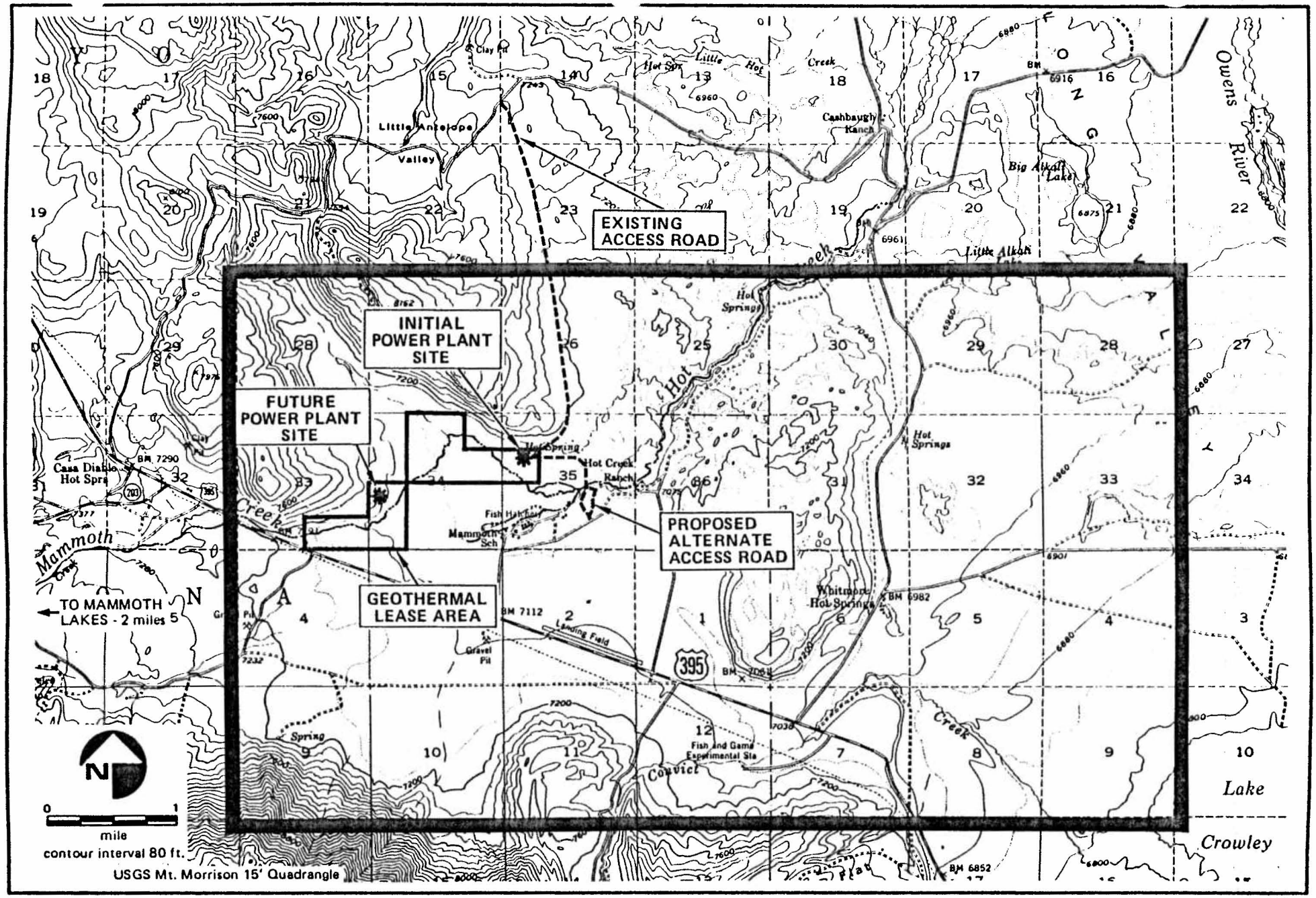


FIGURE 20

GEOTHERMAL LEASE MAP

Source: WESTEC SERVICES, INC.

5. Noise associated with power plant operations will impact development in the vicinity including the Hot Creek Fish Hatchery and the Hot Creek Ranch. Although noise levels can be reduced by design features, an increase in ambient noise levels in the vicinity is unavoidable.

Both of the existing sand and gravel pits have been in operation for many years and represent valuable resources. They are the only sites available for such materials in the Mammoth/Long Valley area. Continued operation of the sites represents inevitable soil disturbances, visual impacts, generation of nuisance noise and dust, and heavy equipment traffic on adjacent roadways. The Forest Service pit is 1,200 feet north of the airport terminal area. Nuisance impacts associated with the continued operation of the this pit will eventually conflict with the development of the airport terminal core area. The proposed expanded terminal facilities, airport hotel development, and golf course recreational land uses are essentially incompatible with the gravel pit operation.

Mitigation. The proposed geothermal development project should be reviewed by the Airport Land Use Commission for compliance with the requirements of the Mammoth/June Lake Airport Land Use Plan. The following mitigation measures should be included in use permit conditions for the project:

1. Vapor emissions and/or steam plumes shall not interfere with aircraft operations in the vicinity of the airport.

2. All building structures, towers, transmission lines, and other above-ground structures shall comply with the height restrictions of the Airport Land Use Policy Plan.

3. Lighting systems for power plant facilities shall be designed to be low-level and shielded to avoid interferences with night airport operations.

Although detailed studies have not yet been conducted, there is a potential beneficial impact associated with the proposed geothermal development. Heat from waste geothermal fluids could be conveyed to the airport terminal core area in a recirculating hot water pipeline for space and area heating purposes. Although the distance between the two facilities is approximately one and one-half miles, the concept appears technically feasible. Advantages would be a considerable reduction in the cost of electrical energy for heating during the winter months. The hot water pipeline could also be used to keep aircraft parking aprons snow and ice free. Disadvantages include the potential capital cost of the hot water recirculation system and the environmental impacts associated with pipeline construction.

Due to its resource value, the existing Forest Service sand and gravel pit will probably continue in operation for at least 5-10 years. Conflicts with proposed airport development should be anticipated, however, leading to the eventual closure of the site. The following measures should be implemented in a phased program:

1. The Mono County Department of Public Works should conduct studies to identify potential alternative sand and gravel pit sites. Potential long-term resources at the existing and alternative site should be evaluated.

2. A surface restoration and revegetation plan for the site should be developed for phased implementation. If feasible, vegetative screening should be provided for the site in the short term.

3. The site should be either restored, contour graded, and revegetated upon its abandonment or converted to other compatible land uses.

Air Quality

Setting and Conditions. The airport planning area is situated within the Great Basin Unified Air Pollution Control District (APCD) which encompasses all the major valleys of the Eastern Sierra Nevada in Inyo, Mono, and Alpine Counties. The general air quality of the region is excellent but is subject to periodic degradation. During the summer months, orographic effects cause gusty local winds almost daily. The arid climate, sparsely vegetated soil surfaces, and frequent high winds contribute to dust storms which carry suspended particulates and visibility reducing particles for considerable distances. During the winter months, clear skies, low humidity, extreme altitude, and wide diurnal temperature changes produce strong radiation and temperature inversions particularly in confined valley areas. The prevalent use of wood-burning stoves and fireplaces for domestic heating in the area contributes to excessive airborne particulate matter. The fact that radiation inversions occur during periods of clear, cold weather when domestic heating is at a maximum aggravates winter air quality problems in developed communities. Usually, such inversions dissipate by mid-day, but under extreme conditions, they can last for a three or four day period.

The Great Basin APCD has monitored suspended particulate concentrations in the Mammoth Basin since 1979. Total suspended particulate (TSP) concentrations within the urbanized area of the Mammoth Lakes community have consistently exceeded the state air quality standards during the winter months. The APCD also monitors carbon monoxide (CO) levels within the community. Although general CO concentrations are low in most community areas, numerous violations of state and federal standards have been recorded adjacent to high volume roadways and intersections. In general, the Great Basin APCD has noted a decline in air quality in the Mammoth Basin and Long Valley area in conjunction with population growth and increases in vehicular traffic.

Potential Impacts. Potential air pollution impacts associated with the Airport Land Use Plan will include temporary short-term emissions during construction activities and long-term emissions arising from increased aircraft and automobile traffic as well as industrial and residential land uses.

General construction activities and heavy equipment operations will generate significant amounts of dust and obnoxious fumes and odors within individual project sites. Construction vehicles and equipment are generally powered by internal combustion (usually diesel) engines which can cumulatively produce significant exhaust emissions.

Long-term air quality impacts will be most significant within the vicinity of the airport site. Estimated pollutant emissions are summarized in Table 10 based on the aircraft operations and automobile traffic forecasts presented previously in Table 3. The emission contributions have been estimated using gaussian plume diffusion modeling techniques and are based on the assumption that state and

Table 10.

AIRPORT EMISSION CONTRIBUTIONS WITH PROJECT – 1980, 1995

MAMMOTH LAKES AIRPORT

CONTAMINANT	ANNUAL AIRPORT EMISSION CONTRIBUTIONS IN KILOGRAMS			
	AIRCRAFT	AIRCRAFT FUELING	AUTOMOBILES	TOTAL
Carbon Monoxide:				
1980	108,850	-	1,920	110,770
1995 (With Project)	205,000	-	1,409	206,409
Change	+96,150	-	- 511	+95,639
Non-methane Hydrocarbons:				
1980	3,560	1,810	194	5,564
1995 (With Project)	6,700	2,640	136	9,476
Change	+ 3,140	+ 830	- 58	+ 3,812
Nitrogen Dioxide:				
1980	440	-	94	534
1995 (With Project)	830	-	118	948
Change	+ 390	-	+ 24	+ 414
Sulphur Dioxide:				
1980	120	-	*	120
1995 (With Project)	220	-	*	220
Change	+ 100	-	*	+ 100
Suspended Particulates:				
1980	200	-	17	217
1995 (With Project)	380	-	*	380
Change	+ 180	-	- 17	+ 163

*Negligible

federally mandated reductions in automobile emission rates will be realized by 1995. Aircraft emission rates have been assumed to remain constant, even though technical improvements are anticipated which will eventually reduce pollutants associated with exhaust gasses. Annual airport related emissions assuming complete implementation of the Airport Master Plan improvements are presented in Table 11. Although both tables indicate that federal and state air quality standards will not be exceeded by airport operations, there will be a decline in relative air quality due to airport emissions.

Table 11.

AIRPORT EMISSION CONCENTRATION CONTRIBUTIONS – 1980, 1995
MAMMOTH LAKES AIRPORT
(WITH OR WITHOUT PROJECT)

	MICROGRAMS PER CUBIC METER				
			AIRPORT EMISSION CONCENTRATION CONTRIBUTIONS (ADVERSE WEATHER CONDITIONS AND BUSY HOUR ACTIVITY)		
	AMBIENT AIR QUALITY STANDARD				DISPERSION ESTIMATE OF TOTAL PROJECT EMISSIONS 10 KM. DOWNWIND
CONTAMINANT	FEDERAL (PRIMARY)	STATE	RUNWAY END	ROADSIDE ENTRANCE (AIRPORT ACCESS)	
Carbon Monoxide: (1-hr)					
1980:	40,000	46,000	2,192	215	1.5
1995:			3,288	131	2.8
Change:			+1,096	-84	+1.3
Non-Methane Hydrocarbons: (1-hr)					
1980:	235	200	41	22	*
1995:			60	14	*
Change:			+ 19	- 8	*
Nitrogen Dioxide: (1-hr)					
1980:	-	470	3.2	27	*
1995:			4.8	28	*
Change:			+ 1.6	+ 1	*
Sulphur Dioxide: (1-hr)					
1980	-	1,310	3.2	0.8	*
1995:			2.0	0.9	*
Change:			- 1.2	+0.1	*
Suspended Particulates: (24-hr)					
1980	260	100	2.0	0.8	*
1995:			2.8	0.9	*
Change:			+0.8	+0.1	*

*Negligible

Long-term air quality impacts will arise from stationary and mobile emissions associated with residential development, lodging facilities, and industrial activities. Experience in the Mammoth Lakes area has shown that emissions from wood-burning stoves or fireplaces used for residential heating can be significant. Projected emissions of TSP and CO associated with ultimate development of land uses designated for the plan are presented in Table 12. The estimated emissions assume that fuel wood is the primary source of residential heating, natural gas is utilized for lodging heat, and automobile traffic averages 5 trips per day.

Table 12. Estimated CO and TSP Emissions

Development Type	Units	Emissions (tons per year) CO	TSP
Residential	130	9.20	1.87
Lodging	300	4.20	.46
Industrial	50	9.30	1.89
Automobiles, trips per day	2,560	14.80	0.60
	Total:	37.50	4.82

Mitigation Measures. The potential levels of pollutant emissions associated with airport operations, residential and industrial land uses, and automobile traffic do not represent significant air quality hazards. Pollutant emissions may contribute to a decline in the air quality of the Long Valley area during adverse meteorological conditions, however. The following mitigation measures should be implemented to reduce the potential air quality impacts of the Airport Land Use Plan:

1. Project grading and construction permits shall contain the following provisions:

   a. Sites shall be adequately watered to control nuisance dust.

   b. All construction equipment shall be equipped with required exhaust systems and mufflers.

   c. Burning of waste materials and stripped vegetation shall not be permitted.

2. All project developments within the planning area shall obtain a construction permit from the Great Basin Unified APCD and comply with the following requirements:

   a. All residential structures shall be designed to comply with state energy conservation standards to reduce the need for fossil fuels and wood burning for heating.

   b. All industrial and manufacturing uses shall be required to provide filters, scrubbers, or other emission control devices as necessary to reduce the discharge of pollutants to the atmosphere. No emissions of toxic fumes or gasses are permitted.

   c. The use of alternative energy sources (geothermal, solar) shall be considered in all major development proposals.

   d. Landscaping and ground cover vegetation shall be required to stabilize all exposed or disturbed soil surfaces.

3. The potential air quality impacts associated with automobile traffic shall be considered in all development proposals.

   a. Provisions should be made in development plans to encourage the use of transit systems, car pools, or other traffic reducing measures.

   b. The use of sand and cinders for de-icing during winter periods should be avoided to reduce dust generation along roadways.

   c. Local roadway systems should be designed to minimize traffic congestion and delay.

Visual/Aesthetic Resources

Setting and Conditions. The Long Valley region is an area of spectacular natural beauty and sweeping, open vistas. The rugged snow-capped peaks of the Eastern Sierra terminate abruptly on broad plateaus and open range lands and dominate the visual setting. From vantage points along Highway 395, straight line visibility is in excess of 25 miles and includes panoramic views of the valley and surrounding mountain ranges. The setting of the planning area is shown on Figure 21.

Within the airport planning area, the visual approach from the southeast along Highway 395 is stunning (see Figure 22). Looking northwest, Mount Morrison and Laurel Mountain are to the left, Mammoth Mountain is in the distant left center, while the Minarets, Mount Ritter, Banner Peak, and Mount Wood dominate the far distant skyline from center to right. In consideration of this unique view, the stretch of Highway 395 within the planning area is designated an official State Scenic Highway. As one travels northwesterly through the planning area, the terrain widens into an open, essentially flat plain. Within this four-mile stretch virtually all projections above the natural landscape are visible on either side of the highway. The entire airport planning area is conversely visible from the south on Convict Lake Road.

In 1981, Mono County adopted a Scenic Highways Element for the county-wide general plan. This element defined a County Scenic Highway system which basically includes all of the state highways and major roadways in the county not within the boundaries of developed communities. The Scenic Highway Element establishes policies and requirements for all development located within 1,000 feet of the designated scenic highways.

