

Draft
Environmental Impact Report
and
Environmental Assessment

for

MAMMOTH/JUNE LAKE AIRPORT
LAND USE PLAN

State Clearinghouse No. 86060901

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Prepared for:

Mono County Airport Land Use Commission
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SUMMARY

General

The Mammoth/June Lake Airport Land Use Plan establishes a comprehensive land use plan which defines the type and pattern of future development in the area surrounding the existing airport. The plan provides more specificity than the existing County General Plan or the Mammoth-Mono Unit Plan of the Inyo National Forest and will amend or supercede these existing planning documents. The plan provides a framework for the orderly growth and development of the Mammoth/June Lake Airport planning area over a 20-year period which will promote inter-agency coordination and cooperation. Specific policies and guidelines of the plan are intended to protect the general welfare of residents in the vicinity of the airport and to assure the safety of air navigation.

Project Location and Boundaries

The Mammoth/June Lake Airport is located in the southern portion of Mono County, approximately 35 miles north of Bishop and eight miles east of the Town of Mammoth Lakes. It is situated in the westerly portion of Long Valley immediately adjacent to U.S. Highway 395, which is the principal north-south arterial highway route of the Eastern Sierra Nevadas. The land use planning area encompasses 28 square miles and includes all areas potentially affected by aircraft landing and takeoff zones, approach and departure flight patterns, and general overflight zones. The planning area extends eight miles east-west from the existing Mono County Sheriff Substation to Crowley Lake and four miles north-south from the lower foothills of the Sierra Nevada to the Hot Creek Gorge.

Project Objectives

There are three basic objectives of the proposed Mammoth/June Lake Airport Land Use Plan:

1. To achieve compliance with the requirements established in the California Public Utilities Code for airport land use planning.
2. To provide a means of coordinating joint planning studies for the designation of appropriate land uses in the airport area.
3. To provide economic development opportunities in the airport area for the benefit and welfare of the county.

It is intended that the adopted Airport Land Use Plan will provide the basis for amendment of the Mono County General Plan and the MMPU Land Management Plan of the Inyo National Forest.

Project Description

The proposed plan establishes land use designations for existing developments within the planning area, preserves large open space areas and identifies their primary use, and creates an Airport Development District for lands immediately adjacent to the Mammoth/June Lake Airport site. Open space designations represent 93.8% of the total planning area, and existing land uses encompass 3.7%. The remaining area (approximately 455 acres) comprises the proposed Airport Development District (ADD) which includes the existing 256-acre airport site.

The plan provides for major development and expansion of the airport terminal area within the ADD zone, including additional aircraft support facilities, a new passenger terminal, an airport hotel, and extensive infrastructure improvements. The remainder of the ADD zone is designated for light industrial, manufacturing, warehousing, and similar economic development purposes. The plan also considers potential low-intensity recreational uses, such as a golf course, in open space areas adjacent to the airport.

The Airport Land Use Plan further establishes specific land use policies to protect the public welfare and the safety of aircraft operations. These include airport safety zone policies, overflight zone and traffic pattern policies, height restriction policies, and noise policies. All development within the airport planning area is subject to the restrictions and requirements of these policies.

Projected ultimate average population associated with implementation of the plan is 720 persons. Maximum daily populations (PAOT) are estimated to ultimately approach 1,500 persons. These projections are considered to represent moderate growth over the 20-year planning period.

Summary of Impacts and Mitigations

The following table summarizes the potential environmental impacts of the proposed land use plan and describes mitigation measures necessary to reduce those impacts. The table also indicates the relative significance of the potential impacts assuming implementation of the listed mitigation measures. The proposed mitigation measures are considered to be technically and economically feasible but may not be necessarily acceptable based on social, political, and institutional considerations.

Unavoidable Adverse Impacts.

Environmental analyses and evaluations of the plan elements indicate that the following adverse impacts are unavoidable:

Construction Impacts. Short-term disturbances of the local environment during construction activities are unavoidable but can be mitigated to reasonable levels.

Land Transformation Impacts. Ultimate development of the land uses designated in the plan will result in the loss of 430 acres of natural habitat. The designated development areas are not known to contain any unique habitat for rare, endangered, or threatened species. Loss of habitat and attendant reductions in the productivity of the ecosystem are an unavoidable consequence of any land use within the planning area.

Water Resource Impacts. The proposed land uses, including expansion and development of the airport site, will impose an ultimate projected annual demand of 756 acre-feet on the groundwater resources of the area. Although significant impacts on surface streamflows, spring flows, or riparian meadows are not anticipated, localized declines in groundwater levels are unavoidable.

Air Quality. Additional emissions of air pollutants associated with increased automobile traffic, expansion of aircraft operations, and new development are inevitable and unavoidable. Significant declines in general air quality are not anticipated within the planning area, however.

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 of the Proposed Plan

Two basic alternatives to the proposed plan are considered in the environmental analysis: elimination or modification of ADD and PUD land uses; and the mandatory "no project" option. Elimination or modification of the designated ADD and PUD development zones would reduce (but not eliminate) visual impacts, air pollutant emissions, water resource demands, automobile traffic, and secondary noise and human activity impacts. The primary disadvantage of this alternative would be the loss of economic development opportunities and potentially adverse impacts on the economic viability of the existing airport facility.

The "no project" alternative would revert planning direction in the area to existing regional documents. These documents are broad-scope, general policy plans that do not specifically address airport development, existing land uses, or potential future land uses. The "no

project" alternative would not reduce the identified environmental impacts associated with the proposed plan, and in many cases the resultant lack of specific planning direction would potentially increase the severity of those impacts.

SUMMARY OF POTENTIAL IMPACTS
and
REQUIRED MITIGATION MEASURES

<u>POTENTIAL IMPACTS</u>	<u>SIGNIFICANCE</u>	<u>REQUIRED MITIGATION MEASURES</u>
<u>SOILS/LAND TRANSFORMATION</u>		
* Construction disturbances of local environment, including earthwork, dust, noise, and creation of stock-piles and debris.	Moderate	<p>All grading and earthwork activities must be conducted in accordance with an approved grading plan and grading permit issued by Mono County Dept. of Public Works. The following provisions must be included in the grading permit.</p> <ul style="list-style-type: none">a. All earthwork must be conducted in accordance with a detailed project schedule which provides for completion of work in a single construction season.b. Existing drainage patterns shall not be significantly modified and drainage concentrations shall be avoided.c. All loose piles of earthwork materials shall be protected to avoid discharges of silt-laden runoff.d. Limits of construction work should be clearly delineated and disturbances of adjacent soil and vegetation should be strictly avoided.e. Dust control measures (watering trucks or pumped systems) shall be continuously implemented throughout the construction period.f. All exposed soil areas shall be stabilized and reseeded in accordance with an approved landscape/revegetation plan as soon as possible. All stockpiles of unsuitable soil materials (boulders and

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*Indicates unavoidable adverse impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Increased erosion from exposed soil surfaces during earthwork operations and after completion of construction. Potential long-term visual impacts.

Moderate

stripped vegetation) shall be removed and disposed of at approved sites designated by Mono County.

- g. Bonds or other security shall be required to guarantee completion of site stabilization and revegetation measures within the time periods delineated in the project schedule.

A drainage and erosion control plan for all major projects shall be approved by the Mono County Public Works Dept. and the Lahontan RWQCB. The plan shall include the following provisions:

- a. Interim erosion control measures shall be implemented during the construction period, including such facilities as temporary dikes, filter fences, hay bales, and retention basins as necessary.
- b. No discharges of silt, waste materials, toxic substances, or other deleterious matter to surface waters shall be permitted.
- c. Permanent drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent waste discharges from the completed site.
- d. All projects shall be designed to retain and infiltrate all runoff from a 20-year, one-hour design storm event.
- e. Revegetated areas shall be maintained in order to insure adequate establishment and growth. All permanent drainage and erosion control facilities shall be periodically inspected and maintained as required.

POTENTIAL IMPACTS

Erosion from exposed soil surfaces during construction could result in discharges of sediment loads to adjacent surface waters.

SIGNIFICANCE

Moderate

REQUIRED MITIGATION MEASURES

Large scale earthwork, grading, or soil disturbances within the stream zones of Mammoth Creek, Hot Creek, and Convict Creek are prohibited.

- a. All activities within the stream conservation zone shall be conducted in accordance with the requirements of a Stream Alteration Permit (Section 1603) issued by the California Department of Fish and Game.
- b. All construction activities shall be scheduled during the lowest streamflow period, usually September through November.
- c. Special control measures shall be implemented to prevent the discharge of silt, sediment, and debris or any other adverse water quality impacts on surface streams.

GEOLOGIC/VOLCANIC HAZARDS

Development of residential property and public facilities in an area of known seismic and volcanic hazards may expose residents to safety hazards.

Moderate

A building permit shall be obtained from the Mono County Building Dept. for all structures in the planning area. The permit shall incorporate the following design provisions:

- a. All structures must be designed in accordance with the Uniform Building Code, incorporating lateral force requirements for Seismic Zone 4 (maximum seismic loads).
- b. A lateral force (seismic) analysis is required to be submitted by a licensed structural or civil engineer for all public, commercial, and residential structures.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

c. All structures must be designed for seismic forces under maximum snow loading conditions (presently 60 psf).

No residential or commercial building structures are permitted within the Alquist-Priolo Special Studies Zones unless site specific geologic and soils investigations conclude that the designated fault zones are inactive or do not represent a hazard.

An emergency response plan shall be prepared for the Mammoth/June Lake Airport. All essential facilities, such as power supply and fire protection systems shall be provided with emergency back-up provisions (i.e., engine generators).

HYDROLOGY/WATER RESOURCES

∞ Water supply demands could reduce surface stream flows in Mammoth Creek, Hot Creek, and Convict Creek.

Significant

Diversion of surface streams for domestic, irrigation, or industrial water supplies for new developments should be prohibited.

Groundwater extraction should be avoided within the Mammoth/Hot Creek watershed north of U.S. Highway 395 to protect sensitive stream environments as well as unique hot/cold water flow systems.

* The capacity of the lower Convict Creek groundwater basin in the vicinity of the airport may not be adequate to supply projected demands.

Significant

All available geologic and hydrologic evidence indicates that projected water demands represent a small fraction of the storage capacity and annual recharge of the groundwater basin.

A comprehensive water supply, distribution, and storage system should be developed for the concentrated land uses associated with the Airport Development District. Whenever

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Lowering of groundwater levels in the lower Convict Creek drainage basin may affect spring flows at the Hot Creek Fish Hatchery and in the Hot Creek Gorge.

Significant

possible, other water supply facilities should be consolidated within the planning area.

The most favorable area for groundwater resource development is in the vicinity of the existing airport site. A well development and testing program should be implemented to verify the availability and capacity of the potential groundwater supply.

All proposed land uses within the airport planning area should be conditioned upon the availability of water supplies.

All available geologic and hydrologic evidence indicates that extraction of groundwater in the vicinity of the airport will have no effect on the hatchery spring flows.

Hydrologic continuity between the lower Convict Creek groundwater basin and spring flows at the Hot Creek Gorge is possible, but not proven. Projected ultimate annual water demands represent less than 2% of the surface flow in Hot Creek at the gorge.

