular stream, must be retained in its natural condition. All construction

directly affecting the stream must be strictly controlled so as not to cause siltation or in other ways adversely affect the quality of the water or the suitability of the stream as a fish habitat area. Where the 100-year flood plain has not been established, the area along any waterway within 100' of the centerline of the stream shall be left in its natural state. Where the stream environment zone and/or flood plain has previously been adversely affected by channelization, fill, or other human activity, consideration should be given to restoring the stream environment zone as a condition to the approval of projects on adjoining properties. Erosion control is necessary along portions of Squaw Creek and its tributaries and can be accomplished without further diversion of the stream bed or destruction of existing vegetation. Any crossings of the natural stream bed by road, trail, or other transportation facility must be accomplished so that the natural stream characteristics are not impaired. Underground utilities must be located and constructed at a safe distance from all streams or designed properly to prevent any contamination of soils or waterways. Equestrian trails should also be maintained at a safe distance from the stream to prevent pollution and damage to the vegetational cover in the stream environment zone.

Snow storage areas must be designated within every existing and proposed project in areas which will not adversely affect water quality, under no circumstances should snow be dumped in Squaw Creek. In general, high density, compact development which limits the removal of native vegetation and reduces the extent of impervious surfaces should be encouraged over low

density, sprawling types of projects. In areas where the density of development and extent of impervious surfaces is necessarily high, such as the village commercial areas and parking lots, a system for the treatment of run-off should be required.

New development activities will be subject to requirements of the California Regional Water Quality Control Board -Lahontan Region as per the Water Quality Control Plan Report -North Lahontan Basin (6A) (adopted October, 1975 with amendments). Standards imposed by Lahontan should insure that no significant adverse impacts occur within Squaw Creek.

VEGETATION

Setting

The Squaw Valley watershed contains many of the flora typical of two major life zones, the Canadian (generally below 8,200 feet in Squaw Valley) and the Hudsonian (generally above 8,200 feet) Zones (See Tables 9 & 10). The transition between these two life zones is not a clearly defined interface in that the Canadian Zone extends upwards to higher elevations on the warm south facing slopes, while the Hudsonian Zone conversely extends downward on the cooler northerly slopes; thus, the flora often represents an integration of plant species from both zones.

The Canadian Life Zone is characterized by the coniferous forest composed of Jeffrey pine, red fir, lodgepole pine, and, to a lesser degree, western white pine, white fir, incense cedar, and sugar pine. These forests dominate throughout most of the Squaw Valley watershed.

The Hudsonian Life Zone is the timber-line zone and is generally well defined in its upper limits of growth. The dominant coniferous species are lodgepole pine, mountain hemlock, western juniper, with minor amounts of red fir and Jeffrey pine.

TABLE 9

DOMINANT VEGETATION RELATIVE TO TOPOGRAPHIC POSITION
AND SLOPE ASPECT

SQUAW VALLEY WATERSHED

CANADIAN LIFE ZONE (Mostly below 8200 feet)	Alluvial Bottom-lands	Valley Margins and Basins	Northerly & Easterly Slopes	Southerly & Westerly Slopes	Ridge Tops	Riparian Zones
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Major Tree Species

Jeffrey pine (<u>Pinus jeffreyi</u>)		1	2	1	1	
Lodgepole pine (<u>Pinus contorta</u> var. <u>murrayana</u>)	1	1	2			1
Red fir (<u>Abies magnifica</u>) above 6800'			1	2	2	2
White fir (<u>Abies concolor</u>) below 6800'		1	1	2		2

Minor Tree Species

Western white pine (<u>Pinus moticola</u>) above 6800'			1	2	2	
Sugar pine (<u>Pinus lambertiana</u>) below 7200'			1	1	2	
Incense-cedar (<u>Libocedrus decurrens</u>) below 6800'		2	2	1		
Quaking aspen (<u>Populus tremuloides</u>)	1	1				1

PRINCIPLE WOODY PLANTS

**Sagebrush	<u>Artemisia tridentata</u>
**Bitterbrush	<u>Purshia tridentata</u>
*Greenleaf manzanita	<u>Arctostaphylos patula</u>
Currants and gooseberry	<u>Ribes spp.</u>
*Snowbrush	<u>Ceanothus velutinus</u>
Squaw carpet	<u>Ceanothus prostratus</u>
Mules ears	<u>Wyethia mollis</u>
Bush chinquapin	<u>Castanopsis sempervirens</u>
**Rabbitbrush	<u>Chrysothamnus viscidiflorus</u>
*Huckleberry oak	<u>Quercus vaccinifolia</u>
Serviceberry	<u>Amelanchier alnifolia</u>
Bitter cherry	<u>Prunus emarginata</u>
Mountain alder	<u>Alnus tenuifolia</u>
Willow	<u>Salix spp.</u>
Mountain Rose	<u>Rosa ultramontana</u>
Curleaf Mt. Mahogany	<u>Cercocarpus ledifolius</u>
*Mountain whitehorn	<u>Ceanothus cordulatus</u>
Pinemat manzanita	<u>Arctostaphylos nevadensis</u>
Red elderberry	<u>Sambucus racemosa</u>

1 Denotes primary site (most common occurrence)

2 Denotes secondary site (lesser occurrences)

*Principle brush species

**Principle range species

TABLE 10

DOMINANT VEGETATION RELATIVE TO TOPOGRAPHIC POSITION
AND SLOPE ASPECT

SQUAW VALLEY WATERSHED

HUDSONIAN LIFE ZONE (Mostly above 8200 feet)	Alluvial Bottom- lands	Valley Margins and Basins	Northerly & Easterly Slopes	Southerly & Westerly Slopes	Ridge Tops	Riparian Zones
<u>Major Tree Species</u>						
Mountain hemlock (<u>Tsuga mertensiana</u>)		2	1	2	1	2
Western juniper (<u>Juniperus occidentalis</u>)		2	2	1	1	
Lodgepole pine (<u>Pinus contorta</u> var. <u>murrayana</u>)	2	1	2	2	2	1
<u>Minor Tree Species</u>						
Red fir (<u>Abies magnifica</u>)		1	2	2		2
Jeffrey pine (<u>Pinus jeffreyi</u>)		1		2		
<u>PRINCIPLE WOODY PLANTS</u>						
Willow						<u>Salix</u> spp.
Gooseberry and Currents						<u>Ribes</u> spp.
Pale laurel						<u>Kalmia polifolia</u>
Red heather						<u>Phyllodoce breweri</u>
Spirea						<u>Spiraea densiflora</u>
Mountain snowberry						<u>Sympnoricarpos rotundifolius</u>

- 1 Denotes primary site (most common occurrence)
2 Denotes secondary site (lesser occurrences)

For purposes of describing the vegetation of these life zones within the watershed, they have been classified into the following vegetation types: Coniferous forest, range, riparian, mountain brush, meadow, and barren, rocky, or disturbed areas.

Coniferous Forest

Description. This forest cover includes the coniferous forest species previously enumerated for the Canadian Life Zone and the Hudsonian Life Zone.

Medium Forest

Description. This category is comprised of relatively open forest stands which form a crown closure of at least 10% but less than 40% when viewed from a vertical position above the forest canopy.

Dense Forest (See Plate 5)

This category is comprised of semi-dense forest stands which form a crown closure of 40% or greater when viewed from a vertical position above the forest canopy.

The forest species that occupy the site, can be generally ascertained by inspecting Tables 9 & 10, which present a summary of the dominant tree and woody plant species comprising these forests by life zone, topographic position, and slope aspect.

Tables 9 & 10 present some of the major characteristics associated with each of the coniferous tree species - general range within the watershed basin, longevity, and principal natural enemies.

Range (Associated with Sparse Forest Cover)

Description. The range vegetation is characterized by big basin sagebrush, bitterbrush, rabbitbrush, wooley mule's ears, gooseberries, currants, and undifferentiated sedges, grasses, and forbes. It predominates in the open areas along the valley margins, in large openings in the forest canopy, and

occasionally on small flats and open mountain slopes. Coniferous trees may comprise up to 10% of the vegetative cover. The dominant composite species composing this vegetation type area shown in Tables 9 & 10.

The range vegetation dominates on the excessively drained soils with low water holding capacity. It provides a moderate to sparse ground cover in areas that will not generally support less drought tolerant species, and for this reason is considered valuable as a watershed cover. The range type also provides good browse for both wildlife and livestock.

Fire risk is relatively high but is generally easily controlled with good accessibility. It affords no protection from avalanches and, because of its open character, affords no natural screening value for development purposes.

Riparian

Description. This type includes the riparian vegetation along Squaw Creek and the tributary water courses as well as several isolated incidences of hydrophytic communities in other areas of the property.

Principal vegetation elements are: Mountain alder (Alnus tenuifolia), willow (Salix spp.), quaking aspen (Populus tremuloides), lodgepole pine (Pinus contorta var. murrayana), creek dogwood (Cornus occidentalis), and undifferentiated grasses, sedges, rushes, and forbs.

The riparian zone is a sensitive vegetation type, and is the result of natural succession by plants adapted to the water environment; once disturbed these plants are extremely difficult to reestablish. The vegetation in this zone serves several purposes: It provides soil stabilization and retards stream bank erosion; it helps maintain the fishery habitat through its influence on water temperature and control of stream sediments; it provides a favorable habitat and food source for many wildlife and aquatic species. Disturbance generally results in increased stream bank erosion and subsequent deterioration of water quality, loss of a desirable fishery habitat and aquatic species, and in some instances, encouragement of weedy and

undesirable plant species which may further accelerate the degradation of the riparian environment.

Mountain Brush (Associated with Sparse Forest Cover)

Description. This cover type is found on the property in the large openings within the forested areas and particularly on the rocky slopes above the valley margins. The most common constituent species are greenleaf manzanita, snowbrush, huckleberry oak, mountain whitethorn, bush chinquapin, bitterbrush, curlleaf mountain mahogany, service berry, bitter cherry, gooseberry, and currant. This cover type is generally encountered in shallow soils on moderate to moderately steep slopes. The brush species generally manage to hold these sites from coniferous succession for relatively long periods of time.

The brush cover affords good protection from soil erosion and a moderate to good wildlife habitat. It does not provide protection in areas of avalanche potential nor does it furnish any significant natural screening qualities for development purposes.

The fuel characteristics of this type and its proximity to quantities of medium and heavy fuels makes this cover a potential hazard to development, unless hazard reduction measures are undertaken to reduce the dangers.

Meadow Vegetation

Description. This type includes the Squaw Valley Meadow. The existing vegetation consists of both wet and dry meadow types; these include several sedges, grasses, legumes (Lotus and Trifolium spp.), and forbs. The dominant soils are Aquic Xerumbrepts and Aeric Humaquepts with the wet meadow type occupying the lower topographic positions in the meadow. The trefoils (Lotus spp.) are of special value because they are deep rooted for legumes and make good growth in the late summer. Similarly, the other legumes (Trifolium spp.) also provide the meadow with a later summer growth, but they are not as deep rooted and rely heavily on the available supply of phosphorus, potassium, and calcium. The sedges (Carex spp.) are perennial by

rootstocks, relatively deep rooted, and dominate the most of the meadow, both on the wet and dry sites. Both the grasses and the sedges start growth early in the year and usually produce seed by late July or early August.

The growth of grasses and similar vegetation is dependent upon the amount of available water stored in the soil following the precipitation period. Where the root zone penetrates into an area of constantly available moisture, the actual and potential evapotranspiration rates are nearly identical. The wet meadow vegetation grows under such circumstances, and when the growth period for such plants is interrupted for long periods of time by the cessation of available water, the plant must respond adequately to such an adjustment it will wilt and die. It is this difference in tolerance to drought that is largely responsible for the growth of certain species in one part of the meadow and of other species elsewhere.

The meadow cover type is sensitive to disturbances. The vegetation will normally regenerate itself if the disturbances are temporary in nature, but will become a problem if the causes of disturbance persist. The normal problems associated with these disturbances are soil compaction, water pollution, and accelerated erosion.

The meadow vegetation has been classified as Key Sensitivity in development planning for Squaw Valley.

Barren, Rocky or Disturbed Areas (Associated with Sparse Forest Cover)

Description. These areas have sparse vegetation either because of the presence of volcanic flows and granitic rock outcrops or because of past grading and clearing operations. In some instances, the natural vegetation has been replaced with lawns, pavement, or building structures.

In the naturally occurring barren or rocky areas, the shallow soil mantle or exposed rocks generally preclude any significant growth of vegetation. The disturbed areas are suitable for revegetation, and, in some cases, are being maintained in lawn. In other areas the natural invasion by brush

species is slowly occurring. The fire hazards are relatively low.

TREE SILVICS*

I. Jeffrey Pine (Pinus jeffreyi) A. Range and Type Locations: Generally found below 8,200' on the southerly and westerly exposures. Occupies moderate to well drained soils but often shallow soils. Found in mixed occurrence with lodgepole pine, white fir, red fir, and western juniper.

B. Remarks: Intolerant of shade; temperatures range from -25° to 100°+F. Best growth in the area occurs on well-drained, coarse volcanic soils with adequate moisture. Sensitive to fire in the early growing season, tolerant of ground fire during later periods. Longevity normally 200 to 400 years, but often exceeds 500 years. Wind firm species. Commercially valuable.

Principal Diseases: Dwarf mistletoe (Arceuthobium campylopodum f. campylopodum); the stem and limb rusts produced by (Peridermium spp.); and the root diseases: (Fomes annosus), (Armillaria mellea), and (Polyporus schwienitzii).

Principal Insect Enemies: The bark beetles (Dendroctonus jeffreyi), (Ips coniusus), and (I. emarginatus); the flat headed borer (Melnophila californica); the defoliators (Coloradia pandora) and (Neodiprion spp.).

II. Lodgepole pine (Pinus contorta var. murrayana)

A. Range and Type Locations: Common species throughout the property, especially along the valley margins, topographic flats and benches, and on poorly drained to imperfectly drained soils. Occurs in pure stands along the valley margins and in mixed stands principally with

red fir, white fir, and Jeffrey pine. Lodgepole pine also associates freely with quaking aspen along riparian zones and adjacent to the meadows.

B. Remarks: Intolerant of shade, grows in a wide range of soil types. The species is not exacting in soil or temperature requirements and often regenerates so profusely as to cause stagnation of the stands at an early age. Longevity is generally less than 200 years. Stands which have developed over shallow soils are often susceptible to windthrow.

Principal Diseases: Numerous stem and limb rusts (Cronartium spp.), dwarf mistletoe (Arceuthobium americanum), and the root diseases (Armillaria mellea), (Fomes annosus), and (Polyporus schweinitzii).

Principal Insect Enemies: The bark beetles (Dendroctonus monticolae) and (Ips radiatae); the needle miner (Recurvaria milleri); the lodgepole sawfly (Neodiprion burkei); and numerous other insects.

III. Red fir (Abies magnifica)

A. Range and Type Locations: This tree species is found well distributed both in nearly pure and in mixed stands from 6,800 to 8,400' in the project area. Prefers northeast aspects and moist, cool sites in protected basins.

B. Remarks: Moderately tolerant of shade. Temperature ranges below -25° to 90°F or less. Best development on northerly aspects. Will not occupy flats with standing water. Sensitive to fire because of dense foliage and resinous bark blisters. Longevity is normally 200 to 350 years. Snow loads can cause severe damage. Stands

in shallow soils with windy exposures are often susceptible to windthrow after partial cutting. Commercially valuable.

Principal Diseases: Dwarf Mistletoe (Arceuthobium campylopodum f. abietanum) is probably the most important disease. Trunk rots: (Pholiota adiposa); (Pomes annosus); (Echinodontium tinctorium); and (Armillaria mellea).

Principal Insect Enemies: The bark beetle (Scolytus ventralis); the flat-headed borer (Menanophila drummondii); and the round headed borer (Tetropium abietis).

IV. White Fir (Abies concolor)

A. Range and Type Locations: Occurring in mixed stands with Jeffrey pine and lodgepole pine below 6,800'. Transitions into the red fir type above 6,800'.

B. Remarks: A very tolerant species. Best growth on deep moist loams but will grow on a variety of soils. Temperature range in this area from -25° to 96°F. Very fire sensitive when young. Longevity usually around 200 years but sometimes attaining 300+ years. Commonly has frost cracks and is subject to sunscald and windthrow and is wind breakable in heavy selective cutting. Sensitive to root disturbances but relatively wind firm.

Principal Diseases: Essentially same as listed for red fir but also is affected by numerous foliage diseases.

Principal Insect Enemies: Similar to those listed for red fir.

V. Western White Pine (Pinus monticola)

A. Range and Type Locations: Commonly found in the project area above 6,800'. Does not occur in pure stands but as a mixed species with other conifers.

B. Remarks: Only regarded as moderately shade tolerant, generally good growth in deep, well-drained, medium to fine textured soils of high water holding capacity. Subject to winter drying (desiccation) and summer drought damage. Intermediate sensitivity to fire. Commercially valuable species. Longevity normally 100 to 200 years or older. The species does not respond well after being suppressed.

Principal Diseases: White pine blister rust (Cronartium ribicola); root diseases (Fomes annosus) and (Armillaria mellea). Generally considered wind firm.

Principal Insect Enemies: The bark beetles (Dendroctonus monticolae), (Ips confusus), and (Ips emarginatus); the pine needle scale (Phenacaspis pinioliae); and the pine butterfly (Neophasia menapia).

VI. Sugar pine (Pinus lambertiana)

A. Range and Type Locations: Scattered occurrences below 7,200'. Occurs in mixed stands with Jeffrey pine and white and red fir on well drained soils on both northerly and southerly slopes.

B. Remarks: Sugar pine has an intermediate tolerance of shade. It will tolerate more shade than Jeffrey pine but less shade than white fir and incense-cedar. The normal temperature ranges area below -10°F to over 100°F. The seedlings are generally more susceptible to freezing injury than Jeffrey pine but less susceptible than white fir. Seedlings, saplings, and poles are readily killed by fire. Sugar pine is relatively wind firm and will generally respond well to thinning. It is a commercially valuable species. Longevity is normally about 300 years, although many trees may reach ages in excess of 500 years.

Principal Diseases: White pine blister rust (Cronartium ribicola). Heart rots and stem diseases are generally not a serious problem in this species.

Principal Insect Enemies: Mountain pine beetle (Dendroctonus monticolae), the fire-spined engraver (Ips confusus), and the flat-headed borer (Melanophila gentilis).

VII. Incense-cedar (Libocedrus decurrens)

A. Range and Type Locations: Individual occurrences below 6,800' in mixed stands with Jeffrey pine, white fir, and lodgepole pine principally on easterly or westerly facing slopes. The best growth occurs in deep, well drained sandy loam soils.

B. Remarks: Incense-cedar is more shade tolerant than the associated pine species but less tolerant than white fir. It generally shows good response to release thinning but often retains its lower limbs. Although noted for its heartwood durability in wood products,

standing overmature trees are rated as the most defective of all associated conifers. Young trees are readily killed by fires and, although older trees are fairly well protected by the thick bark, intense fire may indirectly cause severe damage by exposing trunks to infection by the pocket dry-rot fungus. It has an extensive, well developed lateral root system and is generally regarded as quite windfirm. Incense-cedar is long lived, generally exceeding 500 years.

Principal Diseases: The most important single disease is the pocket dry-rot fungus (Polyporus amarus), lesser diseases include incense-cedar leaf rust (Gymnosporangium libocedri) and incense-cedar mistletoe (Phoradendron libocedri).

Principal Insect Enemies: The western cedar bark beetle (Phloeosinus punctatus), the western cedar borer (Trachykele blondeli) and the flatheaded borer (Trachykele opulenta).

VIII. Mountain Hemlock (Tsuga mertensiana)

A. Range and Type Locations: Commonly found above 8,200' in the Squaw Valley watershed area. Usually favors the northerly aspects and timberline flats. Can be found in small pure stands as well as in a scattered occurrence. At lower elevation limits it can be found growing in association with red fir, lodgepole pine, western white pine, and western juniper.

B. Remarks: Exceedingly tolerant of shade, slow growing. Well adapted to severe alpine climate. Thrives in most well drained soils, but best growth is associated with loose, coarse, moist soils. Longevity variable, probably 60 to 80 years in stunted form and

up to 200 years or more on favorable sites.

Principal Insect Enemies: The bark beetle (Scolytus tsuagae), and occasionally (Dendroctonus monicolae) if in the vicinity of attacked lodgepole pine.

IX.

Western Juniper (Juniperus occidentalis)

A. Range and Type Locations: Commonly prevails on the rockier and drier sites on the upper slopes and ridge tops surrounding Squaw Valley. It occupies rocky soils derived from both volcanics and granites and is able to survive and grow within the confines of a rock crevice on windy, barren slopes. Common tree associates are red fir, mountain hemlock, lodgepole pine, Jeffrey pine, and western white pine.

B. Remarks: Generally regarded as intolerant of shade in that it always grows in full light. The species does not compete well with other trees on better sites, and so its normal range is largely restricted to the harsh, rocky sites where competitive species are unable to survive. Young trees are extremely sensitive to ground fires and older trees are generally moderately resistant. It is generally a long-lived tree, sometimes reaching 800 to 1,000 years or more.

Principal Diseases: Juniper fomes (Fomes juniperinus), a mistletoe (Phoradendron ligatum), and stem and foliage rusts (Gymnosporangium spp.)

Principal Insect Enemies: The juniper bark beetle (Phloesinus juniperi).

*Sources:

USDA Forest Service, 1965

USDA, 1971

USDA, Revised 1952

Impacts

The impacts associated with build out of the Plan are expected to be primarily caused by clearings required for housing development and ski trail and lift line development. When specific plans are available and developers apply for use permits, Placer County will have more precise determinations available and may request addenda to this EIR.

No vegetation impacts are expected to occur from the removal of domestic water from the valley's aquifer. The root zone of the grasses, sedges and most other meadow plants are generally confined to a soil mantle substantially above the water table. These meadow plants depend on seasonal precipitation, and this precipitation is adequate to fill the soil to full capacity each year. Since these plants are not dependent upon the water table level, they go through dormancy periods unrelated to water table fluctuations. The few trees that may be utilizing groundwater will not be adversely affected due to their drought periodicity, the duration of change, and the fact that the water table will be recharged to capacity annually; also, the water table is not expected to fluctuate more than one foot. Some areas of meadow and riparian vegetation are green throughout the warm season due to their proximity to Squaw Creek, springs, and seeps; this condition will not be altered.

Mitigation

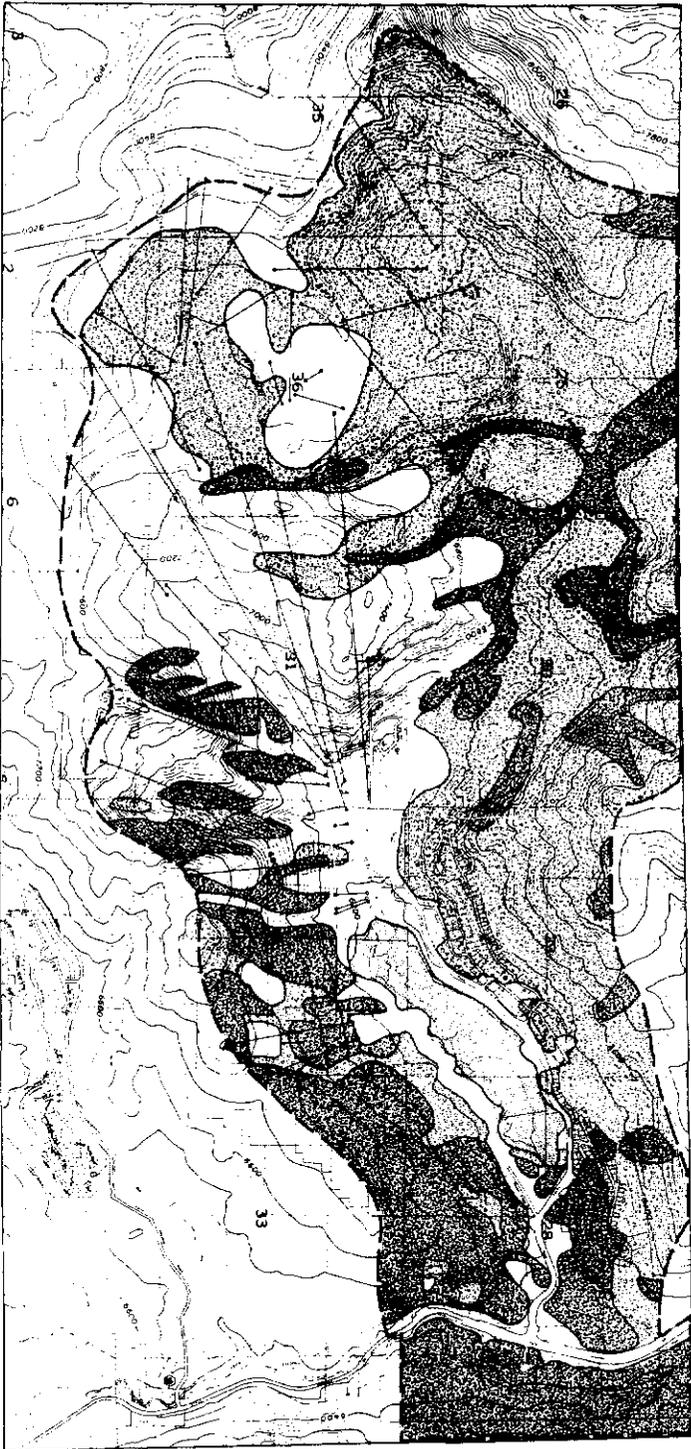
Only those trees that occupy improvement sites should be removed. All others should remain and susceptible trees should be protected from damage during the construction periods with a double wrap of snow fencing. Wherever possible, groups of trees that are to be retained should be fenced with an area fence. Further, no earth materials should be stock piled within the drip line of the trees nor should impervious paving be allowed within the drip line.

Retention of natural vegetation and planting of indigenous species should be incorporated where possible. To avoid infestation by bark beetles, the vegetation that is cut for removal should not be stacked against trees that are to be

retained; also, all cut tree trunks and limbs in excess of 4 inches in diameter should be removed from the site within 30 days of cutting.

Development should be encouraged to occur in areas of good tree cover; meadows, stream environment zones, steep terrain, and edges where vegetation types change, should remain free of development. Retention of vegetation is important in preserving and maintaining aesthetic values. Areas necessarily disturbed due to development activities must be replanted and landscaped. In many cases, trees may be pruned to permit adequate solar exposure instead of being removed.

Refer to the Landscaping and Forest Management Sections of the General Plan for further clarification regarding vegetation constraints.



**SOLAW VALLEY
GENERAL PLAN
1983**

VEGETATION

-  DENSE FOREST COVER
-  MEDIUM FOREST COVER
-  SPARSE FOREST COVER
-  MEADOW VEGETATION



PLATE B

F I R E H A Z A R D

Setting

During summer months much of the undeveloped areas of Squaw Valley receive occasional hiker use and the upper roads are used occasionally by ski lift maintenance crews and Western Union service crews. Most of the lower valley's north periphery is residential, creating the risk of fire starts from smokers, children with matches, structure fires, etc. In addition to the risk of man-caused fires, occasional lightning fires are started on the slopes surrounding the valley.

As noted on the Vegetation Map (Plate 5), the fuel hazards are quite variable, ranging from safe bare rock areas through different densities and age groups of timber, brush and grass, or combinations of these fuel types. Fortunately, from the standpoint of safety, almost all hazardous fuel areas are upslope from existing residences and buildings used by summer recreationists. In regard to the existing primary residential areas, the discontinuous nature of the fuel above this area plus the toe-of-the-slope location makes the area easy to defend in the event of catastrophic north-wind fires. Fires above the developed areas may be subject to some suppression delays because of poor access. The meadow is an excellent natural barrier between the south side of Squaw Valley and the north side; barren areas form a natural barrier on the west side of the valley's development.

Local fire control capabilities are described in the "Environmental Setting - Public Services and Utilities" section. Area-wide forest fires are under the jurisdiction of the United States Forest Service. In addition to suppression crews stationed in Truckee, the U. S. F. S. has air attack capability from several Sierra bases and draws on other regional manpower and equipment as needed for large, long duration fires.

Impacts

Increased residential development is expected to increase the fire risk by exposing hazardous fuel areas to increased human use (see "Environmental Setting - Fire hazard").

Due to the strategic location of proposed habitation improvements and fire protection forces within the valley, danger to improvements from forest fires is considered low.

Proposed high-rise structures and other specialized facilities represent fire protection problems that will be treated in detail when exact architectural plans are available and permits are requested (see "Public Services and Utilities -Fire").

Mitigation

Flash fuels such as accumulations of dry leaves and needles should be removed from areas adjacent to dwellings as required by State law. Also, where dwellings are near timber stands, the heavy, dead or fallen fuels should be removed to help prevent crown fires.

W I L D L I F E A N D F I S H E R I E S

Setting

Squaw Valley is located within the Sierra Nevada Wildlife Region (Brown and Livezey, 1962). Elevations in the study area range from about 6,400' on the valley floor to about 7,400'. Surface environments are quite varied within the region; hence, a diversified wildlife community is found. The following baseline discussion is divided into five main headings: Habitat types, habitat sensitivities, wildlife species and groups, fisheries, and rare or endangered species.