Potential Impacts. Virtually all of the airport planning area is within the scenic viewshed of State Highway 395. Most of the land uses designated in the Airport Plan reflect existing developments which have been a part of the viewshed for many years. With the exceptions of the Sierra Quarry and Forest Service sand and gravel pits, these existing

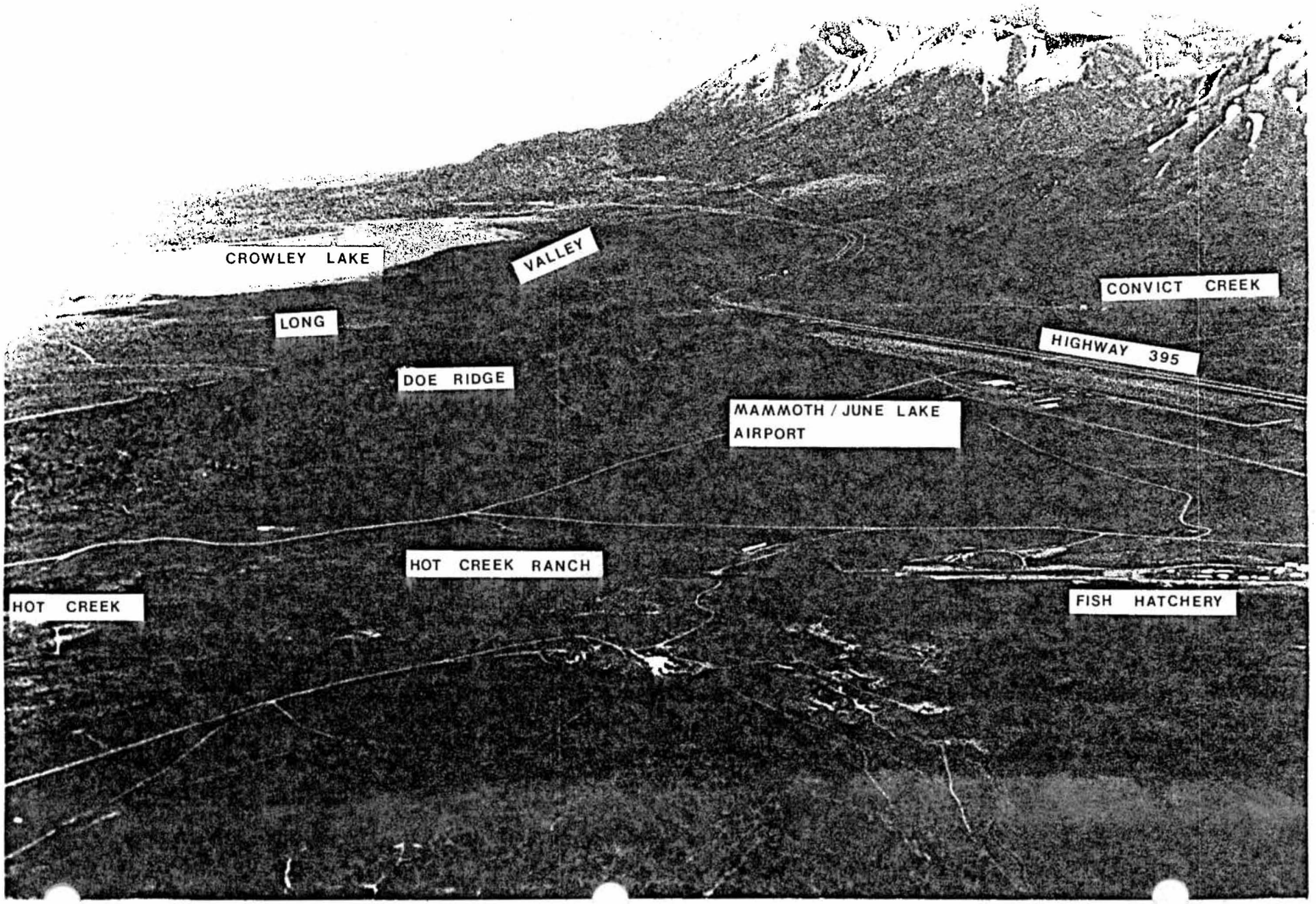


FIGURE 21

VISUAL SETTING

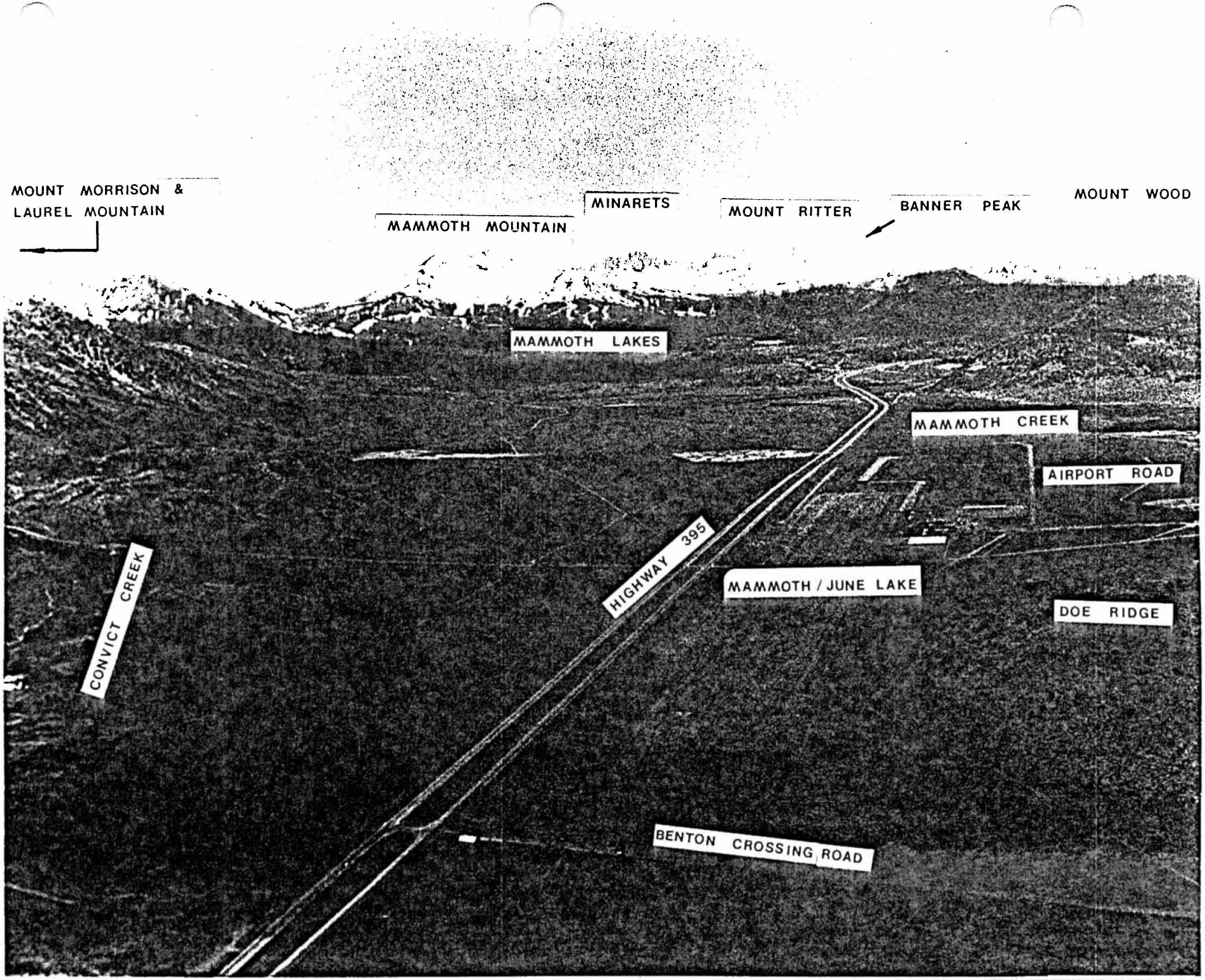


FIGURE 22

SCENIC VIEWS

uses are not considered visually offensive nor do they have a significant impact on the scenic views of the area.

The most sensitive land use designations for potentially adverse visual impacts are the Airport Development District and the two existing sand and gravel pit industrial sites. The ADD zone extends from Highway 395 to the airport access road and includes the entire length of the existing airport site. The terrain of the airport area is essentially flat and there are no natural topographic or vegetative screening features. The Sierra Quarry site is situated immediately adjacent to Highway 395 across from the school road intersection. Although the Forest Service sand and gravel pit is almost a half-mile north of the highway and behind the airport, the visual scar of the excavation and associated processing equipment are visible from a considerable distance.

Development of the airport terminal and associated hotel could have adverse visual impacts from viewpoints on Highway 395 and Convict Lake Road. Although the existing airport facilities have been a part of the viewshed for many years, additional building structures and development could result in the deterioration of visual quality. Inadequate consideration of building separations, external colors and appearance, or excessive building and tower heights could adversely affect the viewshed of the surrounding natural landscape. Potential visual impacts associated with eventual development of industrial, warehousing, and manufacturing land uses in the westerly portion of the ADD zone are especially critical. These land uses typically involve bare metal frame structures, outdoor storage of materials and equipment, overhead utility poles and light standards, and minimal consideration of aesthetic features. Closely spaced structures, excessive signing and lighting, and inadequate control of trash and debris in semi-industrial areas frequently leads to visual blight.

Short-term visual impacts are most acute during the construction phase of individual developments. Large-scale vegetative removals and mass grading for developments such as the industrial area and the proposed golf course facilities will necessarily create visual scars on the landscape. If grading is performed far in advance of development, or if projects are abandoned following earthwork and grading, such visual scars could have long-term impacts. The existing Sierra Quarry site and the Forest Service borrow pit are obvious examples of the potential impact associated with mass grading.

Excessive outdoor lighting, illuminated signs, and glare within the airport area could have adverse night time visual impacts. The airport area is essentially isolated on a flat, open plain which is visible from the west for many miles. The cumulative effect of excessive lighting could be dramatic and might even adversely affect night aircraft operations.

Mitigation Measures. As a general policy, development within the scenic highway corridor of Highway 395 should be discouraged and visual considerations for all development within the airport planning area should be of primary importance. The following mitigation measures shall be strictly enforced for all land use proposals.

Scenic Highway Corridor. All development within scenic highway corridors shall comply with the following requirements of the County Scenic Highways Element:

1. Visually offensive land uses shall be adequately screened.

2. Earthwork, grading and vegetative removals shall be minimized.

3. All site disturbances shall be revegetated with plants and landscaping which are in harmony with the surrounding environment. A landscaping plan shall be submitted and approved for all projects.

4. Existing access roads to scenic highways shall be utilized whenever possible. Construction of new access roads, frontage roads, or driveways adjacent to scenic highways shall be avoided, except where essential for safety and welfare.

5. The number, type, size, height, and design of on-site signs shall be strictly regulated. Use permits are required for all signs. No off-site signs are permitted.

6. All new utility installations must be installed underground.

Airport Development District. Considering airport safety zones, it is anticipated that most of the development within the ADD zone will be situated adjacent to the existing airport road alignment. Although this location is generally outside of the 1,000-foot scenic highway corridor, the potential visual impact of industrial and manufacturing land uses is significant. The following mitigation measures shall be enforced for industrial development outside of the airport terminal core area:

1. Large exposed cut and fill slopes shall be avoided. All site grading shall be contoured to blend with the existing topography. Bonds or other security shall be provided to guarantee site restoration in accordance with grading permit requirements.

2. Extensive site landscaping shall be required to provide visual screening. Where appropriate, landscaping berms and contour grading shall be utilized to minimize visual

impacts. Minimum landscaping area shall be 20% of gross site area.

3. Maximum height of all building structures shall be 35 feet. Minimum separation between building structures shall be 20 feet.

4. Design, color, and materials for all buildings, fences, and appurtenant structures shall be compatible with the natural setting. Earth tone colors and natural materials should be emphasized. All building elevations and colors shall be subject to ALUC approval.

5. All developed sites shall present a neat and clean appearance to adjoining roadways and land uses. All storage areas, utility tanks, and other potentially unsightly facilities shall be screened with natural material fences or vegetation.

6. All utilities within the ADD zone shall be constructed underground. Exterior lighting shall be shielded and indirect and shall be minimized to that necessary for security and safety.

7. All development within the ADD zone shall be required to obtain trash removal service and provide an adequate number of fenced and screened receptacles.

Mass Earthwork and Grading. The most critical mitigations for visual impacts associated with large-scale grading activities (such as golf course development) are to complete the work in as short a time period as possible and initiate revegetation immediately. The visual impact of completed golf course facilities is visually not adverse, although somewhat subjective. The following mitigation measures shall be included in grading permit requirements for all large-scale earthwork projects.

1. Removal of vegetation shall be restricted to those areas that require grading or are to be landscaped. Tree removals shall be minimized. All large-scale projects shall be phased in accordance with County Public Works Department requirements.

2. All grading and earthwork activities must be completed by November 30, and disturbed areas shall be stabilized or reseeded prior to December 15.

3. Irrigation systems must be provided to insure the establishment of revegetation.

As discussed previously in the Mineral/Energy Resources section of this report, a phased program for surface restoration and revegetation of the two existing sand and gravel pits should be implemented. Interim vegetative screening, or other mitigating measures, should be provided to reduce the visual impacts of the sites.

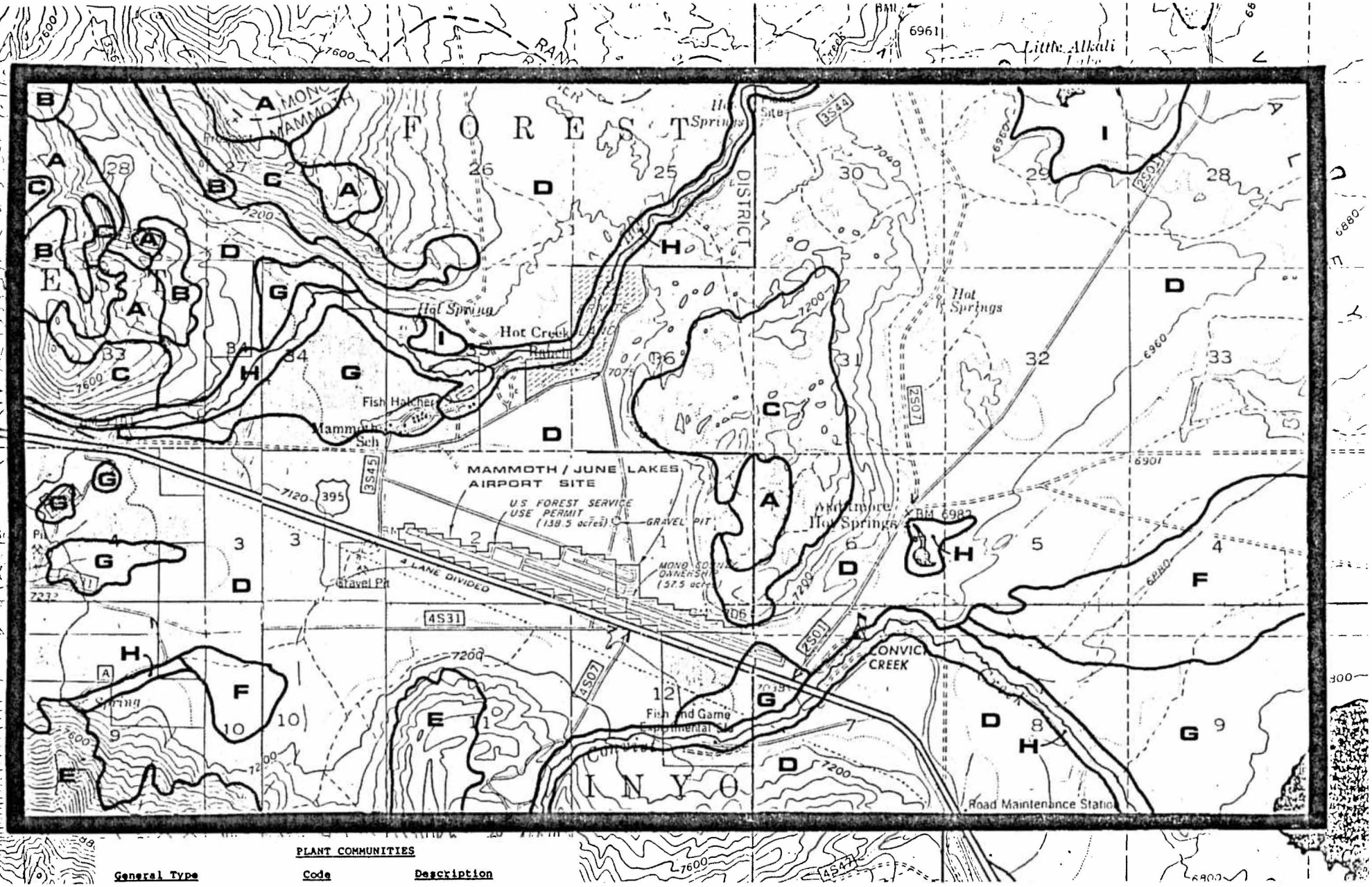
Biological Resources

Setting and Conditions. The climate, altitude, and vegetation of the airport planning area includes three distinctive life zones found in the Eastern Sierra region: Canadian, Transition, and Upper Sonoran. Each of these life zones contains distinctive plant communities which provide characteristic habitat for wildlife species. Five major plant communities are found within the planning area as shown on Figure 23 and summarized in Table 13.