A groundwater level monitoring and reporting program should be developed to assist public agencies in evaluating the impact of groundwater extractions on downstream spring and surface flows.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

WATER QUALITY

Inadequate control of domestic and industrial waste discharges may adversely affect the quality of surface and groundwaters.

Significant

All wastewater treatment and disposal systems shall be designed, constructed and maintained in accordance with requirements of Lahontan RWQCB and the Mono County Health Department. Waste discharge permits shall be obtained from both agencies prior to the installation of wastewater facilities.

No wastewater disposal systems shall be permitted within 100 feet of stream environment zones or in areas where groundwater is less than five feet below ground surface.

The direct discharge of treated (or untreated) wastewaters to perennial surface streams is prohibited within the planning area.

Wastewater collection, treatment and disposal systems shall be consolidated to the greatest extent possible within all designated land use areas.

A centralized sewage collection, treatment, and disposal system shall be developed for the Airport Development District. A sewerage maintenance district shall be established for the ADD land use area. All proposed private development within the district shall be required to contribute to the operation and maintenance of the sewerage system and bear the cost of expansions or extensions as necessary.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Point source discharges of industrial waste or pollutants could contaminate surface and groundwater resources.

Significant

Groundwater sampling wells shall be provided to monitor the performance of centralized subsurface disposal systems and to assess potential adverse water quality impacts. The size, location, and depth of sampling wells shall conform with Lahontan RWQCB requirements.

The discharge of industrial and manufacturing wastes shall be strictly controlled. Pre-treatment or containment facilities shall be provided in accordance with RWQCB requirements prior to any discharges of industrial manufacturing wastes to domestic wastewater treatment or disposal systems. Wash-down wastes from aircraft or vehicle maintenance facilities shall be intercepted and pretreated prior to discharge to sewerage facilities.

Waste oils, greases, or industrial contaminants shall be contained in holding tanks and periodically pumped out for eventual recycling or disposal at approved industrial waste sites. All holding tanks, fuel storage tanks, and other potential sources of water contamination shall be installed in accordance with State Health Department requirements. All hazardous material storage tank installations require the issuance of permits by the RWQCB and the County Health Department.

Erosion from exposed soil surfaces could result in discharges of sediment loads to adjacent surface waters.

Moderate

No significant soil disturbances are permitted within the stream conservation zones of Mammoth Creek, Hot Creek or Convict Creek.

Grading and earthwork shall be expedited to attempt completion in a single summer season. Soil stabilization and initial reseedling shall be completed prior to the onset of winter weather conditions.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Runoff from asphalt roadways and other impervious surfaces contain pollutants which may have adverse water quality impacts on surface streams.

Moderate

All disturbed areas must be revegetated with a variety of climate-adapted plants and ground cover in accordance with an approved landscape and revegetation plan.

All development projects shall be required to install appropriately designed drainage retention and conveyance facilities in accordance with RWQCB guidelines.

All development projects shall be designed to retain and infiltrate all runoff from impervious surfaces associated with a 20-year, one-hour design storm.

The use of sand, cinders, and chemicals for de-icing in winter shall be avoided.

Discharges of significant concentrations of nutrients and/or toxic chemicals from large landscaped areas could have long-term adverse water quality impacts.

Moderate

Fertilizers should be applied in the fall months so that chemicals will be absorbed by seepage from winter snowpack. Fertilizer applications should be avoided during peak precipitation periods when the danger of having nutrients simply washed into surface streams is the greatest.

The use of pesticides and weed control agents should be restricted to the dry summer months. Project proponents shall consult with the Soil Conservation Service, local agricultural agencies, and the Lahontan RWQCB for appropriate weed control agents and pesticide formulas which will not have potential long-term water quality impacts.

Large-scale landscaping projects (such as golf courses) should incorporate decorative ponds and lakes as drainage retention basins or should specifically provide similar facilities for runoff control.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

MINERAL/ENERGY RESOURCES

Geothermal development projects may adversely impact airport operations and aircraft navigation.

Minor

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

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

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

Waste heat from geothermal fluids could provide an alternative energy source for airport facilities.

Beneficial

Detailed studies should be conducted to determine the feasibility of utilizing geothermal fluids for space and area heating purposes.

Proposed airport terminal area developments are incompatible with the existing Forest Service sand and gravel pit.

Moderate

The Mono County Dept. of Public Works and the U.S. Forest Service should conduct studies to identify potential alternative sand and gravel pit sites.

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.

The site should be restored, contour graded, and revegetated upon its abandonment.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

AIR QUALITY

Construction activities will generate dust and exhaust emissions resulting in short-term, localized air quality impacts.

Minor

Project grading and construction permits shall contain the following provisions:

Sites shall be adequately watered to control nuisance dust.

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

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

* Projected expansion of airport operations will result in increased aircraft-related air pollutant emissions.

Moderate

Projected pollutant emissions do not result in concentrations which exceed state and federal air quality standards.

*
14 Development in airport area will increase stationary air pollutant emissions associated with building heating and semi-industrial exhaust gases.

Moderate

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.

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.

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.

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

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

*	Long-term mobile air pollutant emissions arising from automobile traffic and congestion may adversely affect air quality.	Moderate	Landscaping and ground cover vegetation shall be required to stabilize all exposed or disturbed soil surfaces. Provisions should be made in development plans to encourage the use of transit systems, car pools, or other traffic reducing measures. The use of sand and cinders for de-icing during winter periods should be avoided to reduce dust generation along roadways. Local roadway systems should be designed to minimize traffic congestion and delay.
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VISUAL/AESTHETIC RESOURCES

15

Project developments may adversely affect the visual quality of state and local Scenic Highways.

Significant

All development within scenic highway corridors shall comply with the requirements of the Mono County Scenic Highways Element. Visually offensive land uses shall be adequately screened.

Earthwork, grading and vegetative removals shall be minimized. All site disturbances shall be revegetated with plants and landscaping which are in harmony with the surrounding environment.

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.

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

* Proposed industrial and manufacturing land uses within the ADD zone may adversely affect scenic views and vistas.

Significant

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.

All new utility installations must be installed underground.

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.

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

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.

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.

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. Antennas, masts, or flagpoles are prohibited.

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Mass earthwork and grading projects may create long-term visual scars on the surrounding landscape.

Significant

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

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.

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

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

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

17

BIOLOGICAL RESOURCES

* Proposed land uses in the Airport Development District will result in the loss of 200 acres of Sagebrush-Scrub habitat.

Moderate

Areas adjacent to the existing airport have already been impacted by airport activities, reducing the habitat value.

No critical habitat for rare, threatened, or endangered species of plants or animals is known to occur within the ADD zone.

Projects shall be required to retain as much natural open space as possible in site development design.

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

18

* Development of the proposed golf course will result in the direct loss of 60 acres and disturbance of an additional 90 acres of mixed Sagebrush-Scrub, Pinon-Juniper Woodland, and Jeffrey Pine Forest Habitat. Migratory patterns of Mule Deer could be adversely affected.

Moderate

Project grading and construction plans should prohibit disturbance of off-site natural areas. All disturbed areas shall be graded, revegetated, and restored to their natural condition.

Proposed golf course development could provide important replacement habitat for migratory birds and improved forage for deer.

Studies indicate that the project area is not within a major deer migration route. Golf course recreational activities generally do not correspond with peak deer migration periods.

Mass earthwork, grading and vegetative removals should be minimized in the golf course design.

A site specific Environmental Assessment must be prepared for the proposed golf course in accordance with Inyo National Forest and NEPA requirements.

Future development of the Hot Creek Ranch site could have significant adverse effects on the unique aquatic and terrestrial habitat of Hot Creek. Site area is 130 acres.

Significant

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

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

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

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

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

* Cumulative impact of the proposed land use plan will include the loss of 430 acres of existing habitat, with attendant reductions in wildlife populations and general productivity losses within the ecosystem.

Moderate

Loss of existing habitat is an inevitable consequence of any land use within the planning area. No mitigation is possible.

Approximately 90% of the planning area is designated for industrial open-space purposes.

ARCHAEOLOGICAL/CULTURAL RESOURCES

Construction and development activities may disturb or destroy significant or unique archaeological resources.

Moderate

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.

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 shall be notified.

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

REGIONAL PLANNING AND POPULATION

Proposed land use plan requires amendments or modifications to existing jurisdictional agency planning documents and policies, including:

1. Mono County General Plan
2. Inyo National Forest Mammoth-Mono Unit Plan
3. Bureau of Land Management Benton-Owens Valley Management
4. City of Los Angeles
5. Mammoth Lakes General Plan

Minor

Consideration and adoption of the proposed ALUP by jurisdictional agencies will promote the coordinated achievement of public land management goals and policies within the planning area.

Most public lands within the planning area (93.8% of total area) are designated for open space purposes, categorized by existing use.

*Indicates unavoidable impact.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Proposed land use plan will promote population growth and economic development within the airport area.

Significant
(Beneficial)

Proposed land use plan is consistent with the goals and policies of the following regional planning documents:

1. Mono County Regional Transportation Plan
2. Mono County Overall Economic Development Plan
3. Monoplan Regional General Plan
4. Mono County General Plan
5. Draft Mammoth Lakes General Plan

Projected ultimate population associated with plan implementation is lower than presently permitted under Mono County Land Use Element.

Projected population represents moderate growth based on existing conditions.

Economic development opportunities within the airport area are significantly beneficial.

20

Population growth and development will result in increased human activity and disturbance of the natural environment.

Moderate

Future development shall be limited to the zones designated for such purposes.

Access outside of development areas shall be limited to existing improved roadways. Off-road vehicles in roadless areas should be prohibited.

Efforts should be made to restrict public access to environmentally sensitive areas.

EMPLOYMENT AND ECONOMIC DEVELOPMENT

Airport terminal area development and expansion will create approximately 205 full-time, permanent jobs. Associated industrial and manufacturing development within the ADD zone could create an additional 100 jobs.

Significant
(Beneficial)

Mono County experiences a high level of unemployment due to its dependence on a seasonal resort-tourism economy.

Proposed economic development is consistent with the goals of the Mono County OEDP.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Development within the ADD zone will generate lease payments, bed tax, sales tax, and property assessment revenues for Mono County.

Significant (Beneficial)

Revenues will enhance the economic viability of the airport. Facility currently operates at a net annual loss to Mono County

The level of Mono County governmental services has significantly declined in recent years due to a lack of public revenues. Potential for generation of additional revenues is limited, and airport development project represents a unique opportunity for Mono County.

TRAFFIC AND TRANSPORTATION

Ultimate expansion of airport facilities and land uses designated in the plan will increase automobile traffic within the planning area to 2,560 ADT and 360 VPH.

Moderate

Existing two-lane rural roads have a theoretical design capacity of 500-750 VPH, depending on roadway conditions.

21

Projected increases in automobile traffic may create safety hazards and congestion at intersections of local roads with State Highway 395.

Significant

No additional roadway intersections or driveway access on State Highway 395 are permitted.

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.

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

Mass transit facilities should be incorporated into the airport development plan to reduce dependence on automobile access. Improved taxi service and alternative transit systems should also be promoted for the airport area.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

Emergency vehicle access to the airport terminal area is poor.

Significant

The construction of an alternate access road to the airport terminal area from the south via Benton Crossing Road should be evaluated and implemented if feasible.