Habitat Types

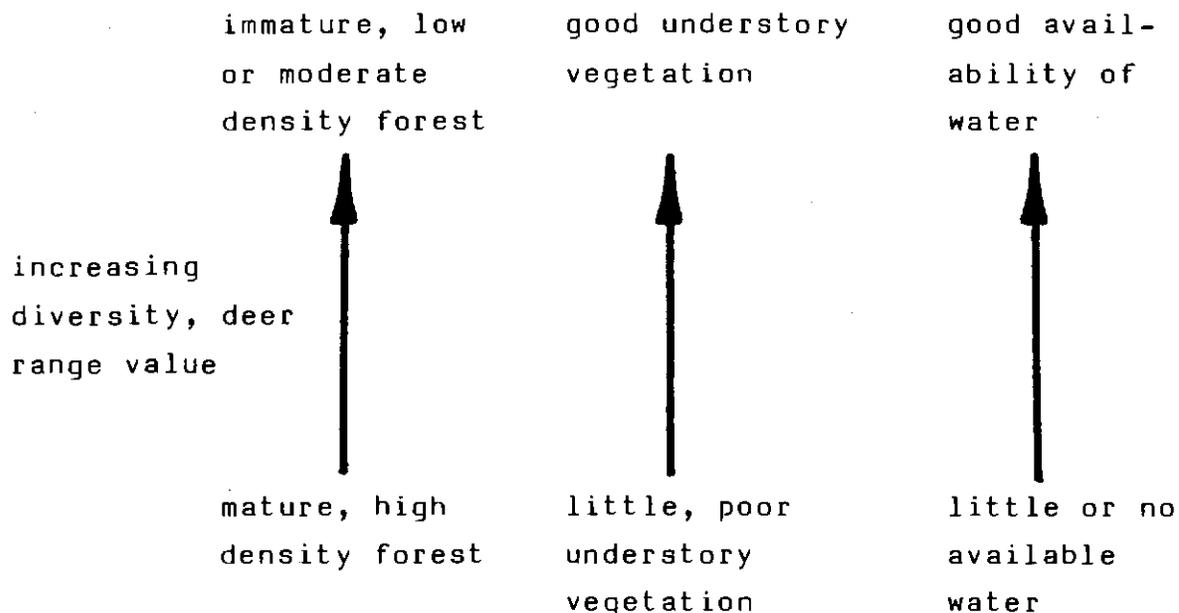
Riparian. This habitat consists of the vegetation which is commonly found along Squaw Creek in the valley and around some springs and minor drainages at higher elevations. It is extremely valuable to wildlife, providing excellent food, cover, and water--the three elements essential to all animals. Furbearers, reptiles, amphibians, water birds, and occasional waterfowl are common inhabitants and visitors.

Meadow. Meadows are also of high value to wildlife. Grasses and forbs are abundant and provide an important source of food for small mammals, birds, and deer. Mice and burrowing rodents are plentiful, making meadows a favorite hunting ground for predatory birds and some carnivorous mammals. Reptiles and amphibians are also common.

Range. Rangeland provides good browsing areas for mule deer; bitterbrush is a highly preferred browse species. This type also provides some cover and forage value for upland game species with densities being highly dependent upon the degree of cover.

Mountain Brush. This habitat type is valuable to many animals, including upland game, because of the cover it provides. Many of the trees and shrubs also have some food value. Manzanita and snowbrush, for example, are palatable to deer, although not highly preferred.

Coniferous Forest. The wildlife community of this habitat type varies widely within the type itself. The key considerations are tree density and size, understory vegetation, and availability of water. Generally, this habitat's value as deer range and the diversity of the wildlife community it supports both increase with the above conditions as described in the following chart:



Barren. This habitat type is comprised of areas which are essentially devoid of significant vegetation. Rocky areas are included in this category and are found in several locations in the region. Although generally of low value to wildlife, some species of reptiles and mammals thrive in these areas.

Human Environment. This includes all areas in which man's influence is relatively constant and tends to modify the wildlife community. The degree of modification is highly dependent upon the intensity of human activity.

Meadow "Edge". The "edge effect" occurs wherever two habitat types come together; the edge between the two types will be more favorable as wildlife habitat than either type considered alone. The meadow "edge", where meadow meets other habitat types, is an important hunting area for carnivorous mammals and a feeding area for deer. Both species diversity and total biomass are greater in "edge" areas.

Forest-Range "Edge". The "edge effect," in this case, applies primarily to the zone between the forest and range habitat types. Deer, for example, have the forage benefits of the range and the cover benefits of the forest.

Habitat Sensitivity. The riparian zone is classified as a Key Sensitivity because of three factors: (1) Its high wildlife value to not only the species which regularly inhabit it, but also to species in surrounding habitats that utilize it as a vital part of their daily requirements, (2) Its value to the fishery of providing shade and food, preventing bank erosion, and providing breeding sites for aquatic insects, and (3) The enumerated goals of the Squaw Valley General Plan.

Other Sensitivities. The meadow "edge" serves as a valuable feeding area for furbearing carnivores. These edge areas also produce abundant herbaceous vegetation for deer use, particularly in the spring, and provide a valuable hunting area for carnivorous mammals.

The meadow proper supports an abundant rodent population, providing an important feeding area for predatory birds. Associated vegetation and insect populations furnish ample food for a wide variety of small birds.

The forest-range "edge" consists of the margin areas between the forest and the open range, riparian, and meadow types. It provides the highest value habitat in terms of the cover-feeding area relationship and is of prime importance to the deer population of an area.

Wildlife Species. A partial list of common wildlife species that can be expected to inhabit the Squaw Valley study area is given in Table 11. The following paragraphs briefly describe some of the most prominent groups or species.

Mule deer. The regional area of Squaw Valley serves as summer range for mule deer of the Loyalton-Truckee Deer Herd (U.S.D.A. Forest Service, 1968). Animals that summer here migrate northeast in the fall to the winter ranges located west and north of Reno, Nevada. According to the habitat Management Plan for this deer herd, a major migration route originates just west of Lake Tahoe, moves north and passes by Squaw Valley to the east, and then continues northeast to the winter range.

Herbaceous vegetation provides an important part of the deer diet during spring and early summer. It is especially abundant in meadows, riparian areas, glades, seeps, and near springs. These areas are utilized as fawning grounds where cover is adequate; however, fawning activity at Squaw Valley has undoubtedly been somewhat curtailed due to existing developments. During mid and late summer when herbaceous growth is scarce, bitterbrush and other browse species provide the major source of food.

Furbearers. The furbearers, most of which are carnivorous or omnivorous, include the coyote, fox, badger, raccoon, skunk, bobcat, and others. Many are nocturnal and secretive and, therefore, are only seen occasionally. Riparian and meadow habitats are particularly favorable to these mammals because of the excellent availability of food.

Small Mammals. This group, which includes many rodents, plays a very important role in the biotic food chain. Small mammals occur in great abundance in meadows in this region and provide a major food source for carnivorous mammals and predatory birds. Mice, gophers, moles, and squirrels are typical representatives of this group.

Predatory Birds. Birds of prey (hawks, owls, eagles) are highly valued for their esthetic appeal and for their beneficial function of helping to control rodent populations. Meadows and riparian zones are favorable hunting grounds. Because they are at the top of the food chain, these animals have relatively low population densities and are more susceptible to the harmful effects of some pesticides.

Reptiles and Amphibians. Reptiles and amphibians are fairly common in Squaw Valley. Amphibians are most predominant in wet areas such as riparian zones and meadows; reptiles are less restricted. This group is preyed upon by several birds and furbearers.

Insects. Insect populations at Squaw Valley are not usual or unique in comparison to other similar areas. Insects as a group provide a vital link in the food chain of other animals, especially trout, birds, reptiles, and amphibians. Riparian habitat is important to the propagation of aquatic insects which are a primary food source for the trout in Squaw Creek.

Fisheries. Squaw Creek, located in Squaw Valley south of the Hidden Lake site, supports a cold water fishery with brown and rainbow trout as the dominant species. These are resident populations that both spawn and reside in the stream. Additionally, Squaw Creek provides essential spawning area for a large portion of the populations residing in the Truckee River. California Department of Fish and Game surveys of Squaw Creek indicate an average resident population of 50 pounds of trout per

acre (Wickwire, 1972). No hatchery fish are stocked in Squaw Creek, with redbside shiner, speckled dace, and sculpin as the most common species.

Rare or Endangered Species. The only two species listed by the California Department of Fish and Game (1974) as rare or endangered that could inhabit this general region are the American peregrine falcon (Falco peregrinus anatum) and the wolverine (Gulo luscus). The peregrine falcon is now extinct as a breeding bird east of the Rocky Mountains, and in 1970, the California population was estimated at ten birds. Food chain contamination by persistent pesticides, illegal taking by falconers, shooting, and human disturbance are factors contributing to its decline.

The wolverine is chiefly found at elevations above 8,000' and would, therefore, not be expected to be common in the Squaw Valley project area. They are wilderness species and tend to avoid man.

Other species which are not presently listed as rare or endangered in California but which are believed to be in low numbers include the pine martin (Martes americana) and fisher (Martes pennnti). Both of these species normally inhabit high, thick mountain forests of the Sierra Nevada and are very intolerant of human intrusion; their occurrence in Squaw Valley is probably extremely limited or nonexistent.

The Lahontan cutthroat trout should be included in this section on rare and endangered species as a potential inhabitant of Squaw Creek and its tributaries. This species is classified as "threatened" by the Federal government, and the U.S. Fish and Wildlife Service is attempting to restore it to its original habitat throughout the Truckee River system. It has been found recently in the Truckee River and in several of its tributaries in California.

Village Setting. The village lies entirely within the area identified as "Human Environment". This indicates that wildlife activity in this area has been and is now modified substantially

by human use. Some coniferous trees exist in the core area and receive some use by birds and tree-dwelling mammals. They are concentrated primarily at the west end of the village area.

The other significant biological feature is Squaw Creek, which runs through the project area and supports the trout fishery previously described.

TABLE 11

PARTIAL LIST OF COMMON WILDLIFE SPECIES OF SQUAW VALLEY

<u>Common Name</u>		<u>Scientific Name</u>
	<u>Mammals</u>	
Mule Deer		<u>Odocoileus hemionus</u>
Coyote		<u>Canis latrans</u>
Raccoon		<u>Procyon lotor</u>
Badger		<u>Taxidea taxus</u>
Striped skunk		<u>Mephitis mephitis</u>
Red fox		<u>Vulpes fulva</u>
Bobcat		<u>Lynx rufus</u>
Squirrels		Family <u>Sciuridae</u>
Chipmunks		Family <u>Sciuridae</u>
Gophers		Family <u>Geomyidae</u>
Mice		Family <u>Cricetidae</u>
Black-tailed jackrabbit		<u>Lepus californicus</u>
	<u>Birds</u>	
Golden eagle		<u>Aquila chrysaetos</u>
Red-tailed hawk		<u>Buteo jamaicensis</u>
Sharp-skinned hawk		<u>Accipiter striatus</u>
Sparrow hawk		<u>Falco sparverius</u>
Mountain quail		<u>Oreortyx pictus</u>
Mourning dove		<u>Zenaidura macroura</u>
Band-tailed pigeon		<u>Columba fasciata</u>
Killdeer		<u>Charadrius voiferous</u>
Spotted sandpiper		<u>Actitis macularia</u>
Owls		Family <u>Strigidae</u>
Sparrow		Family <u>Fringillidae</u>
Finches		Family <u>Fringillidae</u>
Towhees		Family <u>Fringillidae</u>
	<u>Reptiles</u>	
Western fence lizard		<u>Scelodorus occidentalis</u>
Western skink		<u>Eumeces skiltonianus</u>
Common snakes		Family <u>Colubridae</u>
	<u>Amphibians</u>	
Western toad		<u>Bufo boreas</u>
Pacific tree frog		<u>Hyla regilla</u>
	<u>Fish</u>	
Brown trout		<u>Salmo trutta</u>
Rainbow trout		<u>Salmo gairdnerii</u>
Red shiner		<u>Notropis lutrensis</u>
Speckled dace		<u>Rhinichthys osculus</u>
Sculpin		<u>Cottus beldingii</u>

Impacts

The greatest impacts to wildlife will be a result of cumulative effects of more people in the valley rather than the physical development of projects. Greater use of the meadow will result in some additional degradation of its value as habitat. It can also be anticipated that summer use of the valley slopes by hikers and equestrians will also increase, bringing additional human disturbance into this environment. Although these human disturbance impacts are regarded as adverse, there are no particularly unique or sensitive aspects of the wildlife community that would not tolerate this additional disturbance.

No rare or endangered wildlife species will be adversely affected by the proposed project.

The greatest potential for impact upon the fishery of Squaw Creek will occur during the construction state of the various projects. Erosion from exposed soil could cause harmful sedimentation of the creek unless adequate erosion control is implemented. After completion of the projects, when soils and vegetation have totally re-stabilized, the potential for undesirable sedimentation should be no greater than it is now. Another potential effect on fisheries will be an increase in the amount of fishing pressure. This may necessitate some modification of the management program for the fishery, such as changes in stocking rates and catch limits.

Based on the proposed Squaw Valley General Plan, extensive residential development could, ultimately, occur in the area just south of the meadow. Development to the south of the meadow could represent a significant impact to wildlife if not carefully planned because it could restrict access to the meadow. Presently, this is the only area through which wildlife have unobstructed access, as man-made obstructions now exist on the north, west, and east ends of the meadow. In addition to more housing units, it is estimated that wildlife habitat outside of the project area will have to be altered for future development of ski facilities.

Mitigation

The following mitigation measures will help to reduce adverse impacts on wildlife and fish as a result of implementation of the proposed General Plan:

1. A reforestation program for barren areas should be implemented where feasible and desirable to replace the coniferous forest habitat lost through development.
2. Landscaping should utilize native species except in the case where efficient temporary soil stabilization can only be achieved with exotics.
3. Strict erosion control procedures should be followed during the construction periods to prevent silt from reaching Squaw Creek.
4. All necessary steps will be taken to insure that water quality in Squaw Creek meets Regional Water Quality Control Board standards.
5. If the area south of the meadow is developed, suitable corridors should be preserved to allow free movement of wildlife. Generally speaking, they should be a minimum of about 50 yards wide and located along drainage channels.

ARCHAEOLOGY

Setting

Numerous projects have been reviewed within the past few years in the Valley, and records checks have disclosed only sites located near the east end of Squaw Creek.

"The primary archaeological study in the area is that by Elston, et al (1977) which included the test excavation and analysis of four sites in lower Squaw Creek and the Tahoe Reach portion of the Truckee River where a total of 18 sites had been previously located: 12 on the Truckee River and 6 on Squaw Creek (CA-Pla-161 through 166) (Elston 1977:fig. 1). This area had been previously surveyed by Leventhal in 1975."¹

In November of 1981, members of the Archaeological Study Center, Dept. of Anthropology, California State University, Sacramento conducted a field survey of a 45 acre subdivision north of Squaw Valley Road called "Hidden Lakes". That field work revealed three potentially significant areas of prehistoric use.

The study investigation also indicated where other potential sites might be located:

"Archaeological, ethnographical and historical background materials were researched for indications as to which types of geographical patterns would most likely yield archaeological sites. Suggested to be factors in location of historic sites were

¹ Final EIR for "Hidden Lakes Subdivision", Feb. 19, 1982, Exhibit III, Appendix 2, Pg. 6.

flat areas suitable for living sites and areas near water sources which may have been tested for mineral deposits. Suggested to be major factors in the location of prehistoric sites are the availability of open, flat areas near permanent or semi-permanent water sources, especially at the ecotone of two or more plant communities. There is also a tendency for bedrock mortars to be located on rock outcroppings near water and flat areas."²

Impacts

Without the benefit of a field survey by qualified archaeologists, it is possible that subsequent construction activities could destroy artifacts that otherwise might be saved. The reconnaissance should occur early in the planning phase of specific development projects.

Mitigation

Once sites are identified, the finds should be evaluated by a qualified individual to determine their relative significance. If any of the areas warrant further evaluation, they should either be excavated or left undisturbed by subsequent development activity.

² Ibid.

H I S T O R Y

Setting

The following discussion regarding the history of Squaw Valley is taken from The Saga of Lake Tahoe (Scott, 1957) and the History of the Sierra Nevada (Farquhar, 1965).

The earliest immigrants passed through the valley in the late 1840's and early 1850's. At that time, Washoe Indians used Squaw Valley as a summer encampment site. In an attempt to divert the swelling population of gold seekers and other immigrants through Placer County, efforts were made to improve the trail over the Sierra by way of Squaw Valley. By the time the road was completed, however, gold had become difficult to mine and the road fell into disrepair due to lack of use. Subsequent attempts to improve the road were futile.

Actual settlement within Squaw Valley took place in the 1860's. Squaw Valley Ranch was founded in 1862 by Messrs. Fink, Ferguson, Smith and Coggins. They farmed wild hay from the valley and were able to cut 125 tons of silage during the summer and fall seasons. The ranch and other holdings were purchased by Lowell and Locke in 1872. By the early 1880's they were producing a variety of farm produce, including dairy products, which were sold to various communities around Lake Tahoe.

Timber harvesting operations also took place in the valley and its adjacent mountains. In 1879 a water powered cedar shake mill was operated by Casper Shock. The lumber industry expanded with the construction of a small railroad siding in the early 1900's to remove lumber products from the valley. With time, these developments fell into disrepair. For approx. a half century little activity of a major scale took place in Squaw Valley. land uses during this time included cattle grazing and recreation related uses such as summer homes, ski and hiking trails.

Between 1943 and 1948, much of the private property in the valley was purchased by Wayne Poulsen, who joined Alexander C. Cushing in 1948 to form Squaw Valley Development Company. With a group of investors they raised \$400,000, arranged leases for surrounding federal lands, and in November, 1949, opened Squaw Valley U. S. A., a major ski resort for public use. In 1955, the International Olympic Committee named Squaw Valley as the site for the 1960 Winter Olympic Games. Since then, Squaw Valley winter sports facilities and the year-round resort community have been expanded to their present status.

Squaw Valley is associated with the Pioneer Ski Area of America, a California State historical Landmark (as noted in California Historical landmarks: "The VIII Olympic Winter Games of 1960 commemorated a century of sport skiing in California. By 1860, the Sierra Nevada, particularly at the mining towns of Whiskey Diggings, Poker Flat, Port Wine, Onion Valley, La Porte, and Johnsville, some 60 miles north of Squaw Valley, saw the first organized ski clubs and competition in the western hemisphere.").

Impacts

The implementation of the proposed project will have no impact on any officially designated historical sites.

Mitigation

In the event that other historical resources are uncovered during excavation activities, the Placer County Historical Society will be contacted and time will be allowed for an investigation before construction activities are continued.

T R A F F I C

Three principles should be acknowledged at the beginning of this section:

A) No directly comparable area or "project" exists (i.e., a day-skier being converted to a destination resort and located within 200 miles driving distance of a large population). Because of this lack of directly comparable areas, a number of important assumptions are necessary for this analysis; such assumptions have been explicitly stated in this report.

B) Two distinct traffic patterns exist and will continue in Squaw Valley: 1) Prolonged-stay visitors/residents during all times of the year; and 2) day-skiers during winter, peak-use days. Each presents a different traffic concern and is addressed separately.

C) This discussion of the Plan, its impact, and mitigation measures will be limited as much as possible to the Squaw Valley area. There is no question that traffic conditions outside Squaw Valley affect traffic in Squaw Valley and vice-versa. However, a regional transportation planning effort which considers in detail the entire area from Lake Tahoe to Interstate 80 is beyond the scope of this General Plan and EIR. A general consideration of such externalities is included in both the General Plan and EIR.

Prolonged-Stay Visitors/Residents Traffic

Existing Conditions

Squaw Valley Road, the main arterial through the valley, presently has an average daily traffic (ADT) volume estimated at 3,150 vehicles near the State Highway 89 intersection (Placer County Department of Public Works -traffic counts; October, 1981). ADT is a statistical number based on

actual traffic counts and adjusted for seasonal influence and other variables. ADT does not consider the relatively few days each year when traffic volumes are abnormally high because of day-skiers; instead, ADT represents the typical conditions on an average day. Present peak-hour traffic volume for this same "average day" is estimated from hourly counts to be 307 vehicles, which is approximately 10% of ADT. Peak-hour traffic distribution on Squaw Valley Road is approximately 45% or 138 vehicles westbound and 55% or 169 vehicles eastbound. ADT and peak-hour traffic volumes are used to determine remaining capacities and levels of service of facilities such as roadways and intersections.

Traffic volumes on State Route (SR) 89 are estimated to be : South of the Squaw Valley Road intersection (toward Tahoe City) - 9,500 ADT and 1,300 peak-hour; and north of the Squaw Valley Road intersection (toward Truckee) -8,500 ADT and 1,200 peak-hour. However, the SR 89 peak-hours do not coincide with peak-hour traffic on Squaw Valley Road. SR 89 hourly volumes during the Squaw Valley Road peak-hour are approximately 430 to the South and 365 to the North.

Hourly traffic capacities can be estimated both for sections of roadway and intersections. Maximum potential capacity of either a roadway or intersection is reached only at a level of service which is undesirable for reasons of congestion and lack of reserve capacity (Level of Service "E"). The level of service used as a limiting factor for average daily conditions in this General Plan and EIR is "C" which provides stable traffic flow and is a standard, "lower-limit", design objective. Hourly capacity at Level of Service "C" for Squaw Valley road is estimated at 1,020 vehicles (.51 restricted speed factor x 2,000 vehicles maximum service volume). No reduction in capacity is assumed because of grades, reduced lane width, reduced lateral clearance, alignment, or any other factors which commonly limit capacity. Hourly capacity for SR 89 on either side of the Squaw Valley Road intersection is estimated at 2,000 vehicles; Level of Service C would limit volumes to 1,200 vehicles/hour (2,000 x .60 reduced speed factor).

Intersection capacity is the limiting factor in most roadway systems. Here, too, the number of vehicles which can pass through the SR 89/Squaw Valley Road intersection is less than the combined roadway capacities at the designated Level of Service. This difference grows larger as traffic volumes increase--particularly for an intersection controlled only by a stop-sign. Intersection capacity can be increased by adding lanes for intersection approaches and optimized by the addition of traffic signals. Normally, and in this instance, the levels of service of the several movements through an intersection are not balanced. The particular movement which first approaches the capacity limit as traffic volumes increase is the "critical" movement.

In this case, the peak-hour critical movement is the left-turn from Squaw Valley Road onto SR 89. Assuming that existing proportions of traffic remain for the several intersection movements as growth occurs, capacity for the critical movement will be reached when peak-hour traffic volumes through the intersection are approximately 1,413 vehicles--1,020 on SR 89 and 393 on Squaw Valley Road. (Present peak-hour volumes are estimated at 307 on Squaw Valley Road and 796 on SR 89.)

Existing development in Squaw Valley is estimated to include: 400 occupied residential units, 125,000 sq. ft. commercial floor area, and the ski hill with a capacity of 15,000 skiers. The 307 peak-hour trip-ends on Squaw Valley Road are estimated to be distributed as follows:

TABLE 12

<u>Land Use</u>	<u>Existing Development</u>	<u>Peak Hour Traffic Generation</u>	<u>Calculation</u>	<u>Approximate Peak-Hour Traffic Generation Rates</u>
Residential (including hotels)	400 units	192 trip-ends (TE)	$\frac{192}{400} = .48$ TE per unit (Average 2.5 bedrooms per existing unit)	.2 TE/bedroom
Commercial	125,000 ft. ² - gross floor area (GFA)	35 TE	$\frac{35}{125,000} = .28$ TE/1000 ft. ² GFA	.25 TE/1000 ft. ² GFA
Ski Hill	17,500 skiers capacity	80 TE	$\frac{80}{17,500} = 4.57$ TE/1000 skiers cap.	.5 TE/1000 skiers capacity
		TOTAL =	307 TE	

TABLE 13

<u>Land Use</u>	<u>Remaining Development Potential</u>	<u>x</u>	<u>Peak-Hour Traffic Generation Rate</u>	<u>x</u>	<u>Buildout Factor</u> <u>x</u>	<u>Occupancy Factor</u>	<u>=</u>	<u>Traffic Generator</u>	<u>Additional Peak-Hour Traffic Generator</u>
Residential	5,100 bedrooms		.2 trip-ends (TE)/ bedroom		.8 x	.75		612	
Commercial	225,000 ft. ² gross floor area (GFA)		.25 TE/1000 ft. ² GFA		1.0 x	1.0		57	
Ski Hill	5,000 skiers capacity		5 TE/1000 skiers capacity		1.0 x	1.0		25	
							TOTAL =	694	

The General Plan

Buildout to 80% of General Plan density is assumed for residential uses. Although very large areas (80+/- acres) are designated for commercial use, the maximum likely buildout is assumed to be 350,000 sq. ft. gross floor area (approximately 30 acres of land). Ski area buildout is assumed to be 100% of that allowed by the General plan. Peak-hour traffic generation rates are assumed to remain constant as growth occurs except for projects managed in the "destination resort" manner. The discussion of peak-hour traffic generation focuses on traffic on Squaw Valley Road near the SR 89 intersection.

Those projects which are operated in the "destination resort" manner may generate significantly less peak-hour traffic. Characteristics of a destination resort include: Prolonged stays by visitors, a high proportion of arrivals/departures by means other than the private automobile, a high proportion of arrivals /departures at other than the peak-period, a reduced traffic generation because of "containment" factors, etc. If development in Squaw Valley is managed so that these characteristics result, the traffic generation rate of "residential" (including hotels, condominiums, etc.) land uses is assumed to be reduced by 50%. A new "additional peak-hour traffic generation" total then results:

Residential	306	
Commercial	57	
Ski Hill	<u>25</u>	
Total	388	Vehicles

Impacts

The addition of 388 peak-hour trip-ends to the present 307 on Squaw Valley Road would create major operational problems at the SR 89 intersection. Service would deteriorate to unacceptable levels. Traffic congestion at the Squaw Valley Road/SR 89 intersection would be severe--particularly for left-turn movements.

TABLE 14

At Service Level "C":

Through lanes, 1200 vehicles/hour
 Left turning lanes, 800 vehicles/hour
 Right turning lanes, 1000 vehicles/hour (free right with adequate merge distance)

Lane	Hourly "C" Service Level Capacity	x % Green time =	Actual Hourly Capacity ("C" Level)	Projected Hourly Demand
SR 89 South - Thru	1200	x 39% =	468	402
SR 89 South - Right	1000	x 59% =	590	142
SR 89 North - Thru	1200	x 59% =	708	484
SR 89 North - Left	800	x 20% =	160	158
SV Road East - Left	800	x 31% =	248	249
SV Road East - Right	1000	x 31% =	310 + 150 = 460*	445

* Right on Red

Note: Load factor has not been included.

Assuming a conservative annual growth rate of 2% for SR 89 traffic, the average days peak-hour traffic volume in the year 2002 would be 1,183. Right-turning vehicles onto SR 89 would experience delays; left-turning vehicles onto SR 89 would experience extreme congestion and have delays in excess of an hour to complete the turning movement.

Mitigations

The only practical mitigation for this intersection problem is signalization with well defined channelization of approaching lanes. A properly designed signal could be expected to provide capacities as shown below. Some reconstruction of roadways would be necessary to ensure optimal signal operations.

<u>Year 2002</u>	Peak-hour Volume	% Traffic Entering Inter- sections	% Green Time
SR 89	1183	63%	Left-20% Through-39%
SV RD	695	37%	31%

Traffic signals would not be warranted at any other locations in Squaw Valley. Although no "critical" sections of roadway or intersections should result from buildout of the General Plan, certain spot improvements would significantly improve traffic flow. These improvements include:

1) Construction of left-turn storage pockets along Squaw Valley Road at intersections with other County roads;

2) Construction of a "loop road" south of Blyth Arena to serve the commercial core area. This road alignment is shown on the General Plan map as conforming to the location of existing public rights-of-way in the area. However, an alternative

alignment opposite Squaw Valley Road exists which better serves the area's circulation needs. This alternative alignment is also shown on the General Plan map in order to allow a Planline to be established and right-of-way dedications required. When the improved alignment right-of-way has been obtained, the existing corridor may be abandoned by the County and developed in "Village Commercial" uses.

An alternative alignment for the more easterly bridge crossing of Squaw Valley Creek is shown, also. This realignment has been proposed by development interests in the immediate area; however, minimal public benefit would result from the margin of improvement afforded by such a realignment, so public funds should not be used for the reconstruction/relocation.

Throughout the commercial core area, access to the loop road should be limited to well defined driveways in order to optimize circulation;

3) Construction of a "loop road" from the end of Squaw Peak Road through the "Village" area and connecting to Squaw Valley Road near the fire station. This roadway connection would provide the opportunity for persons in the area served by Squaw Peak Road to gain access to Squaw Valley Road without going through the congestion of the commercial core. This road should be designed with a relatively low speed (15 mph minimum) and other features such as alignment and width which minimize conflicts with the pedestrian orientation of the Village area. This alignment is shown on the General Plan map in order to establish a Planline for the route.

4) Construction of a separated bicycle/pedestrian trail on the south side of Squaw Valley Road for summer use. ~~Initially, this facility would be constructed to a standard adequate only for bicycle/pedestrian use. However, the potential exists for upgrading the standard to allow use by transit and/or emergency vehicles at sometime in the future.~~ Some physical barrier would be necessary to prevent use of the lane by automobiles. Stored snow should be adequate in winter; landscaping, mounding, etc., would be necessary during the remainder of the year. A 10' paved width would be adequate for 2-way bicycle traffic. ~~Upgrading the facility would encourage the use of transit vehicles by giving them an advantage during periods of congestion.~~

Each of the mitigation measures identified above, including the traffic signal, would improve the safety and efficiency of transportation/circulation within Squaw Valley. Because each of the mitigation projects is of general benefit to residents of major areas in Squaw Valley, all the projects should be included in the Squaw Valley Road Network Capital Improvement Program. This Program--in existence since 1980--has been supported by fees (Capital Improvement Fund) from new development in the area. The existing Program should be superseded by the above list of projects with priority funding according to the order in which they are listed. Portions of projects listed in the Capital Improvement Program will, of course, be constructed out of sequence by developments with "frontage" on such projects. The traffic signal at the Squaw Valley Road/SR 89 intersection should not be constructed until increased traffic has created warrants

for the signal. (The "signal warrant" process is the standard quantitative method for determining the need and effectiveness of traffic signal installation.) The fee structure supporting the Capital Improvement Fund should be modified in the manner described in the EIR..

Other, less significant mitigations are included in the "performance standards" section of this General Plan and include frontage improvements to the planned road network, adequate on-site circulation, design control for parking to eliminate obstructions to traffic flow, etc.

Transit should be encouraged through direct subsidies, construction of turnouts and shelters at important points, operations which give priority circulation and parking to transit vehicles, and incentives to developments which provide or encourage transit service.

The last type of mitigation measure is management. Most of the destination resort characteristics fall in this category; many are listed above and are included in the Land Use Ordinance as performance standard requirements. In addition, commercial developments and the ski area should be operated in a manner which allows employees and customers to use facilities and commute at non-peak traffic hours.

Management of the area as a destination resort is critical to the proper operations of the transportation system. If future development in Squaw Valley is not according to the "destination resort" formula and simply increases the scale of present development, the road network would become overburdened and adequate levels of service would not be maintained.