Table 13. Plant Community Distributions

General Type	Code	Description	Area, acres	% of Total Area
Jeffrey Pine Forest	A	> 11-inch caliper	466	2.6
	B	< 11-inch caliper	336	1.9
		Subtotal:	802	4.5
Pinon-Juniper Woodland	C	< 11-inch caliper	1,160	6.5
Sagebrush Scrub	D	Great Basin Sagebrush	12,462	69.5
	E	Mountain Brush/ Chaparral	414	2.3
		Subtotal:	12,876	71.8
Mountain Meadow	F	Wet Grassland	735	4.1
	G	Riparian Meadow	1,284	7.2
		Subtotal:	2,019	11.3
Riparian	H	Stream Environment Zones	815	4.5
Barren	I	Alkali Flats	248	1.4
		Total:	17,920	100.0

Brief descriptions of the features of the major plant communities are presented below:



PLANT COMMUNITIES

General Type	Code	Description
Jeffrey Pine Forest:	A	Greater than 11-inch caliper, 10%-40% crown cover.
	B	Less than 11-inch caliper, 10%-40% crown cover.
Pinon-Juniper Woodland:	C	Less than 11-inch caliper, 10%-25% crown cover.
Sagebrush Scrub:	D	Great Basin Sagebrush
	E	Mountain Brush/Chaparral
Mountain Meadow:	F	Wet Grassland
	G	Riparian Meadow
Riparian:	H	Stream Environment Zones
Barren:	I	Alkali Flats

FIGURE 23

AREA VEGETATION

Jeffrey Pine Forest: This community is found at the tops of ridges in the highest elevations of the planning area. The dominant tree species is Jeffrey pine (Pinus jeffreyi), but White Fir (Abies concolor) is also found in scattered association. Crown cover densities range from 10%-40%. Understory vegetation is composed of shrubs, forbs, and grasses in variable density. Principal understory species include representatives of the Great Basin Sagebrush and Mountain Brush/Chaparral plant communities as described below.

Pinon-Juniper Woodland: Usually found on southerly slopes and exposed ridges which are characterized by shallow, rocky soils. Dominant tree species are single-leaf pine (Pinus monophylla) and western juniper (Juniper occidentalis), but scattered Jeffrey pine intermingle with these species where soil depths allow. Crown cover densities are low, and understory is similar to that found in Jeffrey Pine forest community.

Sagebrush Scrub: This plant community represents the majority of the planning area and occupies the flat valley floors and lower foothill slopes where free-draining soils predominate. Two vegetative types have been included in the general community: Great Basin Sagebrush and Mountain Brush/Chaparral. The principal species of the Great Basin Sagebrush community are big sagebrush (Artemisia tridentata), antelope bitterbush (Purshia tridentata), rabbitbrush (Chrysothamnus sp.), snowbrush, (Ceanothus velutinus), buckwheat (Eriogonum sp.), desert needlegrass (Stipa speciosa) and wheat grass (Bromus tectorum). Numerous other species also occur in limited numbers. Mountain Brush/Chaparral species include mixtures of sagebrush varieties and mormon tea (ephedra nevadedsi), curl-leaf mahogany (Cercocarpus ledifolius) and manzanita (Arctostaphylos patula).

Grassland/Meadow: Natural wet grasslands and meadows occur adjacent to Mammoth Creek, Convict Creek, and in the areas near Crowley Lake. Some of the wet grasslands are artificially irrigated and maintained for pastures. This vegetative community is extremely important to the ecosystem of the area from a wildlife standpoint and is the most sensitive to disturbance. Representative vegetative species include redtop (Agrostis alba), meadow foxtail (Alopercurus pratensis), tufted hairgrass (Deschampsia caespitosas), sedges (Carex sp.), wiregrass (Juncus sp.), monkey flower (Mimulus sp.), and wild iris (Iris sp.).

Riparian. This designation is really a portion of the Grassland/ Meadow community, but has been separately identified due to the importance of the Mammoth Creek, Hot Creek, and Convict Creek stream environment zones. In addition to the vegetative species found in the meadow community, the riparian zone includes aquatic flora such as Mare's Tail (Hippuris vulgaris), Water Buttercup (Ranunculus aqiatilis), Horsetail (Equisetum sp.), and Duckweed (Lemna sp.). In rare locations, Sandverbena (Abronia turbinata) and Hoary Chaenactis (Chaenactis douglasii) are also found along stream banks.

The plant communities in the planning area provide diverse habitat for a variety of bird, reptile, amphibian, and small mammal species common to the life zones of the Eastern Sierra Nevada. Over 40 bird species can be found in the area, the most common of which are Cinnamon Teal, Killdeer, Sandpiper, California Gull, Mourning Dove, Nighthawk, and several varieties of Swallow, Sparrow and Blackbirds. Representative reptile species include Great Basin Fence Lizard, Northern Side-Blotched Lizard, Sagebrush Lizard, Great Basin Whiptail, Garter Snake, Gopher Snake, and Great Basin Rattlesnake. Amphibians include California Toad, Pacific Treefrog, and Great Basin Spadefoot. Common small mammal species include Belding Ground Squirrel, Least Chipmunk, Panamint Chipmunk, Pocket Gopher, White-tailed Jackrabbit, Desert Cottontail, and Yellow-Bellied Marmot. The cited wildlife identifications are not intended to be all-inclusive, and there are many other species present which are characteristically associated with the habitat. The following special interest wildlife species are of significance. The locations of sensitive habitats for these species within the planning area are shown on Figure 24.

Aquatic Wildlife. Mammoth Creek, Hot Creek, and Convict Creek support resident populations of rainbow (Salmo gairdneri) and brown (S. Trutta) trout. Mammoth Creek and Convict Creek are both stocked by the State Department of Fish and Game (DFG) at upstream lake locations. Hot Creek is managed by the DFG as a trophy trout stream from Mammoth Creek to the Owens River and is considered a "world class" brown trout stream. Regulations require artificial flies on barbless hooks and all fish caught must be released. The warm, productive waters of Hot Creek also support small populations of the Owens Valley Tui Chub (Gila bicolor synderi), an endangered species, as well as the Owens Snake, Three Spine Stickleback, and Mosquitofish.

Hot Creek Fish Hatchery is one of the oldest and most productive hatcheries in the DFG system. Relative constant, warm (58°F), spring water has supported the development of unique strains of rainbow trout which have unusually high growth rates. The hatchery produces over 600,000 catchable-size trout and 1,000,000 fingerlings which are planted in lakes and streams throughout the Inyo-Mono area.

Mule Deer. The Mule Deer (Odocoileus hemionus) is the most important big game animal of the Sierra Nevada and considerable effort is devoted to management and preservation of major herds. Mule deer are migratory animals, and their annual cycle includes four periods: winter range, spring migration and staging, summer range, and fall migration. Significant numbers of two major deer herds are known to migrate through the project area during the spring and fall months. Total population of the Sherwin and Casa Diablo herds is estimated at 6,000. The Sherwin herd (est. 4,000) migrates from Round Valley (near Bishop) to the Sherwin Ridge area (near Mammoth Lakes) along the lower foothills of the Sierra Nevada generally west and south of Highway 395. The migratory pattern of the Casa Diablo herd is not well known, but appears to follow a path from

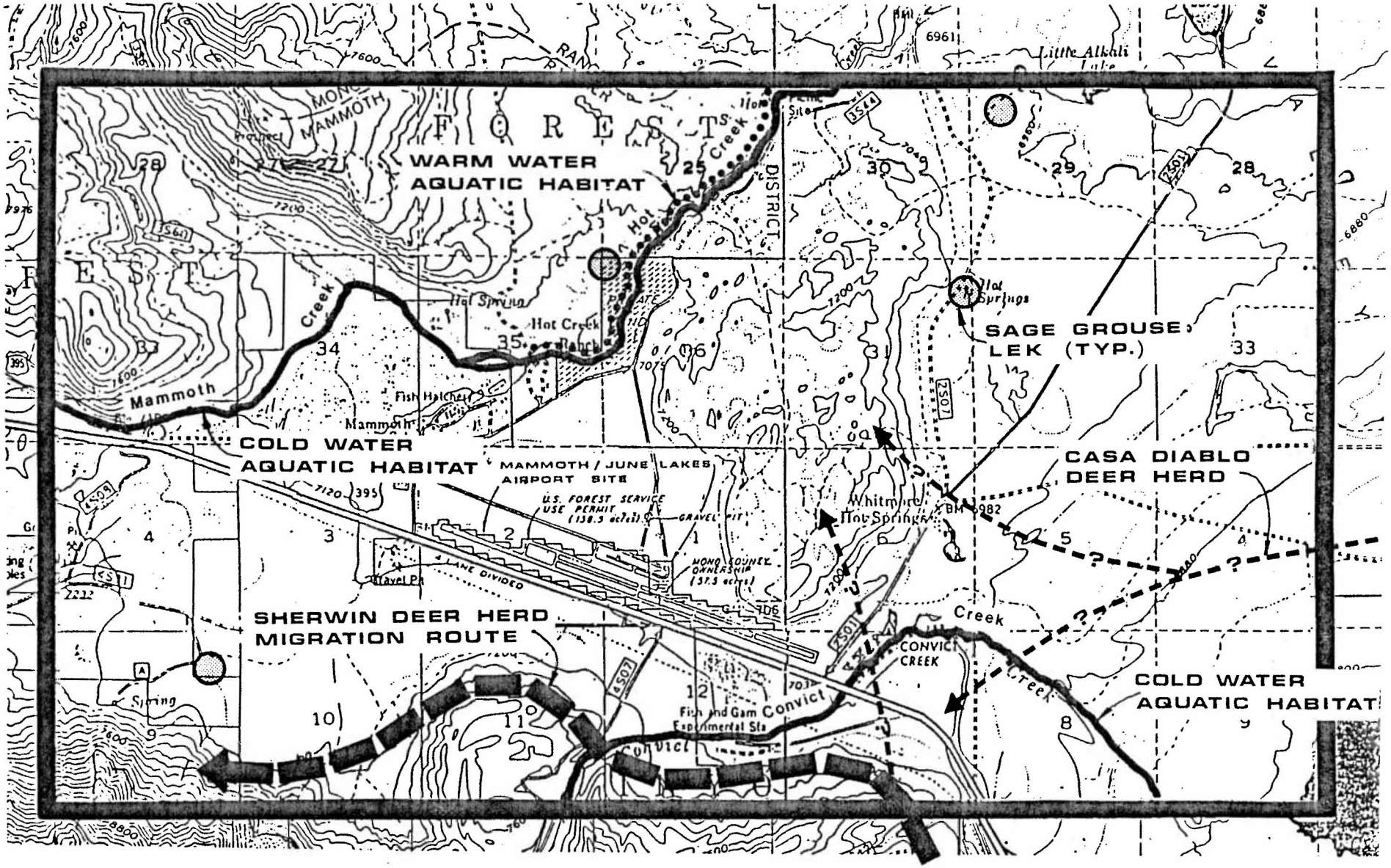


FIGURE 24

SENSITIVE HABITAT LOCATIONS

the summer months. Studies conducted for the project site indicate that no major populations of deer will be impacted by the proposed development and conflicts with migratory patterns are expected to be minimal.

Hot Creek Ranch. Future development at this site could have significantly adverse impacts on aquatic and terrestial wildlife. The following mitigation measures are considered essential to reduce the significance of potential impacts:

1. Any development should be conducted in accordance with a comprehensive development plan as required under the PUD zoning district.

2. No disturbances of the Hot Creek stream environment zone are permitted. No road or utility crossings of Hot Creek are permitted.

3. No building structures, facilities, or site alterations are permitted on the westerly side of Hot Creek.

4. All development proposals shall be reviewed by the Department of Fish and Game.

It should be noted that a general mitigation for potential biological impacts is that over 93% of the planning area is designated as open space in the Land Use Plan.

Archaeological and Cultural Resources

Setting and Conditions. Although it is suspected that early man occupied the Eastern Sierra for at least 20,000 years, direct archaeological evidence only supports human occupation circa 6,000 years ago. The geologically recent volcano activity of the area is undoubtedly a factor in the lack of prehistoric evidence. During the protohistoric and early historic periods, the Long Valley was occupied by the Owens Valley and Mono Lake Paiute groups, each representing Shoshonean linguistic characteristics of the larger Uto-Aztecan linguistic family. Occupancy of the Paiute groups appears to date from 1,000 to 1,500 years ago.

Due to harsh winter conditions, the Long Valley area was only subject to seasonal visitation for hunting, gathering, and tool-making, and no permanent habitation sites are known. Arrowheads, obsidian tools, and stone artifacts are relatively common in the area, especially at locations near large surface streams, along trading routes, or in the vicinity of deer migration routes. Several archaeological surveys have been performed in the planning area, and numerous seasonal campsites and obsidian quarry sites have been identified. The general locations of these sites are shown on Figure 25. For additional information reference should be made to the following archaeological site survey records: CA-MNO-1, -73, -382, -458/630, -661, -703, -776, -777, -778, -779, -1660, and CV-1985-1 and -2.

the Casa Diablo Mountain area (20 miles east of the planning area) through Long Valley to the same Sierra Nevada crossings as the Sherwin herd. A recent study indicates that approximately 200 deer migrate through the Doe Ridge mesa and additional numbers undoubtedly disperse throughout the northerly ridge slopes of the planning area.

Sage Grouse. Sage Grouse (Centrocercus urophasianus) is found throughout the Great Basin Sagebrush habitat of the planning area and the surrounding region. This game bird was once abundant throughout its range, but over-hunting and competing land uses, such as grazing, have greatly reduced its numbers. They are closely linked to the Great Basin Sagebrush which provides food, cover, and nesting and are usually found in flat or rolling terrain. Breeding occurs in March and April in strutting grounds, or leks, which are generally isolated open areas in the sagebrush scrub. It is estimated that the total population in the Long Valley area is approximately 600 birds.

Raptors. Special interest birds of prey which are known to occur within the planning area include the Golden Eagle (Aguila chrysaetos), Prairie Falcon (Falco mexicanus), and Swainson's Hawk (Bueto swainsoni). The open spaces of the Long Valley area and adjacent high ridges and promontories provide ideal hunting areas for these birds.

Potential Impacts. The primary impacts of the proposed Airport Land Use Plan on biological resources will be in those areas which have previously been undisturbed. These areas include:

1. Portions of the Airport Development District.
2. The proposed golf course site.
3. The Hot Creek Ranch Property.
4. Geothermal Lease Area.