An archaeological study should be conducted to determine if the alternative access road alignment impacts any identified archaeological sites, or if mitigations are feasible.

NOISE

* Expansion of aircraft operations at the Mammoth/June Lake Airport will result in a significant increase in noise levels adjacent to the airport.

Significant

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

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.

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

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.

The existing church building located near the easterly end of the airport runway is incompatible with the projected noise impacts of airport operations. Removal of the existing structure is recommended.

Pre-flight engine run-up procedures should be modified to avoid existing nuisance noise impacts.

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

SAFETY AND WELFARE

Development within the vicinity of the Mammoth/June Lake Airport may adversely affect the safety of air navigation and represent hazards to residents and the general public.

Significant

All development within the airport planning area shall comply with the adopted Land Use Policy Plan of the ALUC within the following zones:
1. Airport Safety Zone
2. Airport Overflight and Traffic Pattern Zone
3. Airport Height Restriction Zone (ACZP).

The construction of a cross-wind runway may be necessary for the safety of air navigation.

Significant

Preliminary environmental analysis indicates that the potential cross-wind runway installation would have significant adverse environmental and safety impacts within the planning area. The necessity for the cross-wind runway should be carefully evaluated.

Existing emergency assistance and fire protection facilities at the airport are inadequate.

Significant

Proposed installation of a crash/fire/rescue (CFR) facility with emergency response equipment should be implemented at the earliest possible date.

The development of a complete water supply, storage, and distribution system capable of providing adequate fire suppression flows should be implemented at the earliest possible date.

Standby electrical generation equipment should be provided for all essential emergency facilities and fire protection systems.

CUMULATIVE IMPACTS

In conjunction with projected regional population growth, the proposed ALUP will cumulatively contribute to the following environmental impacts:

Moderate

Proposed Airport Land Use Plan is intended to provide specific planning direction which will reduce the overall impacts of population growth and development within the planning area.
Proposed plan is consistent with the land use concepts and recommendations of regional planning documents.

Direct loss of wildlife habitat as well as a potential gradual degradation of habitat value due to construc-

POTENTIAL IMPACTS

SIGNIFICANCE

REQUIRED MITIGATION MEASURES

tion disturbances and increased levels of human activity.

Increases in runoff from impervious surfaces with attendant waste discharges.

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

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.

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

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.

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

Mitigation of cumulative impacts requires the establishment of regional policies and programs to accommodate projected population growth.

All development within the airport planning area shall comply with the land use requirements and mitigation measures established in the adopted Airport Land Use Plan.

INTRODUCTION

Background

The Mammoth/June Lake Airport is located in the southwestern portion of Mono County approximately eight miles easterly of the resort community of Mammoth Lakes. The California Public Utilities Code requires that each county which contains an air carrier airport must establish an Airport Land Use Commission (ALUC) whose primary function is to maintain the utility and economic viability of air transportation while protecting the public health, safety, and welfare in the vicinity of airports. The Public Utilities Code further requires the Commission to formulate a comprehensive land use plan for areas surrounding or affected by airport operations. The Mammoth/June Lake Airport is the only air carrier airport in Mono County with two commercial aviation companies presently offering scheduled service from the facility.

The proposed Mammoth/June Lake Airport Land Use Plan establishes a comprehensive land use plan which defines the type and pattern of future development in the 28 square mile area surrounding the existing airport. The plan provides more specificity than the County General Plan or the Mammoth-Mono Unit Plan (MMUP) of the Inyo National Forest and is intended to provide the basis for amendment of these planning documents. The Mono County ALUC and the U.S. Forest Service are joint lead agencies for the proposed Airport Land Use Plan. The plan provides a framework for the orderly growth and development of the Mammoth/June Lake Airport planning area which will promote inter-agency coordination for the achievement of regional land management goals.

Specific policies and guidelines established in the plan are also intended to protect the safety and general welfare of people in the vicinity of the airport and to assure the safety of air navigation. Specifically, the plan seeks to protect the public from adverse effects of aircraft noise, reduce the number of people exposed to airport-related hazards, and to ensure that no structures affect navigable airspace. Furthermore, the plan sets forth the criteria by which the Mono County Airport Land Use Commission will evaluate general and specific plans, zoning ordinances, building regulations, and development proposals within the vicinity of the Mammoth/June Lake Airport.

The proposed Airport Land Use Plan is not categorically exempt from environmental review, and an initial study has indicated that there may be environmental impacts associated with the plan which require mitigation.

Purpose of an Environmental Impact Report/Environmental Assessment

The California Environmental Quality Act (CEQA) and Guidelines for Implementation of the California Environmental Quality Act, as amended, are binding on all public agencies in California. If the agency

determines that there is substantial evidence that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency shall: (1) prepare, or cause to be prepared by contract, an environmental impact report (EIR); or (2) use a previously prepared EIR which the lead agency determines adequately analyses the project. The purpose of an EIR under CEQA is to:

- o Inform governmental decision makers and the public about the potential significant environmental effects of the proposed project.
- o Identify ways that environmental damage can be avoided or significantly reduced.
- o Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds mitigations feasible.
- o Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental affects are involved.

EIRs must contain discussions of specific topics as outlined in guidelines for implementation of CEQA prepared by the State Secretary of Resources. These guidelines are periodically updated to comply with changes in CEQA and court interpretations.

Federal requirements for environmental review are established by the National Environmental Protection Act (NEPA) of 1969. Although the basic goals for environmental review under CEQA and NEPA are essentially the same, there are differences in requirements, terminology, and procedures. Under NEPA, an Environmental Assessment is used to perform the functions of the EIR specified in CEQA. The content of this report is intended to be in conformance with the general requirements of both NEPA and CEQA.

Public Review and Comments

This Draft EIR will be distributed to local, state, and federal agencies, interested organizations, and circulated to the public for review and comment. Written comments must be received by the Mono County Airport Land Use Commission or the Inyo National Forest, Mammoth Ranger District within a period of 45 days from the date of distribution. Copies of the Draft EIR will be available for review at the Mono County Planning Department offices in Bridgeport and Long Valley at the Mammoth Ranger District office, at the Mammoth High School Library, and at the Mammoth Lakes Public Library. Copies may be obtained from the Mono County Planning Department at printing cost.

The Airport Land Use Commission, the Board of Supervisors of Mono County and the Inyo National Forest must consider the information presented in this document, as well as all written comments received in public hearings before approving or disapproving the proposed Mammoth/June Lake Airport Land Use Plan. Notice of the date and time of the hearings will be published in local newspapers and public input is encouraged at both hearings. In the final review of the proposed land use plan, environmental considerations and economic and social factors will be weighed to determine the most appropriate elements and provisions of the plan.

Additional Information

The report was prepared by Triad Engineering Corporation for the Mono County Airport Land Use Commission, the Mono County Planning Department, and the Inyo National Forest. Specific comments and inquiries regarding the content of this Draft EIR or any of the information presented herein may be directed to:

Mono County Planning Department
P. O. Box 8
Bridgeport, California 93517
Telephone: (619) 934-7504
Attention: Joseph Olinghouse, Director

or

Mammoth Ranger District/Inyo National Forest
P. O. Box 148
Mammoth Lakes, California 93546
Telephone: (619) 934-2505
Attention: Dean McAllister, District Ranger

or

Triad Engineering Corp.
P. O. Box 1570
Mammoth Lakes, California 93546
Telephone: (619) 934-7588
Attention: James N. Ognisty

PROJECT DESCRIPTION

Project History

The Mammoth/June Lake Airport was originally constructed by the U.S. Army during World War II and acquired by Mono County shortly following the war. It was operated as an unattended landing strip (known as the Long Valley Airport) for many years with virtually no additional improvements. During the early 1960's, the Mammoth Lakes area began to develop into a major Eastern Sierra resort, and Mono County transferred the property to the U.S. Forest Service with the understanding that private interests would improve and expand the facilities. The runway was subsequently widened and lengthened to 5,000 feet and operated by private parties under a U.S. Forest Service special use permit. The use permit included the development of recreational-resort facilities in addition to airport land uses. In the mid 1970's, the Mammoth Lakes area experienced a period of extraordinary growth and annual airport traffic increased from less than 6,000 to over 20,000 aircraft operations. Responding to increasing demands being placed on the airport, Mono County prepared a comprehensive Airport Master Plan in 1978 and resumed public operation of the facility in 1980.

In 1983, the county began a \$5,100,000 improvement program to upgrade the airport facility, financed primarily with grants from the Federal Aviation Administration. In addition, two land exchanges were initiated with the Inyo National Forest to return 196 acres of the airport property (total site area is approximately 256 acres) to Mono County ownership. One 57.5-acre exchange was completed in the fall of 1985, and the remaining 138.5-acre exchange is to be finalized soon. The most easterly 60-acre portion of the runway and taxiway is located on land leased from the City of Los Angeles.

The Mammoth/June Lake Airport presently consists of a 7,000-foot asphalt runway, 3,400 feet of paved overrun area, a full-length parallel paved taxiway, and both concrete and paved aircraft parking aprons. The facility includes a small single-story terminal, a management office, an operations office, fueling facilities, and several aircraft maintenance and storage hangars. The airport facility handles in excess of 30,000 aircraft operations annually, and is presently managed by a private firm, Glazov Aviation, Inc., under contract with Mono County.

Land uses in the vicinity of the airport have generally evolved in the absence of coordinated planning concepts. Prior to airport construction, the land surrounding the airport was primarily utilized for livestock pasture and grazing and fishery resource development at Hot Creek. In the past 20 years, however, development has included such

diverse land uses as an elementary school, a church, a regional recreational facility, aquatic research facilities, private and public quarries, and a sheriff's substation. Although most of the land surrounding the airport site is under public ownership, there has been little planning coordination between the various jurisdictional agencies.