The amount of development potential allocated by this General Plan is predicated upon the destination resort type of development. If traffic volumes projected for development in the Valley are significantly exceeded for any reason (i.e., more than 20% greater than anticipated at any stage of build-out), development potential, the Capital Improvement Program, transit, and transportation systems management should be reevaluated. Periodic monitoring of traffic from both specific projects and cumulative development should be conducted to determine the accuracy of projections.

Day-Skiers/Peak Recreation Traffic

Existing Conditions

On peak use days, traffic on Squaw Valley Road has two peak periods: 7-9 A.M. and 4-6 P.M. Daily traffic volume on Squaw Valley Road occasionally reaches 13,000+ with peak-hour volumes of 1,400 vehicles during both A.M. and P.M. peaks. At such times the distribution is heavily skewed with up to 87% traffic in one direction. During P.M. peak-hours, the demand is actually greater, but the capacities of both the roadway (one direction) and the Squaw Valley Road/SR 89 intersection are exceeded. No additional vehicles can pass through this particular section of the road in a given hour without "downstream" changes to increase capacity. Because of traffic backups from the Tahoe City "Y" and the Alpine Meadows Road intersection on such days, additional capacity constraints exist for traffic turning either direction on SR 89. Lengthy periods of heavily congested

traffic occur with delays of greater than an hour. Level of service for AM peak traffic entering Squaw Valley reaches D level near the SR 89 intersection and capacity limit (E level) near the commercial core where extreme congestion results from the parking areas.

Over the past 10 years an average of 10 to 15 days each winter have had traffic problems similar to those described above. The only other recurrent peak-use problem has occurred each year in September when a large religious group holds an annual convention in Blyth Arena. The church group provides sophisticated manual traffic control which keeps traffic flowing well. On heavy traffic days during the winter, traffic control is provided in the parking lot areas by employees of the ski area operator and at the Squaw Valley Road/SR 89 intersection in PM peak-hours by uniformed law enforcement officers. The wintertime traffic problems are greater because of a number of factors, including: coincident peaks with other traffic generators; bad weather with poor visibility; narrow, cleared roadways; poor lane delineation; higher peak traffic volumes; and different driver attitudes.

Manual control of traffic at peak times is presently an adequate approach; however, the actual control operations could be much improved and should be required as conditions of approval for any additional ski area development. Although peak traffic volumes are large enough to consider traffic signals, the frequency of occurrence of such peak events does not justify their installation. Signals should not be installed now for two reasons: 1) because they would be counter-productive during

almost all of a given year when traffic volumes are relatively low; and, 2) because such signals would not be a cost-effective improvement under present circumstances.

The Proposed General Plan

The 1982 General Plan provides for expansion of the ski area from the former ski hill capacity of 15,000 skiers to approximately 17,500 skier capacity. This represents a change in hourly lift capacity (manufacturer's rating x 80%) from 21,560 to 25,153. In addition to this increase in the potential number of day-skiers due to new lift construction, better management of the existing complex of lifts could also raise the number of day-skiers actually on the ski hill.

The ski area operator has repeatedly stated its intention to expand ski area facilities only a small, additional amount; most of the growth in skier-days is expected to come from increased mid-week skiing activity. Present weekday traffic during the ski season does not normally cause capacity or convenience problems except in unusual circumstances such as extremely bad weather.

The General Plan emphasizes and encourages the "destination resort" concept which, theoretically, could reduce projected traffic. However, the "destination resort" management techniques suggested apply only to visitor accommodations, not to ski hill operations.

Assuming Blyth Arena is used as a community/convention/recreation center, additional incidents of peak traffic conditions are likely to occur. Similarly, if the destination resort concept is realized on a large scale, some peak traffic from conventions, etc., will likely occur.

Impact

In the immediate future the existing proportion of day-skiers in peak traffic is assumed to remain constant as additional skier capacity is added. Therefore, the number of vehicles attempting to leave Squaw Valley during the P.M. peak period would be increased by $17,500/15,000 = 1.17$. Since traffic during this period already exceeds intersection capacity, hourly traffic volumes would not become larger; instead, delays would become longer as vehicles wait in line to pass through the "bottleneck".

Some portion of present and future peak-hour traffic is attributable to sources other than the ski hill. Although residents and longer-term visitors can learn to avoid peak traffic, some peak-hour trips cannot be deferred. Therefore, buildout of residential and commercial uses will add somewhat to the wintertime peak-hour traffic which primarily results from the ski hill.

The ski area operator apparently expects to increase peak use of the ski area very little while emphasizing weekday skiing. Assuming this strategy is successful, one of the results of this approach is more peak use days--with associated traffic

problems--each year. This potential increase in the frequency of occurrence of peak-use traffic problems is as significant a concern as the magnitude of the peak volume.

The destination resort concept would, theoretically, replace some of the day-skiers (and their automobiles) with resident skiers. However, an increase in resident skiers would not be offset by a commensurate decrease in the mass of day-skiers. It seems more likely that if the matter is left to market forces, the numbers of resident skiers and day-skiers would be additive. The ski area operator has indicated its expectation and intention to serve unlimited numbers of both types of skiers. The ski area operator has also indicated that it is unwilling to limit day-skier ticket sales. Therefore, without such a limitation, peak-hour traffic congestion should be expected to continue at present levels for longer peak periods, for more days each year--regardless of whether the destination resort ideal is realized.

Mitigation Measures

The most effective mitigation measure is the policy expressed in the General Plan which requires the following findings by the decision-making body before any additional ski-lifts, lift modifications, or winter sports activities are approved in Squaw Valley:

1. Present, peak-period traffic congestion and delay shall not be worsened; levels of service on the area's road network shall not deteriorate within Squaw Valley, or at the Squaw Valley Road/State Highway 89 intersection, or at the State Highway 89/State Highway 28 Intersection.

2. The duration and number of occurrences of such traffic problems shall not increase within Squaw Valley, or at the Squaw Valley Road/State Highway 89 intersection, or at the State Highway 89/State Highway 28 intersection.

These policies require all ski area operators to provide systems management or transit services to ensure that no increase in vehicle trips into congested areas will occur during peak periods. (Such management was made a condition of the recent approval of the Granite Chief, Broken Arrow, and Squaw Creek ski lifts).

A very effective and practical management device for reducing peak traffic loading is to keep congestion off of the road network by confining it to the parking areas. Traffic flow could then be "metered" out of the parking areas onto Squaw

Valley Road by traffic controllers and matched to available capacity at the Squaw Valley Road/SR 89 intersection. This approach would also allow a priority to be given to transit vehicles. For this metering approach to work properly, it is necessary for the persons controlling traffic at the parking lot and Squaw Valley Road/SR 89 intersection to be in radio contact.

These two points in the regional traffic system could eventually become part of a communications network that could include the Alpine Meadows Road/SR 89 intersection, the Tahoe City "Y", Truckee, and other points in the system where manual or signalized traffic control is employed. Such a communications system could be of value in maintaining desired levels of service and/or optimizing available roadway and intersection capacity. Experiments with such a system are about to be carried out by a group including the ski area operators, Placer County, Cal-Trans, and the California Highway Patrol.

Properly designed and operating traffic signals can move traffic at high volumes as efficiently as manual direction. Therefore, manual control should not be necessary at signalized intersections during these peak periods. Regardless of whether intersections are signalized, lane definition and channelization of flows are very important to efficient operations. This winter Placer County and Cal-Trans will together attempt an experiment to define lanes by using moveable cones for the Squaw Valley Road/SR 89 intersection.

Another major mitigation to ensure that skier traffic and parking do not exceed target levels is the limitation of ticket sales to persons other than residents or those arriving by

transit vehicles. This could be a very effective means of limiting both the number of private vehicles requiring parking and the amount of traffic congestion caused by skiers. This approach would afford the ski area operators the opportunity to increase ticket sales, but only if transit and/or destination resort development actually materialized. Such a ticket sales limitation program could be required as a condition of approval of any additional ski area development.

Other management techniques that could reduce peak traffic include: phased shut-down of ski lifts (or entire ski areas), staggered or off-peak employee shift changes, and economic incentives for off-peak arrivals and departures. Development of Squaw Valley as a destination resort may, because of "containment development", reduce some potential peak traffic.

Transit is a much more significant mitigation for peak ski traffic than for year-round daily traffic. The Tahoe Area Regional Transit (TART) system has provided service from the Tahoe area in past years. However, for the winter of 82/83, the ski area operator did not renew the historical contract with TART. However, the ski area operator has provided private carrier service at the same levels as was perviously done by TART and has linked its private transit service with the TART system.

Buses bringing day-skiers from other population centers appear to be adding to the total number of skiers, rather than replacing skiers arriving in private vehicles. However, this type of transit service does appear to have the potential to replace some portion of private vehicles under certain circumstances (for example, the cost of gasoline increasing substan-

tially, financial incentives being provided for transit use, transit vehicles being given priority in traffic operations, and transit serving better the needs and desires of skiers). A major factor which limits transit potential is the affluence of many skiers; a strong incentive for transit use (and/or discentive for private vehicle use) must be developed before peak-period traffic would be significantly affected. An opportunity to reduce traffic and parking needs within the Valley may exist if parking areas can be developed near the I-80 corridor in Truckee and effective transit service provided.

The Capital Improvement Program and its financing plan (described above in this section) provide major mitigations of problems resulting from skier peak traffic as well as average daily traffic. Several of the projects included would allow local resident traffic to avoid major areas of congestion during peak-skier traffic. Improved access for emergency vehicles would result. Efficient traffic movement at the Squaw Valley Road/SR 89 intersection would be optimized by signalization when signal warrants result from growth in average daily traffic.

Peak traffic impacts resulting from the use of Blyth Arena as a community/convention/recreation center could be somewhat mitigated. The most effective way to reduce such impacts is to provide adequate traffic control in the immediate area of Blyth Arena (and at more remote locations as determined to be necessary by attendance at the event). A permit process for such large events should be established which gives authority to the Department of Public Works to require the appropriate degree of manual control. This approach would be especially effective at reducing impacts upon local traffic.

POPULATION / HOUSING

Setting

Residential activity in Squaw Valley has been characterized by periods of rapid growth in between periods of little or no activity. The most recent growth period was between 1977-1982, during which time 450 new condominium units were approved by Placer County. Only approximately 130 of those units have been completed to date. Squaw Valley currently has approximately 360 single-family dwellings, 280 hotel or dormitory rooms, and 300 apartments or condominiums. The sewer district indicates that approximately 1,180 sewer connections currently exist. With the exception of three condominium projects totalling 67 existing and 57 proposed units, all of the apartments, condominiums, hotel and dormitory units are located within one-half mile of the tram building in the core area. Employee housing units exist in the area of the Olympic Dorms, and the Squaw Valley Ski Corp., at present, has a valid Conditional Use Permit to construct 32 employee housing units in the lower Red Dog area.

Since the time the 1972 Squaw Valley General Plan was prepared, significant growth in the number of condominiums has occurred; however, the basic problems identified with the residential provision then, still exist today. In 1972, housing accommodations provided space for approximately 2,800 residents, while the ski hill had a comfortable capacity of 7,500 skiers per day. If 60% of the residents in the valley in all of the different types of units were skiers, then only about 20% of the ski hill capacity was used by people staying in the valley; thus meaning that 80% of the ski hill capacity was used by day skiers. Today the ski hill has a comfortable capacity of 12,500-15,000 skiers per day. Applying the same standards used in 1972, only about 15% of the ski hill capacity can now be accommodated in housing units within the valley.

Impacts

Using the reasoning contained in the 1972 Plan, ski-related operations require almost the same investment and capital outlay, whether used to capacity or not. Because day skiers spend significantly less per day than overnight or vacation skiers, insufficient housing accommodations in Squaw Valley represent a substantial economic loss to the Valley.

In addition to the economic loss, the adverse impacts of day skiers on the transportation network is also important. A change in the proportions of overnight to day skiers, as proposed in this Plan, could have a profound affect on traffic, circulation, and congestion problems and at the same time, increase the economic vitality of the valley.

Mitigation

In keeping with the overall objectives of this General Plan with respect to housing, the stated goal is to provide a mix of housing types within the plan area which are available to all segments of the population and which will contribute to the development of a viable dynamic year-round community. Housing must be provided to accommodate a permanent population, a transient destination resort-oriented population, and both full-time and seasonal employees. The quantity of housing units must be balanced between the ski-hill capacity, destination resort demand (including employees), permanent population, and the ability of the environment and public facility infrastructure to accommodate the peak population.

For the reasons stated in Section IV "Plan Summary", the 1983 Squaw Valley General Plan does not attempt to allow for 100% of the living units necessary to support the potential day-time population of the Valley. The Plan, in some cases, encourages specific types of housing units. Additional single family dwellings are permitted in some areas, although not encouraged except to allow the "in-filling" of the existing single family subdivision. Multiple family structures are permitted, and actually encouraged in many areas as a means of

reducing the area over which development occurs. This type of housing will reduce grading, road construction, energy consumption, construction costs, and the costs of extending public utilities and services.

Within the Plan area, lands reserved for multiple family structures exist in several areas. Densities vary because of access, proximity to the core area, available developable area, and other factors. In some cases, the existing land use pattern has affected the potential density as well.

Generally, the areas which permit multiple family structures are the same as those currently zoned for such use. A notable exception is the area on the south side of the Squaw Valley meadow where the potentially developable area has been modified as shown on the Plan map in order to reduce the extension of development along the south side of the meadow. In this instance, a trade-off has been made whereby additional developable area has been identified to the south of and up the slope from the existing residentially-zoned lands. In this area, relatively level sites exist which could serve to accommodate residential development.

Existing land use regulations could permit in excess of 160 dwelling units in the area known as Juniper Ridge. Due to potential conflicts with the planning principles adopted as a part of the Plan, this development potential has been transferred to the area to the north and down the slope closer to Squaw Ridge Road on lands presently under the same ownership. Only in this way could public utilities and services be provided in an efficient manner, only in this way can adequate access to the area be realistically maintained, and only in this way can the development avoid being non-contiguous and premature.

N O I S E

Setting

Although an acoustical survey of the valley has not been made, some assumptions can be made about sound levels. Natural features contribute very little to the sound levels in the valley. Wind moving through the forest cover produces background noise levels of about 10 to 15 dBA¹. Wildlife may add to this and generate noise up to 35 dBA at isolated locations (Wyle Laboratories, 1971a). Other phenomena such as thunder, rock slides or avalanches may generate levels above 50 dBA.

Man-associated sources contribute greatly to the noise environment of the valley, with vehicular traffic representing the greatest noise generator. Noise associated with traffic depends on the time of day and the number and type of vehicles present. In general, trucks account for the highest noise levels. Diesel trucks, in particular, are about 12 to 18 dB noisier than automobiles and 8 to 10 dB noisier than gasoline powered trucks (Wyle Laboratories, 1971b). At 50 feet, a single automobile generates a noise level of 65 dBA on the average when traveling at 35 miles per hour. These levels depend, however, on the road surface, grade, and adjacent barriers. While trucks account for the highest individual noise levels, automobiles, because of their greater number, represent the greatest noise source in the valley.

During the winter months, snowmobiles also represent a major noise source. These off-road vehicles have been allowed and rented in Squaw Valley for the past few years. Snowmobiles typically generate noise levels of about 88 dBA at 50 feet (Wyle Laboratories, 1971b). The major source of noise from snowmobiles

¹ A "dBA" is a measure of sound pressure level as recorded in decibels (dB) rated on an "A" scale. This scale, as measured on a sound meter, is intended to match the response of the human ear to sounds of low intensity. It should be noted that because of the nature of the decibel measuring system, a 10 dB increase corresponds to a 10 times increase in loudness. Normal conversation at 12 feet measures about 50 dBA.

is from the intake and exhaust systems, and the level of noise varies with the type and age of each machine. Racing vehicles, for instance, may generate noise between 105 and 110 dBA at 50 feet. Noise from snowmobiles, in general, is disturbing to other recreationists, landowners, and wildlife.

People and their activities, chair lifts, machinery and appliances, small motors such as chain saws and lawn mowers, and musical instruments are among the other noise sources common in Squaw Valley and the village center. These sources, generally, cause an increase in ambient noise levels where there are concentrations of people and buildings. Consequently, the ambient noise levels at undeveloped areas of the valley or on mountain slopes may be as low as 15 or 25 dBA, while those in the residential areas may increase to 30 or 35 dBA. Ambient conditions in the village center may be about 40 to 45 dBA (Wyle Laboratories, 1971a).

Impacts.

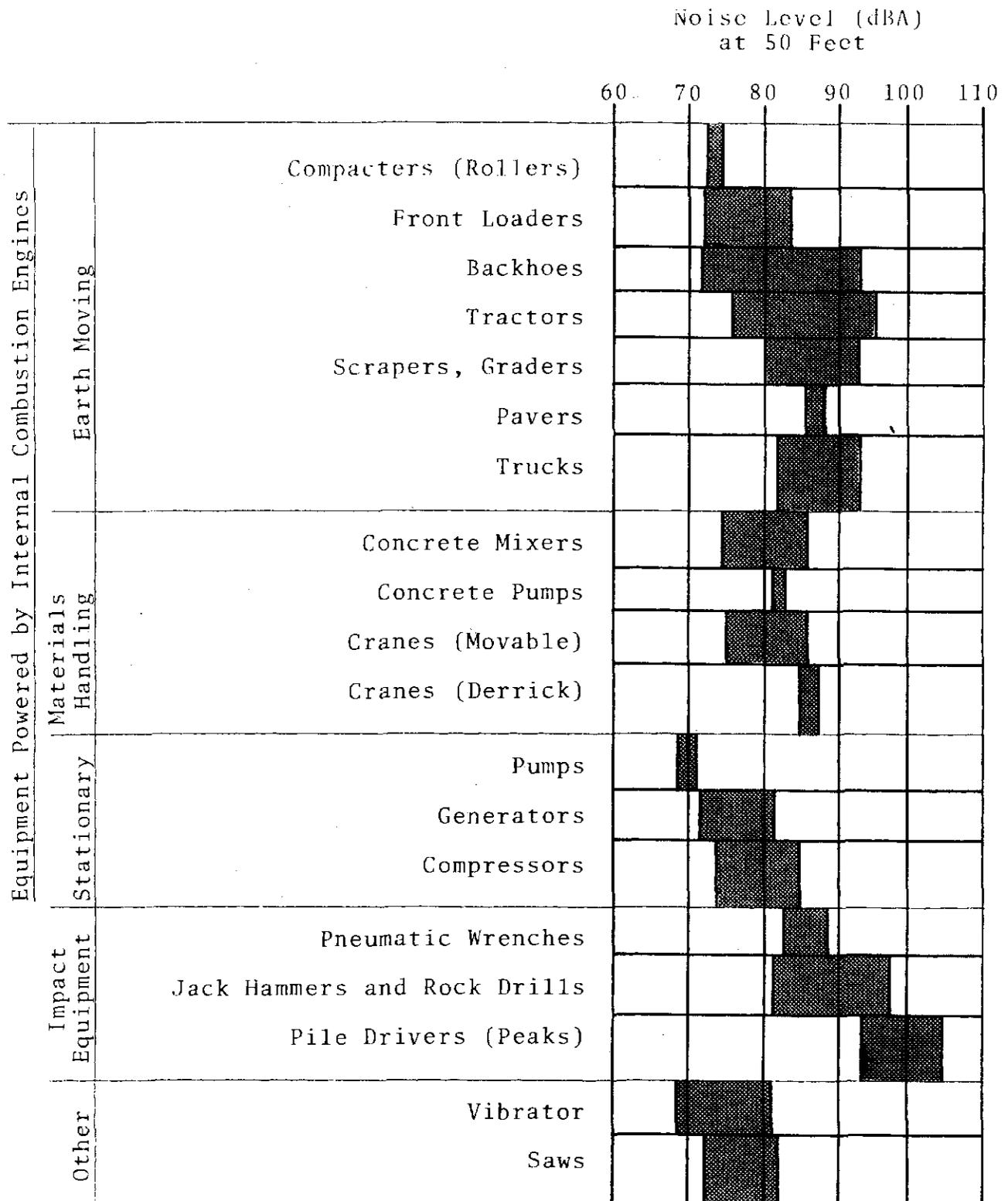
Increased noise levels will occur as a result of development at the head of Squaw Valley in particular, and throughout the valley in general. This will be a direct result of construction activities, increased population, increased reflective noise surfaces, and increased mechanical devices.

Construction noise will be temporary for each specific project or phase of development but because of the length of time required for completion of the entire development, it could be a major noise source in the valley for some time. Construction noise is generated by heavy equipment such as graders, concrete mixers and trucks, hand labor such as hammering and sawing, power equipment, private vehicles and communication among the workers. Since some structures will have to be removed prior to construction, demolition equipment will also represent a noise source. Figure 5 lists noise levels associated with various types of construction equipment. These sources may result in noise levels of 90 to 100 dBA at the construction site, which may

represent a disturbing impact on nearby residences, offices and commercial establishments. These levels can also reduce the quality of recreation throughout the valley.

Traffic will still be a major noise source in the valley following development. According to projections by the Department of Public Works, the number of vehicles using Squaw Valley Road during peak winter hours is not expected to increase although non-peak hour traffic will increase. As a result, noise levels from traffic on Squaw Valley Road are not expected to increase during peak hours but will be greater at other times. There will also be an increase in bus traffic on residential roads and on Squaw Valley Road during non-peak traffic hours which will contribute to increased noise levels.

CONSTRUCTION EQUIPMENT NOISE LEVELS



Source: Bolt, Beranek, and Newman, 1971

Fig. 5

With population growth in the village, noise from people and their activities will necessarily increase. The amount of increase will depend on the population, buildings, and activities at each specific location. Noise increases from people in other parts of the valley are also difficult to quantify since use areas are likely to expand as well as densities. It is realistic to assume, however, that noise disturbance from people throughout the area will increase.

An increased population in the valley is likely to result in an increase in noise from off-road vehicles, chain saws, power mowers and similar mechanical devices powered by internal combustion engines. These sources could become annoying if the areas of use, numbers, and hours of use are not restricted. This particularly applies to off-road vehicles such as snowmobiles and motorcycles. These vehicles can result in disturbance to residents, recreationists, and wildlife over a large area, if not properly controlled.

In addition to the above noise sources, development in the village and the entire valley will require the removal of sound absorbing vegetation and replacement with sound reflecting walls, roads and sidewalks.

Mitigation.

The following measures are included in the proposed plan:

1. Dense landscaping should be planted around sources of concentrated noise such as parking lots, recreational facilities, etc.
2. Landscaping, various materials, and different textures should be used on the buildings of the village area, in order to break up noise reflective surfaces.
3. Construction activities should be restricted to between the hours of 8:00 A.M. to 5:00 P.M. on weekdays.

4. Regulations regarding the number, areas of use, and hours of operation for off-road vehicles in the valley should be established.

PUBLIC SERVICES

Sewage Disposal

Sewage treatment in Squaw Valley is primarily handled through the Squaw Valley County Water District's collection system which is connected to the Tahoe Truckee Sanitation Agency export line along the Truckee River. The TISA plant in Truckee is presently undergoing an expansion which will significantly increase its capacity. Additional connections will then be granted on a first-come, first-served basis. New development in Squaw Valley will be required to connect to the existing public system. Currently the commercial facilities at the High Camp Restaurant and Gold Coast areas are connected to an on-site sewage treatment and disposal system constructed several years ago. Due to the maintenance and operational costs of such a system, along with the potential for health hazards which may exist, these facilities and new ones like them should also be connected to a public treatment system as soon as is feasible. Any new development located at the entrance to the Valley and along the Truckee River should also be required to tie into the existing public sewage disposal system.

Mr. D.E. Butterfield, General Manager, T.T.S.A., has indicated that the currently approved plant expansion will handle approximately 12,000 single family equivalent unit. This expansion would not be adequate to handle buildout of the already subdivided lands within the TISA service area. Responsible planning for expansion of TISA or a new advanced wastewater treatment plant should involve all affected jurisdictions.

Water

~~On the mountain, two verticle wells serve the High Camp facility and an existing (1964) reservoir is presently supplying water to Gold Coast.~~ This reservoir is fed from surface sources so it is subject to contamination and pollution, therefore, water

is used only for utility purposes and water brought up from the valley floor (a public system) is used for drinking. There are presently studies going on to improve the water supply for the upper mountain, both as per domestic and fire flow requirements. The water supply for the valley is obtained by means of verticle wells and a horizontal well. In 1972, it was estimated that less than 4% of the water avilable from the underground supply was used by the existing development. In 1982, the water district is still convinced that the water supply for the valley will not be a constraint.

Distribution of water is handled by the Squaw Valley Mutual Water Company and the Squaw Valley County Water District. The County Water District has been in the process of upgrading its distribution system for several years. Recent construction in the eastern end of the Valley has resulted in new storage and distribution facilities being put in place, however, there still exists a need to upgrade water sources, storage and distribution facilities. Recent efforts of the District have been to connect the water systems at both ends of the Valley in order to have the ability to tie the entire valley into one system.

Fire Protection

The Squaw Valley Fire Department, financed through County Service Area #14, is responsible for fire protection throughout the Plan area. Mutual aid agreements exist with the Alpine Meadows Fire Department so that each fire department can respond to emergencies throughout the area. Recently, the Squaw Valley Fire Department 150 rating was upgraded to a 6 as a result of better available manpower and improved water service.

In order to continue to improve the efficient delivering of fire protection services, this Plan encourages the continued organizational changes such as the Eastern Placer County Joint Powers Agency and automatic response agreements with other fire districts.

In considering new development in Squaw Valley, the relative efficiency of providing fire protection services must be used as one of the criteria. Very early in the project design stage, developers should coordinate with fire department staff so that projects are designed to incorporate and accommodate fire protection features and services.

The Squaw Valley Fire Department has identified the need for the following new facilities or equipment based on the potential development shown in the General Plan:

- a) Purchase of an aerial fire truck with an Estimated Cost of \$350,000.00.
- b) An addition to or replacement of the existing engine room.

Estimated Cost = \$230,000.00.

- c) Purchase of a specialized parking area vehicle having an Estimated Cost of \$20,000.00.

The need for an aerial truck in Squaw Valley is due to the existence of several structures having three or more stories, and the potential under the General Plan for substantial new development. Each and every project which is built to three stories or more will add significantly to this need. The purchase of this and the other equipment and facilities will increase the fire protection capability of the Fire Department for the valley as a whole; therefore, a fee schedule has been included as a part of the Plan which will result in new development supporting the cost of these new fire protection facilities. The fee schedule recognizes the disproportionate need created for such equipment by structures of three stories or more through higher fees for such projects. Such fees will be reserved exclusively to meet the needs of the fire department to provide an adequate level of fire protection.

Police Protection

Police protection is currently provided by the Placer County Sheriff's Department from the sub-station in Tahoe City and the California Highway Patrol out of Truckee. Through the Sheriff's Office, search and rescue operations are also provided to the area. In providing Sheriff's patrols in the area, the

past program of requiring private financing of such patrols where the private benefit warrants such action, should be continued. Reducing the need for Sheriff's patrols by reducing the potential for violations and minimizing inefficiencies that result from non-contiguous development must be considered with each new project.

Schools

Squaw Valley is part of the Tahoe-Truckee Unified School District which now transports students to schools outside the Valley. The school site shown on the 1972 Plan has been eliminated based on comments from the School District Board of Directors who now feel that a site will not be needed in Squaw Valley. In the review of projects, consideration must be given to the impacts of development on school space needs and transportation requirements.

Other Public Services

Solid waste disposal in Squaw Valley is provided by a private company operated under a franchise from the County. A public landfill exists on USFS land to the north of Squaw Valley off Hwy 89. Electric service is provided by the Sierra Pacific Power Company and telephone by Pacific Telephone. All new utility lines should be installed underground in order to reduce the visual impact on the Valley and service reliability due to the area's climate.

A E S T H E T I C S

Setting

Squaw Valley's visual and aesthetic qualities are derived from the area's natural environmental elements and man-made structures and changes.

Topography contributes significantly to the visual character of the area. The valley floor, meadow in the classic sense, is a relatively flat, grass covered open area traversed by numerous natural drainage channels of Squaw Creek, which converge as one channel at the mouth of valley before emptying into the Truckee River. To the east, the valley floor opens into the narrow valley formed by the Truckee River, but is visually blocked by the adjacent steep mountain wall that rises 1,200 feet above the floor. The walls of the valley on the north and south also rise steeply from the floor edge.

Vegetation plays a key role in the aesthetic quality with the meadow and forest cover being the two dominant types. The mountain slopes also contain areas of brush stands and exposed granite, providing major natural visual diversity.

Climate is also important to the visual character by effecting major aesthetic differences between winter and the remaining seasons. Heavy snows provide classic winter mountain scenes with the evident contrasting elements of the forest trees, Squaw Creek, and the man-made structures of the ski and residential areas and the paved road.

Human land use of Squaw Valley modifies its visual quality throughout the year. The permanent buildings, roads, and other structures are prominent all year, but because of its function as a winter resort and ski area, man's presence is dominant during this season. Automobiles, skiers on the slopes, and operating ski equipment become prominent visual features, primarily at the west end of the valley. During the summer,

human use is greatly reduced but is more spread out over the valley. Important recreation activities at this time include fishing, hiking, and horseback riding.

An important aspect of visual and aesthetic character at Squaw Valley is that of visual "edges." When examining the overall views, the ridge lines, steep slopes, and the flat meadow become the dominant elements. The broad, flat plain of the meadow and the major parking lot at Blyth Arena are defined by the steep topography as a sharp visual edge, and by the vegetation as a softer edge.

The importance of the various edges of these dominant elements relative to their interface with each other becomes apparent as new elements are introduced, such as paved roads, parking lots, residential development and specific buildings with a specialized architectural treatment.

Perhaps the most sensitive edge is where the meadow interfaces with the open and forested slopes. Here, the contrast between two elements is most apparent.

The overall visual and aesthetic character, then, is that of a large, high mountain meadow with typical associated visual qualities.

The village core area itself has already had its visual and aesthetic character modified significantly by man. The natural visual qualities of the site are characterized by scattered Jeffrey pine, lodgepole pine, and other coniferous trees. The remaining portions of the area consist of several buildings of various shapes, sizes, and uses, and large areas of paved and unpaved parking lots. Squaw Creek has been channelized through the site and has lost most of its natural character. The site lies at the base of mountains on three sides which form a backdrop of exposed rock and trees when viewed from the meadow.