Eventual development of the Airport Development District will result in the loss of approximately 200 acres of Great Basin Sagebrush habitat. Although this habitat is ubiquitous in the region, its conversion will contribute to a cumulative decline in the wildlife productivity of the area. Development of expanded passenger terminal facilities, hotel/ lodging facilities, and industrial and manufacturing uses will increase noises, activity levels, traffic, and general human presence in the area. Animal populations in disturbed areas will be severely reduced. Those animals which can relocate to adjacent undisturbed areas will create additional competition for food and habitat. Migratory animals (including the Mule Deer) and other transitory mammals will avoid the development area, potentially disrupting their normal foraging or feeding habits.

Potential golf course recreational development adjacent to the airport site will involve the disturbance of 40 acres of Great Basin Sagebrush; 80 acres of Pinon-Juniper Woodland, and 30 acres of Jeffrey Pine Forest. Approximately 40% of the 150-acre project area will be

converted into an artificial grassland environment. During the construction period, large-scale losses of resident animals and disruptions of migratory patterns will occur. Upon completion, the ecosystem of the area will be altered favoring those wildlife species suitable for a grassland environment. Such an environment will be potentially attractive to the Mule Deer and may alter their natural migratory habits. Although such an alteration may actually increase the health and productivity of the deer herds, it also presents the potential for increased road kills on Highway 395 because the primary migration route is on the far side of the roadway.

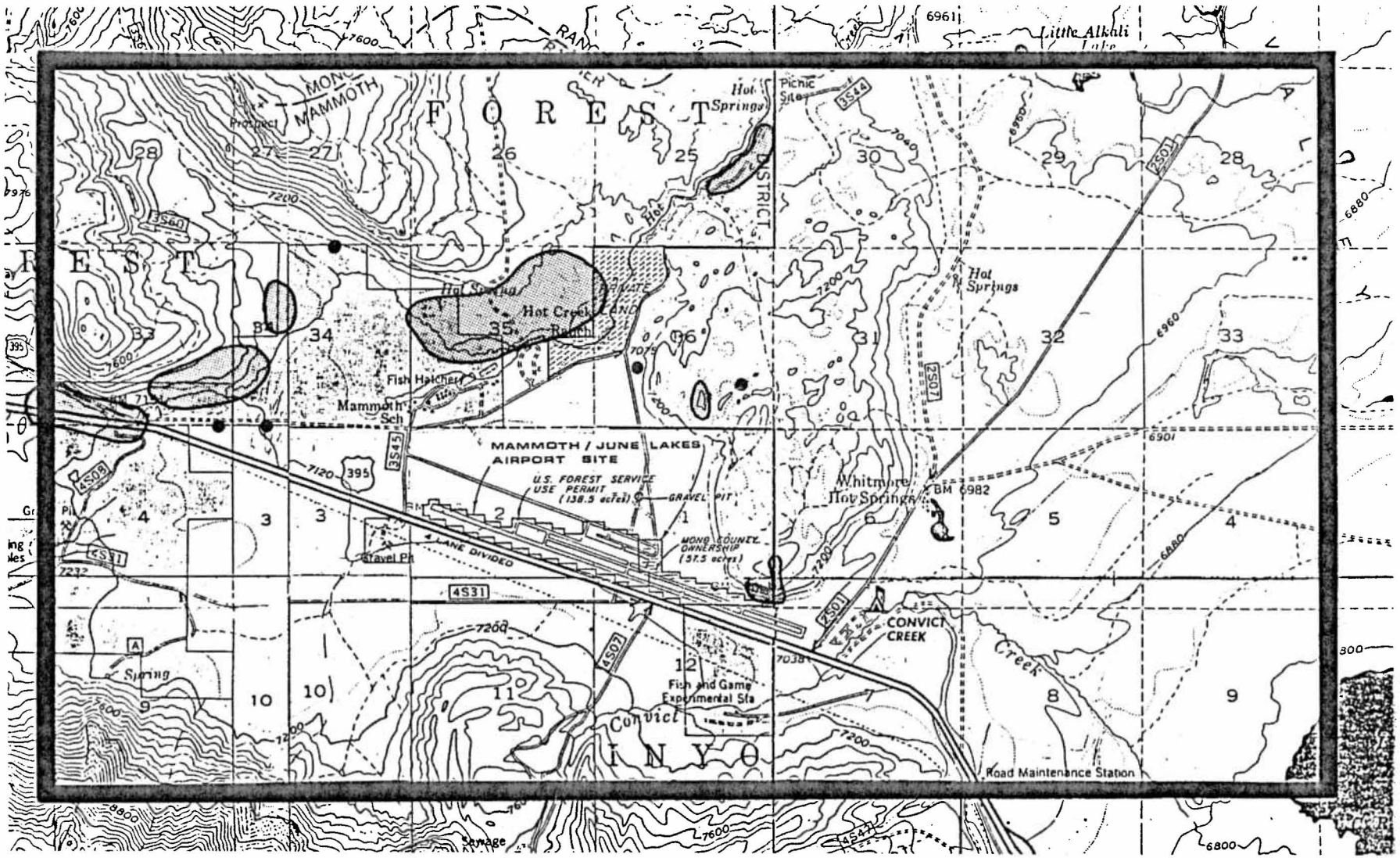
The most sensitive site for wildlife impacts is the existing Hot Creek Ranch property. Hot Creek (and its unique warm water aquatic habitat) flows through the central portion of the site. In addition, a sage grouse lek is situated at the northwest corner of the property. Potential development of the 130-acre site could adversely affect the unique and delicate habitat of Hot Creek, reduce the population of the endangered Tui Chub, and impact the productivity and breeding habits of the sage grouse. The importance and sensitivity of the Hot Creek wild trout fishery resource should also be emphasized.

Geothermal power plant development within the lease area could have significant impacts on the adjacent meadowland and aquatic environment of both Mammoth and Hot Creek. Consideration of potential biologic impacts for the project is beyond the scope of this document, however. Reference should be made to the Draft EIR for the Mammoth/Chance Geothermal Project (available from the Mono County Office of Energy Management) for the specific impacts associated with this project and proposed mitigation measures.

Mitigation Measures. The loss of habitat associated with implementation of developments within the planning area is an unavoidable consequence of the Airport Land Use Plan. The following conditions and mitigation measures generally reduce the significance of this impact within the proposed development areas:

Airport Development District. The airport facility has been in existence for many years, and resident wildlife populations have already adjusted to its presence. No critical habitats are situated within the proposed development area. Previous studies conducted by the U.S. Forest Service indicate that there are no rare, endangered, or threatened species of plants or animals known to occur within the airport area (see Appendix F).

Golf Course Recreation Area. The development of golf course recreational facilities adjacent to the airport site will represent several beneficial impacts on the wildlife of the area. Decorative lakes and ponds will provide valuable habitat for migratory birds, and grass fairways will provide forage for deer. In general, the operation of the golf course represents a low-intensity land use restricted primarily to



● Isolated Site or Lithic Scatter

Potentially Significant Occupation Area

ARCHAEOLOGICAL STUDY AREAS

FIGURE 25
(Revised)

During the historic period, activities in the Long Valley area centered on timber harvesting, mining extraction, and ranching. The Chance Ranch has been in existence for at least 100 years, and there are numerous mining sites in the general area dating from the 1880's. With the possible exception of the Chance Ranch site, there are no known features of historical significance within the planning area.

Potential Impacts. Destruction or disturbance of significant archaeologic sites within the planning area could represent an irretrievable loss of potentially valuable prehistoric information. Because the identified sites in the planning area appear to have been subsequently occupied by different groups over long periods of time, they could be defined as "important" in accordance with CEQA criteria.

The proposed geothermal development project has the greatest potential for adverse impacts on archaeological resources due to its location. Reference should be made to the site-specific discussions of archaeological resources and mitigation measures presented in the Draft EIR for the project.

Several archaeological reconnaissance surveys have been performed by the U.S. Forest Service in the vicinity of the airport site (see Appendix F). Two rockshelter sites (CA-MNO-703) were identified at the most southerly toe of Doe Ridge. Design modifications were incorporated into the 1983 airport expansion project to avoid disturbance of these areas even though detailed archaeological investigations had not been performed to verify the importance of the sites. No archaeological or cultural features were identified in the remainder of the 256-acre airport property.

Site specific archaeological reconnaissance surveys are in progress for the Doe Ridge golf course area. Preliminary findings indicate there are several lithic scatter sites within the proposed project area, probably associated with obsidian quarry and tool making activities. The significance of the sites has not yet been completely evaluated.

Mitigation Measures. A general mitigating circumstance for potential impacts on archaeological resources in the planning area is that there appears to be little potential for significant sites within the most intensive land use designations. No archaeological resources are known to exist within the Airport Development District, for example. Although several sites have been identified within the proposed golf course project area, preliminary studies indicate that they are not of any unique significance. CEQA guidelines require "reasonable" efforts to preserve unique archaeological resources in an undisturbed state and suggest the following alternative mitigation measures:

1. Construction should be planned to avoid archaeological sites.

2. Permanent conservation easements may be provided to preserve archaeological resources.

3. Archaeological sites may be capped or covered with a layer of soils before building on the sites.

4. Parks, greenspace, or other open space can be incorporated into projects to preserve archaeological sites.

The following mitigation measures shall be required for all development projects within the airport planning area:

1. Site-specific archaeological surveys shall be conducted for all development proposals within the planning area. If warranted, detailed archaeological investigations shall be conducted to determine the significance of identified resources.

2. All grading and construction permits shall include requirements for archaeological preservation. If archaeological evidence is discovered during construction, work shall be suspended and the Mono County Planning Department and the Inyo National Forest shall be notified.

3. Wherever feasible, archaeological sites shall be preserved in an undisturbed state as recommended in the alternative CEQA mitigation measures.

A potentially significant archaeological site exists on the westerly side of Hot Creek within the Hot Creek Ranch property. As previously recommended in the Biological Resources section of this report, all disturbances on the westerly side of Hot Creek should be avoided.

Regional Planning and Population

Setting and Conditions. Jurisdictional relationships within the airport area are complex and involve several federal, state, and local planning agencies. Agencies include the Inyo National Forest, the Bureau of Land Management, the City of Los Angeles, California Department of Fish and Game, University of California Santa Barbara, Mono County and the Town of Mammoth Lakes.

Inyo National Forest land use policies are established in the Mammoth-Mono Planning Unit Land Management Plan of 1979 under Alternative VI (modified). The airport planning area includes portions of Management Units Nos. 40, 46 and 47. Unit Nos. 40 and 46 are assigned Zone H goals and policies with management emphasis on watershed, visual quality, forage and wildlife habitat. The stated goals for Zone H are:

(a) Increased amounts of dispersed and developed recreation opportunities of Experience Levels 1 and 2
(b) Visual quality objective of the partial retention level or higher
(c) Irregular size structured stands of healthy, vigorous trees within and adjacent to existing or potential recreation development

sites, scenic roads and key wildlife habitat; generally even size structured stands of healthy, vigorous trees on all other productive forest land
(d) Increased production of forage for domestic livestock
(e) Increased fish and wildlife habitat productivity

The only specific reference relating to the airport land use plan is a statement that policies will provide for ". . . expanding aircraft service facilities at Long Valley Airport . . ." Unit No. 47 (Hot Creek) is assigned Zone E goals and policies with management emphasis on watershed, visual quality, recreation and fisheries. No specific policies for Hot Creek are stated, but the resource analysis summary emphasizes preservation of the fishery resource. All of the three management units in the airport planning area are overlain by a Geothermal Management Zone which provides for geothermal resource development subject to constraints. No surface occupancy is permitted within Unit No. 47 (Hot Creek), and the sensitive nature of the Hot Creek groundwater/surface water system is noted.

Bureau of Land Management lands occupy the northeasterly portion of the planning area and are administered under the Benton-Owens Valley Management Plan. Most of the land use policies established in the plan concern resource management and preservation. The Long Valley Area General Plan also contains the following general policy statements:

1. All public lands in this area will be used for multiple use management. This policy may be modified at a later time only if the management goals for the area are changed and are concurred to by Mono County, United States Forest Service, and Los Angeles Department of Water and Power. If the Mono County General Plan update identifies different goals for specific parcels of public land, then an amendment to this plan will be considered.

2. Special public facility uses of these lands may be made, on a case by case basis, providing the use is in harmony with other agency and government land use goals and the environment. These uses would generally be low key non-structural type facilities which would not impair visual resources.

The 1982 Land Use Element of the Mono County General Plan designates the planning area for "mixed intensity--multiple use" purposes. This general land use designation is defined as

> "Land utilized for a variety of purposes including: A mix of rural residential and service commercial uses on one acre minimum lots; a combination of clustered residential units and convenience commercial uses on thirty (30) acre parcels; private land devoted to both recreational and agricultural uses on one (1) acre lots; and public lands devoted to a combination of recreationally related uses

(e.g., open space, ski facilities, summer homes, commercial concessions, etc.) and lands suitable for other purposes (e.g., agricultural leases, affordable housing, cemetery site, sanitary landfill, etc.), on variable lot sizes. None of the multiple land uses are subject to maximum density requirements."

The "target" land use density for mixed-multiple uses is defined as one dwelling unit per 10 acres for all non-federally owned lands. Under this criteria, projected development of the planning area is 571 dwelling units (DU) based on a total non-federal land area of 5,708 acres. No formula is defined for relating dwelling units to commercial, industrial, or lodging land uses, but a population density of 2.34 persons per DU is established. The maximum population anticipated for the planning area is therefore 1,387 persons.

The airport planning area is within the sphere of influence of the Town of Mammoth Lakes. The first comprehensive general planning document prepared for the community of Mammoth Lakes was the 1975 Monoplan which was the culmination of an extensive five-year inter-agency planning effort. All of the airport planning area is included within the regional land use studies of the Monoplan. The adopted plan identified the need for airport expansion and development, designated the Whitmore Hot Springs area as a recreational activity node, and recognized the potential for geothermal development. The Monoplan projected a permanent regional population of 12,600 in the Mammoth Lakes/Long Valley area, and a total annual recreational/tourist visitation of about 5,000,000 persons. The recently incorporated (1984) Town of Mammoth Lakes is currently in the process of adopting a new general plan to update the original Monoplan. The draft general plan reemphasizes the need for expansion and improvement of the Mammoth/June Lake Airport in order to improve air travel to the region. Consideration is also being given to the possibility that the airport facility may eventually be included within the jurisdiction of the Town of Mammoth Lakes.

Potential Impacts. The airport planning area includes numerous jurisdictions and is subject to the management plans, policy plans, and general planning documents of federal, state, and local agencies. Although historically there has been considerable inter-agency coordination in the area, the various jurisdictional planning documents have never been incorporated into a single overall land use plan. If the proposed Airport Land Use Plan is adopted by Mono County and the Inyo National Forest without the cooperation and support of affected public agencies, there is a potential for future land use conflicts and interferences with long-term resource management goals and objectives.

The proposed Airport Land Use Plan designates over 93% of the planning area for open space purposes (see previous Table 4). With the exception of the Airport Development District, most of the other land use

designations reflect existing uses within the planning area. In general, the lands designated for PA purposes are not subject to intensive future development although moderate expansions and additions of existing facilities should be anticipated. Potential future uses of the Sierra Quarry site include industrial development subject to visual and scenic corridor constraints. The plan designates the existing Hot Creek Ranch property for planned unit development (PUD) in recognition of both its environmental sensitivity and resort recreational potential. The PUD designation is intended to insure that any future development will be adequately planned with consideration of environmental constraints.

The Airport Development District is the most intensive land use zone within the planning area. With the possible exception of visual impacts, the lands adjacent to the existing Mammoth/June Lake Airport are the least environmentally sensitive in the area. Land uses designated for the ADD zone include facilities which will directly contribute to the economic viability of the airport facility as well as those which will promote general economic development in the region. While the designated land uses are considered appropriate within the immediate vicinity of the airport, they are generally incompatible with other open space uses of the surrounding area. Accordingly, the containment of intensive land uses within the confines of the ADD zone is an essential feature of the plan.

Projected ultimate populations for the land uses designated in the ALUP are presented in Table 14.