Authority and Requirements

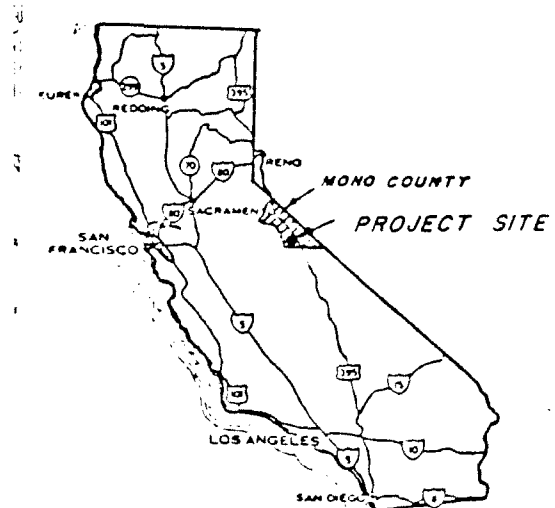
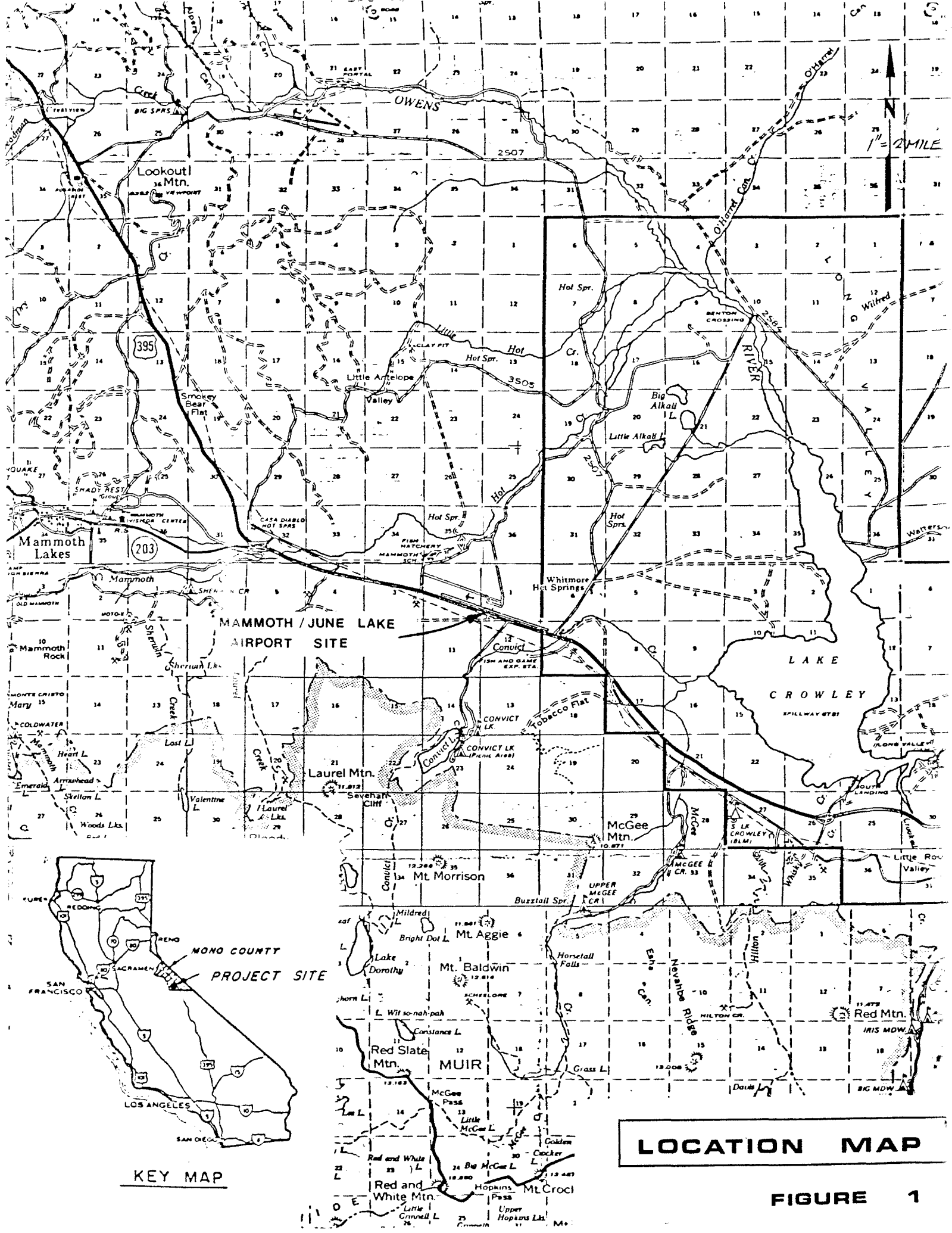
The California Public Utilities Code (Article 3.5, Sections 21670 - 21678, as amended) requires that each county which contains at least one air carrier airport must establish an Airport Land Use Commission. The following powers and duties are assigned to the Commission:

1. To assist local agencies in ensuring compatible land uses in the vicinity of all new airports and in the vicinity of existing airports to the extent that the land in the vicinity of such airports is not already devoted to incompatible uses.
2. To coordinate planning at the state, regional and local levels so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety and welfare.
3. To prepare and adopt an airport land use plan pursuant to Section 21675.
4. To review the plans, regulations and other actions of local agencies and airport operators pursuant to Section 21676.
5. The powers of the Airport Land Use Commission shall in no way be construed to give the commission jurisdiction over the operation of any airport.

Pursuant to the provisions of the Public Utility Code, the Board of Supervisors established the Mono County Airport Land Use Commission in January, 1986. There are seven designated members of the commission: Two county representatives, two representatives of the Town of Mammoth Lakes, two representatives of airport management in the county, and one member representing the general public.

Planning Area Location and Boundaries

The Mammoth/June Lake Airport is located in the southern portion of Mono County, approximately 35 miles north of Bishop and eight miles east of the Town of Mammoth Lakes (see Figure 1). It is located immediately adjacent to U.S. Highway 395 which is the principal north-south arterial highway route of the Eastern Sierra. Highway 395 basically parallels the lower slopes of the Sierra Nevadas, connecting Reno, approximately 180 miles to the north, with Los Angeles, approximately 300 miles to the south.



KEY MAP

LOCATION MAP

FIGURE 1

The airport site is situated in the westerly portion of Long Valley on a broad plain confined by low hills and ridges to the north and the Sierra Nevadas to the south (see Figure 2). Significant geographic features in the area include Crowley Lake to the east, the Convict Lake basin to the south, the Mammoth Creek drainage basin to the west, and the Hot Creek Gorge to the north. The central portion of the area is dominated by Doe Ridge, a large mesa which rises abruptly 200 feet above the surrounding plains.

The California Public Utilities Code requires the airport land use commission to define planning boundaries around each public airport within their jurisdiction. Determination of the planning boundary must consider aircraft operations and physical development of the airport for a 20-year period. The land potentially affected by present and future airport operations is also known as an "area of influence." The land use planning area for the Mammoth/June Lake Airport is shown on Figure 3. It encompasses 28 square miles and includes all areas potentially affected by aircraft landing and takeoff zones, approach and departure flight patterns, and general overflight zones. The airport land use planning area is legally described as follows:

<u>Section</u>	<u>Township</u>	<u>Range</u>	<u>Meridian</u>
28, 29, 30, 31, 32 & 33	T3S	R29E	MDB&M
4, 5, 6, 7, 8 & 9	T4S	R29E	MDB&M
25, 26, 27, 28, 33, 34, 35 & 36	T3S	R28E	MDB&M
1, 2, 3, 4, 9, 10, 11 & 12	T4S	R28E	MDB&M

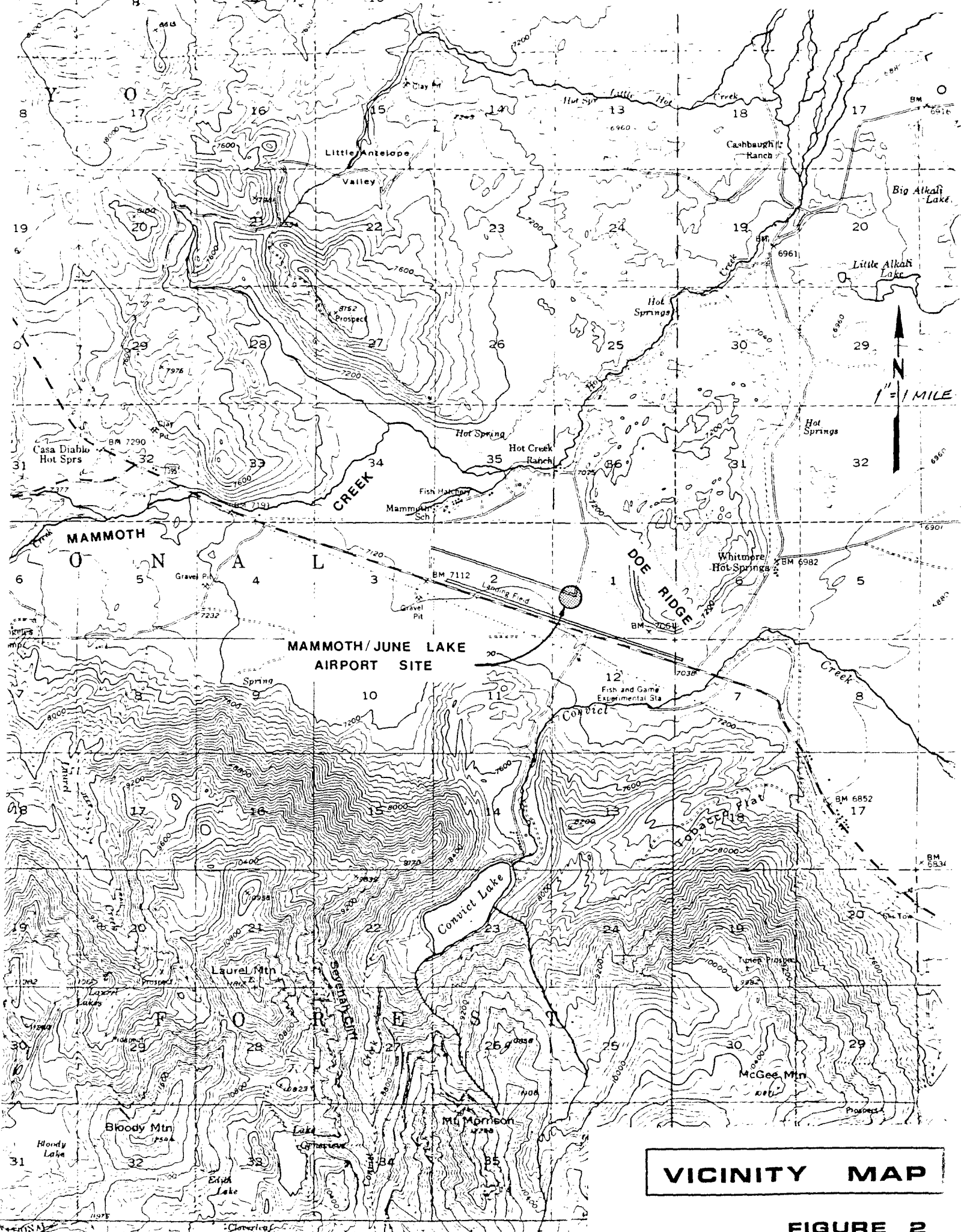
Land Ownerships and Existing Development

Land ownerships within the planning area are shown on Figure 4 and summarized in Table 1 below.