Impact Mitigation

The mountainous slopes, particularly those visible from the commercial village, Squaw Valley Road, and the single family subdivision along the north side of the road, must be carefully managed to preserve their general forested appearance. Areas

previously disturbed by ski run construction should be revegetated, not only for aesthetic reasons, but also to control erosion and siltation. Development should not be visually dominant in any area outside the commercial core. Residential construction on the south side of the meadow should be concentrated on the east end of the property. Tree removal for road construction, ski trails and ski lift lines should be carefully planned to maximize the use of existing clearings (while avoiding wet areas) and to minimize unnaturally straight lines. Lift towers, terminals and buildings, in areas visible from Squaw Valley Road or the subdivisions to the north should be visually screened to the greatest extent possible.

Residential development along the south side of the meadow should be located to maximize the potential for visual screening so that individual buildings, roads, or recreational facilities are screened from across the meadow to the greatest extent possible.

The Squaw Valley meadow is defined in this General Plan on the basis of its visual and geographic characteristics. (see limits defined on the General Plan Map by the Conservation Preserve Area in the center of the valley east of the Core Area). In the past, development has taken place in this area, or has been approved in a manner which should not be repeated. The old corrals and fences located to the south of Squaw Creek and east of the Ski Any Mountain parking lot should be further upgraded and the site restored or improved in conjunction with the development of the adjoining commercial properties. Disturbed portions of Squaw Creek should be rehabilitated. Although they have not yet been constructed, 36 condominium units have been approved on the south side of Squaw Valley Road, near the bridge at the west end of the meadow. Due to its visual impact, this project has an affect on the boundary which has been established separating the "Village Commercial" area from the "Conservation Preserve" area. No further encroachments of buildings, impervious surfaces, or other development activity (other than that permitted by the Land Use Ordinance) should occur on the lands designated in the Plan as "Conservation Preserve".

The visual impact of buildings, parking lots, signs, roads, and other man-made structures will play an important part in the success of converting Squaw Valley into an active, viable, destination resort-type of community. The County and local Design Review Committee should exercise design review authority over most new construction, remodeling, or rehabilitation of structures, signs, or other proposed improvements. The Plan contains a basic concept of developing a pedestrian-oriented village core which combines commercial and tourist-residential uses. This core should be oriented both internally and to the mountains surrounding the area. Design considerations must address this issue so that each project contributes incrementally to the development of this desired space, the overall goal of which is to create a visually and socially attractive setting which will contribute to the likelihood of creating a viable year-round destination resort in Squaw Valley.

Reference is also made to the Visual Analysis Section of the General Plan.

A L T E R N A T I V E S

Alternatives to the proposal could range from slight variations to major modifications of the concept for development of the whole valley. Minor changes in the proposed General Plan are not expected to cause appreciably different impacts or mitigation measures than previously discussed herein. It is therefore necessary to discuss alternatives in general terms based on the destination resort concept.

The concept of a destination resort was discussed within the context of the 1972 General Plan. Inter-relationships necessary for the 1972 plan to succeed have broken down and new goals and policies are necessary to make this type approach to development function properly. Thus, the no project alternative is not deemed acceptable since it would mean the 1972 Squaw Valley General Plan would still direct growth within the area. Some of the reasons this plan is being proposed for modification include the following:

1. A parking structure near the mouth of the valley and its attendant intra-valley mass transit system have not been implemented, nor does it appear that such an occurrence would be likely in the near future.
2. The previous plan showed a long strip of land for residential use extending south along the edge of the meadow. This type land use, in this location, was not felt to be compatible with potential ski hill expansion immediately to the south nor with the natural beauty of the meadow and mountains when viewed from the north side of the valley.

3. The designation for the village core area on the 1972 General Plan is "commercial residential", but unfortunately no specific criteria or guidelines are spelled out regarding kinds of uses or timing for necessary Capital Improvements.

Lower Density - If the destination resort concept was completely removed from discussion and the area was treated like a typical community General Plan, existing conditions would require a substantial reduction (approximately 40%) in holding capacity from what is being proposed. Based on the extent of development of the ski area already, the potential for expanded utilization of those facilities, the traffic congestion problems currently evident, and the fact that day skier use would probably not be limited, this alternative was rejected in favor of the proposed plan. At the substantially lower densities, the social and economic well being of the Squaw Valley community would likely continue to deteriorate. The motivation to solve the problems associated with a very seasonal use of the valley would not exist.

Both the traffic and parking sections of the General Plan and EIR discuss problems associated with subsequent buildout of the valley, and it is evident that a more intense use of the core area is acceptable under the destination resort approach. This is possible by providing accommodations and amenities to the skiers, thereby spreading out the exodus from the valley to other

than peak times. This in turn allows more density to be realized in other parts of the plan area.

Higher Density- This was categorically rejected due to the cumulative impacts associated with this type proposal. Virtually all areas previously evaluated would experience compounded impacts, most obvious of these would be air quality, noise, traffic, and water quality.

G R O W T H I N D U C I N G I M P A C T S

Development of the Squaw Valley village will have its primary growth inducing influence on the undeveloped lands in the remainder of the valley and on the surrounding slopes. The large ski-oriented population attracted by the facilities in the village will certainly influence or accelerate the construction of undeveloped but proposed ski lifts and trails surrounding the valley. Development of the village is also likely to increase: land values in the lower valley, the impetus to develop those remaining units allowed by the General Plan, and the speed with which these units are built. This may have adverse visual, aesthetic, and land use effects if these units are not developed in a manner compatible with the development proposed for the upper valley.

The village proposal also represents a growth inducing factor by increasing demands on existing public service and utility districts. This may cause an increased need for machinery, equipment and labor. Labor will also be required directly by the proposed development, both in the initial construction and the subsequent occupation phases. The exact number of employees required by the development is not known. The extent of the growth inducing impacts attributable to labor needs will depend on the local unemployment situation and the number of employees brought in from other areas.

The Plan is not expected to induce growth in other ski areas or, to any great extent, at any commercial locations in the area. This is primarily because the development is proposed to be a self-contained destination resort. Some services such as gas stations, restaurants, and motels which are located along travel routes to Squaw Valley may secondarily benefit from the development. Airport and mass transit expansion may also occur because of this and other development.

**RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES
OF MAN'S ENVIRONMENT
AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

In broad terms, the purpose of this discussion is to assess the Plan from the perspective that the present generation is the custodian of the environment for all succeeding generations. This section identifies the relationships between the immediate and long-term benefits, and the long-term and cumulative adverse effects of the Plan. The implications of these relationships for the long-term stability and productivity of the environment (both natural and human) are also discussed.

Beneficial impacts associated with the proposed destination resort concept are primarily, but not exclusively, social and economic in nature. The landowners and developers will, if the projects are successful, derive an economic benefit in the form of a profitable return on their investment. Similarly, the County of Placer will derive economic benefits in the form of tax revenues that exceed the costs of County services. Also, the implementation of the Plan will contribute to the County economy through the wages paid to project employees, both during and after construction, and through expenditures by users of the proposed facilities. The Plan will provide greatly expanded opportunities for year-round recreation and additional accommodations at Squaw Valley which will satisfy part of the increasing demand for these opportunities from residents of the San Francisco and Sacramento metropolitan areas.

Maintenance and improvement of existing flood control structures in Squaw Creek, particularly the sediment catch basins, will have a beneficial effect on water quality and aquatic habitat value by significantly reducing the quantity of sediments transported into the meadow segments of the creek. Reduction in the area of exposed roads and parking lots in the

village core will also have a beneficial effect on water quality by reducing the volume of street surface contaminants entering the creek.

Adverse impacts of the proposed development are related primarily to the natural environment as well as noise and air quality. Significant increases in soil erosion that will adversely affect water quality and aquatic habitat value will occur during and immediately following construction.

Construction activities and equipment will temporarily increase ambient noise levels in the valley; increased human activity (including automobile traffic) will cause smaller permanent noise level increases. Increased numbers of automobiles travelling to and within the valley will generate increased emissions to the atmosphere as will the fireplaces and heating systems associated with the proposed new buildings. All of the above described impacts will add to the cumulative impact of development of Squaw Valley.

In summary, the Plan represents a long-term land use commitment with a number of beneficial and adverse environmental effects. Most of the adverse effects are amenable to mitigation measures that will lessen their significance.

**ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED
IF THE PROJECT IS IMPLEMENTED**

Impacts identified here are those effects of the Plan that are considered adverse and that will not be eliminated by the mitigation measures discussed previously. Unavoidable adverse effects associated with build out are related to soils, water quality vegetation, wildlife, air quality, and acoustic quality. There are also avalanche hazards associated with a portion of the Valley.

Soil erosion from various project areas will be increased over baseline conditions during and immediately following the construction periods. This increased erosion will be a short-term impact, and it is expected that within five years following completion of construction, soil loss will decrease to essentially existing levels. Soil particles lost during construction will eventually be transported to Squaw Creek where they will add to its already, existing sediment load. Some of these sediments will settle out in the meadow segment of the creek where they will contribute to the existing problem of increasing elevation of the stream bed.

The increased numbers of automobiles in Squaw Valley and the fireplaces and heating systems associated with the new structures represent additional emissions sources within the valley air basin. The additional automobiles also represent noise sources that will contribute to increased ambient noise levels in the valley. Increased human activity will be another contributor to long-term increases in ambient noise. Construction equipment and activities will temporarily increase noise levels during the construction periods.

**IRREVERSIBLE ENVIRONMENTAL CHANGES
WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION
SHOULD IT BE IMPLEMENTED**

For the purpose of this discussion, impacts are considered irreversible if they result in permanent changes in the Squaw Valley environment. Also considered in this section are those changes that remain for the life of the Plan but that can be reversed if project facilities are removed and sufficient energy is expended to effect the reversal. Irreversible changes associated with the project are related to soils, climate, vegetation, air quality, and noise, and commitments of energy, material, and land resources.

Increased erosion during construction periods represents a permanent soil loss from the project area. Placement of structures will result in permanent minor modifications in radiation and moisture balances and windflow patterns of the area. Implementation of the Plan will cause essentially permanent degradation of air quality and increased ambient noise levels in the valley.

Also permanently committed will be the energy expended by persons travelling to Squaw Valley to use the facilities. Material resources (wood, steel, concrete, etc.) will be required for construction and maintenance of the structures and will be committed for the life of each. Should the various projects ultimately be abandoned, the potential exists for the reuse or recycling of most of these materials although the energy requirements for this action would be high. Given the recent past trends in skier and outdoor recreation demand, it is highly probable that the facilities will not soon be abandoned and, therefore, the project can be assumed to represent an essentially permanent commitment of Squaw valley to use as a skier and destination resort.

APPENDIX A

B I B L I O G R A P H Y

1. Asbaugh, J. B., Barone, L. L., Cahill, T. A., Flored, R. A., Further Investigation of Air Quality in the Lake Tahoe Air Basin, Final Report to the California Air Resources Board; Air Quality Group, Crocker Nuclear laboratory, March, 1979.
2. Appendix U, Final EIR, Tahoe-Truckee Sanitation Agency, Brown and Caldwell, January, 1981.
3. Duckworth, Spencer, et al, Visibility Trends in the Pristine Area of California 1958-1977, California Air Resources Board, September, 1981.
4. Duckworth, Spencer, et al, Ozone patterns on the Western Sierra Slope, California Air Resources Board, March, 1979.
5. Cooper, John A., Environmental Impact of Residential Wood Combustion Emissions and its Implications, Oregon Graduate Center, February, 1980.
6. EPA, Trends in the Quality of the Nation's Air, EPA Office of Public Awareness, October, 1980.
7. Hammer, Douglas I., et al, "Air Pollution and Childhood Lower Respiratory Disease. Exposure to Sulfur Oxides and Particulates in New York, 1972", Clinical Implications of Air Pollution Research, Publishing Sciences Group, Inc., 1976.
8. Reynolds, Terry S., Air Quality in the Tahoe Basin, A guide for Planning, Office of Intergovernmental Programs, National Science Foundation, October, 1976.
9. Tahoe Regional Planning Agency, Climate and Air Quality of the Lake Tahoe Region, September, 1971.

10. Trijonis, John, Visibility in California, Final Report, Technical Services Corp. (submitted to the California Air Resources Board), July, 1980.

11. Sierra Environmental Monitoring, Air Quality Evaluation of the Squaw Valley General Plan Amendment, December, 1974.

APPENDIX B

R E F E R E N C E S

- 1972 Squaw Valley General Plan
- Final EIR, "Squaw Valley", March 19, 1975
- 1982 Squaw Valley General Plan

T E C H N I C A L A S S I S T A N C E

John Krogsrud - Placer County Public Works Department
Jim Scribner - Placer County Environmental Health Department
Ken Selover - Placer County Air Pollution Control District
Russ Roberts - Placer County Air Pollution Control District
Norm A. Wilson - Avalanche Consultant
Robert Mathews - Geological Consultant

COMMENTS & RESPONSES

TAHOE REGIONAL PLANNING AGENCY
P.O. BOX 8896
SOUTH LAKE TAHOE, CA 95731

COMMENT:

Agency staff feels expansion of operations will adversely affect traffic and air quality within the Basin. It is important, therefore, in looking at the time frame for expansion, that planned hotel-/motel accommodations be developed and available prior to major increases in skier capacity. The full development of a destination resort will help alleviate the potential for off-site, in-Basin problems.

RESPONSE:

These statements seem to be somewhat contradictory. We agree that an uncontrolled expansion of ski area operations would likely aggravate traffic and air quality problems. However, the Plan and EIR both contain explicit "non-deterioration" policies with regard to traffic levels of service. Management strategies capable of improving existing conditions on the area's road network (including the north Tahoe Basin) are similarly included. One of the objectives of a "destination resort" is to reduce peak traffic and attendant problems such as air pollution, expensive capital improvements used only rarely, etc.

COMMENT:

Implementation of the mitigation measures proposed in the EIR appear (SIC) to be adequate for the immediate Squaw Valley area. However, staff feels Placer County must also examine the Tahoe City "Y" intersection and be able to make two findings

before additional ski lifts, lift modification, or increases in ski hill capacities are permitted. The findings should be:

1. Present, peak-period traffic congestion and delay shall not be worsened and levels of service shall not deteriorate within Squaw Valley, at the Squaw Valley Road and State Highway 89 intersection, or at the State Highway 89 and 28 intersections.

2. The duration and number of occurrences of each traffic problem shall not increase within Squaw Valley, at the Squaw Valley Road and State Highway 89 intersection, or at the State Highway 89 and 28 intersection.

RESPONSE:

We agree and have made the suggested changes in the text of both Plan and EIR. Requiring such findings is consistent with the "performance standards" approach of the Plan. These required findings include consideration of the Tahoe City "Y" intersection and should ensure that additional winter sports recreation development does not aggravate existing conditions.

COMMENT:

Two other items need consideration in finalizing this environmental impact report. First, the "metering" system proposed for the release of vehicles onto State Highway 89 must be expanded to include Alpine Meadows through an operable communications system prior to any additional permits for expansion being issued.

RESPONSE:

It seems presumptuous for IRPA to inform Placer County what measures "must" be included in a County plan for an area out of TRPA's jurisdiction. However, the idea of including Alpine Meadows in the system is a good one, and is taken from the Draft Plan. Operators of the Alpine Meadows ski area have indicated support for the idea and are participating in experiments with traffic control and management presently being conducted. Use permit approval of the most recent ski lifts in Squaw Valley requires the operator to participate in a traffic management program which includes the measures suggested. Some experimentation is necessary to determine what measures are actually practical, or should be changed, deleted, added, etc.

COMMENT:

Also, operation of the ski corporation's private transit system is necessary before skier capacity is increased. Placer County should require a schedule indicating routes, frequency of service, and the marketing program proposed for the system.

RESPONSE:

Use permit approval for the most recent lifts in Squaw Valley was predicated on the ski area operator continuing transit service at historic levels and developing improved transit service in the future. Each year the ski area operator is required to provide Placer County with the information suggested, and much more. It appears that transit service (particularly, out-of-area group ridership) is continuing to improve.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
TAHOE NATIONAL FOREST
HIGHWAY 49 AND COYOTE STREET
NEVADA CITY, CA 95959

COMMENTS:

We know you are aware that the standard elements of the General Plan, development standards for subsequent projects, and proposed development constraints apply only to the private lands within Squaw Valley. In the introduction we believe it would clarify this direction by adding the following comment:

"The development standards do not apply to National Forest System lands."

RESPONSE:

See paragraph three in Introduction on Page i; (Para 3 -Although the Development Standards do not apply to National Forest System lands, it is hoped the Goals & Policies, as well as the physical constraints (i.e. transportation network and parking limitations) of the Valley will be taken into consideration before any permits are issued for projects on the Federal lands which could very easily have off-site impacts.

CALIFORNIA TAHOE REGIONAL PLANNING AGENCY
P.O. BOX 14467
SOUTH LAKE TAHOE, CA 95702

COMMENT: In addition, the traffic and air quality impacts of any proposed development will affect the area outside of the Squaw Valley community.

RESPONSE: We agree and have acknowledged this in both the General Plan and EIR. If Squaw Valley develops as a "destination resort", future air quality and traffic impacts would likely be less severe than what would occur if the present General Plan were realized.

The Air Quality Section of this EIR contains discussion of vehicle miles travelled (VMT) and air quality impacts resulting from traffic related to Squaw Valley.

COMMENT: It is not reasonable to expect all visitors to use commercial and overnight accommodations exclusively within Squaw Valley, and therefore hotel/motel units and commercial businesses located within the Tahoe Basin should be included in the impacted area.

RESPONSE: We agree. Again, one of the purposes of the "destination resort" approach to development is to "contain" visitors within Squaw Valley. This would relieve some of the traffic and other "impact" on the Tahoe Basin. This EIR acknowledges that not all skiers with overnight accommodations will stay in Squaw Valley.

COMMENT:

Plate 1, and all subsequent plates should identify the National Forest System lands within Squaw Valley. We, in turn, are showing other ownerships within the Forest as not being governed by Federal constraints on the maps included in our Land and Resource Management Plan.

RESPONSE:

Ownership patterns are not shown on the Plates within the EIR since the plan is designed for a 20 year period; ownerships are subject to change during that time, even Forest Service lands.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
P.O. BOX 9428
2092 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CA 95731-2428

COMMENT: (page 8). As mitigation for the impacts of development on soils and geology, the EIR recommends construction of "engineered berms and channels....to direct run-off to existing natural drainage ways." This recommendation should not be interpreted to permit direct discharge of surface run-off from developed areas to Squaw Creek and other perennial surface waters. Direction of run-off to functioning stream environment zones (i.e., meadows) for natural treatment might be desirable. In general, run-off should be infiltrated onsite.

RESPONSE: Comment acknowledged. Reference is also made to the mitigation section for Water Quality beginning on Page 60.

COMMENT: (page 38). The air quality section should discuss the potential impacts of nitrogen oxides generated by the increased resident and visitor populations of Squaw Valley on the atmospheric input of nutrients to Lake Tahoe. Even if prevailing winds can be expected to transport most pollutants from Squaw Valley to the east, many of the new residents and visitors will be driving to the Tahoe Basin as well as to Squaw Valley.

RESPONSE:

The increase in nitrogen oxide (NO_x) emissions in the Tahoe Basin as a result of this Plan has been calculated. The additional in-Basin vehicle miles travelled (VMT) were obtained from the Department of Public Works. High altitude emission factors from the California Air Resources Board were used. Since this Plan represents a significant reduction in density, the calculated NO_x emissions are therefore less than what would occur under the existing Plan.

The results were compared to the 1990 emission projections of the 1977 Tahoe Basin Emissions Inventory, which is the most accurate inventory available for the Basin. The table below lists the results.

	1990	77 Emissions	
VMT	Emissions	Invent. Projections	
<u>Increases</u>	<u>Tons/Day</u>	<u>Tons/Day</u>	<u>Increase*</u>
Summer 136,950/Day	0.05	4.25	2.0
Winter 88,260/Day	0.09	3.73	1.3

*Total increase (summer-winter combined) is 1.7%.

COMMENT:

(page 52). Our records do not indicate that the Regional Board was given the opportunity to review the 1980 transportation "Capital Improvement Program". We are concerned about the potential impacts on water quality of the proposed 1982 modification of this program, especially those of the proposed separated "3rd lane" along the meadow side of Squaw Valley Road, and the road link from Lanny Way to Victor Place or Tiger Tail Road, which would cross soils with moderate to high erosion hazard classifications. If the modified program is

approved, the Regional Board will wish to review detailed plans and environmental documents for each component, and to prescribe appropriate erosion and drainage control measures.

RESPONSE:

The "separated 3rd lane" along Squaw Valley Road has been scaled down to a bicycle trail. The proposed road linking Lanny Way with Victor Place or Tiger Tail Road has been removed from the list of projects because of the difficulty of construction and amount of disturbance of steep slopes. Before any of the included projects are undertaken, all interested parties will be given the opportunity to comment through environmental review. Lahontan's comments regarding the plans and project design will also be sought before any such project is undertaken.

COMMENT:

(Plate 4, following page 54). The 100 year flood plain of Squaw Creek as mapped in the EIR does not include the entire Squaw Valley meadow. The zoning maps displayed at the July 1982 hearing on the preliminary draft plan indicated that the entire meadow would be preserved as open space. No zoning map is included with the present drafts. Because of the value of the meadow vegetation and soils should be retained in its natural state, and that disturbed portions should be restored wherever possible.

RESPONSE:

The first part of the comment is correct. The 100 year flood plain of Squaw Creek does not take in the whole meadow. The flood plain was determined by Raymond Vail's Associates as a part of the Mainline project E.I.R. entitled "Squaw Valley", March 19, 1975. As is stated in both the E.I.R. and General Plan, our intent is to preserve the

whole meadow, not just the area within the flood plain. See the mitigation section for Water Quality beginning on page 60.

COMMENT:

(page 24). The groundwater supply in Squaw Valley is said to be adequate to serve the development proposed in this plan. Although appropriative water rights are not now issued for groundwater diversions in California, the State is committed to keep total water diversions from all sources in the Truckee River basin in California from exceeding the limits established in the California-Nevada Interstate Water Compact. Settlement of ongoing litigation might result in reduction of allowable diversions in California. State regulation of groundwater rights could become necessary at some time in the future to keep the compact limits from being exceeded. The final EIR should include an estimate of total residential and commercial water demand at buildout of the development projected in the plan, and a discussion of water conservation measures. It should also discuss the impact of an increased resident and visitor population at Squaw Valley on water demands in the Lake Tahoe Basin. (The State Water Resources Control Board is expected to make a decision in 1983 on allocation of the remaining limited water supply in the Tahoe Basin, based on projected buildout under then current land use and water quality plans and water use patterns.)

RESPONSE:

The ground water supply in Squaw Valley appears to be adequate for this General Plan. It is realized that the State of California may, at some later date, try to regulate ground water diversions. If this does occur, then some adjustments may be required in Squaw Valley as well as in other areas

in the region. It is not possible to anticipate if and when any change in State law might happen, particularly in light of all the pending litigation on the Truckee River drainage basin.

The plan allows growth in Squaw Valley reach a seasonal peak, overnight residential population of about 11 to 12 thousand. With an annual estimated precharge to the water supply of 3,600 A.F. this amounts to approximately 267 gallons per day per person, on a year-round basis, which is well in excess of possible demands.

As far as demands on the water in the Lake Tahoe Basin, again, this is something that is very dependent on the final resolution of the compact. The controls in the Basin are, of course, in the hands of the Tahoe Regional Planning Agency (TRPA), and it's enforcement authority and this plan cannot guess what restrictions the TRPA might put into place.

Existing State and County law requires water saving devices on all new construction.

COMMENT:

(page 60). As we indicated in our earlier comments, we support the proposed prohibition of development in stream environment zones (SEZ's), and recommendations for the restoration of disturbed SEZ's as a condition of development on adjoining lands. SEZ's are defined in the Squaw Valley Plan and EIR as the 100 year flood plain, or where this has not been mapped, the area within 100 feet of the centerline of the waterway. We recommend that the definition be expanded to parallel the definition of a stream environment zone in the Lake Tahoe

Basin, and should include meadows and riparian vegetation, and areas with high groundwater tables.

RESPONSE: Recommendation noted.

COMMENT: (page 88). The Lahontan cutthroat trout should be mentioned in the section on rare and endangered species as a potential inhabitant of Squaw Creek and its tributaries. This species is classified as "threatened" by the Federal government, and the U.S. Fish and Wildlife Service is attempting to restore it to its original habitat throughout the Truckee River system. It has been found recently in the Truckee River and in several of its tributaries in California. In its 1980 Basin Plan update, the Regional Board designated "Rare and Endangered Species" as a potential beneficial use of Squaw Creek.

RESPONSE: Comment acknowledged. See revised section on Rare or Endangered Species.

COMMENT: (page 124). The EIR implies (and page 62 of the Plan states) that the currently approved expansion of the Tahoe-Truckee Sanitation Agency (TISA) wastewater treatment plant will be adequate to serve the development permitted by this plan. This assumption should not be made. The ongoing expansion will be inadequate to serve presently subdivided development in the TISA service area. Even considering the additional capacity which could be made available by development restrictions in the Lake Tahoe Basin, there will probably not be sufficient capacity to serve the proposed increased population of Squaw Valley. Mitigation should include a County commitment to responsible planning

for expansion of TISA or construction of a new advanced wastewater treatment plant. It should be noted that the entire assimilative capacity of the Truckee River has been assigned to TISA at its present level of treatment. Any new or expanded plant would have to involved advanced treatment and/or "no discharge" conditions.

RESPONSE: Comment acknowledged. See revised Sewage Disposal Section of EIR.

COMMENT: (page 133). The discussion of growth-related impacts does not include potential impacts of Squaw Valley residents and visitors on the Lake Tahoe Basin. It can be expected that significant numbers of visitors (especially non-skiers and summer visitors) will travel to the Lake Tahoe Basin for recreation, and that residents will use its commercial and recreational facilities. The EIR should consider the impacts of this increased visitation and use on the finite resources of the Lake Tahoe Basin, and on attainment of environmental thresholds. Ideally, the Squaw Valley General Plan should be coordinated with the Tahoe Regional Planning Agency's 1983 Regional Planning effort. The EIR should also address growth-related impacts of development at Squaw Valley on the environment and resources of the Truckee area (e.g., consumption of sewage treatment capacity and landfill capacity which would otherwise be available for growth in this area).

RESPONSE: It is likely that residents and visitors of Squaw Valley will utilize some commercial and recreational amenities within the Lake Tahoe Basin. It is important to note, however, the destination resort concept of the General Plan update encour-

ages onsite facilities, both commercial and recreational, to serve potential users. Implementation of the Plan should result in less demands on outside of valley goods and services, and continued operation of shuttle buses could relieve some of the traffic congestion experienced at Tahoe City and Truckee.

Because the Squaw Valley General Plan is progressing more rapidly than TRPA's planning effort, we would hope their plan would be coordinated with ours.

Since the SVGP update actually represents a decrease in holding capacity from the existing zoning and General Plan, the demands for sewage capacity and landfill capacity could be less than that possible under the existing buildout potential.

COMMENT:

The EIR does not include specific consideration of cumulative impacts, as required by Section 21083 of the California Environmental Quality Act. The project could have significant cumulative impacts on water quality, water supply, wastewater treatment capacity, and other environmental factors and public services. Cumulative impacts should be considered in a regional context, together with the impacts of presently approved but unbuilt development in the Truckee area, and the impacts of proposed large projects such as the Sunstream ski area.

RESPONSE:

Since no specific development proposal is being considered at this time, it is not possible to quantify impacts in the manner normally done for an individual project.

Water quality impacts will be controlled through conditions of approval for projects as they are reviewed by Placer County and Lahontan. It is reasonable to assume water quality may deteriorate as buildout of the valley continues. (See also the Water Quality Impact Section of the EIR).

Cumulative impacts on water supply, according to the available information, are not expected to be significant. The Squaw Valley Mutual Water Company and the Squaw Valley County Water District feel water supply will not be a constraint for development of the valley.

Cumulative impacts on sewage disposal capabilities could be reduced by implementation of the proposed General Plan update. There is available land area at the I.T.S.A. site to accommodate plant expansion, and an ongoing planning effort among affected jurisdictions should ensue for this matter.

Cumulative impacts with regard to other public services are expected to be less than significant with buildout of the plan.

Development of the Sunstream area will be evaluated in a comprehensive and thorough manner at such time as a conceptual or specific development plan is formulated. To date we have no project proposal for this area which can be analyzed.

COMMENT:

Transportation improvements will be necessary if additional growth is anticipated, as even the present peak-day users in the valley create public safety and convenience problems which should not be tolerated.

RESPONSE:

Additional growth is anticipated, and necessary transportation improvements within Squaw Valley are listed within the proposed Capital Improvement Program. Transportation problems and issues for the region outside the valley are discussed in the Plan and EIR, but no attempt has been made to prepare a detailed Regional Transportation Plan /Study. Such an effort is considered to be beyond the scope of this EIR/General Plan.

Mitigation measures listed in the EIR provide several methods of ensuring that adequate levels of service are maintained; such methods include capital improvements, transit, transportation systems management, and plan policies regarding development.

CALTRANS
DISTRICT 03

COMMENT:

Caltrans concurs with the mitigation measures on pages 103-106 of the draft EIR, including the construction of traffic signals when warranted and the management procedures designed to minimize congestion. We recommend that Priority #5 of the Capital Improvement Program, the third lane on Squaw Valley Road, be given a higher priority. This exclusive transit lane would encourage use of transit and would help ease congestion.

RESPONSE:

We agree that an exclusive transit lane would encourage use of transit and, thus, ease congestion. However, the "separated 3rd lane" has been removed from the list of Capital Improvement Program projects. Instead, a separated bicycle/pedestrian trail for summer time use has been substituted. The reasons for this change include opposition from most development interests, limited seasonal utility, the lack of major transit use, and competing projects determined to be more cost-effective. However, developing the bicycle/pedestrian trail provides a degree of improvement that could serve as a "first phase" of an eventual transit lane if determined to be necessary sometime in the future.