Table 14. Projected Ultimate Population

Land Use	Area, acres	Density DU/acre	Total DU	Maximum Population Density	Maximum Population (PAOT)	Occupancy %	Average Population
PA	490	0.10	49	2.34	115	50	58
I	65	--	--	1.00	65	--	--
PUD	110	1.0	110	2.34	257	50	129
ADD	455	1.0	455	2.34	1,065	50	533
Totals:	1,120		614		1,502		720

The projected average population for the planning area is 720 persons, with a peak maximum daily population of 1,502 people at one time (PAOT). The average population association with the ALUP represents approximately 52% of the population projection (1,387) derived from the existing Mono County General Plan Land Use Element. Although accurate maximum daily populations (PAOT) are not available for the airport planning area, the projected ultimate population of 1,502 PAOT is estimated to represent a

significant increase over current levels. Projected maximum daily population could have adverse impacts on the surrounding open space land uses including increases in noise, automobile traffic, incidence of trespass and vandalism. and a general increase in the level of human activity and presence.

Mitigation Measures. The proposed Land Use Plan is intended to consolidate the various public agency management plans into a joint planning document for the airport area. All open space lands have been categorized to identify existing uses and general management goals as follows: agricultural, recreation, resource management, and stream conservation. Within each specific open space designation, jurisdictional agencies can apply the policies and goals which have been established for the particular type of management required. The proposed ALUP is considered to be consistent with the general goals of the Mammoth-Mono Unit Plan of the Inyo National Forest and the Benton-Owens Valley Management Plan of the Bureau of Land Management. Consideration and adoption of the proposed plan by jurisdictional agencies will provide consistent planning direction and will promote the coordinated achievement of the management goals and policies within the planning area.

Most of the existing developed land uses within the planning area have been established for many years but are not adequately recognized in existing management plans. The ALUP identifies these land uses and defines their limits and purposes. Expansion and development of the Mammoth/June Lake Airport has been a recognized goal of the Mono County General Plan and the Monoplan regional planning document for many years, but specific land use policies and the scope of development has never been defined. The ALUP defines specific land uses and establishes an Airport Development District for the airport area. Constraints on development and mitigation measures necessary to reduce environmental impacts are analyzed in this document.

Ultimate projected populations associated with implementation of the ALUP are considered to represent moderate growth. As noted previously, the average population of the planning area is projected to ultimately approach 720 persons, most of which will be concentrated within the ADD zone. Maximum daily populations are expected to reach 1,500 PAOT during peak recreational periods. Mitigation measures considered necessary to accommodate these populations include:

1. Limitation of future development to the zones designated for such purposes.

2. Limitation of access outside of development areas to existing improved roadways. Off-road vehicles in roadless areas should be prohibited.

3. Provision of adequate signing to inform the public about environmentally sensitive areas.

The Airport Land Use Plan is itself a general mitigation measure for the impacts associated with future land uses and population growth in the airport planning area. The plan provides public agencies with information regarding the type, scale, and location of proposed land use developments so that potential impacts can be anticipated. Appropriate protective policies and regulations can therefore be instituted before actual development takes place.

Employment and Economic Development

Setting and Conditions. Mono County is a sparsely populated rural county with a total land area of approximately 2,000,000 acres. Almost 80% of the land within the county is under public ownership principally within the jurisdictions of the Inyo National Forest, Toiyabe National Forest, Bureau of Land Management, and the City of Los Angeles. The permanent population of the county is approximately 10,000 persons, almost 60% of which is concentrated in the Town of Mammoth Lakes and nearby communities in Long Valley. Capitalizing on the scenic beauty of the Eastern Sierras and the availability of virtually all outdoor recreational pursuits, the economy of the region is primarily based on tourism and resort recreation. The Mono County area accommodates almost 4,500,000 recreational visitors annually. Although almost two-thirds of this visitation occurs during the summer months, winter recreation provides over half of local revenues and employment.

Employment in the Mammoth/Long Valley area is heavily dependent on the resort-tourism and construction industries, both of which are seasonal in nature. Recent studies by the Town of Mammoth Lakes indicate that over half of the labor force is seasonally employed. The distribution of employment in Mammoth Lakes is presented in Table 15.

Table 15. Mammoth Lakes Employment Distribution

Employment Section	Percent of Permanent/Full-Time Employees	Percent of All Employees
Agriculture, forestry, fisheries	0	0
Mining, manufacturing	0	0
Construction	12	14
Transportation, utilities	5	3
Restaurant, bar	12	10
Wholesale, retail trade	14	16
Finance, insurance, real estate	13	6
Recreation	12	24
Services	14	12
Government	5	6.5
Lodging, property management	11	10
	100	100
TOTAL NUMBER OF EMPLOYEES:	2,637	5,559

SOURCE: ESA, 1984; Earth Metrics, 1983

The recreational and tourism bias of the area economy is demonstrated by the employment figures. Recreation, lodging, and restaurant services account for 44% of all local employment, while the construction and service industries employ 26% of the labor force. It is notable that there is virtually no manufacturing or industrial employment in the Mammoth Lakes area. In comparison, 20% of the statewide labor force is generally associated with this segment of the economy.

Because of its heavy dependence on tourism, the economy of the area is subject to extreme annual and seasonal variations in response to national and regional trends. The lack of a stable, year-round employment base and the variability of employment opportunities is reflected in chronically high unemployment rates. In the three-year period from 1981 through 1983, the average annual unemployment rate for the county was 9.4%, 12.6%, and 13.8%. Responding to the need for strategies to stabilize the local economy and employment, the Mono County Human Services Department prepared an Overall Economic Development Plan (OEDP) in 1984. The ultimate goals established by the OEDP are to create and maintain a healthy and diversified economy with high levels of employment, including the following specific measures:

1. Preserve and enhance the existing private sector job and business opportunities.

2. Promote and assist in the establishment and expansion of commercial and light industrial operations.

3. Promote recreation, tourism and other forms of visitor activity.

Potential Impacts. The designation of an Airport Development District in the ALUP has been specifically designed to recognize and exploit the economic development opportunities associated with the Mammoth/June Lake Airport site. The proposed ADD land uses are anticipated to have significant positive effects on the area economy, local employment, and the financial viability of the airport operation. At present, the airport facility is operated and maintained by Mono County with a net annual loss.

Financial studies indicate that the development of the passenger terminal core area and airport hotel will generate almost $300,000 annually in direct revenue for Mono County through lease payments, bed taxes, sales taxes, and property tax assessments. In addition to short-term construction employment opportunities, the proposed core area developments will create approximately 205 full-time, permanent jobs. The total annual indirect contributions to the local economy associated with employment, services, and goods is estimated at approximately $5,000,000. The positive economic impact of the proposed terminal area/hotel development has been recognized and encouraged by the Economic Development Administration (EDA). Considerable interest has been

expressed by the EDA for providing grant funding assistance for water and sewer infrastructure improvements necessary to accommodate the proposed development projects, and project applications are currently being evaluated.

Eventual development of the remainder of the ADD zone for airport related services, light manufacturing, semi-industrial, and similar uses will also provide long-term economic benefits. It is anticipated that such development will provide at least 100 full-time job opportunities and additional direct revenues for Mono County. In general, the lack of suitable land resources for light industrial and manufacturing development has been a significant inhibiting factor in the economy of the area. Lands within the Airport Development District are considered ideal for such purposes because airport operations eliminate other potentially incompatible land uses. Accordingly, land in the immediate vicinity of the airport represents a significant economic resource.

Mitigation Measures. The proposed land uses designated for the ADD zone represent significant economic development opportunities for Mono County. Development of the Mammoth/June Lake Airport area conforms with the specific goals and recommendations of the Mono County OEDP. The economic impact of the proposed Land Use Plan is considered significantly positive and no mitigation is necessary.

Traffic and Transportation

Setting and Conditions. The planning area is traversed by U.S. Highway 395 which provides primary vehicular access to all of the major communities of the Eastern Sierra region. It is a four-lane divided highway in the planning area with a total (both directions) average daily traffic (ADT) volume of approximately 5,000 vehicles. Peak traffic volumes approach 1,500 vehicles per hour (VPH), however, reflecting peak automobile travel during winter and summer holiday periods. The highway is virtually straight within the airport area, sight distance is excellent, and there are no adverse grades or unusual conditions. Theoretical capacity of the existing divided roadway is approximately 20,000 ADT and 3,500 VPH.

There are only three major paved roadways within the planning area as shown on Figure 26: Airport Road (formerly Mammoth School Road), Convict Lake Road, and Benton Crossing Road. All of these roadways intersect with Highway 395 at "tee" intersections with turnout lanes only for the left-hand turning directions. Airport Road and Benton Crossing Road have both been improved and resurfaced within the past three years and are in excellent condition. Convict Lake Road is in fair condition near Highway 395, but its condition deteriorates further to the south, posing driving hazards especially in the winter.

Access to the Hot Creek Fish Hatchery and Hot Creek is provided by a paved roadway extension connecting with Airport Road. The pavement only

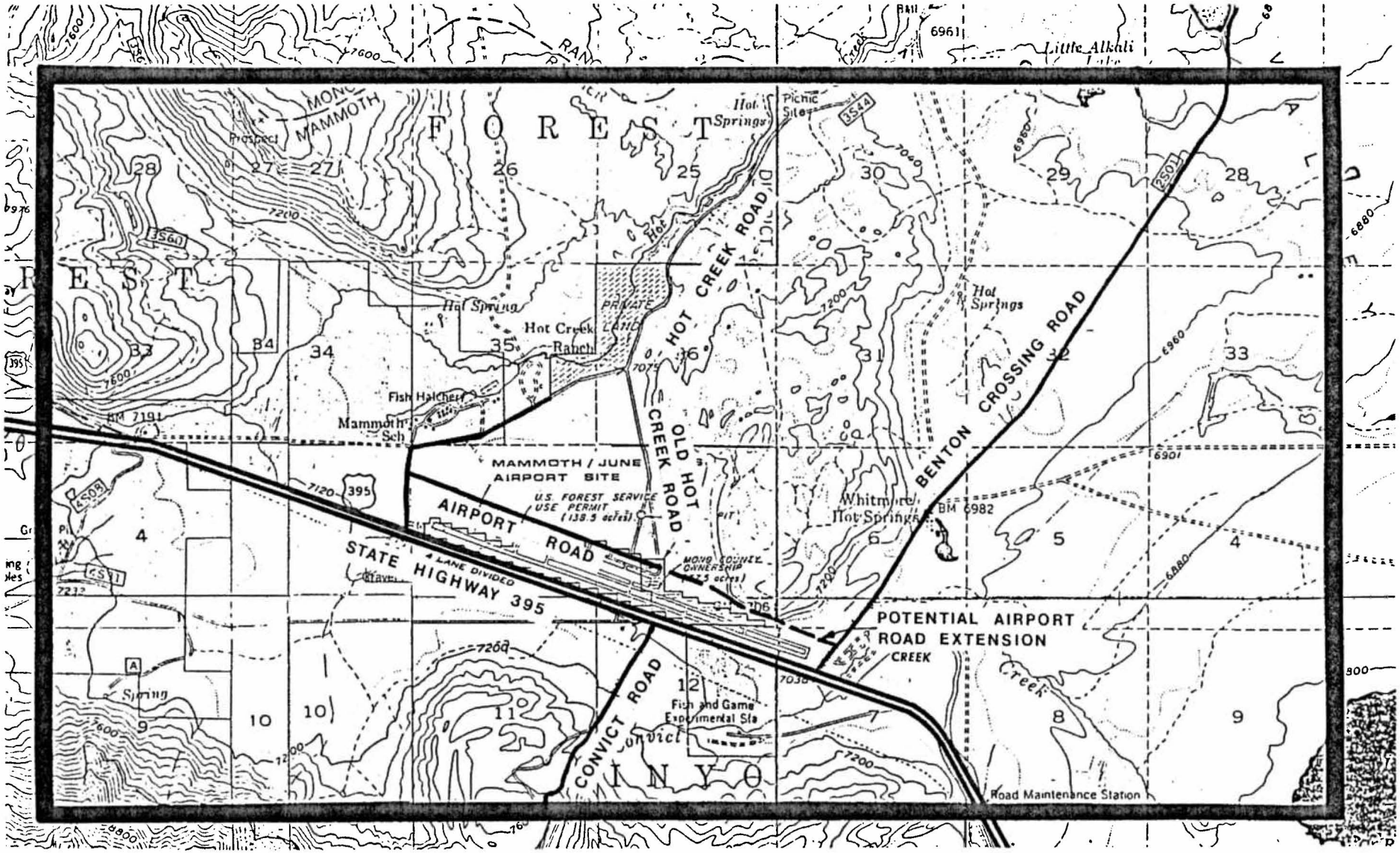


FIGURE 26

ROADWAY CIRCULATION SYSTEM

extends to the easterly portion of the Hatchery frontage, then becomes a graded gravel surfaced roadway to Hot Creek and the Owens River further to the north.

Potential Impacts. The primary sources of existing local traffic in the planning area are the airport and the Whitmore recreational/ institutional complex. Existing traffic volumes are generally low and congestion problems unknown, except during special events such as Airport Day. Current levels of airport-related automobile traffic are estimated at 446 ADT and 106 VPH during peak periods. Projected levels of traffic associated with ultimate development of the Airport Development District and other land uses in the vicinity are presented in Table 16.

Table 16. Projected Ultimate Traffic Volumes

Development	Average Population	Trip Factor	ADT	Max. PAOT	Peak* VPH
Fish Hatchery	20	2	40	50	20
Hot Creek Ranch	129	2	260	257	55
Hot Creek Rec. Area	50	2	100	50	25
Airport Development District	205	2	410	205	50
Airport Hotel	225	4	900	400	100
Airport Passenger Terminal	850	1	850	445	110
		TOTALS:	2,560		360

*Adjusted to reflect that peak hour traffic does not occur at same time for all developments.

The projected ultimate peak traffic volume of 360 VPH is equivalent to six vehicles per minute. This peak hour volume can normally be accommodated by two-lane improved roads (500-750 VPH design capacity), but inadequate consideration of roadway widths and intersection designs could result in localized congestion and traffic hazards. The most critical location for potential traffic hazards is at the existing intersection of Airport Road and Highway 395. The existing intersection is a simple "tee" design with no right turn lane on Airport Road nor acceleration or deceleration lanes on northbound Highway 395. This is a high speed section, and unsafe or poorly timed entry onto Highway 395 could (and does) create traffic hazards and potential accident situations. The above condition actually exists at all present local roadway intersections with Highway 395 in the planning area.

The airport is within the service area of the Long Valley Fire Protection District which has its major facilities in the community of Hilton Creek eight miles to the south. Direct emergency vehicle access to the terminal area requires the opening of a gate (at Old Hot Creek Road) and the crossing of the airport runway and taxiways. Alternatively, emergency vehicles must pass by the airport to Airport Road and

Noise

Setting and Conditions. The planning area is generally characterized as a passive rural setting. Recent studies indicate that ambient 24-hour noise levels at the State Fish Hatchery (located one mile north of the airport and Highway 395) range from 40-48 dB CNEL. These levels are considered typical for existing low intensity developments which are not situated adjacent to major roadways or airport activities. The noise impact of roadways is significant in rural settings. Noise contours developed for the Mono County Noise Element indicate that average noise levels along Highway 395 are 65 dB within 90 feet of the roadway edge and 60 dB within 200 feet. Noise levels for low traffic volume local roadways are approximately 60 dB within 50 feet of the roadway edge.

Other than Highway 395, the most significant noise generator within the planning area is the existing airport facility. CNEL noise contours for the facility based on 1986 operating conditions are shown on Figure 27. Single event noise levels (SEL) associated with landings and takeoffs are considerably higher than the CNEL values and can approach 100 dB adjacent to the runway for small jet aircraft. Human reaction to the intrusion of aviation noise is complex and subjective, but in general, the existing airport operations do not represent a significant adverse noise impact on surrounding areas. The only complaint received has been from the SNARL facility which is situated just south of the easterly end of the airport runway. Noise from preflight engine run-up is apparently reflected off of the south-facing slope of Doe Ridge directly towards the facility.