Table 1. Planning Area Land Ownership

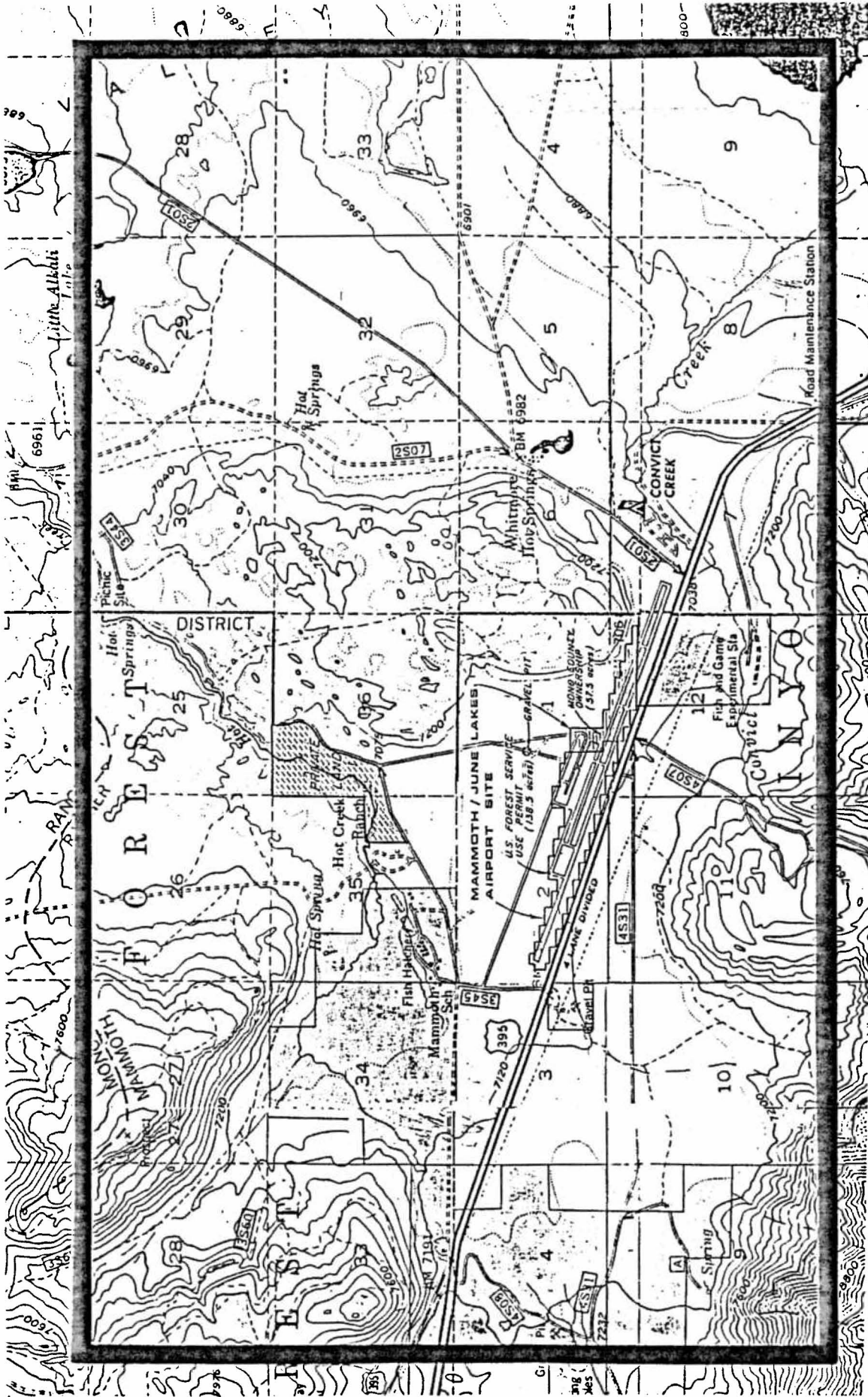
<u>Ownership/Jurisdiction</u>	<u>Approximate Area, acres</u>
Inyo National Forest	8,172
Bureau of Land Management	4,040
City of Los Angeles	5,480
County of Mono	58
Sierra Quarry (private)	40
Hot Creek Ranch (private)	<u>130</u>
TOTAL:	17,920

The existing Mammoth/June Lake Airport encompasses approximately 256 acres of land. Mono County presently owns 57.5 acres of the eastern-central portion of the airport site. The westerly 138.5 acres of

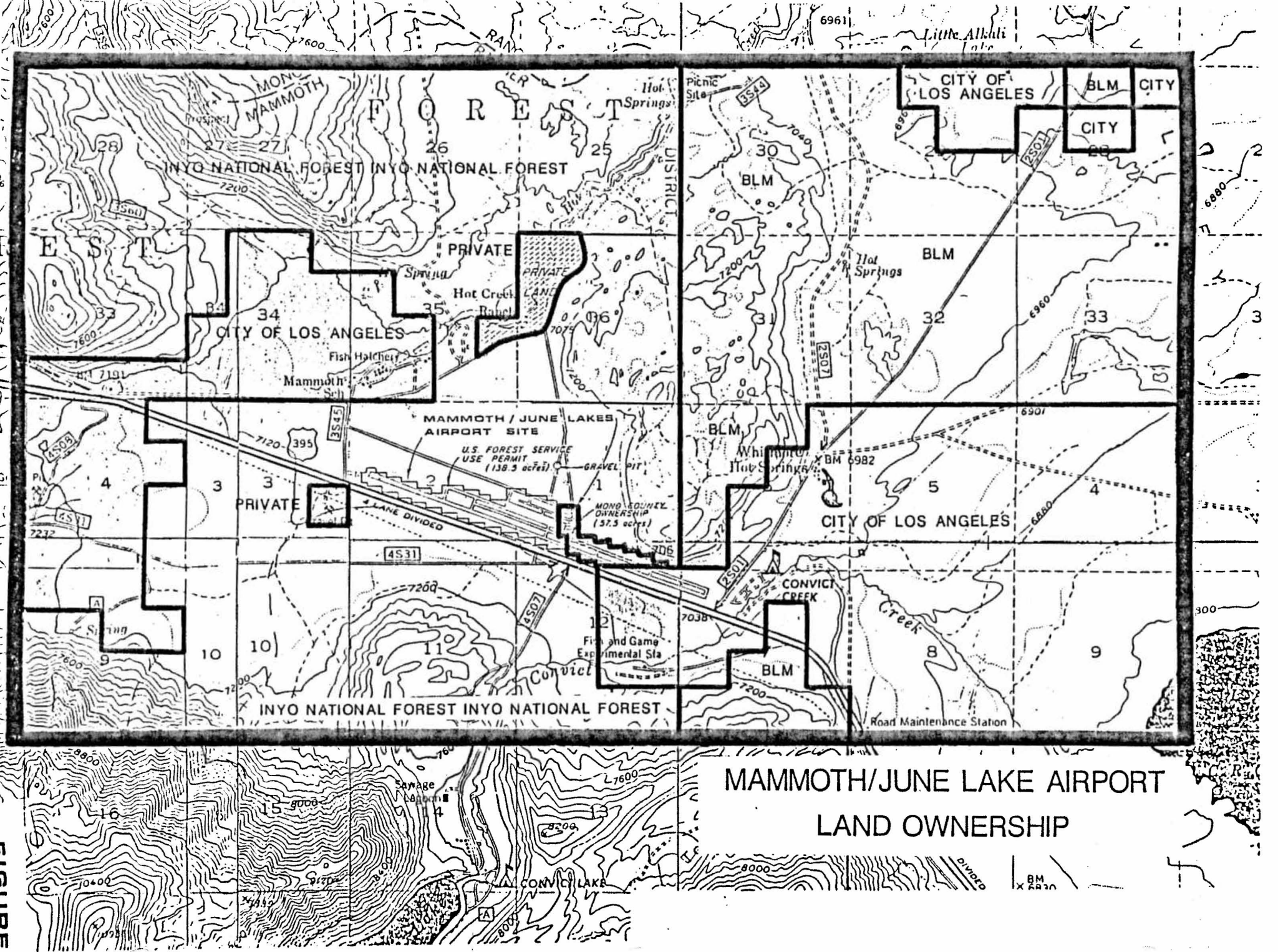


VICINITY MAP

FIGURE 2



MAMMOTH/JUNE LAKE AIRPORT
PLANNING BOUNDARY



MAMMOTH/JUNE LAKE AIRPORT
LAND OWNERSHIP

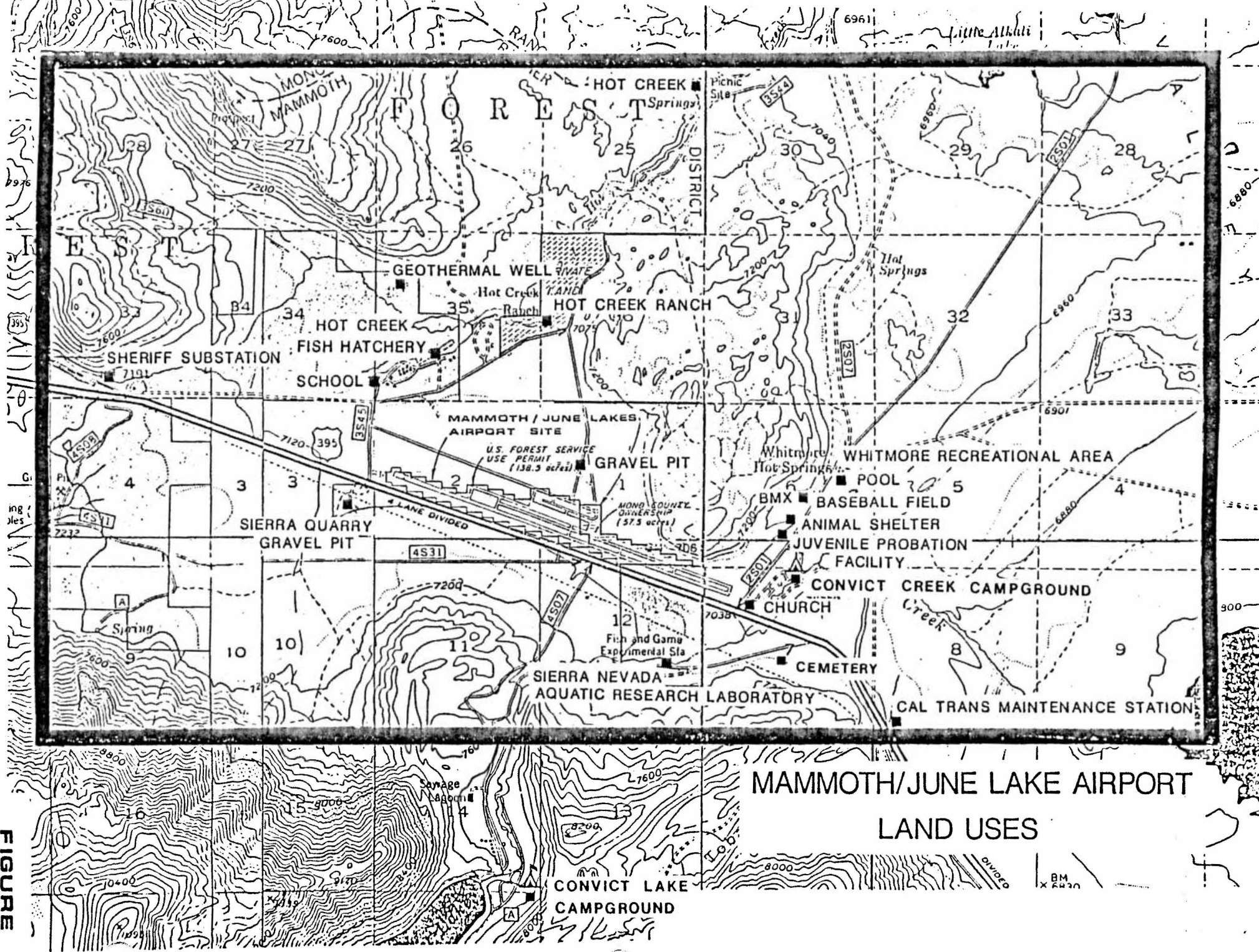
FIGURE

the airport is under special use permit from the Inyo National Forest, but negotiations are in progress to exchange this land into Mono County ownership. The remaining 60 acres of the most easterly portion of the airport are leased by Mono County from the City of Los Angeles.