COMMENT:

The EIR should indicate how many other projects, if any, have a higher priority in the Capital Improvement Program than the General Plan projects.

RESPONSE:

All projects included in the existing Capital Improvement Program are listed in the Plan. All projects included in the reviewed program are listed in the EIR.

COMMENT: On page 106, the sources of direct transit subsidies and the provision of turnouts and shelters should be identified.

RESPONSE: Both public and private subsidies for transit have been provided and are available. Transportation district (Tahoe Transportation District Agency) funds were used for several consecutive years (until this season) to subsidize special bus runs between the Tahoe City area and Squaw Valley. Cal-Trans is presently subsidizing bus service for Amtrak passengers from Truckee to the Tahoe Basin by way of Squaw Valley; this service may be improved in the future by interconnecting with local transit service. The Squaw Valley Ski Corporation is providing bus service to Squaw Valley for skiers this season from both the North Tahoe and South Tahoe areas. The Squaw Valley Ski Corporation also provides an indirect subsidy to transit by offering lift ticket discounts to groups arriving by bus.

Turnouts and shelters have been constructed in the past using both public and private funds. New locations are proposed at several locations in Squaw Valley (see General Plan map); construction of these facilities will be a requirement of immediately proximate development, much like frontage improvements to the road network. Placer County will continue to design and construct turnouts and shelters throughout the area.

COMMENT:

On page 96, existing peak hour traffic volume for an average day is given to be 307 vehicles. In giving the peak hour traffic distribution on Squaw Valley Road, it appears that a mathematical error was made in computing the eastbound percentage. The two figures [139+118=257] do not add up to 307.

RESPONSE:

The errors noted have been corrected in the text. The correct numbers are 138 vehicles westbound and 169 vehicles eastbound; the total of 307 vehicles is correct.

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS

COMMENT: However, the Final EIR will need to be more specific in terms of noise and safety impacts from helicopter operations that are proposed.

RESPONSE: Helicopter operations are not proposed by this General Plan. However, the opportunity for helicopter transport of skiers into Squaw Valley and from base to top of slopes has not been prohibited by the Plan. Any such proposal would be subject to environmental review and conditional use permit requirements. An application for a permit to provide such helicopter service is now being processed by Placer County.

ENVIRONMENTAL HEALTH DIVISION

714 P STREET, ROOM 430

322-2308

COMMENT:

At 80 percent buildout (page 101 of the Draft EIR), ADT on Squaw Valley Road would roughly double and resultant noise levels should increase by 3 dB, which is a perceptible change. In general, an L_{dn} of 65 dB can be expected within 100 feet of the roadway and, as a result, perhaps residential setback requirements should be greater than the 20 feet required by Section 139 (page 89) of the General Plan. Measurements of noise levels should be employed to establish setbacks. However, because ADT is expected to be about 6000, and if the number of heavy trucks (as a percentage of total traffic) is small (5 percent or less), traffic noise should not be a serious problem during the winter.

RESPONSE:

The remaining, undeveloped land along Squaw Valley Road would accommodate hotels and condominium type residential uses along with commercial facilities. It does not appear that any lot and block, single family residential developments would occur within close proximity to Squaw Valley Road. Anticipated noise levels fall within the "normally acceptable" range for multiple family residential use in the County Noise Element.

COMMENT:

A more serious noise problem may be due to snow-mobiles or other off-road vehicles. Consequently, the need for use regulations of off-road vehicles should be emphasized. In addition, local police should be trained and encouraged to enforce appropriate sections of the Motor Vehicle Code.

RESPONSE: Comment acknowledged. See #5 on Page 123 of EIR (#5-Local police should be trained and encouraged to enforce appropriate sections of the Motor Vehicle Code).

COMMENT: Finally, landscaping does not reduce noise levels unless it is deep as well as dense and evergreen. It simply makes the noise source less apparent.

RESPONSE: Comment acknowledged.

WAYNE E. POULSEN
BOX 2008
OLYMPIC VALLEY, CA 95730

COMMENT: SOILS: Page 18, Mitigation Measures.

According to the slope map, Plate 2, page 5, most of our land which the General Plan proposes to zone commercial would be undevelopable due to the restriction of no development over 5%. It should be noted that our commercially zoned land is not in any steep areas, and would not create any problems in this regard, however, a 5% restriction on developability would be unreasonable and counter-productive. There does not seem to be any other area in Placer County which is subject to such a limited slope classification.

RESPONSE: The slope map was based on information from USGS Quad. Maps and is intended to be a guide and not an absolute. Site plans for individual development proposals will show much better detail than does the small scale slope map within the EIR. We acknowledge that most of your commercial land falls within a 5% or less slope since pads have been developed thereon.

It is not the intent of the Plan to completely preclude commercial development on lands with slope in excess of 5% (the reference to a 5% slope limitation has been removed from the Plan). We anticipate some commercial development may occur on lands with greater slopes subject to certain limitations on building size, impervious surface coverage and requirements for slope stabilization, drainage solutions, erosion control, and vegetation removal.

COMMENT: AIR QUALITY: Page 48, Mitigation.

We agree with many concerned citizens that the Capital Improvement plan as proposed might do more harm than good in solving traffic problems. With regard to specific problems related to our land, we do not agree with the idea of adding a third land to Squaw Valley Road.

RESPONSE: Comment acknowledged.

COMMENT: FLOOD PLAIN MAP: Plate 4.

This map is clearly inaccurate. It shows the "flood plain" area at the west end of the meadow on the wrong side of the road, and places our residence which is in a high, dry wooded area in the flood plain at the east end of the meadow. A current, accurate map should be provided because many restrictions are tied into this document. Fore example, on page 60 it states that the 100 year flood plain area "must be retained in it's natural condition" although much of the land is zoned for development in the General Plan and is not in the flood plain.

RESPONSE: Flood plain information was derived from a report prepared for the Mainline project EIR, "Squaw Valley", March 19, 1975. Please see the revised Flood Plain Map, Plate 4. With regard to the flood plain west of the west end of the valley (corrections have been made to the alignment), we have no reason to expect it to be outside of the existing channel and we were merely trying to show this area as it presently exists on the new map.

COMMENT: NOISE: Page 118.

The figure on noise levels of the snowmobiles is inaccurate. The correct figure is 50 dBA at 50 feet, not 88 dBA. The machines have noise controls on them, as required by Federal law. They have been in business in Squaw Valley for over 15 years, under County permit, and do not produce noise levels over 50 dBA.

RESPONSE: The best information we have regarding noise from snowmobiles has been included in the EIR. If noise becomes a serious problem, the County can monitor this type use. If it is not a problem, the concern would be moot.

COMMENT: PUBLIC SERVICES: Page 126.

Many of the items listed under Fire Protection are not needed, such as mini-pumper, over snow vehicle, and a new substation could not be justified in such a small area. It is also unfair to expect the next development to pay for such costly items which will potentially benefit all.

RESPONSE: The fire protection section has been rewritten and reflects the above concerns. Please see the revised section within the EIR.

COMMENT: AESTHETICS: Page 130.

It is stated that Squaw Valley meadow is defined as extending to the tree line to the south, and west to the existing parking lots in the village core area. This is not a correct description, since it takes in areas which have been zoned for develop-

ment since the first subdivision in Squaw Valley, in 1950, and which are proposed for development zoning in the 1982 General Plan.

RESPONSE: The description itself is essentially correct. The only additional land proposed for development activities is at the east end of the parking lots where substantial disturbance has already occurred within the drainage area due to construction activities and silt deposition. The County recognizes this is no longer a natural area and development activities will not be disruptive to the integrity of the remainder of the meadow area.

COMMENT: It also refers to "Conservation Preserve" zoning, which does not exist in Placer County at this time, and would appear to be so restrictive in concept that it could be challenged as "inverse condemnation." Spreading it over such a broad area would severely handicap plans and efforts to turn Squaw Valley into a year-round destination resort, since the perimeter area around the meadow is an ideal area for recreational facilities for summer use. A golf course, even though not specifically planned at this time, should not be ruled out since it could be easily accommodated in the area available, and could be a valuable addition to a destination resort complex.

RESPONSE: The statement that the conservation preserve zoning exists only in Squaw Valley at this time is correct. This is a new category that we feel is appropriate for the unique characteristics of Squaw Valley, especially with regard to the stated goals and policies for ultimate buildout as a destination resort.

We do not concur that utilization of this designation represents inverse condemnation.

Additional forest recreation area has been added along the south side of the valley that will allow increased recreational uses. Please see updated General Plan with land use designations.

A golf course was considered and rejected as unacceptable for various reasons. This type of recreational amenity would introduce non-native vegetation into the meadow area and would detract from the unique natural features of the area. Most importantly, we feel that introduction of fertilizers and pesticides necessary for fairways and greens would be detrimental to water quality of both Squaw Creek and the water table beneath the meadow. Spinoff impacts on meadow vegetation/wildlife habitat were considered to be extensive, especially in light of the U.S. Fish and Wildlife Service effort to restore the Lahontan cutthroat trout to its original habitat throughout the Truckee River system.

COMMENT:

On September 30, 1981 Thomas Kubik solicited our comments with regard to the EIR which we sent him in the form of the enclosed letter. It does not appear that the input requested was considered in the draft, however, it appears to still be pertinent, so we are enclosing another copy at this time to be included with our comments.

RESPONSE:

The input submitted in your letter of November 11, 1981 was considered with regard to preparation of both the General Plan and EIR. Please see the following:

OPTIMUM DENSITY:

- A) If Squaw Valley is to attain it's "highest and best use", and fulfill it's potential as a world class year round destination resort, balanced and orderly community growth is necessary. To develop this potential the General Plan should retain the density called for in the 1972 General Plan, leading to an ultimate residential population of about 11,800 people, with a skier capacity of approximately 15,000. (page 4, Squaw Valley General Plan).

- B) Year round development is essential to stabilize the economy and provide steady jobs for the permanent population. The sporadic, seasonal return now available discourages quality development.

- C) The greatest need is for first class hotel facilities, preferably those with international booking capabilities, such as Hyatt, Holiday Inn (particularly since the existing hotels are now being turned into condominiums). Such a hotel facility could serve not only Squaw Valley but could also accommodate people who wish to visit surrounding areas such as Alpine Meadows, Northstar and even Lake Tahoe, since development is now being severely restricted there. This would create an exciting focal point for year round activities for transients and locals alike, including summer recreational facilities.

D) As noted in the Squaw Valley General Plan, existing housing accommodates less than 1/3 of the skiers generated by the ski lift facilities, which is the primary cause of transient traffic, generating parking and pollution problems. Additional cluster type developments could ideally be accommodated at the east end of the valley which is already zoned for this type of use and which "exhibits reasonable environmental and development characteristics", as noted on page 45 of the General Plan. Development on the south side should be in clustered areas in good tree cover, with medium density as presently zoned.

RESPONSE:

A) The density is nearly the same as exists with the 1972 General Plan. It is possible that the ski hill capacity could approach an ever higher volume of utilization. (Q&F, draft G.P., page 7, para. 1).

B) We concur that year-round activities are necessary to make the destination resort concept a workable concept.

C&D) The goals and policies of the Plan acknowledge this concern as does our proposed treatment of the core area.

The plan calls for development potential at the east end of the valley on the south side of the meadow.

COMMENT:

POTENTIAL FOR ADDITIONAL SKI FACILITIES:

Skiing in California is growing at over 15% a year, but development of new ski areas, particularly those dependent on government land, has been severely constrained, as in Mineral King and Independence Lake. Therefore, the growing needs must be accommodated by existing area.

Squaw Valley has over a mile of pure north slope, with a vertical drop of over 1,300 vertical and excellent snow conditions. It is indicated for development in the Squaw Valley General Plan. It is all private land. It should be retained as part of the Squaw Valley General Plan to give skiing, which is the main economic support of the area, room to grow in an area free of congestion.

RESPONSE:

The development potential along the south ridge of the valley has been removed and relocated at the bottom of the ridge along the southeast edge of the meadow where density has increased. Please see revised General Plan map.

COMMENT:

TRANSPORTATION NETWORK

The area zoned in the 1972 plan for parking at the entrance to Squaw Valley has been abandoned and is now developed as condominiums. This reflects the lack of support for the concept. Studies by experts indicate that multi-level parking would not be financially feasible in this area. Squaw Valley Ski Corporation, which is the main generator of the parking problem, has indicated that they do not agree with the concept of parking at the entrance of Squaw Valley, and would not support it finan-

cially. Other areas of Squaw Valley have area to provide for their own parking needs and have traditionally done so.

RESPONSE:

We agree that the mouth of the Valley is an inappropriate location for a parking structure. At the time that commercial development has displaced a significant amount of day skier parking, we believe that a parking structure will be financially feasible in the commercial core area.

COMMENT:

AIR

Intensive development in the existing parking lot area of Squaw Valley would intensify air pollution, parking and traffic problems by encouraging vehicles to drive into the dead end "core" area. The emphasis in the 1972 General Plan on the core area was based on the anticipation that 1 major development entity would control all of the development capabilities in Squaw Valley. This is no longer true. Use of the core area is primarily concentrated in the ski season, representing 1/3 of the year. The asphalt parking area is not an attractive setting the rest of the year, so there is no good reason to generate traffic to travel the length of Squaw Valley to go there, except for skier oriented facilities, housing and hotels.

A serious legal hurdle involving Squaw Valley Ski Corps "parking agreement" rights may also inhibit major development in this area. Parking is their life line.

Other commercially zoned areas such as Highway 89 and Squaw Valley Road can be developed to provide needed services and facilities on a year round

basis without adding to air pollution, and traffic in Squaw Valley. They can provide their own parking. Truckee Tahoe traffic, and Alpine Meadows can also be served from this location without congesting Squaw Valley.

RESPONSE:

Please review the goals and policies of the General Plan. In order for the plan to work, there are integrated factors which must occur in order for the destination resort concept to be fully realized. One of these factors involves partial replacement parking as the existing parking lot is builtout. Please see the "Parking" section of the General Plan.

Commercial designations have been retained on the north side of Squaw Valley Road as well as at the entrance to the valley. This will help eliminate trips into the central core area for valley residents.

COMMENT:

WATER

As noted on page 33 of the Squaw Valley General Plan, Squaw Valley is using less than 4% of the water available. Water should not present a major problem.

RESPONSE:

We concur and have stated same within the EIR.

COMMENT:

SCENIC QUALITIES

Scenic qualities are well protected by the large areas of "open" zoning in Squaw Valley, representing over 80% of the land area.

RESPONSE: Scenic qualities are also protected through Sierra Design Control review.

COMMENT: SEWER SERVICE

Adequate sewer capacity should be available due to expansion of the TISA regional plant, if Squaw Valley is given adequate development capabilities to take advantage of this opportunity. Availability of capacity will be limited, and could be taken up by areas with less acute economic and development needs than Squaw Valley. Squaw Valley at present has not reached it's potential as an economically viable year round destination resort area.

RESPONSE: We concur that sewage disposal capacity does not appear to represent a serious constraint. Please see the comment from Lahontan and the subsequent response.

COMMENT: FIRE PROTECTION

Is being underwritten and supported by the community.

RESPONSE: Comment acknowledged.

COMMENT: PUBLIC PARK FACILITIES

Squaw Valley is almost 100% recreation oriented already, with facilities supported by private capital. Over 80% of the land is zoned open space and a network of trails provide back country access. Public recreation programs which have to be supported by the taxpayers could be costly and redundant.

RESPONSE: Please see the section within the General Plan dealing with "Recreation".

COMMENT: SCHOOLS

Schools are being closed in the Tahoe area due to inadequate funding and loss of students population, even though they are still being paid for by local taxpayers. This burden should not be increased by setting aside land for more schools.

RESPONSE: The school site has been removed from the General Plan. Please see the section on "Schools" under Public Services in the EIR.

COMMENT: PUBLIC TRANSPORTATION SERVICES

Are present services, such as TART, self supporting? The questionnaire indicated that TART is not generally used by Squaw Valley residents. New developers are required to provide for services from their facilities. The major transportation problems are created by the ski area, and it is my understanding that they do plan to provide bus service to local areas this winter.

RESPONSE: TART is not self supporting.

COMMENT: PLANNING PRINCIPLES

1) The aesthetic, ecological and environmental assets of Squaw Valley (except for the asphalt parking and industrial area) are being well protected by the large areas of open zoning. Areas zoned for development are located in the forested areas and in areas adjacent to the commercial core area. Further curtailment of

development area would make it difficult to achieve the destination resort potential of Squaw Valley. If development is appropriately clustered, an open feeling can be preserved.

- 2) Most of the developable areas are relatively level and can be easily served by extensions of existing public utilities and services.
- 3) "Intense utilization of certain areas" is already built into the present zoning.
- 4) Obviously decisions should be based on sound practices, however, as noted on page 27 of the General Plan they should be "subject to appropriate respect for legal rights and concepts of basic fairness towards existing ownerships".

An inequitable burden is already being carried by certain owners who have large areas of open land with serious limitations on use, which is subjected to high taxes, TISA assessments, support of the Fire Department, and other services which these lands are not permitted to benefit from. The suggestion on page 68, paragraph 20 of the General Plan should be implemented, which provides open space areas should be exempt from service and assessment districts to relieve economic burdens.

- 5) Given the cooperation of Placer County in not unduly restricting Squaw Valley development potential, Squaw Valley can help achieve the goal of the Placer County General Plan as expressed on page 3 of the Squaw Valley General Plan, quote:

"With the increasing importance of recreation industry to Placer County, maximum use should be made of it's potential consistent with good conservation and development practices."

RESPONSE:

Comments 1, 2, & 3 were considered in preparation of both the proposed General Plan and EIR.

Comment #4 is acknowledged, but a decision on this matter must be made ultimately by the Board of Supervisors.

Comment #5 was considered in preparation of the proposed General Plan.

HOFFMAN & LINDE
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TAHOE CITY, CA 95730

COMMENT:

In addition to those observations, I call your attention to a letter submitted to Mr. Kubik dated November 10, 1981, by my office, as well as the letter submitted by Mrs. Wayne Poulsen on the same date (copies enclosed), in which we expressed concerns both about the narrowness of the proposed EIR and the potential failure not to include a more adequate description of the regional setting, pressures upon Squaw Valley, and related matters. We continue to have those concerns, and feel that the EIR is unduly narrow in its approach, and in effect, in many instances there are "blinders on" to the need for new approaches to the Highway 89 transportation core (SIC), impacts of TRPA's planning area, need to plan for additional growth pressures, and related problems.

In short, we want to reiterate our concern that the regional nature of the planning process be addressed in the EIR, and that approaches that involve regional resolution and mitigation measures be considered and evaluated. The most obvious example is the need for traffic improvements on the Highway 89 corridor, including the signal at the Tahoe City "Y", the bypass, and alternative transportation methods to move people in and out of Squaw Valley--which in our judgment if properly addressed will probably result in a finding that many of the proposed traffic improvements in the Valley are unnecessary.

RESPONSE:

All issues raised in this comment are also part of comments received from the Squaw Valley Municipal Advisory Committee. The rationale for limiting the area of the Plan/EIR to that considered is contained in both the Plan and EIR. Where consideration of areas outside of Squaw Valley was necessary, such areas were included to the extent necessary. Specific findings must be made regarding "non-deterioration" of traffic conditions at certain critical points outside the Valley. A discussion of regional traffic conditions, problems, and planning efforts has been included. However, this EIR and Plan are not, and are not intended to be, regional transportation planning studies.

COMMENT:

Existing regulations have significantly curtailed the potential for growth within the Lake Tahoe Basin to accommodate predicted expansion of outdoor recreation demand in this area. This growth demand will exert pressures upon regions in proximity to Squaw Valley as well as upon the valley itself. These demands must be quantified and analyzed to properly prepare for these effects upon the study area. Clearly Squaw Valley has and will continue to be a major recreational resort area, and it is essential that the nature and extent of the demands for further expansion of recreational opportunities afforded by Squaw Valley be addressed in depth.

RESPONSE:

This comment demands that an impossible task be accomplished. Projected growth in outdoor recreation demand cannot be quantitatively analyzed in a meaningful way in terms of its effects on the study area. The general growth pattern of such demand is discussed in the text and is an acknowledged basis for the "shape" of the Plan.

COMMENT:

In response to increasing demands for resort and recreational opportunities from visitors travelling along the Interstate 80 and Highway 89 corridors, there has recently been significant expansion of facilities in the Truckee and Donner Lake areas. Many of these visitors come to the Valley or at least contribute to the traffic problems facing residents and tourists alike. Patterns of travel and analysis of sources of supply for visitor needs throughout the entire North Tahoe-Truckee region must be assessed.

RESPONSE:

The rationale for limits to the transportation study is included in both the Plan and EIR text. The subject is also addressed elsewhere in responses to other comments. Wherever necessary, traffic and areas outside of the valley have been considered.

COMMENT:

It has become increasingly apparent that in order to assure a sound, year-round economic base for essential improvements and developments throughout the Valley, that summer resort and recreation opportunities must be provided. Present study parameters appear narrowly to consider the ski season as the sole focus for land use planning, and in so doing merely exacerbate obvious economic problems.

RESPONSE:

Please see the *Recreational Land Use Section* of the *General Plan*.

COMMENT:

Suggested plans for the Valley would intensify use virtually exclusively within the "core area". This approach endangers a number of negative effects which alternatives may avoid. Specifically, the two principal land owners within the core area are

Squaw Valley Ski Corporation and Carville Sierra Corporation. These entities are presently in litigation over the "parking agreement" which allegedly controls all use of the land in the affected area which comprises the majority of buildable land in the core area. To plan for uses in an area subject to major litigation may be unrealistic. Additionally, to focus intensification on one owner (Carville Sierra) unnecessarily forces the economic well-being of the entire Valley upon one entity. Additionally, a plan which locates all further support facilities such as grocery stores, restaurants, shops and services within the core area, clearly will force residents and many visitors to ensnarl themselves in the skier traffic if they simply want to buy a carton of milk or buy a hamburger. Core area concentration inevitably aggravates serious congestion and air pollution problems by pulling all traffic down the entire length of the Valley.

RESPONSE:

Please see the Squaw Valley General Plan map and the Basic Commercial District Section the General Plan. Commercial designations have been placed at the entrance (NW corner of the intersection of Highway 89 and Squaw Valley Road) to the Valley, and on both sides of Squaw Valley Road west of the intersection to accommodate the types of goods and services a neighborhood population requires.

COMMENT:

Several recently proposed land-use concepts show "no-use area" which is more restrictive designation than "open-space", and which, if implemented, would preclude such developments as golf courses and playing fields. As consequence, this new designation would force such developments to compete for space with other identified recreation needs such

as tennis courts and swimming pools. Close study of summer activity demands and of the resources available to meet them is essential.

RESPONSE:

Please see the Squaw Valley General Plan and map. There are no areas designated "no-use area".

The section on Recreational Land Use within the General Plan is hereby referenced for your use.

See also the sections of the General Plan entitled Forest Recreation District and Conservation Preserve Land Use District.

COMMENT:

Residents and visitors alike are probably most impressed at present with the monumental traffic and parking obstacles they encounter at every attempt to enjoy the attractions of Squaw Valley in winter. cursory examination of the parking structure option readily reveals that this task cannot be accomplished by one private developer. Rather, it must be approached on an area-wide basis, possibly even a region-wide approach, inasmuch as the Highway 89 corridor serves as the main thoroughfare to the Tahoe City-North Lake Tahoe centers from the Highway 80 Truckee/Donner centers. Similarly, a transit system incorporating such a parking facility is sorely needed. Location of future residential, commercial, hotel and motel improvements, as well as development of additional summer and winter recreational elements, should be tied to the transit system. Presently, the Ski Corporation does not have sufficient parking to serve the ski lifts it operates. Yet Placer County's recent survey and the consensus of many skiers is that additional lifts are required and desired. With some 18,000 skiers jamming the

Valley on peak days, there is no question that a parking facility along the corridor or near the entrance to the Valley, or possibly several facilities along the length of the corridor together with an efficient transit system, are essential to the enjoyment of the valley and to the protection of environmental quality.

RESPONSE:

The Plan text regarding the proposed parking structure has been substantially revised and expanded. Transit service and facilities have been matched to development patterns created by the Plan. The need for a parking structure and reason for its recommended location are documented in the Plan/EIR text. The rationale for limiting the transportation study to its present scope is contained in the Plan text.

SUMMARY OF
PORTION OF MINUTES OF
SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL
MEETING ON JANUARY 4, 1983
RELATING TO COMMENTS ON EIR

COMMENTS:

SOILS: Page 18, Mitigation Measures:

Chairman Pavel explained that a large part of the land proposed to be zoned commercial in the General Plan would not be developable if the proposed 5% slope limitation for commercial development was implemented according to the Slope Map contained in the EIR. He noted that 5% is virtually level, and would be very wasteful of valuable land.

After a lengthy discussion, Phil Carville moved that any references to a 5% slope limitation on commercial development be removed from the EIR and the General Plan, and that instead the limitation be the 25% criteria applicable to other construction within the Valley--possibly with a sliding scale concept so construction steeper areas had greater restrictions. The motion was seconded by Jim Davisson and passed unanimously.

Larry Hoffman noted that the entire chapter regarding Soils was deficient with regard to erosion, particularly erosion from ski slopes and the subdivision areas, and Fred Yeager said he would give further consideration to the subject.

RESPONSE: The reference to the 5% slope limitation has been removed.

The sections of the EIR are not meant to stand on their own as being entirely separated. There are many areas that overlap. See also the sections on Drainage and Flood Control and Water Quality as well as the section entitled Streams and Waterways in the General Plan.

COMMENT: Chairman Pavel noted an apparent contradiction in the EIR commenting that on page 97 it proposes that a traffic level of service "C" be used as a limiting factor for development. However, he noted on page 107, the statement is made that the Valley already has reached levels of service "D" and "E" at peak times.

RESPONSE: The discussion of traffic issues in both the Plan and EIR clearly is divided into separate considerations of: a) peak skier/recreation traffic; and, b) "average" daily traffic. Level of service "C" is designated as the lower limit for "average" daily traffic conditions. Peak skier traffic presently falls well below "C" level of service, sometimes to "E" level. The poor levels of service presently experienced during peak skier traffic should not become a daily norm in Squaw Valley. The Plan recommends, however, that occasional instances of such undesirable service levels should be allowed to continue during peak-skier traffic; such instances would not be allowed to increase in frequency, number or duration. There is some possibility that transportation systems management together with development of the area as a "destination resort" will actually improve the existing situation.

COMMENT:

A statement on page 109 provides that there can be no limitations on the number of day skiers, because the ski lift permits had no such requirement. Under these circumstances, Pavel indicated it was unrealistic to use level of service "C" as a development constraint, particularly with the continued annual growth of the number of skiers.

RESPONSE:

Limitations on the number of ticket sales to persons other than residents or those arriving by transit vehicles are proposed by both the Plan and EIR. Level of service "C" is proposed as a limit for the "average" daily traffic situation--not for peak traffic from skiers which already deteriorates to undesirable "D" & "E" service levels.

COMMENT:

Another apparent contradiction raised by Sandy Poulsen was the fact that at page 109 of the EIR it is stated that "the most effective way to control congestion is to confine it to the parking areas", while at the same time the proposed Plan recommends that the parking area be a "pedestrian-oriented core" as part of 80 acres of commercial development.

RESPONSE:

There is no contradiction. Traffic congestion should be confined to the parking areas--whether such areas are expansions of parking lots (such as presently exist) or parking structures or some combination of structures and lots. As development occurs on the existing parking lots, such development should be "pedestrian-oriented" within the core area.

COMMENT: On page 111, under Mitigation Measures, it states: "1. Present peak period traffic congestion and delay shall not be worsened," which Poulsen suggested was unrealistic considering the growth contemplated for a "destination resort".

RESPONSE: This required finding applies to approvals of new winter sports development (e.g., ski lifts) not to other destination resort development (e.g., hotels).

COMMENT: A number of members of the MAC indicated their concern that the EIR was simply a justification for a preconceived capital improvements program, and did not provide an objective analysis of various alternatives, including improvement of traffic flows on Highway 89, the Tahoe City bypass, signalization improvements in Tahoe City, better uses of rapid transit vehicles, and other approaches. Chairman Pavel also noted the continuing objections of the MAC to the suggestion for the proposed traffic signal at the intersection of Highway 89 and Squaw Valley Road, the general concern about adding a third lane to Squaw Valley Road, and other proposals in the suggested capital improvement program. The Council unanimously agreed after discussion that a more comprehensive and objective analysis of traffic impacts and alternatives, including an analysis of the Highway 89 congestion problem and alternative solutions to that problem, should be included in the EIR in order to make an informed decision.

RESPONSE: Most of the comments in this section only repeat the same comments made elsewhere by this same group. Each of the issues raised is discussed in the Plan/EIR.

COMMENT:

AESTHETICS: Page 130:

Chairman Pavel raised the concern that the EIR states that "Lift towers, terminals and buildings should not be permitted along the ridge top. . . ." Chairman Pavel noted that Squaw Valley is a ski resort, and that is why people come here. In most cases, the only practical place for lift towers is on the ridge. John Gack, representing the property owner who owns the south slope area, noted that it is the intent of both the 1972 General Plan and the proposed 1982 Plan to provide for ski area development on the south slope, but that their clients will do everything they can to minimize visual impact of such facilities. However, "they cannot be invisible" he added. He also noted that before any plans could be implemented, there would have to be intensive public scrutiny and hearings regarding such a proposal. However, the most important factor would be that any such ski lift facilities, if they are developed, would have to be constructed in accordance with good engineering standards, and cannot be pre-determined.

After further discussion, including the comment that ski lifts can and should be used for summer recreational activities as well, Sandy Poulsen moved that the language in the EIR in the General Plan should be changed to read that ski area development, including ski lifts and ski towers, should be visually screened to the greatest extent possible from Squaw Valley Road and the subdivisions to the north. The motion was passed unanimously.

RESPONSE: Comment acknowledged. We concur that activities along the ridge line should be visibly screened so as not to disrupt the natural harmony of the sky line.

COMMENT: The accuracy of the definition of the Squaw Valley Meadow set forth on page 130 of the EIR was questioned by Chairman Pavel. He noted the meadow clearly does not go up to the tree line, nor does it extend to the parking lot in the village core area according to the map in the EIR on page 80 that designates the boundary of the meadow. Therefore, he noted the description on page 130 could create serious problems with regard to potential recreation development activity in the area surrounding the meadow, including the potential for a golf course in that area. Fred Yeager indicated he would seek to clarify the difference in the language describing the boundaries of the meadow on page 130 as contrasted with the description of the meadow on the map included at page 80 of the EIR.