Potential Impacts. A noise impact analysis for the airport based on the projected future operational levels is presented in Appendix D. Ultimate CNEL noise contours shown in Figure 28 indicate that future noise levels are not expected to extend significantly beyond the immediate area of the airport. The noise compatibility charts presented in the analysis indicate that the projected noise levels are "normally acceptable" for most land uses within the 55 dB contour. Exceptions are particularly noise sensitive developments such as hospitals, nursing homes, churches, and schools. Special noise reduction measures are necessary within the 60dB contour and only non-residential industrial or commercial development is normally acceptable within the 65dB contour.

It should be emphasized that the noise compatibility charts reflect noise levels considered generally acceptable within a typical urban or suburban environment. The rural setting of the airport planning area is particularly sensitive to noise impacts and virtually any noises above the 50 dB level are noticeable and potentially obtrusive. Also, the Mono County Noise Element, in conformance with state standards, recommends that interior residential noise levels not exceed 45 dB CNEL. Considering noise reductions associated with standard residential construction techniques, this essentially restricts all residential development to an outdoor CNEL exposure of 55 dB.

backtrack to the terminal area. There is a need for a more direct access road to the airport area from the south via Benton crossing Road. The potential location of this roadway connection is shown on Figure 26. Construction of the airport access road at this location was originally proposed in the 1978 Airport Master Plan, but an archaeological site was subsequently identified at the base of Doe Ridge adjacent to the roadway alignment (see previous Figure 25). Although the site was not further studied to determine its significance, the access road was relocated to present alignment. Due to the potential beneficial traffic impacts associated with a looped airport roadway system (reduced congestion at Airport Road and much improved access from the south), it is recommended that the archaeological site be reevaluated and that the construction of the Benton Crossing access road be seriously considered.

The proposed expansion and development of the Mammoth/June Lake Airport is in conformance with the recommendations and goals of the Mono County Regional Transportation Plan. Increased air travel opportunities for access to the region will potentially reduce the almost total dependence on automobile access. Increased air travel will create additional traffic volumes and congestion on local roadways in the airport area, however.

Mitigation Measures. The following mitigation measures are necessary to reduce the potential impacts of airport development on the local roadway system:

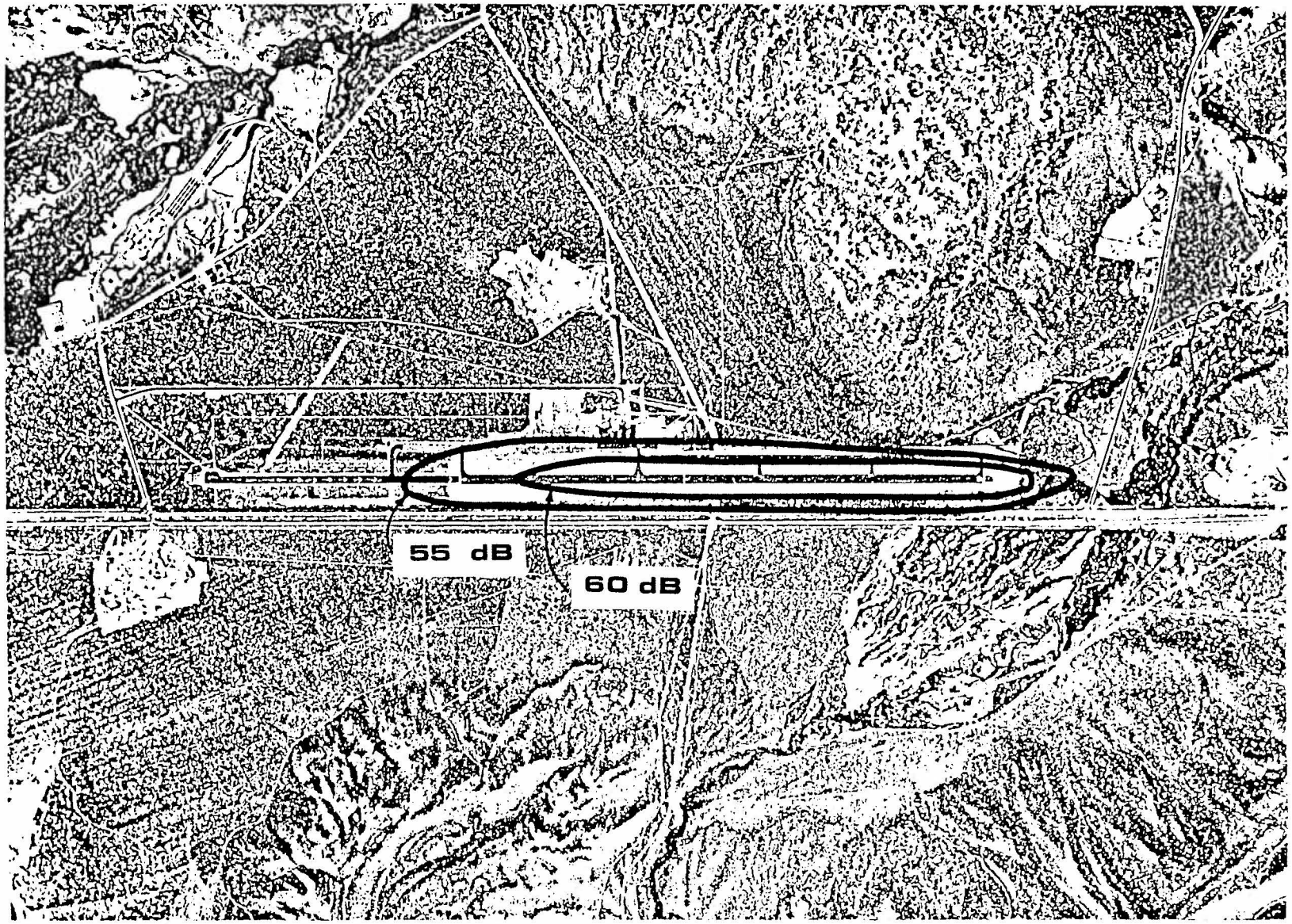
1. No additional roadway intersections or driveway access on State Highway 395 are permitted unless considered necessary for safety reasons.

2. The existing intersection at Airport Road and State Highway 395 should eventually be expanded and improved as traffic volumes warrant. Consideration should be given to providing turning lanes on Airport Road and acceleration/deceleration lanes on Highway 395.

3. Construction of an alternate access road from the south via Benton Crossing Road should be reconsidered. Archaeological studies should be conducted to determine if the existing site is significant and if roadway construction would necessarily impact the site.

4. Intersection improvements at Benton Crossing Road and Convict Lake Road should be evaluated and implemented if traffic volumes and/or traffic safety considerations warrant.

5. Mass transit facilities should be incorporated into the airport development plan to reduce dependence on automobile access. A regularly scheduled shuttle bus system to Mammoth Lakes should be developed, either by private interests or public agencies. Improved taxi service and alternative transit systems should also be promoted for the airport area.

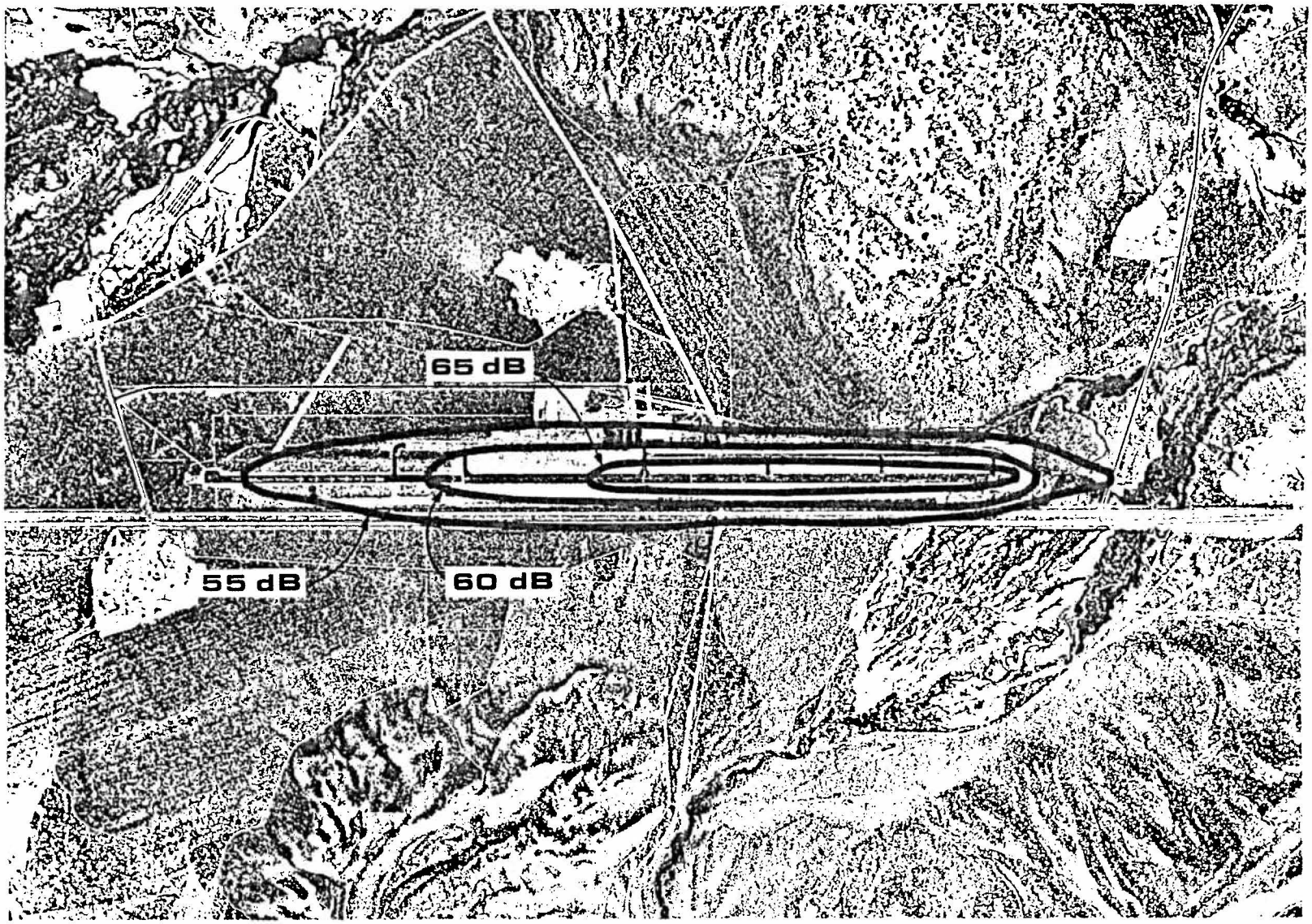


Source: HODGES & SHUTT

[21,000 ANNUAL AIRCRAFT OPERATIONS]

FIGURE 27

EXISTING NOISE CONTOURS



Source: HODGES & SHUTT

[51,000 ANNUAL AIRCRAFT OPERATIONS]

FIGURE 28

PROJECTED NOISE CONTOURS

Aircraft noise impacts are most acute at each end of the airport runway in the normal approach and takeoff zones. The existing High Sierra Community Church is situated directly at the easterly end of the existing runway in the normal approach/departure pattern. Noise impacts can be expected to be very noticeable at this location. As noted previously, engine run-up procedures also produce nuisance impacts at the SNARL facility. With the exception of the ADD zone, all of the other designated land uses for the ALUP are situated outside of the 55 dB CNEL contour and most will experience ambient noise levels no greater than 45 dB CNEL.

Mitigation Measures. In consideration of the potential noise impacts associated with aircraft operations at the Mammoth/June Lake Airport, the Land Use Policy Plan incorporates the following specific mitigation measures:

1. Noise and aviation easements shall be required prior to approval of any project or land use proposal within the planning area.

2. No residential development is permitted within the 65 dB CNEL contour. Non-residential development may be permitted within the 65 dB CNEL contour if structures are soundproofed to limit interior noise levels to 45 dBA.

3. The maximum noise exposure considered acceptable for non-residential land uses without special sound reduction construction is 60 dB CNEL.

4. The maximum noise exposure considered acceptable for residential land uses is 55 dB CNEL. All residential structures shall include soundproofing construction to limit interior noise levels to 45 dBA in any habitable room.

5. If a noise analysis, including noise monitoring, is conducted for a particular location and the results indicate that the maximum CNEL will be less than shown herein, then the lower exposure level may be used for the land use evaluation at the discretion of the ALUC.

In addition to the above basic policies, all use permits for residential development within the overflight zone will contain the following provisions:

1. It is understood by the owner that the subject property is within the area of influence of an airport and the operation of the airport, including aircraft landings and take-offs may generate high noise levels.

2. The owner shall not initiate or support any action to interfere with, restrict, or reduce the operation of the airport by any

aircraft. The owner shall not protest or object to the operation of the airport before any court or agency of government.

3. The above stipulations shall be binding upon any subsequent owners or successors in interest to the property.

As discussed in the following section, the existing Community Church is located in an unsafe area and should be eventually abandoned or relocated. In response to complaints from SNARL, it is recommended that aircraft takeoff procedures be modified to position the pre-flight engine run-up area further to the west away from Doe Ridge. The selected engine run-up area should be clearly marked on the taxiway.

Although mitigation measures can be implemented to reduce potential noise impacts on receptors, the generation of noise at the airport facility and along Highway 395 cannot be realistically controlled. Accordingly, the ambient noise level in adjacent open space areas and existing developments within the planning area will inevitably increase. This general increase in noise levels is not necessarily a consequence of the Airport Land Use Plan because automobile traffic and aircraft operations are projected to increase regardless of the future development of proposed land uses. Highway 395 and the airport facility have been in existence for many years, and noise impacts on wild life and adjacent development are a part of the existing environmental setting. The projected noise contours for ultimate development of the airport do not significantly extend the area of impact.

Safety and Welfare

Setting and Conditions. Aircraft accidents receive an undue amount of publicity and tend to generate a great deal of concern in the view of the public and residents located near airports. Statistically, however, non-occupant fatalities relating to aircraft operations are much lower than any other form of transportation as shown in Table 17.

Table 17. Non-Occupant Fatalities (1900-1965)

Transportation Mode	Total Non-Occupant Fatalities
Automobiles	122,000
Railroad/Passenger Trams	12,800
Buses	4,900
Air Carrier Aircraft	38
General Aviation Aircraft	28

An analysis prepared by the National Transportation Safety Board in 1970 showed that approximately 49% of all aircraft accidents occur within the airport boundary, 14% within one mile of the airport, and the

remaining 37% remote from the airport. The most common causes of accidents are engine failure (44%), stall-spin flight problems (20%), and landing accidents (10%). Almost 60% of landing accidents (6% of all accidents) are the result of aircraft collisions with obstructions near the airport, however. The 1978 Airport Master Plan quoted the following probabilities for aircraft injury accidents at the Mammoth/June Lake Airport facility for the projected operation levels in 1975 and 1995:

Accidents per Year	1975 (26,800)	1995 (53,400)
None	0.99	0.95
One	0.01	0.05
Two	Nil	0.01

The safety record of the Mammoth/June Lake Airport is very good and basically reflects the stated accident probabilities.

Existing emergency fire protection and crash/rescue facilities at the airport are substandard. Airport operations necessarily involve relatively large storage tanks of highly flammable fuels and oils. At present, the existing fire protection facilities consist of a buried 10,000 gallon water storage tank which is fed by a 1-1/2-inch well water supply line. The airport is within the service area of the Long Valley Fire Protection District which houses its major fire suppression equipment almost eight miles away. The main station of the Mammoth Lakes Fire Department is also about eight miles distant. There are no emergency power facilities at the airport.