Existing land uses within the Airport Planning Area are shown on Figure 5. Principal developments include: U.S. Highway 395, a four-lane, divided highway which parallels the southerly boundary of the airport site; the Mono County Probation Camp, Animal Shelter, and Whitmore regional recreation complex located easterly of the airport; the Hot Creek Fish Hatchery, and associated residential and administrative structures to the northwest; old Mammoth Elementary School (now abandoned) adjacent to the hatchery; the Hot Creek Ranch private resort to the north; the Mono County Sheriff's substation and governmental center to the west; the Sierra Quarry private sand and gravel pit to the southwest; Convict Lake Resort and campground area to the south; the Sierra Nevada Aquatic Research Laboratory (SNARL) operated by the University of California to the southeast; the High Sierra Community Church to the east; and the Convict Creek campground area further east. Existing land uses in the vicinity of the airport are summarized in Table 2 below.

Table 2. Existing Land Uses

<u>Facility</u>	<u>Location</u>	<u>Ownership</u>
Whitmore County Recreational Area	1 mile east.	City of L.A. (lease)
County Juvenile Probation Facility	1 mile east.	City of L.A. (lease)
County Animal Shelter	1 mile east.	City of L.A. (lease)
Hot Creek Ranch Resort	1 mile north.	Private
Forest Service Gravel/Borrow Pit	1/4 mile north	Inyo N.F. (use permit)
Hot Creek Fish Hatchery (State DFG)	1-1/2 mile northwest.	City of L.A. (lease)
Mammoth Elementary School (abandoned)	1-1/2 mile northwest.	City of L.A. (lease)
Mammoth/Chance Geothermal Project	2 miles northwest.	City of L.A. (lease)
Sheriff Substation and Governmental Center	3 miles west.	City of L.A. (lease)
Sierra Quarry	1 mile west.	Private
Convict Lake Recreational Area	1-1/2 miles south.	Inyo N.F. (use permit)
Sierra Nevada Aquatic Research Laboratory	1 mile southeast.	Inyo N.F. (use permit)
Convict Creek Campground	1-1/2 miles southeast.	City of L.A. (lease)
High Sierra Community Church	1/2 mile southeast.	City of L.A. (lease)
Caltrans Maintenance Station	2 miles southeast.	City of L.A. (lease)



MAMMOTH/JUNE LAKE AIRPORT
LAND USES

FIGURE 3

<u>Facility</u>	<u>Location</u>	<u>Ownership</u>
Caltrans Gravel Pit	1-1/2 miles southeast.	City of L.A. (lease)
Mono County Cemetery (proposed)	3/4 mile southeast	B.L.M.

Existing Planning Documents

There are three independent general land use planning documents which are presently in effect for the planning area:

1. The Mono County General Plan Land Element as adopted in 1982.
2. The Land Management Plan for the Mammoth-Mono Planning Unit of the Inyo National Forest as adopted in 1979.
3. The Benton-Owens Valley Management Plan of the Bureau of Land Management as adopted in 1982.

All of the above documents deal with broad-scope planning concepts and are necessarily general in nature. Specific airport site planning recommendations are presented in the 1978 Mammoth/June Lake Airport Master Plan and the 1982 Mono County Regional Transportation Plan (updated in 1984). Brief summaries of the major features of each planning document are presented in the following paragraphs.

Mono County General Plan Land Use Element. The General Plan designates the majority of the airport planning area for "mixed intensity-multiple use." This land use designation is a general category which is applied to all areas of the county not specifically associated with developed communities or prime agricultural land. The plan defines "mixed-multiple" as a combination of residential, commercial, and recreation land uses.

The Scenic Highway Element of the General Plan notes that U.S. Highway 395 is officially designated as a State Scenic Highway from Long Valley to the State Route 203 junction. It further designates all of Highway 395 from the Inyo County line to State Route 120 (Tioga Pass Road) as a County Scenic Highway. The element defines a scenic highway corridor extending 1,000 feet on either side of the designated highways within which development policies apply. These policies include restrictions on signs and obstructions as well as controls on the height and appearance of building structures.

Mammoth-Mono Planning Unit Land Management Plan. This plan was adopted in 1979 by the U.S. Forest Service and defines general policies and programs for the management of Inyo National Forest lands extending from Tom's Place to Conway Summit. The Mammoth/June Lake Airport is situated within Management Unit No. 40 of the plan, which is assigned Zone H policies and planning goals. Management emphasis is on watershed, visual quality, forage and wildlife habitat.

Management Zone H encompasses 89,520 acres (140 sq. miles) of non-contiguous land area, and there is only one specific policy reference to Unit 40. The policy provides for the expansion of airport facilities at the Mammoth/June Lake Airport. The resource analysis summary for Management Unit No. 40 only indicates that Inyo National Forest lands within the unit have little recreational or timber resource development potential. Visual quality objectives for 96% of the unit land area are established at the "partial retention" level with the remainder at "full retention." 22% of the unit is identified as inventoried roadless area (RARE II). Roadless areas are primarily situated along the most southerly fringe of the airport planning area boundary, adjacent to Convict Canyon.

Benton-Owens Valley Management Plan. The Bureau of Land Management Plan includes specific policies for the Long Valley Management Area which encompasses 40,230 acres primarily surrounding Crowley Lake. Management goals are defined as ". . . manage resources and uses to enhance the scenic, wildlife, recreational, and livestock forage values of the area while allowing geothermal development with limiting constraints." The management plan states that goals and policies are to be implemented consistent with the Inyo National Forest Mammoth-Mono Unit Plan, applicable County General Plan recommendations, and land use policies of the City of Los Angeles.

Mammoth/June Lake Airport Master Plan. The 1978 Airport Master Plan outlined an extensive phased improvement program for the upgrading and expansion of the existing airport facilities. The first phase of the improvements were accomplished in a major FAA-funded construction project completed in 1984. This project included extension of the existing runway to 7,000 feet (excluding paved overrun area), installation of a full-length parallel taxiway, construction of aircraft parking aprons, installation of runway and taxiway lighting systems, and construction of a new airport access road. Current improvements consist of the construction of a crash/fire/rescue (CFR) building which is scheduled for completion in late 1986. Future major improvements include expansions of facilities within the centralized "core" area of the existing terminal facilities, improvement of aircraft navigational systems, and basic water and sewer infrastructure improvements necessary to accommodate airport development.

The Master Plan considered ancillary land uses within the immediate vicinity of the airport. In addition to essential airport facilities, the following commercial resort land uses are permitted: Lodging, restaurant and cocktail lounge, swimming pool, golf courses, gasoline service stations, a trailer park, taxi and shuttle services, and outdoor recreational facilities.

Mono County Regional Transportation Plan. The 1982 Regional Transportation Plan cited the improvement of the Mammoth/June Lake Airport as the number one aviation priority in the county. Aviation passenger, employment, and traffic forecasts for the airport facility are presented in Table 3.

The Regional Transportation Plan established the following priorities for airport improvements:

1. Mitigation of accident potential.
2. Rehabilitation of existing facilities to protect investments and reduce maintenance costs.
3. Construction of new support facilities to enhance airport use and provide new revenue.

The plan strongly recommends that long-range projects "which are revenue-producing in nature" be developed in cooperation with private enterprise at the airport site.

Project Objectives

The primary objective of the Mammoth/June Lake Airport Land Use Plan is to comply with the authority and requirements established in Section 3.5 of the California Public Utilities Code. The code specifically requires the Airport Land Use Commission to accomplish the following:

"21675. (a) The commission shall formulate a comprehensive land use plan that will provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The commission plan shall include a long-range master plan that reflects the anticipated growth of the airport during at least the next 20 years. In formulating a land use plan, the commission may develop height restrictions on buildings, may specify use of land, and may determine building standards, including soundproofing adjacent to airports, within the planning area. The comprehensive land use plan shall not be amended more than once in any calendar year."

Most of the land surrounding the Mammoth/June Lake Airport is federally owned under the administration of the Inyo National Forest and the Bureau of Land Management. The City of Los Angeles also has large land holdings in the area, and pending land exchanges will make Mono County a significant landholder. Historically, there has been virtually no planning coordination between the various public agencies which control the lands surrounding the airport. Recent events, including geothermal resource development, the establishment of the Whitmore

Table 3. Mammoth/June Lake Airport Demand Forecasts

AIRCRAFT & OPERATIONS FORECAST						AIRLINE TERMINAL AREA OPERATIONAL FACTORS					
	1975	1980	1985	1990	1995		1975	1980	1985	1990	1995
BASED AIRCRAFT						Busy Hour Aircraft Operations:					
Single Engine:	21	30	36	42	48	Small turboprop	4	6	4	4	-
Multi Engine:	7	10	12	13	14	Large turboprop	-	-	2	4	2
Total	28	40	48	55	60	Jet/Electra	-	-	-	-	3
ANNUAL AIRCRAFT OPERATIONS						Total					
Local:	14,000	19,200	23,300	26,400	28,800		4	6	6	8	5
Itinerant:	12,800	18,200	20,500	25,300	24,600	Busy Hour Passengers:					
Total	26,800	37,400	43,800	51,700	53,400	Small turboprop	72	108	72	72	-
Single Eng. Prop:	17,400	24,000	28,800	33,000	36,000	Large turboprop	-	-	100	200	100
Multi-Eng. Prop:	5,500	8,000	9,600	11,000	12,000	Jet/Electra	-	-	-	-	255
Business Jet:	-	-	500	800	1,200	Total					
Airline:	-	-	-	-	-		72	108	172	272	355
Small turboprop	3,900	5,400	2,600	2,600	-	GENERAL AVIATION AIRCRAFT PARKING DEMAND					
Large turboprop	-	-	2,300	4,300	1,600		1975	1980	1985	1990	1995
Electra/Jet	-	-	-	-	2,600	Aircraft Parking Spaces:					
Total	26,800	37,400	43,800	51,700	53,400	Hangars	14	20	24	28	30
PEAK MONTH	2,700	3,800	4,400	5,200	5,350	Tiedowns - Transient	52	70	80	90	100
BUSY DAY	130	190	220	260	265	Based	14	20	24	27	30
BUSY HOUR	20	28	33	39	40	Total	80	140	128	145	160
TOTAL PASSENGER FORECASTS						VEHICLE TRIP GENERATION*					
	1975	1980	1985	1990	1995		1975	1980	1985	1990	1995
ANNUAL:						Air Carrier:					
Airline	31,200	43,500	78,000	134,000	190,000	Private Auto	54	82	115	141	166
General Aviation	57,300	80,000	96,000	110,000	120,000	Car Rental	21	28	56	104	154
Total	88,500	123,500	174,000	244,000	310,000	Taxi/Limo	4	5	9	17	26
PEAK MONTH:						Bus	5	7	13	25	37
Airline	3,800	5,300	9,500	16,300	23,200	Subtotal	84	122	193	287	383
General Aviation	5,700	8,000	9,500	11,000	12,000	(Peak Hour)	(17)	(24)	(39)	(57)	(77)
Total	9,500	13,300	19,000	27,300	35,200	General Aviation:					
BUSY DAY:						Private Auto	40	56	88	76	87
Airline	290	400	720	1,230	1,750	Car Rental	35	51	58	69	71
General Aviation	275	390	460	530	580	Bus/Taxi/Limo	5	6	7	8	8
Total	565	790	1,180	1,760	2,330	Subtotal	80	113	133	153	166
BUSY HOUR						(Peak Hour)	(18)	(23)	(27)	(31)	(33)
Airline	72	108	172	272	355	Employees:					
General Aviation	40	60	70	80	90	Private Auto	42	57	120	141	162
Total	112	168	242	352	445	(Peak Hour)	(14)	(19)	(40)	(47)	(54)
						Total Trips (AADT)					
						(Peak Hour)	208	292	446	581	711
						(Peak Hour)	(47)	(66)	(106)	(135)	(164)
						*All trips are Busy Day except those labeled Peak Hour.					
AVIATION RELATED EMPLOYMENT						AUTO PARKING SPACE DEMAND					
	1975	1980	1985	1990	1995		1975	1980	1985	1990	1995
Airline	6	8	10	11	12	Air Carrier	32	38	42	78	96
FBO	5	6	8	10	12	General Aviation	21	31	38	41	43
Airport Management	-	1	2	2	3	Car Rental	13	19	38	66	100
Car Rental	3	4	7	10	12	Employees	14	19	40	47	54
Restaurant	-	-	10	11	12	Total	80	107	156	230	293
Other	-	-	3	3	3						
Total	14	19	40	47	54						

recreational area, airport expansion and improvements, and private development proposals, have indicated that there is a need for joint planning studies and inter-agency cooperation in the planning area.