RESPONSE: Please see the revised description of the meadow in the Aesthetics Section of the EIR.

COMMENT: Larry Hoffman, an attorney representing two property owners within the Valley, noted that on page 80 the Draft EIR states: "Development should be encouraged to occur in areas of good tree cover". Hoffman noted that this provision seemed inconsistent with the thrust of the Plan which was to encourage development in the already disturbed and nearly treeless core area. Fred Yeager indicated he would reconsider this provision.

RESPONSE:

This is not an inconsistency. The statement regarding development in areas of good tree cover refers to land outside the core area, specifically on the southeast side of the meadow. The idea is to promote building activities which do not detract from the natural beauty of the meadow and adjacent tree stands.

COMMENT:

The next point of discussion was in regards to potential residential development along the south side of the meadow area, as addressed on page 130 of the EIR. Bob Egan, who also represents the owner of the south side property, noted that the language on page 130 to the effect that buildings on the south slope should not be "clearly visible" was ambiguous and unclear. After a lengthy discussion, a resolution was made by Peter Werbel and seconded by Michael Linnett, that the EIR should be changed to provide that development should be located so that individual buildings "are screened to the greatest extent possible as viewed from across the meadow", in lieu of the wording on page 130 of the EIR. The motion was unanimously passed.

RESPONSE:

We concur that building activities should be screened to the greatest extent possible as viewed from across the meadow. Please see the revised Aesthetic Section of the EIR.

COMMENT:

PUBLIC SERVICES: Page 126

The issue of the inclusion of the proposed Fire Department budget within the EIR was again raised by Chairman Pavel. He recommended that the "wish list" for the Fire Department be deleted as being inappropriate in the EIR. He reiterated that the

MAC has previously agreed that it was unfair and unrealistic that the next person who builds a structure of three stories or more should have to pay for the aerial ladder truck and firehouse expansion suggested by the Fire Department. Such a requirement may well deter the need for further development. Jim Davisson stated the only items actually needed would be the aerial truck, with the commensurate enlargement of the fire station to accommodate it. Other items on the wish list had either been already acquired, or were no longer needed, including the substation at the entrance area of the Valley. He also recommended that the existing station not be moved, but instead that the area be designated as a public service facility, and that the Squaw Valley Water County District would like to have space there as well in view of the requirement that they move out of Blythe Arena. In further discussion, it was noted that the MAC had previously asked Kirk Smith to report on an alternative approach to funding, and Chief Hazen to report as well. The MAC tabled final action on this item pending a report from Smith and Hazen.

RESPONSE: Please see the revised section on Fire Protection in the EIR.

COMMENT: Flood Plain Map, page 55--Larry Hoffman noted the apparent inaccuracies in the 100 year Flood Plain boundaries for Squaw Creek as depicted on the Flood Plain Map, particularly as indicated in the areas of the Poulsens' "Hotel Site" and "Poulsens' Compound". After discussion, Fred Yeager agreed that there appeared to be inaccuracies in the map and that he would investigate the matter further.

RESPONSE: The Flood Plain Map has been revised to correct the inaccuracies of which we are aware.

COMMENT: Alternatives, page 132--Larry Hoffman noted that in his judgment, the discussion of Alternatives on page 132 was "woefully inadequate", and should include the range of reasonable alternatives being suggested by the MAC, as well as an analysis of the environmental impacts of various alternatives. For instance, he suggested the alternative approaches to traffic and transportation planning being suggested by the MAC should be considered, particularly an analysis of the Highway 89 congestion problem and potential approaches to its resolution. He also indicated that such items as the environmental impact of the proposed third land that is being suggested for Squaw Valley, would have to be studied as to visual impacts, intrusion into the meadow, and other environmental impacts.

RESPONSE: Comment acknowledged. Please see the revised Alternative section of the EIR.

The "Alternatives" section has been revised and expanded. Discussion of alternate choices is present throughout the report--not just in the "Alternatives" section. The transportation section, in particular, includes a discussion of why certain courses of action are recommended and others rejected. The rationale for limiting the traffic study to its present scope is also given.

The "3rd lane" proposal has been scaled down to a separated bicycle/pedestrian trail. Before such a project is actually undertaken, a detailed environmental review would be conducted. In this General Plan future projects and their environmental impacts are discussed only "generally".

SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL

Squaw Valley, California

January 7, 1983

COMMENT:

In terms of a general observation, the MAC has repeatedly expressed its concern that the EIR appears to be inadequate in a number of respects, particularly in that it appears to be more a justification for a preconceived course of action, rather than an objective analysis of the full range of reasonable alternatives and potential environmental impacts. This short-coming is particularly apparent to us in the area of transportation and traffic planning, where only one alternative (that proposed by the staff) is set forth for analysis, and the repeated concerns expressed by the MAC concerning a more comprehensive, regional approach are simply omitted. In general, therefore, the MAC feels the EIR should be substantially expanded to include consideration of a range of alternatives regarding the key issues, and particularly to assure that it addresses those being considered and recommended by the MAC.

RESPONSE:

Alternatives to recommended courses of action are found throughout the text of both the Plan and the EIR--often with a rationale for why such alternatives were rejected. The problem with documenting rejected alternatives is knowing where to stop, literally thousands of such rejections are part of the planning effort. We believe that the rationale for the present "shape" of the recommended Plan, including assumptions, is clearly traceable in the Plan and EIR texts. In regard to transportation, the reasons for generally limiting the study area to Squaw Valley are expressly stated. Where consideration of traffic factors outside the Plan

area is necessary, the scope of the Plan and EIR has been expanded to include them. In fact, both Plan and EIR provide for certain required findings of "non-deterioration" in traffic level of service at critical points outside Squaw Valley before approval can be granted to new winter sports development.

TAHOE REGIONAL PLANNING AGENCY

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December 1, 1982

Mr. Thomas D. Kubik
Placer County Planning Department
11414 "B" Avenue
Auburn, California 95603

Subject: Draft Environmental Impact Report for the
Preliminary Draft 1982 Squaw Valley General Plan

Dear Mr. Kubik:

The Tahoe Regional Planning Agency has reviewed the subject EIR and Plan. We offer the following comments based upon our mandated role as the regional agency responsible for planning within the Lake Tahoe Basin.

Our review of the subject documents is focused primarily on potential problems associated with expansion of a major resort facility adjacent to the Tahoe Basin. Agency staff feels expansion of operations will adversely affect traffic and air quality within the Basin. It is important, therefore, in looking at the time frame for expansion, that planned hotel/motel accommodations be developed and available prior to major increases in skier capacity. The full development of a destination resort will help alleviate the potential for off-site, in-Basin problems.

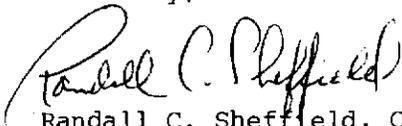
Implementation of the mitigation measures proposed in the EIR appear to be adequate for the immediate Squaw Valley area. However, staff feels Placer County must also examine the Tahoe City "Y" intersection and be able to make two findings before additional ski lifts, lift modification, or increases in ski-hill capacities are permitted. The findings should be:

1. Present, peak-period traffic congestion and delay shall not be worsened and levels of service shall not deteriorate within Squaw Valley, at the Squaw Valley Road and State Highway 89 intersection, or at the State Highway 89 and 28 intersection.
2. The duration and number of occurrences of each traffic problem shall not increase within Squaw Valley, at the Squaw Valley Road and State Highway 89 intersection, or at the State Highway 89 and 28 intersection.

Two other items need consideration in finalizing this environmental impact report. First, the "metering" system proposed for the release of vehicles onto State Highway 89 must be expanded to include Alpine Meadows through an operable communications system prior to any additional permits for expansion being issued. Also, operation of the ski corporation's private transit system is necessary before skier capacity is increased. Placer County should require a schedule indicating routes, frequency of service, and the marketing program proposed for the system. We feel all this information is necessary for the County to make an informed decision on the adequacy of the mitigation measures.

Thank you for the opportunity to provide comments on the Squaw Valley Plan EIR. If you have any questions, feel free to contact Keith Maki, our senior transportation planner.

Sincerely,

A handwritten signature in cursive script that reads "Randall C. Sheffield".

Randall C. Sheffield, Chief
Long Range Planning Division

RCS:md

FY

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Tahoe National Forest
Highway 49 and Coyote Street
Nevada City, CA 95959

1560
November 30, 1982

Mr. Thomas D. McMahan, Director
Placer County Planning Department
11414 B Avenue
Auburn, CA 95603



PLANNING COMMISSION

Dear Mr. McMahan:

Thank you for the opportunity to review the draft Environmental Impact Report for "The Squaw Valley General Plan EIR". Our comments fall under two major headings of the draft environmental impact report and the preliminary draft 1982 Squaw Valley General Plan.

Draft Environmental Impact Report

We know you are aware that the standard elements of the General Plan, development standards for subsequent projects, and proposed development constraints apply only to the private lands within Squaw Valley. In the introduction we believe it would clarify this direction by adding the following comment:

"The development standards do not apply to National Forest System lands."

Plate 1, and all subsequent plates should identify the National Forest System lands within Squaw Valley. We, in turn, are showing other ownerships within the Forest as not being governed by Federal constraints on the maps included in our Land and Resource Management Plan.

Preliminary Draft 1982 Squaw Valley General Plan

On page 1, Introduction, in the last paragraph there should be a statement similar to our proposal for the EIR which states that the implementation measures or standards do not apply to Tahoe National Forest System lands within Squaw Valley. The map titled, "Squaw Valley General Plan 1982 - Land Use Designation" could clarify the landownership by identifying the National Forest System lands in the legend and also on the map.

As you are aware the Forest Service has about completed the Tahoe National Forest's Land and Resource Management Plan. This Plan and the draft Environmental Impact Statement (EIS) will be distributed for County and other comment around February 1983. We have appreciated the close coordination with Placer County during this effort. Our proposed resource management emphasis for the area surrounding Squaw Valley states that it will continue to be managed for the operation of existing ski areas and other outdoor recreation uses. In addition timber may be removed to meet ski area management needs or to maintain the health and vigor of the timber stands. In summary, this direction appears to conflict with the areas you have designated as "CP" on the land use designation map and in the Preliminary Draft 1982 Plan. In general, however, I feel both the County and the Forest Service are prescribing compatible land use practices.

On page 113, we recommend you remove the words "tree removal" from the third paragraph, second sentence, which states, "Uses allowed in such areas shall be limited to those which do not require tree removal, grading, or large impervious surfaces." On National Forest System lands we may permit tree removal for the expansion of ski runs, lifts, or any purposes which will help emphasize the resource management direction in our proposed Forest Plan. As a matter of law and policy, Placer County comments as well as others will be requested prior to approving any such projects.

On page 73 in the Section 100 titled, "Development Standards and Policies" in the introduction, we recommend that you again state that the special zoning, land use districts and restrictions do not apply to National Forest System lands.

On page 74, item 4, Blyth Arena, in the last paragraph, the second sentence which states. "The USFS has recently the facility to a private party", it appears the word "leased" is missing. Since the Arena was recently sold to a private corporation we recommend that this paragraph be reworded as follows:

"Blyth Arena and the 5 acres surrounding it were sold to private interests in October 1982, as authorized by Public Law 97-179."

We believe that the remaining discussion on page 45 about Blyth Arena could be reworded to reflect the current owner's plans and the County's direction for the Arena's use.

Mr. Thomas D. McMahan

3

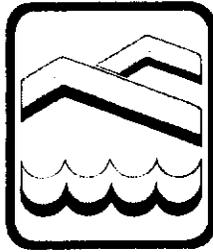
If you have any questions or concerns relating to these comments, please let Truckee District Ranger Joanne Roubique or me know. Again we appreciated the opportunity to comment and look forward to receiving your advice concerning our Forest Land and Resource Management Plan when it is distributed.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert G. Lancaster". The signature is written in a cursive style with a large initial "R".

ROBERT G. LANCASTER
Forest Supervisor

cc:
Supervisor Larry Sevison, P.O. Box 108, Tahoe Vista, CA 95730



December 16, 1982

Mr. Thomas D. Kubik
Placer County Planning Dept.
11414 "B" Avenue
Auburn, CA 95603

Re: Draft EIR for the 1982
Squaw Valley Master Plan

Dear Mr. Kubik:

CTRPA staff has received a copy of the 1982 Squaw Valley Master Plan and Draft Environmental Impact Report prepared for the Plan. Although the Squaw Valley community is located outside the jurisdiction of the Regional Agencies some of the proposed development is contained within our jurisdiction and may require review by the CTRPA and/or TRPA Governing Boards. In addition, the traffic and air quality impacts of any proposed development will affect the area outside of the Squaw Valley community. The General Plan states that during Saturday's peak traffic hours (4-6 P.M.) traffic leaving the valley is distributed approximately 70% toward Tahoe City and 30% toward Truckee; on Sundays the distribution is approximately equal. It is not reasonable to expect all visitors to use commercial and overnight accommodations exclusively within Squaw Valley, and therefore hotel-motel units and commercial businesses located within the Tahoe Basin should be included in the impacted area. Transportation improvements will be necessary if additional growth is anticipated, as even the present peak-day users in the Valley create public safety and convenience problems which should not be tolerated. The mountainous terrain surrounding Squaw Valley is conducive to the formation of an inversion layer. An inversion layer inhibits the dispersal of pollutants, and when combined with the high traffic volumes that occur frequently during the winter, creates a situation where the carbon monoxide standard is being exceeded. The Lake Tahoe Basin was designated a non-attainment area for carbon monoxide standards in 1977. For these reasons, an improved transportation network must accompany additional growth in the area.

CTRPA staff appreciates the opportunity to comment on these documents. When further information becomes available, please contact this office.

Sincerely,

Laura J. Hoover
Associate Planner

cc: TRPA

LJH:c1



EDMUND G. BROWN JR.
GOVERNOR

State of California

GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

(916/445-0613)

December 17, 1982

Mr. Thomas D. Kubik
Placer County Planning Department
11414 B Avenue
Auburn, CA 95603

SUBJECT: SCH# 81101205 - SQUAW VALLEY GENERAL PLAN AND EIR

Dear Mr. Kubik:

State Clearinghouse review is complete for the draft environmental impact report prepared for the Squaw Valley General Plan update. State agency comments are highlighted below and forwarded with this letter. Please contact the staff person listed in the comment letter if you wish to discuss any agency's concerns or recommendations.

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board makes numerous specific comments on both the draft EIR and the General Plan. Comments on the draft EIR cover such issues as directing runoff to natural drainage ways, nitrogen oxides and the atmospheric input of nutrients to Lake Tahoe, and the inclusion of all of the Squaw Valley Meadow in the 100-year flood plain of Squaw Creek.

The Board recommends that the plan and EIR definition of Stream Environment Zones be expanded to parallel the definition of an SEZ in the Lake Tahoe Basin, and should include meadows, riparian vegetation, and areas with high groundwater tables.

The Lahontan cutthroat trout (classified as "threatened" by the federal government) should be mentioned in the EIR section on rare and endangered species as a potential inhabitant of Squaw Creek and its tributaries.

The discussion of growth-related impacts in the EIR does not include potential impacts of Squaw Valley residents and visitors on the Lake Tahoe Basin or on the Truckee area.

The groundwater supply in Squaw Valley is said to be adequate to serve the development proposed in this plan. However, state regulation of groundwater rights could become necessary at some time in the future to keep from exceeding the limits of the California-Nevada Interstate Water Compact. The final EIR should include an estimate of total demand at buildout of the plan, and a discussion of water conservation measures. It should also discuss the impact of an increased resident and visitor population at Squaw Valley on water demands in the Lake Tahoe Basin.

The assumption should not be made that the approved expansion of the Tahoe-Truckee Sanitation Agency (TTSA) wastewater treatment will be adequate to serve development permitted by this plan. The ongoing expansion will be inadequate to serve presently subdivided development in the TTSA service area. Mitigation should include a county commitment to responsible planning for expansion of TTSA or construction of a new advanced wastewater treatment plant.

The EIR does not include specific consideration of cumulative impacts, as required by Section 21083 of the California Environmental Quality Act.

Comments of the Regional Board on the General Plan and Ordinance deal with: erosion and drainage control measures; constraints involved with the creation of a lake; snow storage and removal; rehabilitation of disturbed areas; impacts on water quality of the 1982 modification of the 1980 transportation "Capital Improvement Program"; and, erosion and sediment control plans in areas with moderate to high erosion hazard lands.

The Board reiterates its comments on an earlier draft that the plan and ordinance have a number of features beneficial to water quality which should be retained in the final versions.

CALTRANS DISTRICT 03

Caltrans concurs with the mitigation measures on pages 103-106 of the DEIR, including the construction of traffic signals when warranted and the management procedures designed to minimize congestion. They recommend a higher priority for the third lane on Squaw Valley Road.

The EIR should indicate how many other projects, if any, have a higher priority in the Capital Improvement Program than the General Plan projects.

DIVISION OF AERONAUTICS

Aeronautics is concerned about the potential for increased general aviation demands upon the Truckee-Tahoe Airport by population increases in the Squaw Valley area. Helicopter activity in the Squaw Valley area should be discussed as well. The final EIR will need to be more specific in terms of noise and of safety impacts from helicopter operations that are proposed.

ENVIRONMENTAL HEALTH DIVISION

Measurements of noise levels should be employed to establish setbacks, which perhaps should be greater than the 20 feet required by Section 139 (page 89) of the General Plan. A more serious noise problem may be due to off-road vehicles and the need for use regulations of such vehicles should be emphasized.

STATE CLEARINGHOUSE

We would particularly like to emphasize the importance of properly addressing the cumulative impacts of the project, not only on the environment and levels of service in Squaw Valley, but also on the closely related Truckee area and Lake Tahoe Basin. (See Sections 15142 and 15143(a) of the CEQA Guidelines).

When preparing the final EIR, you must include all comments and responses (CEQA Guidelines, Section 15146). The certified EIR must be considered in the decision-making process for the project. In addition, we urge you to respond directly to the agencies' comments by writing to them, including the State Clearinghouse number on all correspondence.

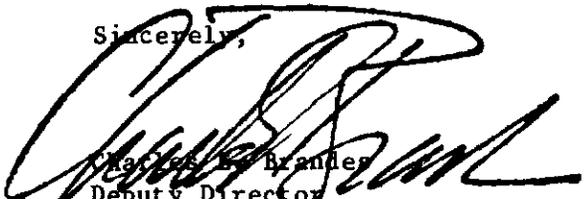
A 1981 Appellate Court decision in Cleary v. County of Stanislaus (118 Cal.App.3d 348) clarified requirements for responding to review comments. Specifically, the court indicated that comments must be addressed in detail, giving reasons why the specific comments and suggestions were not accepted. The responses should indicate any factors of overriding significance which required the suggestions or comments to be rejected. Responses to comments must not be conclusory statements but must be supported by empirical or experimental data, scientific authority or explanatory information. The court further said that the responses must be a good faith, reasoned analysis.

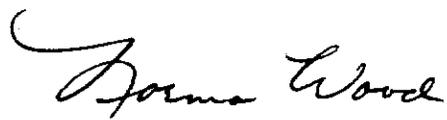
Section 15002 (f) of the CEQA Guidelines requires that a governmental agency take certain actions if an EIR shows substantial adverse environmental impacts could result from a project. These actions include changing the project, imposing conditions on the project, adopting plans or ordinances to avoid the problem, selecting an alternative to the project, or disapproving the project. In the event that the project is approved without adequate mitigation of significant effects, the lead agency must make written findings for each significant effect (Section 15088) and it must support its actions with a written statement of overriding considerations for each unmitigated significant effect (Section 15089).

If the project requires discretionary approval from any state agency, the Notice of Determination must be filed with the Secretary for Resources, as well as with the County Clerk.

Please contact Norma Wood at (916) 445-0613 if you have any questions.

Sincerely,


Thomas D. Kubik
Deputy Director
Projects Coordination


Norma Wood
State Clearinghouse

CEB/NW
attachments
cc: Resources Agency

Memorandum

To : James Burns
Resources Agency
1416 Ninth Street
Sacramento, CA 95814

RECEIVED
DEC 14 1982

Date :

State Clearinghouse

Subject: REVIEW OF DRAFT SQUAW
VALLEY GENERAL PLAN, LAND USE
ORDINANCE, AND ENVIRONMENTAL
IMPACT REPORT, SCH #81101205

From : California Regional Water Quality Control Board
Lahontan Region
P.O. Box 9428
2092 Lake Tahoe Boulevard
South Lake Tahoe, California 95731-2428
(916) 544-3481

We have reviewed these documents. Although the following comments are generally critical, we wish to reiterate our comments (attached) on an earlier draft that the plan and ordinance have a number of features beneficial to water quality which should be retained in the final versions.

Comments on Environmental Impact Report (EIR)

1. (page 8). As mitigation for the impacts of development on soils and geology, the EIR recommends construction of "engineered berms and channels....to direct run-off to existing natural drainage ways." This recommendation should not be interpreted to permit direct discharge of surface runoff from developed areas to Squaw Creek and other perennial surface waters. Direction of runoff to functioning stream environment zones (i.e., meadows) for natural treatment might be desirable. In general, runoff should be infiltrated onsite.
2. (page 38). The air quality section should discuss the potential impacts of nitrogen oxides generated by the increased resident and visitor populations of Squaw Valley on the atmospheric input of nutrients to Lake Tahoe. Even if prevailing winds can be expected to transport most pollutants from Squaw Valley to the east, many of the new residents and visitors will be driving to the Tahoe Basin as well as to Squaw Valley.
3. (Plate 4, following page 54). The 100-year flood plain of Squaw Creek as mapped in the EIR does not include the entire Squaw Valley meadow. The zoning maps displayed at the July 1982 hearing on the preliminary draft plan indicated that the entire meadow would be preserved as open space. No zoning map is included with the present drafts. Because of the value of the meadow vegetation and soils in the natural treatment of surface runoff, we believe that the existing meadow should be retained in its natural state, and that disturbed portions should be restored wherever possible.
4. (page 24). The groundwater supply in Squaw Valley is said to be adequate to serve the development proposed in this plan. Although appropriate water rights are not now issued for groundwater diversions in California, the State is committed to keep total water diversions from all sources in the Truckee River basin in California from exceeding the limits established in the California-Nevada Interstate Water Compact. Settlement of ongoing litigation might result in reduction of allowable diversions in California. State regulation of groundwater rights could become necessary at some time in the future to keep the compact limits from being exceeded. The final EIR should include an estimate of total residential

and commercial water demand at buildout of the development projected in the plan, and a discussion of water conservation measures. It should also discuss the impact of an increased resident and visitor population at Squaw Valley on water demands in the Lake Tahoe Basin. (The State Water Resources Control Board is expected to make a decision in 1983 on allocation of the remaining limited water supply in the Tahoe Basin, based on projected buildout under then current land use and water quality plans and water use patterns.)

5. (page 60). As we indicated in our earlier comments, we support the proposed prohibition of development in stream environment zones (SEZ's), and recommendations for the restoration of disturbed SEZ's as a condition of development on adjoining lands. SEZ's are defined in the Squaw Valley Plan and EIR as the 100 year flood plain, or where this has not been mapped, the area within 100 feet of the centerline of the waterway. We recommend that the definition be expanded to parallel the definition of a stream environment zone in the Lake Tahoe Basin, and should include meadows and riparian vegetation, and areas with high groundwater tables.

6. (page 88). The Lahontan cutthroat trout should be mentioned in the section on rare and endangered species as a potential inhabitant of Squaw Creek and its tributaries. This species is classified as "threatened" by the federal government, and the U.S. Fish and Wildlife Service is attempting to restore it to its original habitat throughout the Truckee River system. It has been found recently in the Truckee River and in several of its tributaries in California. In its 1980 Basin Plan update, the Regional Board designated "Rare and Endangered Species" as a potential beneficial use of Squaw Creek.

7. (page 124). The EIR implies (and page 62 of the Plan states) that the currently approved expansion of the Tahoe-Truckee Sanitation Agency (TTSA) wastewater treatment plant will be adequate to serve the development permitted by this plan. This assumption should not be made. The ongoing expansion will be inadequate to serve presently subdivided development in the TTSA service area. Even considering the additional capacity which could be made available by development restrictions in the Lake Tahoe Basin, there will probably not be sufficient capacity to serve the proposed increased population of Squaw Valley. Mitigation should include a county commitment to responsible planning for expansion of TTSA or construction of a new advanced wastewater treatment plant. It should be noted that the entire assimilative capacity of the Truckee River has been assigned to TTSA at its present level of treatment. Any new or expanded plant would have to involve advanced treatment and/or "no discharge" conditions.

8. (page 133). The discussion of growth-related impacts does not include potential impacts of Squaw Valley residents and visitors on the Lake Tahoe Basin. It can be expected that significant numbers of visitors (especially non-skiers and summer visitors) will travel to the Lake Tahoe Basin for recreation, and that residents will use its commercial and recreational facilities. The EIR should consider the impacts of this increased visitation and use on the finite resources of the Lake Tahoe Basin, and on attainment of environmental thresholds. Ideally, the Squaw Valley General Plan should be coordinated with the Tahoe Regional Planning Agency's 1983 Regional Planning effort. The EIR should also address growth-related impacts of development at Squaw Valley on the environment and resources of the Truckee area (e.g., consumption of sewage treatment capacity and landfill capacity which would otherwise be available for growth in this area).

9. The EIR does not include specific consideration of cumulative impacts, as required by Section 21083 of the California Environmental Quality Act. The project could have significant cumulative impacts on water quality, water supply, wastewater treatment capacity, and other environmental factors and public services. Cumulative impacts should be considered in a regional context, together with the impacts of presently approved but unbuilt development in the Truckee area, and the impacts of proposed large projects such as the Sunstream ski area.

Comments on Draft General Plan and Ordinance

1. (page 13) The plan permits buildout of existing subdivided or approved development on lots with slopes greater than 25%. The erosion and drainage control measures required for construction on such lots should include measures beyond the usual "Best Management Practices".
2. (page 24). The plan states that "it may be appropriate" to allow the creation of a small lake on Squaw Creek or to allow incorporation of the stream into a project. The EIR should discuss the environmental impacts and regulatory constraints involved in such projects and suggest appropriate mitigation measures. Water rights might be necessary for creation of a lake. Construction within a stream could involve discharge of waste earthen materials in violation of the North Lahontan Basin Plan, and would require a streambed alteration permit from the Department of Fish and Game.
3. (page 25). We concur with the recommendations for adequate snow storage and snow removal practices by new and existing development to prevent impacts on water quality. Problems with disposal of snow from the large ski area parking lot into Squaw Creek have been repeatedly documented in past years, and have already occurred this winter.
4. (page 22). We concur with recommendations that disturbed areas in the Squaw Valley meadow and near Squaw Creek should be rehabilitated and upgraded. Such rehabilitation, if it does not involve an increase in impervious surface, could be beneficial to water quality as well as to esthetics. Upgrading of the stables should include measures to keep livestock waste from reaching Squaw Creek.
5. (page 52). Our records do not indicate that the Regional Board was given the opportunity to review the 1980 transportation "Capital Improvement Program". We are concerned about the potential impacts on water quality of the proposed 1982 modification of this program, especially those of the proposed separated "3rd lane" along the meadow side of Squaw Valley Road, and the road link from Lanny Way to Victor Place or Tiger Tail Road, which would cross soils with moderate to high erosion hazard classifications. If the modified program is approved, the Regional Board will wish to review detailed plans and environmental documents for each component, and to prescribe appropriate erosion and drainage control measures.

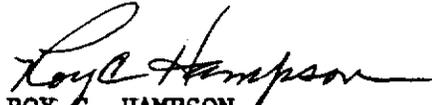
James Burns

-4-

6. (page 81). Section 118.2 of the ordinance requires sediment and erosion control plans for grading which disturbs areas greater than 1000 square feet, areas with slopes over 25%, or stream environment zones. Erosion and sediment control plans should be required for any disturbance of soils or geomorphic areas which are classified as moderate to high erosion hazard lands.

Please contact Dr. Judith Unsicker at this office if you wish to discuss these comments.

Very truly yours,



ROY C. HAMPSON
EXECUTIVE OFFICER

Attachments

cc: Regional Board Members
Andrew Sawyer, SWRCB

(916) 544-3431

August 5, 1982

Fred Yeager, Assistant Planning Director
Placer County Planning Department
11414 B Avenue
Auburn, CA 95603

REVIEW OF PRELIMINARY DRAFT SQUAW VALLEY GENERAL PLAN

Dear Mr. Yeager:

Thank you for giving us the opportunity to review the preliminary drafts of the 1982 Squaw Valley Plan and Land Use Ordinance. We understand that the final draft Plan and Ordinance will be circulated with an Environmental Impact Report (EIR) through the State Clearinghouse. We will submit additional comments to the Resources at that time.

General Comments:

In general, the Plan and Ordinance are sensitive to water quality issues. We believe that the proposed restrictions on development of high erosion hazard lands and stream environment zones should be approved, and possibly strengthened. We hope that all of the plan's goals for water quality protection will be implemented, and that the ordinance will be strictly enforced.

Specific Comments:

1. (page 15) A "stream environment zone" is defined as the 100-year flood plain. The County should consider expanding this definition to include areas of meadow and riparian vegetation, which are essential to the function of a stream environment zone in treatment of surface runoff. The 100-year flood plains of the Truckee River watershed are already protected by the Regional Board's Water Quality Plan.
2. (page 11) We support the proposal to restrict commercial development to areas with slopes of 5% or less, and to decrease permitted densities as impervious surface increases. (The ordinance does not seem to include a mechanism for implementation of the latter goal.) The provision restricting residential development to areas with slopes of 25% or less should be carefully coordinated with the prohibition on development of high erosion hazard lands; some areas with slopes less than 25% may have highly erodible soils. The definition of "high erosion potential" soils should be given in detail in the final Plan.
3. We commend your inclusion with the Plan and Ordinance of a provision for restoration of disturbed stream environment zones as a condition for the development of nearby property (pages 17 and 47). It would be desirable

to have more detailed guidelines to show how this will be done (e.g., a mitigation fee vs. performance of restoration by the developer). It might be more equitable to charge a mitigation fee for all new development, to be used for restoration of stream environment zones and eroded lands.