Potential Impacts. Although statistics indicate that aircraft accidents involving non-occupants are relatively rare, they are usually disastrous when they do occur and almost always result in casualties. Recent national events indicate that inadequate consideration of land uses and air navigation requirements in the vicinity of airports can unnecessarily expose the general public and residents to safety hazards. Two of the primary purposes of the ALUP are to protect the general welfare of the public and enhance the safety of air navigation and aircraft traffic. If the land use and policy plans of the ALUP are not implemented and enforced by the Airport Land Use Commission with the support of local jurisdictional agencies, the primary safety and welfare goals of the commission may not be achieved.

The potential need for a cross-wind runway at the Mammoth/June Lake Airport site deserves special consideration. Although the basic purpose of the cross-wind runway is to improve aircraft safety during high-wind periods, it may have the opposite effect for the general public and existing development in the vicinity of the airport. The only general area considered feasible for the cross-wind runway (and interestingly enough is the location of an old abandoned dirt runway) is shown on

Figure 29. The landing approach from the north is directly over the Hot Creek Gorge and the existing Hot Creek Ranch. Aside from safety considerations, the environmental impacts associated with noise and disturbance of an existing sage grouse lek (see Figure 24) are significant. The assumed southerly takeoff/departure pattern would place Highway 395 directly under the most critical clear zone of the cross-wind runway. It would also alter the general airport traffic pattern towards the community of Mammoth Lakes, the major population center of Mono County. Installation of the cross-wind runway would also necessitate considerable construction disturbances and major earthwork activities in close proximity to the Hot Creek Fish Hatchery which is an environmentally sensitive location. Long-term aircraft noise and activity impacts could adversely affect the operation of the Hatchery and the aesthetic and recreational enjoyment of the Hot Creek Gorge area.

Mitigation Measures. The entire Airport Land Use Plan is basically intended to function as a general mitigation for aircraft-related safety and public welfare hazards. The Land Use Policy Plan presented in Appendix B contains the following specific provisions and measures for the various aircraft operation zones defined in Appendix C.

Airport Safety Zone (see Figure 11):

1. The safety zone shall be kept free of all unrelated airport land uses.

2. No permanent structures or other objects projecting above the level of the primary surface of any runway will be permitted, unless directly related to a necessary airport operation.

3. No residential land uses shall be permitted.

4. No industrial land uses shall be permitted.

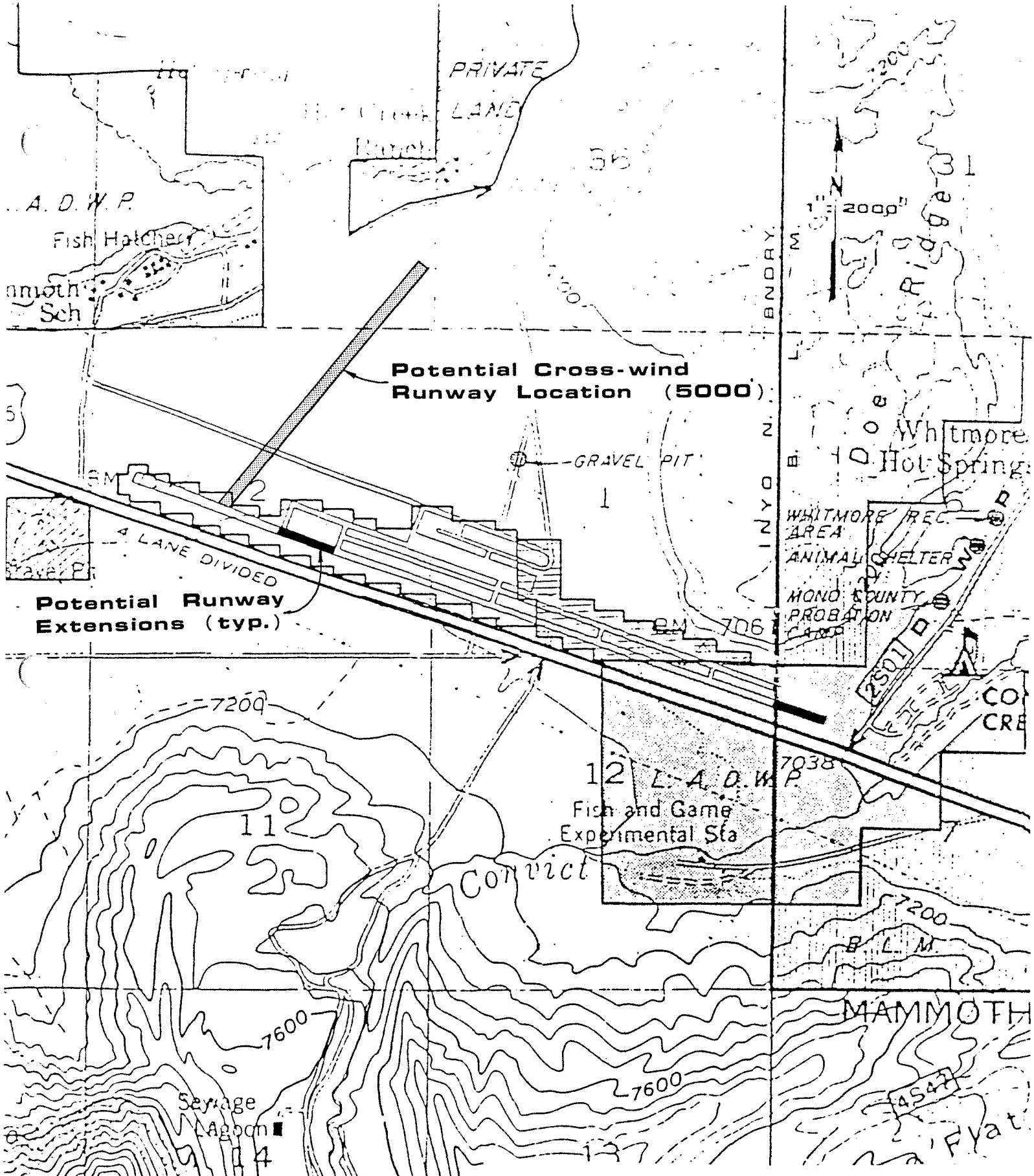
5. No use which may result in short or long-term concentrations of people shall be permitted.

Airport Overflight and Traffic Pattern Zone (see Figure 12):

1. Incompatible land uses shall not be permitted within the airport traffic pattern zone.

2. No uses requiring land divisions which on a regular basis would result in a concentration of people exceeding 25 persons per acre over a 24-hour period, or 50 persons per acre over a period of two hours or more are permitted within the traffic pattern zone.

3. Single-family residential or multiple-family uses, or land divisions with a density greater than one (1) dwelling unit per



POTENTIAL RUNWAY EXTENSIONS / ADDITIONS

FIGURE 29

acre are not permitted in the traffic pattern zone. Higher-density projects which conform to the Zoning Code will be evaluated on an individual basis, with specific attention given to location and concentration within the general overflight influence area.

4. All land uses or land use characteristics which may affect safe air navigation or which, because of their nature and proximity to an airport, may pose high risks to the land users shall be avoided/prohibited in the vicinity of the airport.

Airport Height Restrictions/ACZP Zone (see Figure 13):

1. No structures or obstructions are permitted within the designated primary runway surface, approach surfaces, or clear zones.

2. No structures or obstructions are permitted to penetrate the transitional surface established in the ACZP.

3. Rotating beacons, spot lights, or similar aircraft navigation hazards which are not a part of airport operations are prohibited within the entire overflight zone.

4. No building structures over 35 feet in height are permitted within the area defined as "obstructing terrain."

5. All development proposals within the airport planning area will be reviewed by the ALUC to determine potential impacts on aircraft navigation and safety. The erection of any structure which potentially obstructs or adversely affects the safety, efficiency and capacity of airport operations is prohibited.

The general concept of the proposed Airport Land Use Plan is to preserve open space areas within the normal approach/departure zones at each end of the airport runway. There are two existing obstructions at the easterly end of the runway which do not comply with the ACZP: the High Sierra Community Church building and overhead power/telephone lines which parallel Benton Crossing Road. The 1978 Airport Master Plan recommended removal/relocation of these obstructions prior to the 1983 expansion of the airport runway, but this has not been accomplished to date. The ALUC should expedite the removal of both of these existing facilities.

The brief analysis of the proposed cross-wind runway indicates that there are serious aircraft safety and environmental impacts associated with the proposal. An update of the Airport Master Plan is currently in progress which will study the cross-wind runway proposal in detail. Preliminary environmental and ground safety concerns indicate that the new runway must be carefully considered and evaluated. If the facility

is found to be essential for aircraft safety, then the ALUP should be amended to reflect the safety zones, overflight and traffic pattern zones, and ACZP zones associated with the runway.

The level of emergency assistance and fire protection at the airport must be extensively upgraded in the interests of the public safety and welfare. Proposed airport project improvements include the installation of a crash/fire/rescue (CFR) building with emergency response equipment and the installation of a water supply, storage, and distribution system capable of providing adequate fire suppression flows. Both of these projects are considered essential airport safety elements. In addition, future airport development plans should provide for standby electrical generation equipment.

Cumulative Impacts

Setting and Conditions. Assessment of the cumulative impacts associated with the proposed ALUP requires consideration of regional planning goals and objectives. The planning area is within the area of influence of the Town of Mammoth Lakes, and the level of activity at the airport is closely tied to population growth and development within the community. The current average resident population of the community is presently estimated at 5,000-6,000 persons. As with all resort-oriented communities, the impact of seasonal and visitor populations is significant, however. During the 1985-86 winter season, the Mammoth Mountain Ski Area accommodated over 19,000 skiers on several occasions during peak holiday periods. The corresponding total peak population within the community during these periods is estimated to approach 30,000 persons. During the summer months, the average population of the community is approximately 10,000 persons.

The 1975 Monoplan regional planning document projected the total (permanent and visitor) peak population of the Mammoth Lakes area to be 46,000 persons in the year 2,000. Comparison of the 1975 Monoplan projections with 1985-86 population figures indicates that potential population growth was underestimated. A summary of the current development and population status of the community is presented in Table 18.

Table 18. Current Development Status-Mammoth Lakes

	Monoplan Projection	Current Status	% of Ultimate Projection
Housing Units	13,400	7,120	53.1
Resident Population	12,000	7,200 *	60.0
Peak Population	46,000	30,000 **	65.0

* Based on Mammoth County Water District sewage and water flows.
** Based on Mammoth County Water District estimate of July, 1982 (actual figure: 29,445).

The Town of Mammoth Lakes has prepared a draft General Plan for the community which is currently in the public hearing and evaluation process. Although revisions may occur prior to adoption, it appears that the General Plan will update the ultimate peak population of the community to 48,000-50,000 persons. Total housing units and resident population projections are anticipated to be approximately the same as those estimated in the Monoplan if the draft General Plan recommendations are adopted.

Although the ALUP does not directly address potential geothermal development within the planning area (except as such development relates to airport activities), the potential cumulative impacts must be considered. Geothermal development will generally result in incremental increases in noise, human activity, loss or disturbance of habitat, and water resource impacts within the planning area. The potential extent or intensity of geothermal development is not known at the present time, but at least one power plant proposal is being actively pursued.

Potential Impacts. The proposed Airport Land Use Plan is intended to provide planning direction within the airport influence area for a 20-year period. Most of the designated land uses reflect existing developments within the planning area and, in some cases, expansions of present uses within existing sites. The most significant element of the ALUP is the designation of the Airport Development District. This district was created to provide for expansions of facilities and services necessary to implement the Airport Master Plan as well as to exploit the economic development opportunities associated with the airport. Conversely, the ALUP restricts intensive land development to this district.

Most of the potential cumulative impacts associated with the Airport Land Use Plan will be the result of development within the ADD zone, geothermal development, and increased population and development within the Mammoth Lakes/Long Valley region. These cumulative impacts will include:

1. Direct loss of wildlife habitat as well as a potential gradual degradation of habitat value due to construction disturbances and increased levels of human activity.

2. Increases in runoff from impervious surfaces with attendant waste discharges.

3. Increased demands on groundwater resources within the planning area and potential declines in historical groundwater levels.

4. A general increase in the emissions of air pollutants from stationary and mobile sources leading to a gradual, but probably imperceptible, decline in air quality.

5. Alterations of the foreground view along certain sections of Highway 395 and distant views from Convict Lake Road.

6. General increases in noise and activity levels associated with airport development and additional automobile traffic. Secondary impacts will also include potential increases in litter, trash, and debris throughout the planning area.

7. Increased energy consumption for heating, lighting, and industrial/manufacturing purposes.

Mitigation Measures. Most of the potential cumulative environmental impacts identified above are not directly attributable to the Airport Land Use Plan but are associated with general population increases and projected development within the Mammoth Lakes/Long Valley area. The ALUP preserves approximately 94% of the planning area for open space uses and confines future development to specific sites. In general, the ALUP itself is a significant mitigation measure for cumulative environmental impacts because it provides a comprehensive, coordinated planning document for the area. Implementation of the land use designations, land use policies, and mitigation measures specified in the ALUP will tend to reduce overall cumulative environmental impacts. General measures which could further reduce cumulative impacts include the following:

o Air Quality: A regional air quality monitoring program should be implemented by the Great Basin Unified APCD to provide data for air quality control strategies.

Regional transit and transportation systems should be developed to reduce automobile traffic and associated pollutant emissions.

Policies should be developed to regulate and control air pollutant emissions, especially from residential wood burning and industrial sources.

o Habitat Degradation: Road access to sensitive habitat areas should be limited. Within the recreational resource management policies of jurisdictional agencies, all human presence should be restricted in sensitive habitat areas.

o Water Resources: All groundwater extractions within the planning area should be carefully monitored to evaluate potential long-term effects.

Water resource management and conservation programs should be coordinated by jurisdictional agencies.

The diversion of surface water resources for domestic and industrial supplies should be prohibited within the planning area.

o Energy Consumption: The development of alternative energy sources should be encouraged. The feasibility of developing geothermal resources for heating purposes should be explored.

SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Implementation of the mitigation measures specified in the preceding sections can reduce most potentially adverse environmental impacts associated with the Airport Land Use Plan to reasonable or insignificant levels. Certain impacts, particularly those of a general or cumulative nature, cannot be completely avoided or reduced to a level of insignificance, however. It should be noted that most unavoidable adverse impacts would occur in the absence of the proposed Airport Land Use Plan and that the plan itself is intended to mitigate potential cumulative impacts in the planning area. The following adverse environmental effects cannot be completely avoided:

Construction Impacts. Noise, vibration, and dust involved with the movement of heavy equipment and general construction work can be controlled as provided in the mitigation measures but cannot be completely avoided. Adverse impacts will include disturbances of human and wildlife activities in the vicinity, visual impacts, and air quality degradation. Control measures can be implemented to reduce discharges of silt and sediment from disturbed soils, but experience indicates that minor local water quality impacts are unavoidable during inclement weather. Although construction impacts are temporary in nature and mitigatable, they are essentially unavoidable.

Land Transformation Impacts. Ultimate development of the land uses designated in the plan will result in the permanent transformation of existing vegetative communities and loss of habitat within the respective development sites. Developments which will involve significant land transformation impacts include the Airport Development District, the proposed golf course in the OA-R zone, and the Hot Creek Ranch property. Eventual development of the ADD zone (including airport terminal area improvements) will impact approximately 200 acres of sagebrush-scrub habitat. Development of the proposed golf course will impact 150 acres of sagebrush-scrub, pinon-juniper woodland, and Jeffrey pine forest habitat. Assuming preservation of the Hot Creek stream conservation zone, the Hot Creek Ranch property could impact approximately 80 acres of sagebrush-scrub and grassland habitat. In addition to loss of habitat, ultimate land use will include the addition of building structures, paved areas, altered vegetative patterns and will increase lighting, noise, and human activities above existing levels. These impacts are unavoidable and are a consequence of any land use.