The economy of Mono County is heavily dependent on the resort-tourism industry and is consequently subject to extreme seasonal and annual variations. With the exception of the Mammoth Lakes community, per capita income levels are low, unemployment rates are high, and the economy of the county has been generally stagnant for over a decade. Only 21% of the land area of Mono County is privately owned, and the vast majority of this land is utilized for agricultural purposes. The lack of suitable land resources has been a significant inhibiting factor for economic development within the county.

In consideration of the above factors, there are three objectives of the Mammoth/June Lake Airport Land Use Plan:

1. To achieve compliance with the requirements established in the California Public Utilities Code for airport land use planning.
2. To provide a means of coordinating joint planning studies for the designation of appropriate land uses in the airport area.
3. To provide economic development opportunities in the airport area for the benefit and welfare of the county.

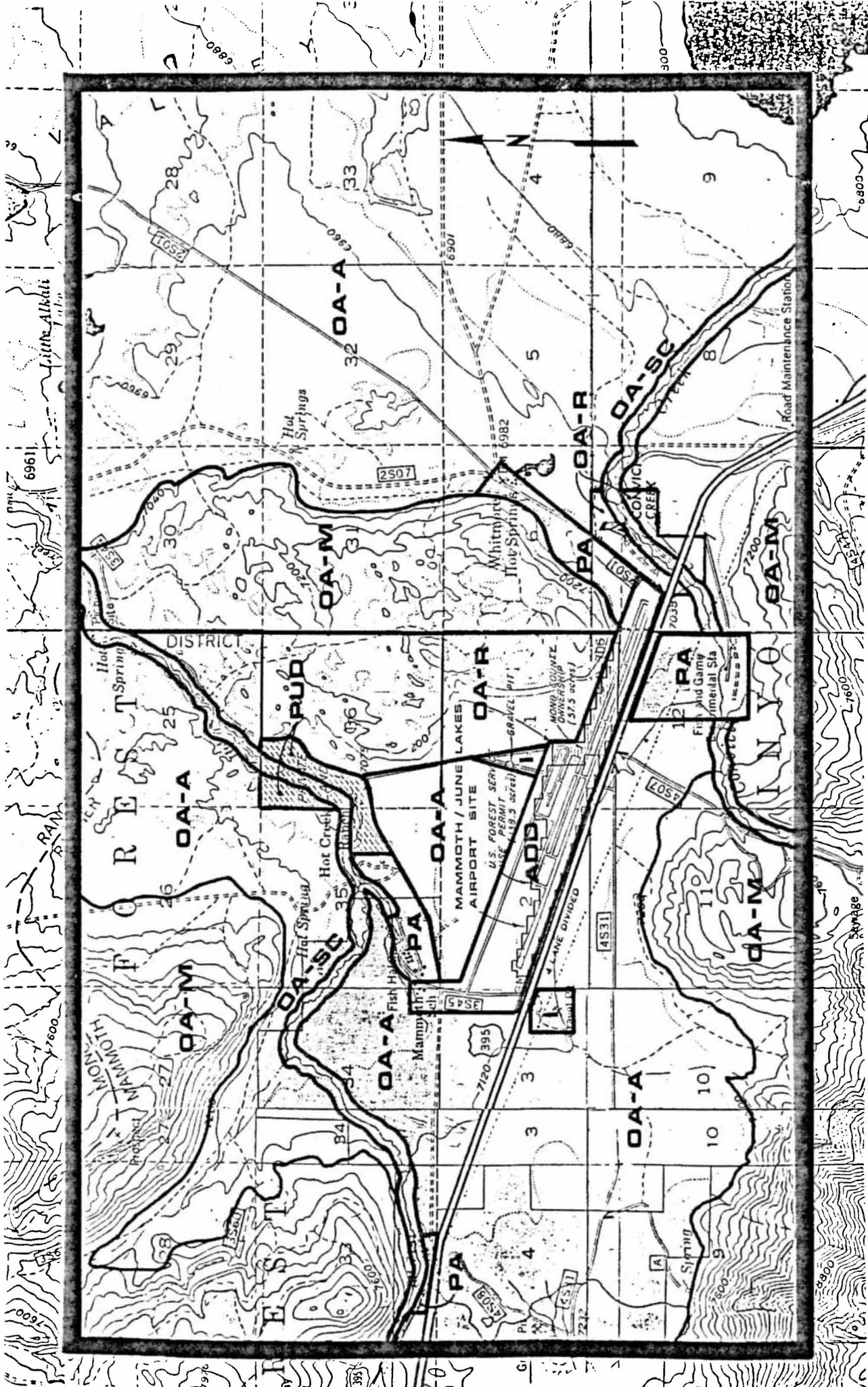
It is intended that the adopted Airport Land Use Plan will provide the basis for amendment of the Mono County General Plan and the MMPU Land Management Plan of the Inyo National Forest.

Proposed Airport Land Use Plan

The proposed Land Use Plan for the Mammoth/June Lake Airport Planning Area is shown on Figure 6. The basic concept of the land use plan includes the following provisions:

1. Recognition of present land uses and consideration of potential future development at existing sites.
2. Preservation of large open space areas and designation of low intensity land uses for the majority of the airport planning area.
3. Designation of an Airport Development District for lands situated immediately adjacent to the Mammoth/June Lake Airport site.

A tabular summary of the land area associated with each land use designation is presented in Table 4 below:



MAMMOTH / JUNE LAKE AIRPORT LAND USE PLAN

LEGEND

Code	Description	ADD	District
OA-A	Open Space - Agriculture		Airport Development District
OA-M	Open Space - Resource Mgmt.	I	Industrial / Manufacturing
OA-R	Open Space - Recreation	PA	Industrial / Public Agency
OA-SC	Open Space - Stream Conservation	PUD	Planned Unit Development

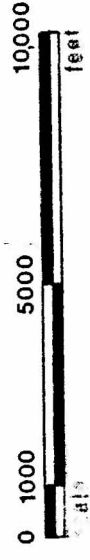


FIGURE E

Table 4. Land Use Areas

<u>Land Use Description</u>	<u>Designation</u>	<u>Approximate Land Area acres</u>	<u>% of Total</u>
Open Space			
Agricultural	OA-A	10,659	59.5
Resource Management	OA-M	4,755	26.5
Recreation	OA-R	1,086	6.1
Stream Conservation	OA-SC	300	1.7
Subtotal:		<u>16,800</u>	<u>93.8</u>
Institutional/Public	PA	490	2.7
Industrial/Manufacturing	I	65	.4
Planned Unit Development	PUD/RR	110	.6
Airport Development District	ADD	<u>455</u>	<u>2.5</u>
Subtotal:		<u>1,120</u>	<u>6.2</u>
TOTAL:		17,920	100.0

The various land uses designated in the Airport Land Use Plan are intended to be consistent with the provisions of Title 19, Mono County Zoning and Development Code and are described in the following paragraphs.

Open Area (OA). The open area designation is intended to protect and preserve those lands which provide low-intensity recreational opportunities, visual open space, habitat for wildlife resources, open range for stock grazing, or stream environment zones. Development requirements and permitted land uses are defined in Chapter 19.18 of the Zoning Code. Residential land uses are not permitted in the OA district. An additional identifier has been utilized to specify acceptable uses of open area lands (subject to use permit procedures) as follows:

OA-A: Indicates open space land which is presently utilized for non-intensive agricultural uses. Designation primarily includes Inyo National Forest, Bureau of Land Management (BLM) and City of Los Angeles range lands utilized for stock grazing.

OA-M: Indicates open space land which requires resource management for the protection of visual quality, wildlife habitat, and wilderness value. Designation primarily includes Inyo National Forest and BLM lands under federal jurisdiction.

OA-R: Indicates open space lands which provide specific low-intensity recreational opportunities. Designation reflects existing picnic, day use, hot spring facilities along Hot Creek, and an existing campground adjacent to Convict Creek. The westerly portion of Doe Ridge is designated for future recreational uses including nordic and cross-country ski trails, equestrian facilities, and potential golf course development.

OA-SC: Designates stream conservation zones along Mammoth Creek/Hot Creek and Convict Creek for the protection of water quality, riparian vegetation, and fishery resources. Conservation zone extends 100 feet on each side of all stream channels. No significant grading alterations, vegetative removals, or building structures are permitted within the stream conservation zone.

Institutional/Public Land (PA). The PA designation is intended to define those public lands which are utilized for regional recreational, natural resource development, institutional, and governmental service purposes. The PA District is described in Chapter 19.19 of the Zoning Code which emphasizes resource development and recreational land uses. The chapter notes that the county may not have permitting authority over lands under state or federal jurisdiction, but indicates the intent of the county to review PA development proposals on the basis of the code.

Industrial/Manufacturing (I). This land use designation conforms with Chapter 19.17 of the County Zoning and Development Code. Virtually all uses within this category are subject to use permit procedures due to the inherent potential for environmental impacts, safety hazards, and nuisances. Lands considered suitable for industrial and manufacturing land uses are limited to two existing sites in the airport planning area: the Sierra Quarry private property and the Mono County gravel pit on Inyo National Forest land.

Planned Unit Development (PUD). Only one site within the planning area is designated for Planned Unit Development land uses: the 130-acre Hot Creek Ranch property. The site straddles the Hot Creek stream conservation zone and is environmentally sensitive. The use of the PUD designation as defined in Chapter 19.20 of the Zoning Code allows mixed recreational/resort land uses subject to natural resource protection requirements and environmental constraints. Maximum overall development density for the property is equivalent to one residential unit per acre. The intent of the PUD zoning designation is to require the approval of an overall master plan for the property prior to any additional development. Criteria applicable to such development includes the preservation of open space areas, conservation of sensitive riparian and stream zones, and clustering of proposed resort residential uses to minimize environmental disturbances and impacts.