4. On page 19, the relocation of the existing stables is mentioned as a possible mitigation measure for visual impacts. Such relocation could also benefit water quality by lessening the threat of discharge of livestock wastes to surface waters and by providing the opportunity for restoration of a disturbed portion of the Meadow. We note that the Forest Recreation land Use District would permit the construction of new stables. The location of any stable within this District should be carefully considered to prevent water quality impacts.
5. (pages 22-23) The Plan encourages rehabilitation of existing commercial buildings in a poor state of repair. Retrofitting of these sites with adequate erosion and drainage controls should be required.
6. The discussion of waste water treatment capacity (page 38) appears to anticipate that the current approved expansion of the Tahoe-Truckee Sanitation Agency's (TTSA's) treatment plant will be sufficient to serve much of the proposed new development at Squaw Valley. The 1981 EIR for the expansion of the TTSA plant estimated that there were about 10,500 (single-family equivalent) unbuilt subdivided lots in the TTSA service area (not including unbuildable lots in the Lake Tahoe Basin), and that the TTSA expansion would be able to serve about 12,500 equivalent lots through 1992. Considering the large amount of land which is zoned but unsubdivided for residential development in the Truckee area, the expected sewerage of the Glenshire - Devonshire subdivision to TTSA, and the proposal for a large new ski resort near Donner Lake, Placer County should not count on the availability of wastewater treatment capacity for Squaw Valley at the proposed buildout level. Our present Water Quality Control Plan allocates essentially all of the assimilative capacity of the Truckee River system to TTSA at its 1992 capacity and level of treatment. Further expansion of TTSA, or construction of a new treatment plant would have to involve improved treatment to assure that there will be no discharge above 1992 levels.
7. (pages 27-28) Recreational facilities, especially those involving large amounts of impervious surface, should not be allowed to encroach in stream environment zones (including flood plains, meadows, and riparian forests.) Exceptions might be made for facilities such as nature trails and fishing access points, which by their very nature must be located in such areas.
8. (page 32) Water quality impacts of the proposed capital improvement program for transportation facilities should be addressed in the EIR, particularly possible encroachment into the meadow by the proposed transit lane.
9. We fully support the recommended sewerage of the High Camp and Gold Coast restaurant areas. However, the potential impacts of sewer construction and of potential sewage spills on water quality must be carefully considered.
- 100 (page 49) We support the proposed prohibition (Section 121) of snow storage within 100-year flood plains.

Fred Yeager

-3-

11. (page 56) Section 131.18 allows some areas disturbed by development and not designated for a specific purpose not to be revegetated if they are screened from public view. In order to protect water quality, all such areas should be revegetated or otherwise stabilized.
12. (page 60) We note (Section 150) that use permits will not be required for recreational development under 2500 square feet in area, for residential ~~projects under 20 units, or for commercial development under 20,000 square feet.~~ Some of these projects, depending on their locations, could have significant impacts on water quality. The Regional Board will wish to review such projects, even if the County does not issue an permit.
13. (page 78) It should be clearly indicated that some of the uses generally permitted on Forest-Recreation or Natural Area lands may not be allowed in high erosion hazard or stream environment zone areas within these districts.

Please contact Dr. Judith Unsicker at this office if you wish to discuss these comments.

Very truly yours,

ROY C. HAMPSON
EXECUTIVE OFFICER

cc: James Burns, Resources Agency

RECEIVED BY
Office of the Secretary

DEC 13 1982

Resources Agency of California

Mr. Ron Bass
Executive Officer
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

December 15, 1982

03-Pla-89
Squaw Valley
General Plan
SCH 81101205
T30028

District 03

Caltrans has reviewed the draft EIR for the 1982 Squaw Valley General Plan Update. Squaw Valley is located between Truckee and Tahoe City, off of State Highway 89.

Caltrans concurs with the mitigation measures on pages 103-106 of the draft EIR, including the construction of traffic signals when warranted and the management procedures designed to minimize congestion. We recommend that Priority #5 of the Capitol Improvement Program, the third lane on Squaw Valley Road, be given a higher priority. This exclusive transit lane would encourage use of transit and would help ease congestion.

The EIR should indicate how many other projects, if any, have a higher priority in the Capitol Improvement Program than the General Plan projects. On page 106, the sources of direct transit subsidies and the provision of turnouts and shelters should be identified.

On page 42, of the EIR, Table 7, the first column should be labeled "1-Hour Maximum."

On page 96, existing peak hour traffic volume for an average day is given to be 307 vehicles. In giving the peak hour traffic distribution on Squaw Valley Road, it appears that a mathematical error was made in computing the eastbound percentage. The two figures [139+118=257] do not add up to 307.

LEO J. TROMBATORE
District Director of Transportation

By
R. D. Skidmore
Chief, Environmental Branch
JLB:d1m
cc Darrell Husum, DOTP
District Routing
(Env. Pl.)

RECEIVED
DEC 15 1982
State Clearinghouse

Memorandum

To: Ron Bass
Executive Officer
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

Date: December 9, 1982

File:

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF AERONAUTICS

Subject: Project Review - Squaw Valley General Plan - County of Placer -
Draft Environmental Impact Report (DEIR) - SCH #81101205

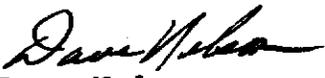
The proposal is a general plan of development standards, constraints, and potential land uses within the Squaw Valley area of Placer County, on the west side of Lake Tahoe and Highway 89.

The nearest air facility to the site of the proposal is the Truckee-Tahoe Airport, six miles to the northeast. Although the potential for noise and safety impacts of the air facility's flight operations upon the proposal appears remote, we are concerned about the potential for increased general aviation demands upon the Truckee-Tahoe Airport by population increases in the Squaw Valley area. Additionally, we are aware of helicopter activity in the Squaw Valley area that should be discussed as well.

The environmental document indicates that development of the Squaw Valley Village area could induce growth on undeveloped lands in the remainder of the Valley and speedup growth in those remaining area units allowed by the General Plan. It indicates that airport expansion may occur because of the proposal and subsequent development of nearby areas. The General Plan attached indicates that any proposed land uses that could generate noise, such as heliports, are subject to noise standards contained in the Placer County General Plan Noise Element.

The environmental document addresses our concern regarding the airport. However, the Final EIR will need to be more specific in terms of noise and safety impacts from helicopter operations that are proposed.

MARK F. MISAPAGEL, Chief
Division of Aeronautics


Dave Nelson
Environmental Review Section

RECEIVED
DEC 14 1982

State Clearinghouse

Memorandum

To : Ron Bass
STATE CLEARINGHOUSE
1400 Tenth Street, Room 121

Date : DEC 15 1982

Subject: Squaw Valley General
Plan Draft EIR -
SCH #81101205

From : ENVIRONMENTAL HEALTH DIVISION
714 P Street, Room 430
322-2308

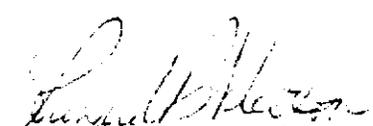
The Department has reviewed the subject environmental document and offers the following comments.

At 80 percent buildout (page 101 of the Draft EIR), ADT on Squaw Valley Road would roughly double and resultant noise levels should increase by 3 dB, which is a perceptible change. In general, an L_{dn} of 65 dB can be expected within 100 feet of the roadway and, as a result, perhaps residential setback requirements should be greater than the 20 feet required by Section 139 (page 89) of the General Plan. Measurements of noise levels should be employed to establish setbacks. However, because ADT is expected to be about 6000, and if the number of heavy trucks (as a percentage of total traffic) is small (5 percent or less), traffic noise should not be a serious problem during the winter.

A more serious noise problem may be due to snowmobiles or other off-road vehicles. Consequently, the need for use regulations of off-road vehicles should be emphasized. In addition, local police should be trained and encouraged to enforce appropriate sections of the Motor Vehicle Code.

Finally, landscaping does not reduce noise levels unless it is deep as well as dense and evergreen. It simply makes the noise source less apparent.

If you have any questions or need further information concerning these comments, please contact Dr. Jerome Lukas of the Noise Control Program, Office of Local Environmental Health Programs, at 2151 Berkeley Way, Rm 613, Berkeley, CA 94704, 415/540-2665.


Richard P. Wilcoxon
Assistant Deputy Director

RECEIVED
DEC 15 1982

State Clearinghouse

WAYNE E. POULSEN
Box 2008,
OLYMPIC VALLEY,
CA 95730.

Placer County Planning Department,
De Witt Center,
Auburn, Ca 95603.

Dear Sirs,

I wish to offer the following comments on the draft E. I. R. Squaw Valley General Plan, SCE #S1101205 as it affects our land in Squaw Valley.

SOILS: Page 18, Mitigation Measures.

According to the slope map, Plate 2, page 5, most of our land which the General Plan proposes to zone commercial would be undevelopable due to the restriction of no development over 5%. It should be noted that our commercially zoned land is not in any steep areas, and would not create any problems in this regard, however a 5% restriction on developability would be unreasonable and counterproductive. There does not seem to be any other area in Placer County which is subject to such a limited slope classification.

AIR QUALITY: Page 48, Mitigation.

We agree with many concerned citizens that the Capital Improvement plan as proposed might do more harm than good in solving traffic problems. With regard to specific problems related to our land, we do not agree with the idea of adding a third land to Squaw Valley Road.

FLOOD PLAIN MAP: Plate 4.

This map is clearly inaccurate. It shows the "flood plain" area at the west end of the meadow on the wrong side of the road, and places our residence which is in a high, dry wooded area in the flood plain at the east end of the meadow. A current, accurate map should be provided because many restrictions are tied into this document. For example, on page 60 it states that the 100 year flood plain area "must be retained in it's natural condition" although much of the land is zoned for development in the General Plan and is not in the flood plain.

NOISE: Page 118.

The figure on noise levels of the snowmobiles is inaccurate. The correct figure is 50 dBA at 50 ft., not 88 dBA. The machines have noise controls on them, as required by Federal law. They have been in business in Squaw Valley for over 15 years, under County permit, and do not produce noise levels over 50 dBA.

PUBLIC SERVICES: Page 126.

Many of the items listed under Fire protection are not needed, such as mini-pumper, over snow vehicle, and a new substation could not be justified in such a small area. It is also unfair to expect the next development to pay for such costly items which will potentially benefit all.

AESTHETICS: Page 130.

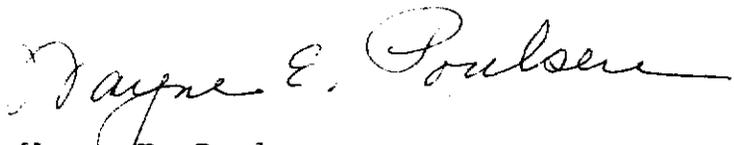
It is stated that Squaw Valley meadow is defined as extending to the tree line to the south, and west to the existing parking lots in the village core area. This is not a correct description, since it takes in areas which have been zoned for development since the first subdivision in Squaw Valley, in 1950, and which are proposed for development zoning in the 1982 General Plan.

2.

It also refers to "Conservation Preserve" zoning, which does not exist in Placer County at this time, and would appear to be so restrictive in concept that it could be challenged as "inverse condemnation." Spreading it over such a broad area would severely handicap plans and efforts to turn Squaw Valley into a year-round destination resort, since the perimeter area around the meadow is an ideal area for recreational facilities for summer use. A golf course, even though not specifically planned at this time, should not be ruled out since it could be easily accommodated in the area available, and could be a valuable addition to a destination resort complex.

On September 30, 1981 Thomas Kubik solicited our comments with regard to the E. I. R. which we sent him in the form of the enclosed letter. It does not appear that the input requested was considered in the draft, however it appears to still be pertinent, so we are enclosing another copy at this time to be included with our comments.

Very truly yours,


Wayne E. Poulsen.

November 11, 1981.

Thomas D. Kubik,
County of Placer,
Office of the Planning Commission,
11414 B Ave.,
Auburn, Ca 95603.

Dear Mr. Kubik,

In response to the specific points addressed in your request for input with regard to the proposed updating of the 1972 Squaw Valley General Plan we submit the following considerations:

OPTIMUM DENSITY:

If Squaw Valley is to attain it's "highest and best use" , and fulfill it's potential as a world class year round destination resort, balanced and orderly community growth is necessary. To develop this potential the General Plan should retain the density called for in the 1972 General Plan, leading to an ultimate residential population of about 11,800 people, with a skier capacity of approximately 15,000. (page 4, Squaw Valley General Plan)

Year round development is essential to stabilize the economy and provide steady jobs for the permanent population. The sporadic, seasonal return now available discourages quality development.

The greatest need is for first class hotel facilities, preferably those with international booking capabilities, such as Hyatt, Holiday Inn (particularly since the existing hotels are now being turned into condominiums). Such a hotel facility could serve not only Squaw Valley but could also accommodate people who wish to visit surrounding areas such as Alpine Meadows, Northstar and even Lake Tahoe, since development is now being severely restricted there. This would create an exciting focal point for year round activities for transients and locals alike, including summer recreational facilities.

As noted in the Squaw Valley General Plan, existing housing accommodates less than 1/3 of the skiers generated by the ski lift facilities, which is the primary cause of transient traffic, generating parking and pollution problems. Additional cluster type developments could ideally be accommodated at the east end of the Valley which is already zoned for this type of use and which "exhibits reasonable environmental and development characteristics", as noted on page 45 of the General Plan. Development on the south side should be in clustered areas in good tree cover, with medium density as presently zoned.

POTENTIAL FOR ADDITIONAL SKI FACILITIES:

Skiing in California is growing at over 15% a year, but development of new ski areas, particularly those dependent on government land, has been severely constrained, as in Mineral King and Independence Lake. therefore the growing needs must be accommodated by existing areas.

Squaw Valley has over a mile of pure north slope, with a vertical

2.

drop of over 1,300 vertical and excellent snow conditions. It is indicated for development in the Squaw Valley General Plan. It is all private land.

It should be retained as part of the Squaw Valley General Plan to give skiing, which is the main economic support of the area, room to grow in an area free of congestion.

TRANSPORTATION NETWORK

The area zoned in the 1972 plan for parking at the entrance to Squaw Valley has been abandoned and is now developed as condominiums. This reflects the lack of support for the concept. Studies by experts indicate that multi-level parking would not be financially feasible in this area. Squaw Valley Ski Corp., which is the main generator of the parking problem, has indicated that they do not agree with the concept of parking at the entrance of Squaw Valley, and would not support it financially. Other areas of Squaw Valley have area to provide for their own parking needs and have traditionally done so.

AIR

Intensive development in the existing parking lot area of Squaw Valley would intensify air pollution, parking and traffic problems by encouraging vehicles to drive in to the dead end "core" area. The emphasis in the 1972 General Plan on the core area was based on the anticipation that 1 major development entity would control all of the development capabilities in Squaw Valley. This is no longer true. Use of the core area is primarily concentrated in the ski season, representing 1/3 of the year. The asphalt parking area is not an attractive setting the rest of the year, so there is no good reason to generate traffic to travel the length of Squaw Valley to go there, except for skier oriented facilities, housing and hotels.

A serious legal hurdle involving Squaw Valley Ski Corps "parking agreement" rights may also inhibit major development in this area. Parking is their life line.

Other commercially zoned areas such as Highway 89 and Squaw Valley Road can be developed to provide needed services and facilities on a year round basis without adding to air pollution, and traffic in Squaw Valley. They can provide their own parking. Truckee Tahoe traffic, and Alpine Meadows can also be served from this location without congesting Squaw Valley.

WATER

As noted on page 33 of the Squaw Valley General Plan Squaw Valley is using less than 4% of the water available. Water should not present a major problem

SCENIC QUALITIES

Scenic qualities are well protected by the large areas of "open" zoning in Squaw Valley, representing over 80% of the land area.

SEWER SERVICE

Adequate sewer capacity should be available due to expansion of the TTSA regional plant, if Squaw Valley is given adequate development capabilities to take advantage of this opportunity. Availability of capacity will be limited,

3.

and could be taken up by areas with less acute economic and development needs than Squaw Valley. Squaw Valley at present has not reached it's potential as an economically viable year round destination resort area.

FIRE PROTECTION

Is being underwritten and supported by the community.

PUBLIC PARK FACILITIES

Squaw Valley is almost 100% recreation oriented already, with facilities supported by private capital. Over 80% of the land is zoned open space and a net work of trails provide back country access. Public recreation programs which have to be supported by the taxpayers could be costly and redundant.

SCHOOLS

Schools are being closed in the Tahoe area due to inadequate funding and loss of students population, even though they are still being paid for by local taxpayers. This burden should not be increased by setting aside land for more schools.

PUBLIC TRANSPORTATION SERVICES

Are present services, such as TART, self supporting? The questionnaire indicated that TART is not generally used by Squaw Valley residents. New developers are required to provide for services from their facilities. The major transportation problems are created by the ski area, and it is my understanding that they do plan to provide bus service to local areas this winter.

PLANNING PRINCIPLES

(1)

The aesthetic, ecological and environmental assets of Squaw Valley (except for the asphalt parking and industrial area) are being well protected by the large areas of open zoning. Areas zoned for development are located in the forested areas and in areas adjacent to the commercial core area. Further curtailment of development area would make it difficult to achieve the destination resort potential of Squaw Valley. If development is appropriately clustered, an open feeling can be preserved.

(2) Most of the developable areas are relatively level and can be easily served by extensions of existing public utilities and services.

(3) "Intense utilization of certain areas" is already built in to the present zoning.

(4) Obviously decisions should be based on sound practices, however, as noted on page 27 of the General Plan they should be "subject to appropriate respect for legal rights and concepts of basic fairness towards existing ownerships."

An inequitable burden is already being carried by certain owners who have large areas of open land with serious limitations on use, which is subjected to high taxes, TTA assessments, support of the Fire Department, and other services which these lands are not permitted to benefit from. The

Mr. Fred Yeager
January 10, 1983
Page 2

Squaw Valley--which in our judgment if properly addressed will probably result in a finding that many of the proposed traffic improvements in the Valley are unnecessary.

Sincerely,



Lawrence L. Hoffman

LLH/blm

Enclosures

cc: Mr. and Mrs. Wayne Poulsen
Mr. Robert Egan

HOFFMAN & LINDE

ATTORNEYS AT LAW

MAIL ADDRESS

POST OFFICE BOX 7740

TAHOE CITY, CALIFORNIA 95730

(916) 583-8542 • 546-2564

LAWRENCE L. HOFFMAN
MARY MARSH LINDE
GREGG R. LIEN

November 10, 1981

SUITE 8
DOLLAR HILL PROFESSIONAL BUILDING
3000 NORTH LAKE BOULEVARD
TAHOE CITY, CALIFORNIA

Mr. Thomas Kubik
Associate Planner
Placer County Planning Department
11414 "B" Avenue
Auburn, CA 95603

RE: Notice of Preparation of Draft Environmental Impact
Report for the Squaw Valley General Plan Update

Dear Mr. Kubik:

This office is in receipt of the above Notice of Preparation. We are responding both as addressees and as Legal Counsel for Mr. and Mrs. Wayne Poulsen, principal land owners in Squaw Valley as well as in our role as Legal Counsel for other property owners affected by the proposed Squaw Valley General Plan Update.

Quite frankly, we are quite concerned that the Notice of Preparation indicates serious deficiencies in the nature and extent of the proposed EIR to be prepared in connection with the Squaw Valley General Plan Update. Accordingly, we believe it essential for the scope of the EIR to be further expanded if it is in fact to be a legally adequate document.

In the following paragraphs, we will briefly summarize the principal areas of concern:

1. Failure to Address Area-Wide Pressures Upon
Land Use Within Squaw Valley

Existing regulations have significantly curtailed the potential for growth within the Lake Tahoe Basin to accommodate predicted expansion of outdoor recreation demand in this area. This growth demand will exert pressures upon regions in proximity to Squaw Valley as well as upon the valley itself. These demands must be quantified and analyzed to properly prepare for these effects upon the study area. Clearly Squaw Valley has and will continue to be a major recreational resort area, and it is essential that the nature and extent of the demands for further expansion of recreational opportunities afforded by Squaw Valley be addressed in depth.

Mr. Thomas Kubik
Placer County Planning Dept.
November 10, 1981
Page Two

2. Failure to Consider Corridor Influences Upon Land Use Within Squaw Valley

In response to increasing demands for resort and recreational opportunities from visitors travelling along the Interstate 80 and Highway 89 corridors, there has recently been significant expansion of facilities in the Truckee and Donner Lake areas. Many of these visitors come to the Valley or at least contribute to the traffic problems facing residents and tourists alike. Patterns of travel and analysis of sources of supply for visitor needs throughout the entire North Tahoe-Truckee region must be assessed.

3. Failure to Adequately Assess the Need to Provide for Summer Recreation Opportunities Within Squaw Valley

It has become increasingly apparent that in order to assure a sound, year-round economic base for essential improvements and developments throughout the Valley, that summer resort and recreation opportunities must be provided. Present study parameters appear narrowly to consider the ski season as the sole focus for land use planning, and in so doing merely exacerbate obvious economic problems.

4. Concentration of Development in the "Core Area" Merely Concentrates Congestion, Air Pollution and Parking Problems

Suggested plans for the Valley would intensify use virtually exclusively within the "core area". This approach engenders a number of negative effects which alternatives may avoid. Specifically, the two principal land owners within the core area are Squaw Valley Ski Corporation and Carville-Sierra Corporation. These entities are presently in litigation over the "parking agreement" which allegedly controls all use of the land in the affected area which comprises the majority of buildable land in the core area. To plan for uses in an area subject to major litigation may be unrealistic. Additionally, to focus intensification on one owner (Carville-Sierra) unnecessarily forces the economic well-being of the entire Valley upon one entity. Additionally, a plan which locates all further support facilities such as grocery stores, restaurants, shops and services within the core area, clearly will force residents and many visitors to ensnarl themselves in the skier traffic if they simply want to buy a carton of milk or buy a hamburger. Core area concentration inevitably aggravates serious congestion and air pollution problems by pulling all traffic down the entire length of the Valley.

5. Open Space Designations in Many Areas of the Valley May Unnecessarily Preclude Summer Recreation Development

Several recently proposed land-use concepts show "no-

Mr. Thomas Kubik
Placer County Planning Department
November 10, 1981
Page Three

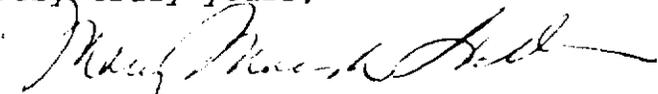
use area" which is more restrictive designation than "open-space", and which, if implemented, would preclude such developments as golf courses and playing fields. As consequence, this new designation would force such developments to compete for space with other identified recreation needs such as tennis courts and swimming pools. Close study of summer activity demands and of the resources available to meet them is essential.

6. Transportation and Parking Solutions Should be the Primary and Pivotal Study Topics

Residents and visitors alike are probably most impressed at present with the monumental traffic and parking obstacles they encounter at every attempt to enjoy the attractions of Squaw Valley in winter. cursory examination of the parking structure option readily reveals that this task cannot be accomplished by one private developer. Rather, it must be approached on an area-wide basis, possibly even a region-wide approach, inasmuch as the Highway 89 corridor serves as the main thoroughfare to the Tahoe City-North Lake Tahoe centers from the Highway 80-Truckee/Donner centers. Similarly, a transit system incorporating such a parking facility is sorely needed. Location of future residential, commercial, hotel and motel improvements, as well as development of additional summer and winter recreational elements, should be tied to the transit system. Presently, the Ski Corporation does not have sufficient parking to serve the ski lifts it operates. Yet Placer County's recent survey and the consensus of many skiers is that additional lifts are required and desired. With some 18,000 skiers jamming the Valley on peak days, there is no question that a parking facility along the corridor or near the entrance to the Valley, or possibly several facilities along the length of the corridor together with an efficient transit system, are essential to the enjoyment of the valley and to the protection of environmental quality.

In brief, this letter is intended to serve as a serious expression of concern regarding the apparent inadequacy of the proposed EIR to be drafted in connection with the Squaw Valley General Plan Update. Needless to say, we believe that these concerns must be resolved during the "scoping process". With that in mind, we would be pleased to meet with you at your convenience to discuss these issues at greater length, and thereby hopefully avoid future misunderstandings regarding the proposed EIR.

Very truly yours,


MARY MARSH LINDE

SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL
Squaw Valley, California

January 7, 1983

PLACER COUNTY
DATE
RECEIVED

JAN 11 1983

PLANNING COMMISSION

Mr. Fred Yeager
PLACER COUNTY PARKS COMMISSION
11414 "B" Avenue
Auburn, California 95603

Re: Comments of Squaw Valley MAC Concerning
the Draft EIR for Proposed Squaw Valley
General Plan

Dear Fred:

The purpose of this letter is to transmit to you in writing the observations and input of the Squaw Valley MAC in regards to the Draft EIR for the Squaw Valley General Plan.

As you know, the MAC has considered a number of issues at its public meetings regarding the EIR, and it would be beyond the scope of this letter to attempt to restate all of that discussion here. Rather, I call your attention to the minutes of all the MAC's meetings, copies of which are attached, as well as the summary of the portion of the minutes for the MAC meeting held on January 4, 1983, at which we addressed some specific concerns regarding the EIR. Because of the press of time, and the January 10th cut-off for comments, however, it is not possible for us to restate at length all of those concerns.

In terms of a general observation, the MAC has repeatedly expressed its concern that the EIR appears to be inadequate in a number of respects, particularly in that it appears to be more a justification for a preconceived course of action, rather than an objective analysis of the full range of reasonable alternatives and potential environmental impacts. This short-coming is particularly apparent to us in the area of transportation and traffic planning, where only one alternative (that proposed by the staff) is set forth for analysis, and the repeated concerns expressed by the MAC concerning a more comprehensive, regional approach are simply omitted. In general, therefore, the MAC feels the EIR should be substantially expanded to include consideration of a range of alternatives regarding the key issues, and particularly to assure that it addresses those being considered and recommended by the MAC.

Another apparent contradiction raised by Sandy Poulsen was the fact that at page 109 of the EIR it is stated that "the most effective way to control congestion is to confine it to the parking areas", while at the same time the proposed Plan recommends that the parking area be a "pedestrian-oriented core" as part of 80 acres of commercial development. On page 111, under Mitigation Measures, it states: "1. Present peak period traffic congestion and delay shall not be worsened," which Poulsen suggested was unrealistic considering the growth contemplated for a "destination resort".

After considerable discussion regarding traffic, Chairman Pavel recommended that the approach proposed by the Squaw Valley General Plan Committee in its September 29, 1982 Draft Report, at pages 58 through 70, be incorporated in the EIR in lieu of the provisions of the EIR regarding transportation and traffic. A number of members of the MAC indicated their concern that the EIR was simply a justification for a preconceived capital improvements program, and did not provide an objective analysis of various alternatives, including improvement of traffic flows on Highway 89, the Tahoe City bypass, signalization improvements in Tahoe City, better uses of rapid transit vehicles, and other approaches. Chairman Pavel also noted the continuing objections of the MAC to the suggestion for the proposed traffic signal at the intersection of Highway 89 and Squaw Valley Road, the general concern about adding a third lane to Squaw Valley Road, and other proposals in the suggested capital improvement program. The Council unanimously agreed after discussion that a more comprehensive and objective analysis of traffic impacts and alternatives, including an analysis of the Highway 89 congestion problem and alternative solutions to that problem, should be included in the EIR in order to make an informed decision.

AESTHETICS: Page 130:

Chairman Pavel raised the concern that the EIR states that "Lift towers, terminals and buildings should not be permitted along the ridge top . . ." Chairman Pavel noted that Squaw Valley is a ski resort, and that is why people come here. In most cases, the only practical place for lift towers is on the ridge. John Gack, representing the property owner who owns the south slope area, noted that it is the intent of both the 1972 General Plan and the proposed 1982 Plan to provide for ski area development on the south slope, but that their clients will do everything they can to minimize visual impact of such facilities. However, "they cannot be invisible" he added. He also noted that before any plans could be implemented, there would have to be intensive public scrutiny and hearings regarding such a proposal. However, the most important factor would be that any such ski lift facilities, if they are developed, would have to

be constructed in accordance with good engineering standards, and cannot be pre-determined.

After further discussion, including the comment that ski lifts can and should be used for summer recreational activities as well, Sandy Poulsen moved that the language in the EIR in the General Plan should be changed to read that ski area development, including ski lifts and ski towers, should be visually screened to the greatest extent possible from Squaw Valley Road and the subdivisions to the north. The motion was passed unanimously.

The accuracy of the definition of the Squaw Valley Meadow set forth on page 130 of the EIR was questioned by Chairman Pavel. He noted the Meadow clearly does not go up to the tree line, nor does it extend to the parking lot in the village core area according to the map in the EIR on page 80 that designates the boundary of the Meadow. Therefore, he noted the description on page 130 could create serious problems with regard to potential recreation development activity in the area surrounding the Meadow, including the potential for a golf course in that area. Fred Yeager indicated he would seek to clarify the difference in the language describing the boundaries of the Meadow on page 130 as contrasted with the description of the Meadow on the map included at page 80 of the EIR.

Larry Hoffman, an attorney representing two property owners within the Valley, noted that on page 80 the Draft EIR states: "Development should be encouraged to occur in areas of good tree cover." Hoffman noted that this provision seemed inconsistent with the thrust of the Plan which was to encourage development in the already disturbed and nearly treeless core area. Fred Yeager indicated he would reconsidered this provision.

The next point of discussion was in regards to potential residential development along the south side of the Meadow area, as addressed on page 130 of the EIR. Bob Egan, who also represents the owner of the south side property, noted that the language on page 130 to the effect that buildings on the south slope should not be "clearly visible" was ambiguous and unclear. After a lengthy discussion, a resolution was made by Peter Werbel and seconded by Michael Linnett, that the EIR should be changed to provide that development should be located so that individual buildings "are screened to the greatest extent possible as viewed from across the Meadow", in lieu of the wording on page 130 of the EIR. The motion was unanimously passed.