Water Resource Impacts. The proposed land uses designated in the plan will impose a projected annual demand of 756 acre-feet on the groundwater resources in the vicinity of the airport. Although this demand represents a small fraction of the estimated capacity of the

groundwater basin, it may result in localized declines in groundwater levels during period of drought. Although considered unlikely, such declines may reduce the flow in downstream springs in the vicinity of Hot Creek. Water conservation and groundwater management programs can reduce the potential adverse effects of water supply demands, but general impacts are unavoidable.

Air Quality. Additional air pollutant emissions within the planning area due to increased automobile traffic on Highway 395, expansion of air travel operations at the airport, and additional residential (and industrial) development are inevitable. Although general declines in air quality are not anticipated, increased emissions may periodically cause excessive pollutant concentrations during adverse atmospheric conditions. Although mitigations can reduce pollutant emissions, air quality impacts are essentially unavoidable.

Visual Impacts. Eventual development of the airport area and associated land uses will result in alterations of the existing viewshed. Adverse visual impacts can be mitigated to acceptable levels, but the modification of the existing visual character of the area is unavoidable.

Noise. General increases in ambient noise levels are an inevitable consequence of expanded airport operations. Although projected noise impacts are generally limited to the immediate vicinity of the airport and are within the acceptable range of federal and state guidelines, cumulative noise increases are unavoidable.

ALTERNATIVES TO THE PROPOSED PLAN

It is considered unlikely that the pattern and scale of the Mammoth/ June Lake Airport or existing developments within the planning area could be significantly modified or eliminated at this date. Consequently, the only feasible alternatives consist of potential modifications or eliminations of the proposed new land uses designated in the Airport Land Use Plan. In addition, it is mandatory under CEQA and NEPA guidelines to assess the consequences of the "no project" or "no action" alternative. The following discussions evaluate potentially feasible alternatives which might reduce the environmental impacts associated with the proposed plan, including the "no project" alternative.

Elimination or Modification of ADD Land Uses

The proposed plan designated 455 acres for ADD zoning, but this area includes approximately 260 acres for the actual airport site and terminal area development. Considering runway safety zone and clear zone restrictions, the actual developable area of the ADD zone is approximately 170 acres, generally concentrated in the vicinity of the existing airport access road. Although ADD land uses could be eliminated within this area, it is assumed that development of the terminal "core area" would still proceed because support facilities are essential for the continued operation and economic viability of the airport.

Elimination or reduction of the proposed light industrial, manufacturing, and warehousing land uses in this area would avoid soil disturbances, vegetative removals, and the loss of 170 acres of sagebrush-scrub habitat. Potential advantages would include a proportional reduction in visual impacts, air quality impacts, water resource demands, and automobile traffic associated with airport development. Secondary reductions in noise, activity levels, and potential water quality impacts might also be realized.

The primary disadvantage of this alternative is the loss of economic development opportunities. Suitable land resources for light industrial development are extremely limited in Mono County. The area immediately adjacent to the existing airport facility has already been impacted by airport activities and its value as open space habitat is minimal. Noise, traffic, and activity levels associated with the airport are complementary to light industrial development but generally incompatible with most other land uses. The proposed ADD land uses would provide employment and economic development opportunities consistent with the goals and objectives of the Mono County OEDP. Elimination of such land uses would represent the loss of a potentially significant economic resource. There are few other areas in Mono County which possess the advantageous characteristics for economic development which are evident at the Mammoth/June Lake airport site.

Hot Creek Ranch Land Uses

The proposed plan designates the existing Hot Creek Ranch site for planned resort-recreational land uses under PUD zoning. The assigned maximum density is one DU/acre, subject to environmental constraints. As discussed previously in this report, the site is extremely sensitive to environmental disturbance, however. The property is traversed by Hot Creek for almost 4,000 feet and contains a sage grouse lek near its northwesterly boundary. The intent of the PUD zoning is to insure that any future development incorporates adequate provision for protection of the Hot Creek stream environment zone, fishery resources, habitat value, and sensitive wildlife areas. Potential future environmental impacts could be reduced by limiting the use of the property to existing development only. Another alternative would be to eliminate all uses on the property through the implementation of a land exchange (or outright purchase) by the Inyo National Forest.

The Hot Creek Ranch resort has been in existence for many years under private ownership. The proposed land use designation recognizes the property rights of the owners but imposes severe limitations on future development based on environmental considerations. If the property is restricted to existing uses only, it is probable that the owner will seek remuneration for lost development rights. The legal ramifications of the "no development" alternative cannot be accurately predicted and are beyond the scope of this document.

No Project Alternative

The "no project" alternative would essentially eliminate the proposed Airport Land Use Plan designations and revert area planning to existing planning documents. These would include the Mono County General Plan Land Use Element, the Inyo National Forest Mammoth-Mono Unit Plan, and the BLM Benton-Owens Valley Management Plan. As noted throughout this report, these documents are all broad-scope, general policy plans and do not provide specific planning direction for the airport planning area. All of the documents are out of date and do not adequately consider existing land uses, potential future land uses, or the development of the Mammoth/June Lake Airport. In particular, the potential impact of the airport on adjacent land uses and the safety policies necessary to protect aircraft navigation and the welfare of the public are not addressed in the existing documents.

The "no project" alternative would not reduce the potential environmental impacts identified in the Airport Land Use Plan. Because the existing general planning documents do not identify specific development areas, zoning requirements, or existing land uses, there is a significant potential for future land use conflicts and adverse environmental impacts. The Airport Land Use Plan designates specific development locations, identifies the potential impacts associated with the proposed developments, and defines the constraints and mitigation measures necessary to accommodate potential land uses. It also provides

specific land use policies which address the operation and safety of the Mammoth/June Lake Airport. The proposed ALUP provides significant mitigation for the potential impacts associated with expansion and development of the airport which are anticipated to occur whether or not the plan is adopted.

The preparation of the Airport Land Use Plan is the first attempt to develop a comprehensive general plan for the airport planning area which addresses specific land uses, airport safety policies, and environmental considerations. The proposed plan provides a focus for the coordinated implementation of the land management policies of jurisdictional agencies. The beneficial effects of coordinated inter-agency planning in the area might not be achieved without the proposed plan. Unavoidable environmental impacts and cumulative impacts would not be reduced under the "no project" alternative, and, in some cases, the severity of impacts would be potentially greater than those associated with the Airport Land Use Plan.

LOCAL SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY

The establishment of a general land use plan for the airport planning area is a positive measure for preserving the long-term productivity of the region. The plan reserves large open space areas for agricultural, resource management, recreational, and resource conservation purposes and defines specific land uses and limits for potential development within the planning area. The establishment of safety policies, noise policies, and height restrictions in the vicinity of the airport is intended to avoid future land use conflicts. The Airport Land Use Plan accommodates the expansion of facilities at the Mammoth/June Lake Airport. This short-term goal will provide long-term opportunities for the continued recreational use of the area without the adverse impacts associated with the present dependence of automobile travel. The proposed plan provides for economic development opportunities which will have long-term beneficial impacts on local employment and county government revenues. The local short-term benefits of the proposed Airport Land Use Plan are therefore considered to be consistent with the long-term environmental, economic, and planning goals of the region.

IRREVERSIBLE ENVIRONMENTAL CHANGES

The proposed Airport Land Use Plan permits additional development at specified locations within the planning area. Material resources for construction of improvements and the energy expended for development represent commitments of resources which are irreversible. Proposed development and expansion of the Mammoth/June Lake Airport will further establish the facility as the major air transportation center of Mono County. Since removal or abandonment of existing and proposed improvements is unlikely, the plan essentially commits the existing airport site to aviation uses for the foreseeable future.

Eventual development of the land uses designated in the plan will result in the permanent transformation of approximately 430 acres of natural vegetation and existing habitat. These land transformations are considered irreversible because the loss of habitat will result in long-term alterations in wildlife patterns and populations. The area impacted by the permitted land uses of the plan represents approximately 2.4% of the total acreage of the planning area. With the exception of the Hot Creek Ranch property, most of the area affected by land transformations does not represent unique or sensitive habitat.

GROWTH-INDUCING IMPACTS

Within the confines of the airport planning area, the Airport Land Use Plan must be considered moderately growth inducing over the 20-year planning period. It designates land use zones, defines densities, and establishes requirements which will facilitate future development in areas where none presently exists. The plan accommodates the expansion and further development of the Mammoth/June Lake Airport. It also promotes economic development within the immediate vicinity of the airport.

The significance of the growth-inducing impacts of the plan must be evaluated with respect to established regional planning goals and objectives. The plan limits potential land uses to those defined areas considered suitable for development. The projected ultimate population of the planning area is actually less than that provided by the Mono County Land Use Element. It reserves large areas of open space and differentiates between the primary uses of those areas, providing a focus for the coordination of resource management plans and conservation policies by federal and state agencies. The expansion of the Mammoth/ June Lake Airport is in conformance with the planning goals of the Mono County Regional Transportation Plan and the Federal Aviation Administration. The potential benefits of expanded air travel facilities were originally discussed in the 1975 Monoplan regional planning document and have been restated in the current 1986 draft General Plan for the Town of Mammoth Lakes. The economic development potential of the airport site has been recognized for over a decade and is emphasized in the current Mono County Overall Economic Development Plan. The establishment of the Airport Development District is in direct response to the recommendations of the OEDP.

In a regional context, the proposed Airport Land Use Plan is not, of itself, growth inducing. Regional population growth is not essential to any of the designated airport terminal area, airport development district, open space recreation, or resort-recreational land uses of the Airport Land Use Plan. Population growth in the region will be determined more by the policies and programs established in the Mammoth Lakes General Plan, overall economic conditions, and state-wide recreational demands than by the availability of facilities at the Mammoth/June Lake Airport.

REPORT PREPARATION/ORGANIZATIONS CONSULTED

This report was prepared by the Mono County Airport Land Use Commission by Triad Engineering Corporation with assistance from the Mono County Planning Department and the U.S. Forest Service, Mammoth Ranger District. The principal in charge of the preparation of this report was James N. Ognisty. Mono County staff support was provided by Joe Olinghouse, Planning Director, and Keith Hartstrom, Associate Planner. Additional specialized information incorporated in the report was prepared by Thomas E. Kucera (Doe Ridge Deer Migration Study), Kathleen F. Nelson (Vegetative Inventory and Analysis), Hodges & Shutt (Noise Impact Analysis-Airport Hotel), and Jeff Burton (Archaeology).

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SAFETY AND WELFARE

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APPENDIX A

Proposed Mono County Zoning and
Development Code Amendment
for
Airport Development District

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CHAPTER 19.47

A-D DISTRICT - AIRPORT DEVELOPMENT

Section:

19.47.010 Intent.

The intent of the A-D, Airport Development, District is to encourage, and protect the appropriate development of retail, commercial, industrial and other related uses on airport lands, both public and privately owned, and on suitable land adjacent or in proximity to an airport.

19.47.020 Uses Permitted.

The following uses shall be permitted in the A-D district, plus such other uses as the Commission finds to be similar and not more obnoxious or detrimental to the public health, safety and welfare.

A. Airports and airstrips, subject to all applicable regulations of the Federal Aviation Administration;

B. Facilities incidental to the safe operation and routine maintenance of airports and airstrips (e.g., light, radio, and radar facilities);

C. Aircraft:
   1. Fueling and defueling facilities,
   2. Parking,
   3. Washing and cleaning (non-commercial),

D. Private (non-commercial) aircraft storage and hangers;

E. Agricultural and grazing of vacant land;

F. Pilot instruction and supplies;

G. Fixed base operator;

19.47.030 Uses permitted subject to director review.

The following uses shall be permitted in accordance with the requirements of Chapter 19.40 and subject to the review and approval of the Director of Public Works, and concurrence of the Planning Director.

A. Uses which, in the opinion of the noted Director's, are accessory or incidental to operation of an airport and **which are found not to be** materially detrimental to the public welfare or injurious to contiguous property or improvements, have no substantial impacts on public agencies, nor are not expected to be controversial, or environmentally sensitive. Such uses may be subject to conditions deemed necessary for the protection of the public health, safety, and welfare.

B. All the permitted uses in .020, if determined necessary by the Director of Public Works and the Planning Director.

The Director's may designate such conditions, in connection with the granting of the Directors Review, as is deems necessary to secure compliance with the purposes and intents airport development plan. Such conditions may including, but not are not limited to: street and drainage improvements, noise control, visual impacts, landscaping, building height, and signing.

Whenever the performance of any condition is required by the granting of a Directors Review, and accomplishment is to occur at or after a specified time, the Director's may require the developer involved to execute a covenant agreement, in a form approved by the County Counsel, which shall contain the requirements imposed, and shall be recorded in the office of the County Recorder. The Director shall issue and record releases from such covenants when they are no longer applicable to the use.

A notice setting forth any imposed conditions shall be mailed to the developer and engineer and shall state the procedure for filing possible appeals.

19.47.040 Uses permitted subject to use permit.

A. Terminal facilities;

B. All commercial activities related to aviation (e.g., airline and air freight offices and facilities, aircraft service and repair shops, flight training schools);

C. Aircraft and aviation accessory sales;

D. Professional offices;

E. Retail sales and services conducted within an airport terminal building or hotel, resort hotel/motel: (Plus other such uses as the Commission determines to be similar and not more obnoxious or detrimental.)

1. Bakery,
2. Ballroom,
3. Banquet rooms,
4. Barber shop,
5. Beauty parlor,
6. Book, magazine store,
7. Cleaning and laundry agency,
8. Clothing stores,
9. Cocktail lounge,
10. Confectionery,
11. Delicatessen,
12. Florist,
13. General merchandise,
14. Gift store,
15. Photographic supplies,

F. Food service establishments;

G. Hotels, motels, and resort hotels/motels;

H. Public buildings or uses;

I. Transportation services, automobile fueling:

J. Limited light industrial uses;

K. Warehouses, enclosed storage and distribution facilities;

19.47.050 Development Standards.

Unless otherwise specified in an approved Use Permit or as specified in the standards of a detailed development plan for a particular airport, the development standards contained in Sections 19.47.060 - 19.47.120 and Chapter 19.03 shall apply to all land and structures in the AD district.

19.47.060 Special Provisions.

1. No use shall be permitted which would interfere with the landing or taking off of aircraft at any airport or otherwise constitute an airport hazard, whether or not such would otherwise be permitted under the provisions of this Chapter.

2. No operation shall emit electrical, electronic, or radio emissions which will interfere, obstruct or adversely affect the operation of air navigation aids

and radio communications or which in any manner violate the applicable provisions of the Federal Air Regulations of the Federal Aviation Administration.

3. Utilities. Facilities for the distribution of gas, water, telephone, cable television and electricity, etc., shall be undergrounded.

19.47.070 Yards

The following minimum yard requirements are applicable unless building lines have been established or optional design standards are used.

A. Front. Each lot in the AD district shall have a front yard of not less than 20 feet, of which 80 percent shall be landscaped.

B. Side. None, except as required by other regulations, and except that buildings, structures, or edifices shall not be less than 50 feet from the centerline of any public roadway.

C. Rear: 10 Feet.

19.47.080 Lot Area.

The minimum lot area shall be ten thousand (10,000) square feet.

19.47.090 Building Height.

The maximum building height shall be 35 feet above grade. The height maybe reduced whenever necessary to prevent interference with the landing or taking off of aircraft or to comply with FAA standards.

19.47.100 Density.

The maximum population density shall be as follows:

A. No residential development shall be permitted.

B. Hotel/motels 40 units per acre.
(Limited on site housing for employees only.)

19.47.110 Lot Coverage.

The maximum lot coverage (see definition 19.01.730) shall be seventy (70%) percent.

19.47.120 Fences, screening and landscaping.

Fences and/or screening shall be required when abutting any residential district. Any uses subject to use permit shall be

required to either landscape (per approved landscape plan) or leave in natural open space (i.e., ungraded) all areas not covered by impervious surfaces. Any combination of the above is acceptable.

APPENDIX B

Proposed Airport Land Use Policy Plan