PUBLIC SERVICES: Page 126

The issue of the inclusion of the proposed Fire Department budget within the EIR was again raised by Chairman Pavel. He

recommended that the "wish list" for the Fire Department be deleted as being inappropriate in the EIR. He reiterated that the MAC has previously agreed that it was unfair and unrealistic that the next person who builds a structure of three stories or more should have to pay for the aerial ladder truck and firehouse expansion suggested by the Fire Department. Such a requirement may well deter the need for further development. Jim Davisson stated the only items actually needed would be the aerial truck, with the commensurate enlargement of the fire station to accommodate it. Other items on the wish list had either been already acquired, or were no longer needed, including the sub-station at the entrance area of the Valley. He also recommended that the existing station not be moved, but instead that the area be designated as a public service facility, and that the Squaw Valley Water County District would like to have space there as well in view of the requirement that they move out of Blythe Arena. In further discussion, it was noted that the MAC had previously asked Kirt Smith to report on an alternative approach to funding, and Chief Hazen to report as well. The MAC tabled final action on this item pending a report from Smith and Hazen.

OTHER ISSUES:

Chairman Pavel then entertained discussion about the following issues:

1. Flood Plain Map, page 55--Larry Hoffman noted the apparent inaccuracies in the 100-year Flood Plain boundaries for Squaw Creek as depicted on the Flood Plain Map, particularly as indicated in the areas of the Poulsens' "Hotel Site" and "Poulsens' Compound". After discussion, Fred Yeager agreed that there appeared to be inaccuracies in the map and that he would investigate the matter further.

2. Alternatives, page 132--Larry Hoffman noted that in his judgment, the discussion of Alternatives on page 132 was "woefully inadequate", and should include the range of reasonable alternatives being suggested by the MAC, as well as an analysis of the environmental impacts of various alternatives. For instance, he suggested the alternative approaches to traffic and transportation planning being suggested by the MAC should be considered, particularly an analysis of the Highway 89 congestion problem and potential approaches to its resolution. He also indicated that such items as the environmental impact of the proposed third lane that is being suggested for Squaw Valley, would have to be studied as to visual impacts, intrusion into the Meadow, and other environmental impacts. Fred Yeager indicated he would consider this point further.

Note: The foregoing summary of the Minutes for the Squaw Valley MAC meeting on January 4th has been prepared in summary form by its Secretary, Sandy Poulsen, but not

yet approved by the full MAC. This summary deals only with the portion of the discussion during the MAC meeting on January 4th dealing with specific comments to the EIR, as time did not permit the completion of a full set of minutes for submission. After the complete set of minutes has been prepared, it will be forwarded to the County.

SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL

Minutes of meeting held December 21, 1982

Directors present: Eric Pavel, Chairman.
Sandy Poulsen, Secretary.
James Davisson.

Guests: Craig Poulsen, Foothill Design. Joseph Marillac
Larry Hoffman Ken Todd,
Wayne Poulsen. Hans Burkhardt, Ski Corp.
Bob Hazen, Fire Dept.

It was announced that no County personell would be present due to Hgh. 80 being closd.

Eric Pavel reported that a quorum was present. The meeting was called to order at 9.25 am

Eric Pavel reviewed actions of the previous meeting including the request of the MAC that the fee schedule relating to fire protection be deleted from the General Plan, and that a payback plan be worked out if developers are required to contribute equipment or funds.

Larry Hoffman reviewed actions of the Board of Supervisors at their recent meeting. He said that the Board had not officially named members to the Design Review board, so the "at large" opening could be circulated, however he thought they would go along with our recommendations.

He also noted that they reconsidered their hasty action on the avalanche ordinance, due to an avalanche of protests from local groups, such as the Chamber of Commerce, Alpine Springs County Water District, and others. He suggested that the Board go on record to request notice from the Supervisors when important decisions are to be made affecting our area, and that we request agendas from the Supervisors and the Planning Commission in advance.

Eric Pavel suggested that we should assert ourselves now with regard to the problems posed by the General Plan, and we should stick to our own recommendations.

Hans Burkhardt stated that Fred Yeager obviously didn't know what he was doing on the parking issue.

Larry Hoffman said that we should pick the best time to fight the battle, and probably the best time would be at summary and findings when we know which of our recommendations have not been accepted. The plan should not come out of the Planning Commission until problems are worked out. One suggestion would be to put the General Plan on the back shelf, and go back to the 1972 plan, but we would not want a moratorium.

Joseph Marillac said that development in the "core ^{area}" affected by the "parking agreement" should be left out until the problems are solved, because it could be in Court for years. The County is planning for something they have no right to plan.

2.

Eric Pavel agreed that concentration in the core created a problem.

Larry Hoffman said that the rest of the Valley, especially in B. C. was being treated as "2nd class" with limitations established that are more restrictive than any in Placer County.

Eric Pavel said "We are all agreed that B. C. is no good." and suggested a Squaw Valley Commercial zoning, with the same set of rules. "We are making plans for the whole Valley, and should have a uniform feeling which could be established through Design Review criteria, instead of putting all our eggs in one basket in the "core area."

James Davisson stated that we want to develop a "destination resort" for all of Squaw Valley.

Sandy Poulsen emphasized the importance of a YEAR ROUND destination resort, as recommended by the Squaw Valley General Plan Committee to stabilize the economy of the area.

James Davisson mentioned that many people prefer to be at the entrance area because they don't want to become involved in the congestion, or want to ski other areas, as well as Squaw.

Larry Hoffman mentioned that Marillac wanted a hotel on his property which would be allowed under present zoning. There was no objection to this type of use at the entrance area. He asked what types of uses would be desirable or objectionable.

Michael Linnet agreed that B. C. is too restrictive as proposed, and that we need a "happy medium", not the same as V. C.

James Davisson asked that we agree as a MAC that the entrance area must have more reasonable zoning and areas of use, allowing essentially the same uses with possibly less density than the core.

Larry Hoffman suggested that we offer an alternative proposal.

James Davisson said he had to leave so he wanted to address the Fire Dept. problem, due to his knowledge of the situation. In his opinion, we need an aerial truck, but we do not need a second station. The Valley is too small, and there is inadequate personnel to man a second station, it would have to be manned by a volunteer, and would constitute a substantial ongoing expense. The best location is where it is now because that is where it is most needed. In any case it would have to be on main road.

Sandy Poulsen noted that if they had to buy another site along the main road, the value could be the same as where it is.

Bob Hazen of the Fire Dept. agreed that the aerial truck is already needed for some structures, and that a substation would not be necessary unless there was substantial additional development on the south side, or entrance area.

3.

He mentioned that the Fire Dept. can only go a certain percentage over last years budget so any additional needs would have to be privately financed.

Ken Todd stated that the County's proposal was a "crazy financing scheme", that would stop development if the next developer had to pay for it, on top of sprinkling systems and other requirements.

Burkhard stated that it could "scare Dempsey out."

Larry Hoffman suggested that there should be a "break off point" at which additional facilities would be needed, with a pay back formula., possibly over a ten year plan. Consideration should be given to whether some of the funds could come out of mitigation fees T. O. T., or taxes, since all of the Valley could be benefitted. He recommended that Kirk Smith be asked to come up with alternative means of financing. He also noted that a General Plan is not an appropriate medium for specific equipment needs and cost estimates, it should be a separate issue addressed by the Supervisors at the appropriate time.

Eric Pavel summarized the discussion by stating that the MAC does not agree that all costs should be put on the next developer, and that he recommends that the station stay where it is. He asked that a new payment plan from Kirk Smith be requested, and that we ask Bob Hazen to bring a letter reflecting our discussions.

Ken Todd suggested that Carvelle might have a suitable alternative location for the station, and Davisson said he would look at it to see if a station would fit, since the station would have to be large enough to accomodate the aerial if appropriate means of financing can be worked out.

James Davisson moved that the MAC delete item B, page 65 of the Preliminary plan of October 19, 1982 and the motion was seconded by Michael Linnet, and passed unanimously. He then left the meeting at 11.45 am.

Burkhard reminded the MAC that there is still a dispute as to who is going to replace the parking, and suggested that development proposals for the area under the parking agreement be left out until the matter is resolved. He emphasized that the "parking agreement" area does not include Poulsen property, and that the S. V. 17 map is the correct map to use.

Eric Pavel suggested that he meet with Carvelle and the Ski Corp. to discuss the problem. He set the next meeting date for the MAC for Tuesday January 4 at 1.30 pm. The agenda would include parking, B. C. concentration in the core area", fire protection, avalanche study, a review of the E. I. R. for comments before Jan. 10, a report on the traffic experiment, and Design Review committee composition.

4.

Phil Carvelle made a motion that the MAC recommend that the Design Review committee consist of 3 MAC members, Phil Carvelle, James Davisson and Sandy Poulsen, plus Robert Egan and Ken Todd, and one at large member, seconded by Sandy Poulsen, and passed unanimously.

The next meeting date was set for December 21 at 9 am.

Members were asked to read the E. I. R. so the MAC could submit a timely response to the matters which appear to be in conflict with the thinking of MAC members.

SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL
Minutes for meeting of December 16, 1982.

Directors present: Eric Pavel, Chairman.
Sandy Poulsen, Secretary.
Patricia Guilford
Peter Werbel
Phil Carvelle

Directors absent: Michael Linnett
James Davisson.

County representatives: Fred Yeager, Planning Dept.
Kirk Smith, Special Districts

Guests: John Twitchell, Chamber of Commerce, Robert Egan, John Gack and Craig Poulsen, Foothill Design, James Mott, Hans Durkhard, S. V. Ski Corp., Joseph Marillac, property owner, commercial and residential, Ken Todd, Carvelle Sierra.

The E. I. R. for Granite Chief Hotel proposed by Carvelle Sierra was presented for consideration. Phil Carville stated that he had put the project "on the back burner", and intended to make major changes from the proposed plan, so the matter was not considered further.

Approval of the minutes was deferred because of lack of a quorum.

John Twitchell from the Chamber of Commerce advised the Council of serious community concern regarding an avalanche ordinance which had been passed by the Board of Supervisors without any advance notice to the areas affected. He said it was of questionable legality, and could represent "inverse condemnation". It required various forms of noticing owners in areas allegedly subject to avalanches, or prospective purchasers, and other limitations on development and use of land. He questioned the credibility of the study and the credentials of Mr. Wilson. He recommended that the Council contact the Supervisors to ask for further study and consideration of the ordinance.

Fred Yeager stated that it was an "emergency ordinance", which was effective immediately, without right of appeal.

Eric Pavel outlined the procedure to be followed regarding controversial matters. They would be discussed with County Staff, and if agreement was reached, Yeager would rewrite the language accordingly. If no agreement could be reached, the problem would be taken to the Board of Supervisors.

Fred Yeager stated that responses to the E. I. R. would have to be in by Jan. 10, 1983, and the Summary and Findings information by January 24, 1983. The next Planning Commission meeting would be March 10 at 10 a. m. in Auburn.

Discussion continued regarding the ski area parking problem.

2.

Fred Yeagers position is that it is the responsibility of Ski Corp. to provide parking, no matter what the court decides, and that they will be in violation of their permit if they fail to do so. He stated that the County is no party to the parking agreement, therefore the decision of the court would not affect their position. They can't hold anyone else responsible.

Hans Burkhard stated that the Ski Corp. has already provided spaces in accordance with County requirements, and should not have them taken away through the provisions of a new plan which does not realistically address the parking problem. The area will "always be supported by the day skier", who must be provided for. Ski Corp. has an 80 yr. agreement for parking.

Phil Carvelle stated that if he complies with County requirements and provides parking spaces for development, he should be allowed to develop. He said the "parking agreement" did not address the day skier problem, and obviously contemplated development. He suggested that Ski Corp. could buy the parking area. He mentioned that parking would also have to be provided for commercial development, which would not replace skiers.

Larry Hoffman stated that it would be presumptuous of the County to pass an ordinance on a matter that is before the Courts. There is no other such ordinance in Placer County where parties are named. The County should not be taking sides. He suggested that even though he is not counsel for Ski Corp., it might be advisable for them to join the County as a party to the "Parking Agreement" lawsuit. He suggested that the language be flexible depending on the outcome of the litigation; with approval of the Board of Supervisors, the obligation to provide parking could be transferred to another party by written agreement.

Eric Pavel made a motion that the MAC request a change in the language regarding the responsibility for providing parking. The motion was seconded by Patty Guilford. In favor, Pavel, Guilford, Poulsen. Opposed, Werbel. Phil Carvelle abstained. Passed 3/1. Pavel also noted that parking is needed so Squaw Valley can develop, and concentrating too much development in the core might be creating a problem.

Fire protection was the next issue considered, since Kirk Smith of County Special Districts was in attendance. Kirk Smith reviewed the financial problems created by Prop 13, and other restrictions on spending, and the back up measure of expenditures up to \$100.00 in taxes from Squaw Valley residential and commercial owners. His position is that the County cannot carry the cost of facilities and equipment necessitated, in the opinion of the County, by new development so the General Plan provides that the first entity triggering the need for an aerial truck be required to pay for it, and that development on the south side of the Valley would require a new sub station to be built at the developers expense. He also mentioned that the County might wish to sell the valuable 2 acre site where the station was now located, and relocate it, possibly on the "triangle area" belonging to Poulsens.

3.

Sandy Poulsen noted that from a valuation standpoint, the land in the "triangle" could be an even exchange value for the land now in use, and they would have the additional expense of building a new station.

Eric Pavel noted that the costs seemed unreasonably high, and would scare developers away, rather than pay for equipment and stations.

Larry Hoffman questioned the need for another sub station in such a short distance. He stated that Tahoe City serves as far as Kings Beach, a distance of $7\frac{1}{2}$ miles, and that such a requirement would be unique in Placer County. He also noted the inequity of the proposal, with the entrance and south side of the Valley having to pay a higher share, and suggested a formula to share costs.

Peter Werbel suggested that if the property owners would benefit from an insurance standpoint, they might be asked to pay 20% of the cost.

Kirk Smith suggested that this might need voter approval.

Phil Carvelle noted that the "budget was sketchy" and it sounded like a wish list. He questioned why Squaw Valley was unique, and noted that he is already paying heavy costs for alarm systems and other safeguards. He noted that he does not plan highrise in the core.

Larry Hoffman suggested that the matter should not be covered in the General Plan at all, and should be a separate resolution by the Supervisors, when equitable means of financing have been resolved.

Fred Yeager proposed a revised section on Blythe Arena, providing that no residential uses would be allowed, and allowing for benefits in the way of forgiveness of mitigation fees, parking requirements, taxes, etc. to encourage the developer to continue the existing use.

Hans Burkhard said that would be O. K.

Phil Carvelle took exception to this proposal, saying that it represented a "double standard", and he would discuss it with his attorneys, since it would be a "profit making entity" and not a public facility. It is overreaching and discriminatory.

Hans Burkhard claimed that it would cost an incredible amount ~~just~~ to renovate it, and it would not be a profit making venture.

Patricia Guilford moved that a Special Purpose Land Use District be formed for Blythe Arena, and the motion was seconded by Peter Werbel. Guilford, Werbel, Pavel and Poulsen voted for the resolution, and Phil Carvelle voted against it.

Larry Hoffman suggested trying to make it unanimous.

Fred Yeager said "unanimity is not relevant. Phil can object."

The composition of the Design Review committee was discussed. It was recommended that 7 people be selected with the addition of Bob Egan and Ken Todd to the names already submitted.

SQUAW VALLEY MUNICIPAL ADVISORY COUNCIL
December 10, 1982.

The meeting of the MAC was called to order at 9.07 a.m.
in the offices of Carville-Sierra Corporation.

Commissioners present: James Davisson
Michael Linnett
Patricia Guilford
Sandy Poulsen
Philip Carville
Eric Pavel
Peter Werbel

Placer County Officials and Staff present:
Larry Sevison, Supervisor
Joanne Neft, Planning Commissioner
Don Lunsford, County Manager.
Kirk Smith, Special Districts
John Krogsrud, Public Works
Fred Yeager, Planning Department.

Others present: Ken Todd, Carville-Sierra
Larry Hoffman, Attorney
Craig Poulsen, Foothill Design
John Gack, Foothill Design
Hans Burkhard, S. V. Ski Corp.
Jimmy Mott, SV Ski Corp.
Jim Kellar, Tahoe World.

This was the first meeting of the Squaw Valley Municipal
Advisory Council which had been appointed by the Placer County
Board of Supervisors at their meeting on Tuesday, November 30,
1982 in Auburn, California.

The first order of business on the agenda was the organ-
ization of the MAC. Eric Pavel was unanimously elected Chairman
of the Board. James Davisson, designee of the Squaw Valley County
Water District, was named Vice Chairman by unanimous vote. Sandy
Poulsen nominated Patty Guilford as Secretary, and Patty Guilford
nominated Sandy Poulsen. Sandy Poulsen was elected Secretary,
with Patty Guilford offering assistance as needed.

The terms of office of the five at-large members have to be
staggered in the original election, so all terms will not run out
at the same time. Michael Linnet moved that Phil Carvelle, Eric
Pavel, and Sandy Poulsen be named to two year terms, and Patty
Guilford and Peter Werbel be named to one year terms. The decision
was unanimous.

Supervisor Larry Sevison stated that members of the County
staff were in attendance to advise the Council members on their
function and duties. The main function is to act as an advisory
council to the Board of Supervisors representing issues and prob-
lems that are important to the people of Squaw Valley, including
matters such as snow removal and garbage problems, and matters
pertaining to the Squaw Valley General Plan.

The Council can also work with other government agencies such as the Forest Service, State, and Special Districts, and can apply for grants for projects in Squaw Valley.

Another separate advisory group which will be formed by the Board of Supervisors will be a Design Review Committee. Larry Sevison suggested that the Design Review Committee should be a "lay" group, consisting of 5 to 7 members. Members of the MAC were polled to see who would be willing to serve on the Design Review committee, which was described as carrying a "heavy responsibility." Jim Davisson, Phil Carville and Sandy Poulsen volunteered to serve on the Committee. It was recommended that at least 3 MAC members participate, plus 2 "at large" residents. Larry Sevison said that Jimmy Mott of Ski Corp. had also asked to be on the Design Review Committee. Michael Linnett asked if it was advisable to have technical expertise in the group, and suggested Chip Matcham as a possibility. Fred Yeager stated that the County staff would be willing to help as necessary, and would spell out the duties of the Design Review Committee. He said the Design Review function would lengthen the time function for review of plans from 7 days to 21 days. If input is not received within the prescribed time period, the County will proceed without it. The Committee can cover subjects relating to traffic, circulation, parking, lighting, signage, landscaping, development plans and other problems. They should not get involved in single family residences. Phil Carville moved, seconded by Michael Linnett that if any member missed more than three meetings without a valid excuse, in a consecutive period, they would be replaced. Otherwise the terms would be the same as the MAC terms for MAC members, with 3 two year terms and 2 one year terms initially, so terms would be staggered. It was recommended that the vacancies be advertised so people could apply for membership.

There was discussion as to whether the Recreation Commission should be under the MAC or stay with the Squaw Valley County Water District. Larry Sevison suggested that it might be advisable for them to stay with the Water District, which is providing them with secretarial service and funds. The MAC has no budget at this time. Yeager explained that TCPUD is handling the funds now for the Rec Committee, and it might make more sense for them to be under the MAC. Chairman Eric Pavel suggested that they be invited to the next meeting to give their input. Joanne Neft said the Recreation Committee has a broader base of 7 members, and an active program.

Don Lunsford stated that the County would provide certain services and personnell to assist the MAC, including assistance from the County Counsel on legal matters, and from Bill Combs on Tahoe issues.

Jimmy Mott of S. V. Ski Corp. mentioned that he wanted to be on the MAC, and that he was the only one recommended for membership who hadnot been named. He had attended the General Plan meetings regularly and felt that Ski Corp. should be represented since they are a major property owner and taxpayer. Larry Sevison suggested that Mott could be on the Design Review committee instead, which would be more involved with the General Plan problems, and could be an alternate to the MAC.

3.

Larry Hoffman discussed the problem of resolving the many unresolved problems and disagreements during the short time frame available, and requested a more reasonable time schedule.

Fred Yeager said he had to have written input on the EIR by December 24, so he can have everything printed by January 20. The MAC should receive a copy of the Summary and Findings by January 20, hopefully. He suggested that we concentrate on areas of disagreement.

Larry Hoffman suggested that we concentrate on the list of issues. One of the major issues is parking which does not seem to have been adequately address or resolved in the Plan.

Fred Yeager outlined his proposal that in areas encumbered by the parking agreement only one half of the displaced parking spaces would have to be made up. His plan is making an "enormous assumption" that 50% of the day skiers can be replaced, and that Ski Corp. will be held responsible for replacing displaced parking.

Hans Burkhard stated that this concept is not acceptable to Ski Corp. and that they have given input to the County in this regard. He noted that Squaw Valley was built by day skiers, and the number is growing. He estimates that only 4% will be replaced by the proposed Carvelle development, and that it is a ridiculous concept that Ski Corp. has to replace parking which they have already provided. It should not be taken away. They do not intend to back off in this regard. He does not object to Hotel development but the developer should pay at least 50% if he is using parking involved in the parking agreement.

Larry Sevison agreed that the day skier problem must be addressed. He has a house at Tahoe and is familiar with the problem.

Larry Hoffman noted that Carvelle and Ski Corp. are now in Court seeking a determination of their rights.

Eric Pavel stated that legal action could tie up development of the core area for many years, so it is important to avoid the problem. Fred is restricting the development of other areas which are not affected by the parking agreement. B. C. and other areas should be permitted to develop.

Fred Yeager stated that his plan is encouraging development in core area and he does not want other areas to interfere.

Burkhard stated that the need for parking for day skiers in the core area is not going to decrease.

Larry Hoffman stated that the plan as presented puts "too many eggs in one basket", and discourages development in other areas, treating them as "second class."

Sandy Poulsen suggested that the "destination resort" concept should be for a year-round destination resort, balanced throughout the Valley, and not all concentrated in the core area which is a seasonal use primarily concentrated in the ski season. The other

4.

areas of the Valley offer amenities for recreational, residential and commercial development in other seasons of the year, without adding to parking congestion and traffic throughout the length of the Valley. Year round development uses would help stabilize the economy of the Valley.

Burkhard said "Let's see what Carvelle can provide in other areas."

Carvelle stated that Ski Corp. could have bought the parking area if they wished to do so.

Burkhard said that Carvelle bought the property with full knowledge of the parking agreement.

Carvelle stated that he felt the problems would be resolved in Court, and that in any case the agreement terminated in 2074, since it only provides for a 50 year term with a 50 year option. He also commented that there is some question as to whether there is parking for 4,000 cars. He also mentioned that he does not intend to do any development in the core area for several years.

Burkhard stated that development should not go beyond 20% in the next two years.

Carvelle stated that that would be an arbitrary constraint.

Pavel stated that we must try to make recommendations that are in the best interest of the Valley.

Larry Sevison decided that since there were so many critical unresolved questions the time crunch was unrealistic, and he would ask for continuation to a later date. He did not want all of these questions brought before the Board of Supervisors.

Fred Yeager said this would not hurt his feelings.

Eric Pavel suggested that since this is a new deal of the MAC working with the staff, it would save the taxpayers money to delay the point where Fred has to finalize the plan until some of the problems are resolved. He recommended that a formal letter be sent to the Board of Supervisors to extend the time frame until Jan. 24, 1983, including comments on the E. I. R.

Fred Yeager agreed that this would give him time to rewrite certain controversial sections of the document.

A list of some of the most controversial issues was drawn up to be considered at the next meeting, attached herewith.

MUNICIPAL ADVISORY COUNCIL

Agenda for discussion of some of the controversial issues in the Squaw Valley General Plan.

1. Parking. Substantial discussion has taken place about the parking problem at the previous meeting. The MAC will attempt to formulate a recommendation for a resolution of the problem.

This subject is covered on pages 7, 8 and 14 of the Summary of principal issues, and page 63 of the SVGPC Draft.

2. Transportation. Widely discussed by the SVGPC. There should be time now for the study recommended by the SVGPC during the winter months, referred to on page 7, Para. 23, 24, 25 of summary.

3. Concentration in "core" area. Referred to on page 5, Para. 15, page 8, Para. 8, page 14, Para. 20 and 24, and page 15, para. 25, 26.

4. Uses and restrictions on B C development. See page 3, para. 5, summary, pages 21-22 SVGPC plan, page 5 para. 15, summary, and page 41, SVGPC plan, page 12, para. 10, 11, 12, 13, page 14, para. 20, 24, page 15, para. 25.

5. Floor area ratios, -and storage areas. See summary page 11, para. 9 page 12, para. 10, 11, page 14, para. 20, 24.

6. Height limit in commercial, building envelope requirements, HDR, LDR. page 5, para. 18, summary, page 47 SVGPC. page 15, para 26, 29, 30, summary, page 16, para. 32, 34,

7. Alignment of Squaw Valley Road, Shirley Canyon boundaries. page 2, para. 13, para. 16. summary.

8. Ski lifts and Alpine Commercial designations should be indicated schematically until engineering is completed. page 1, para. 6, page 6, para. 19, page 16, para. 36,

9. Western States Trail. PAGE 1, PARA. 4

10. Recreational park. PAGE 1, PARA. 5 page 6, para. 21, summary, page 6, page 55, SVGPC, page 17, para. 38, summary.

11. Employee housing. PAGE 13, PARA. 15.,

12. Apartment overlay. page 5, para. 19, summary, pages 48, 49, SVGPC.

13. Fire protection. page 8, para. 28, page 13, para 18.

14. Phasing. PAGE 1, PARA. 8, page 5, para. 16, page 14, 23, page 16, para.

15. Blythe Arena. page 17, para. 41.

16. Signs criteria for signs. page 13, para. 16.
17. Corrals and stables. PAGE 4, PARA.11, page 16, para. 17, page 17, para. 38.
18. Avalanche study. PAGE 7, PARA. 8.
19. Comments on the E. I. R.
20. Fee levels and financial planning. PAGE 12, para. 14.

6.

Further unresolved discussion continued between Burkhard, Carvelle, Yeager and Krogsrud with regard to the parking problems, as to how much day skier parking must be retained and who is required to pay for it if it is displaced, and how developability of the property will be affected.

The problem of zoning on Blythe Arena was discussed. Yeager said it was hoped that it would be retained as a sports and recreation facility. He said the County was willing to waive mitigation fees if this was the case, and that they would overlook the fact that parking was inadequate, because it would serve a public benefit. Residential uses would be eliminated.

Burkhard said they were not planning to tear the arena down unless structural problems arose. They planned to add recreational activities. They expected to lose around \$40,000.00 the first year.

Carvelle stated that it was bought to make a profit.

The next Board Meeting was scheduled for Thursday, December 16 at 1 p. m. It was proposed that a letter be sent to the County asking for more time, until January 24, 1983 because of the many unresolved problems.

The meeting was adjourned at 5.00 p. m.

MEMORANDUM

PLANNING DEPARTMENT

COUNTY OF PLACER

To: The Squaw Valley Final EIR file (SCH# 81101205) Date: April 14, 1985
From: Thomas D. Kubik, Associate Planner
Subject: ERRATA FOR SQUAW VALLEY FINAL EIR

Changes were incorporated by the Planning Commission at their last hearing of March 23, 1983 to the Impact Report as follows:

- 1) On Page 110, the first paragraph was modified to remove the second, third, and last sentences; and
- 2) On Page 131, the first sentence of the last paragraph on the page was modified to reflect the following wording: "On the mountain, there are currently five vertical wells, three belonging to the Squaw Valley County Water District and two belonging to the Mutal Water Company, and an existing (1964) reservoir is presently supplying water to Gold Coast."

The cover sheet of the Impact Report should read "Final Environmental Impact Report and the date of preparation should be "February 15, 1983".


THOMAS D. KUBIK
Associate Planner

TDK:djg

cc: EIR Distribution List

PUBLIC SERVICES

Sewage Disposal

Sewage treatment in Squaw Valley is primarily handled through the Squaw Valley County Water District's collection system which is connected to the Tahoe Truckee Sanitation Agency export line along the Truckee River. The TTSA plant in Truckee is presently undergoing an expansion which will significantly increase its capacity. Additional connections will then be granted on a first-come, first-served basis. New development in Squaw Valley will be required to connect to the existing public system. Currently the commercial facilities at the High Camp Restaurant and Cold Coast areas are connected to an on-site sewage treatment and disposal system constructed several years ago. Due to the maintenance and operational costs of such a system, along with the potential for health hazards which may exist, these facilities and new ones like them should also be connected to a public treatment system as soon as is feasible. Any new development located at the entrance to the Valley and along the Truckee River should also be required to tie into the existing public sewage disposal system.

Mr. D. E. Butterfield, General Manager, T.T.S.A., has indicated that the currently approved plant expansion will handle approximately 12,000 single family equivalent units. This expansion would not be adequate to handle buildout of the already subdivided lands within the TTSA service area. Responsible planning for expansion of TTSA or a new advanced wastewater treatment plan should involve all affected jurisdictions.

Water

On the mountain, there are currently five vertical wells, three belonging to the Squaw Valley County Water District and two belonging to the Mutual Water Company, and an existing (1964) reservoir is presently supplying water to Gold Coast. This reservoir is fed from surface sources so it is subject to contamination and pollution, therefore, water

MEMORANDUM

PLANNING DEPARTMENT

COUNTY OF PLACER

Date: July 26, 1983

To: Squaw Valley General Plan E.I.R. File
From: Thomas D. Kubik
Subject: Modifications to the Squaw Valley General Plan

Various changes have been made to the General Plan since the E.I.R. was prepared. These changes, for the most part, have been minor and do not require any modification of the impact report.

Provision has now been made within the Plan for the establishment of a golf course, and this is one modification that warrants additional discussion. Although no specific layout for a golf course has been submitted, ramifications of this type facility must be disclosed in a general context.

The following is intended to be incorporated by reference into the Squaw Valley General Plan E.I.R. as it relates to Soils, Drainage, Water Quality, Vegetation, Wildlife and Aesthetics:

GOLF COURSE IMPACTS

There may be environmental impacts associated with the construction of a golf course that should be studied in a subsequent E.I.R. That E.I.R., when prepared, shall address the concerns of any degradation of the meadow.

MITIGATION MEASURES

1. Grading and topsoiling should be accomplished during summer months.
2. Runoff from the golf course should be infiltrated on site instead of being discharged directly into Squaw Creek.
3. Fertilizer applications should be matched as closely as possible to the requirements and uptake rates of the plants.