Airport Development District (ADD). The intent of the ADD designation is to permit the development of appropriate commercial, industrial, and other related uses on lands adjacent to the Mammoth/June Lake Airport. The present Zoning Code does not define a land use district that adequately addresses the combination of commercial and industrial uses which are anticipated within the airport development district. Accordingly, the Airport Land Use Plan proposes that Title 19, Zoning and Development Code, be amended to include Chapter 19.47 which defines an Airport Development Zone and establishes the requirements and provisions applicable to the district. The proposed text of Chapter 19.47 is presented in Appendix A.

The Airport Development District has been specifically created to recognize the economic development potential associated with the expansion of services and facilities at the airport site. Although light industrial, manufacturing, and warehousing developments are necessary for economic stability and growth, these land uses are frequently incompatible with resort recreational, residential, and agricultural land uses. This inherent incompatibility has limited the land resources available for economic development within the county. Subject to the constraints associated with the proximity of aircraft activities, the following land uses are proposed for the Airport Development District:

1. Airport operational facilities.
2. Aviation products and services.
3. Housing for airport employees.
4. Hotel/motel and lodging developments.
5. Light industrial and warehousing.
6. Office, business and commercial.
7. Public buildings.
8. Retail sales and services ancillary to airport terminal or hotel/motel facilities.
9. Automobile service stations.
10. Recreational vehicle park.
11. Golf course or other low intensity recreational development.

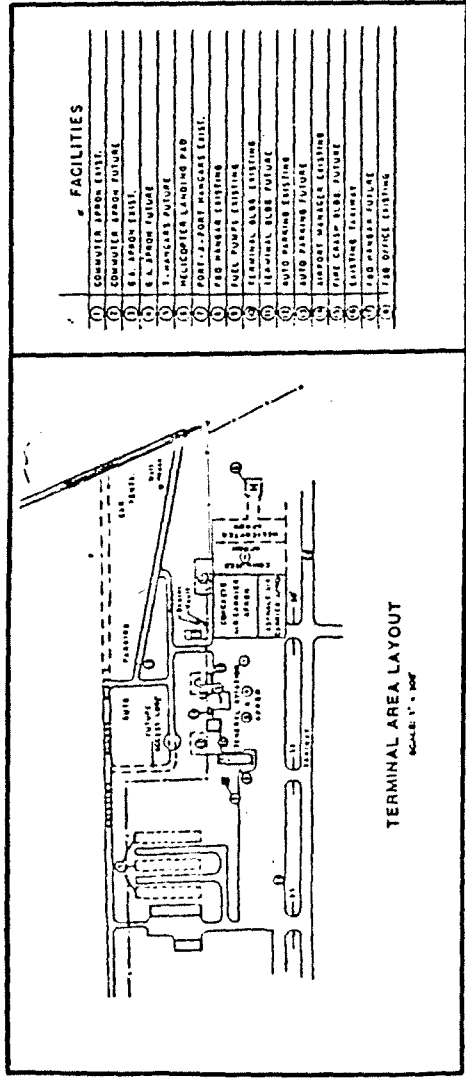
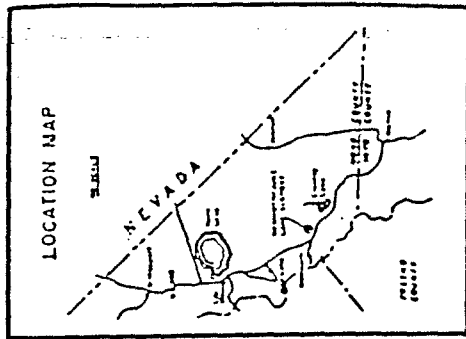
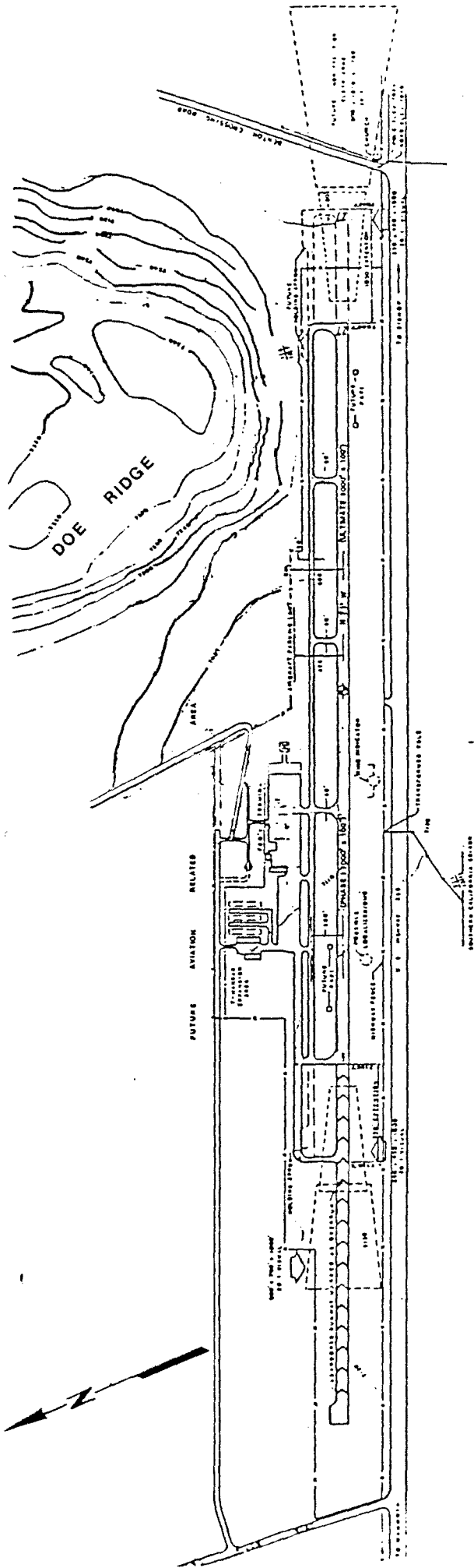
All of the permitted land uses within the Airport Development District are subject to review and approval of the Airport Land Use Commission.

Proposed Airport Development and Expansion

The expansion and improvement programs outlined in the 1978 Mammoth/June Lake Airport Master Plan are only partially completed at the present time. A schematic layout of existing airport facilities is presented in Figure 7. As noted previously, proposed Master Plan improvements include expansions and development of the existing terminal area as well as infrastructure systems. In addition, a proposal has been submitted for the development of a major hotel within the core area of the terminal complex. The basic features of current airport development and expansion proposals are described in the following paragraphs.

Terminal Area Development. Proposed improvements for the development of the airport terminal complex are shown in Figure 8 and include the following facilities:

1. Construction of a crash/fire/rescue (CFR) building (5,000 sq. ft.).
2. Construction of an expanded and improved passenger terminal building (up to 20,000 sq. ft.) and paved parking areas.
3. Construction of a new fixed base operator (FBO) hangar and office facility (10,000 sq. ft.).



EXISTING AIRPORT DEVELOPMENT

FIGURE 7

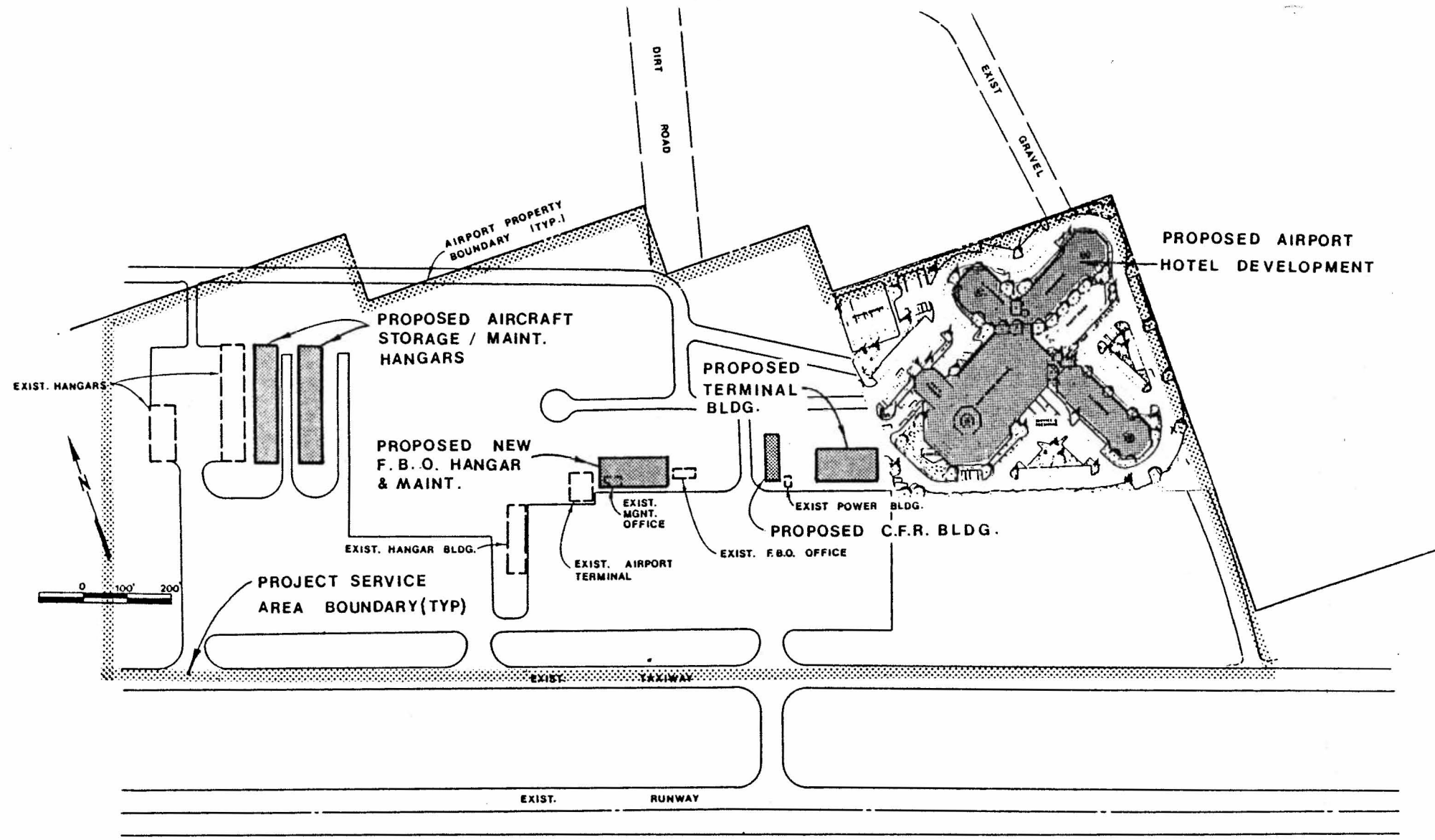


FIGURE 8

PROPOSED TERMINAL AREA DEVELOPMENT

4. Construction of additional hangar, storage, and maintenance facilities (40,000 sq. ft.).
5. Installation of an instrument landing system for alternative non-precision aircraft navigational aids.

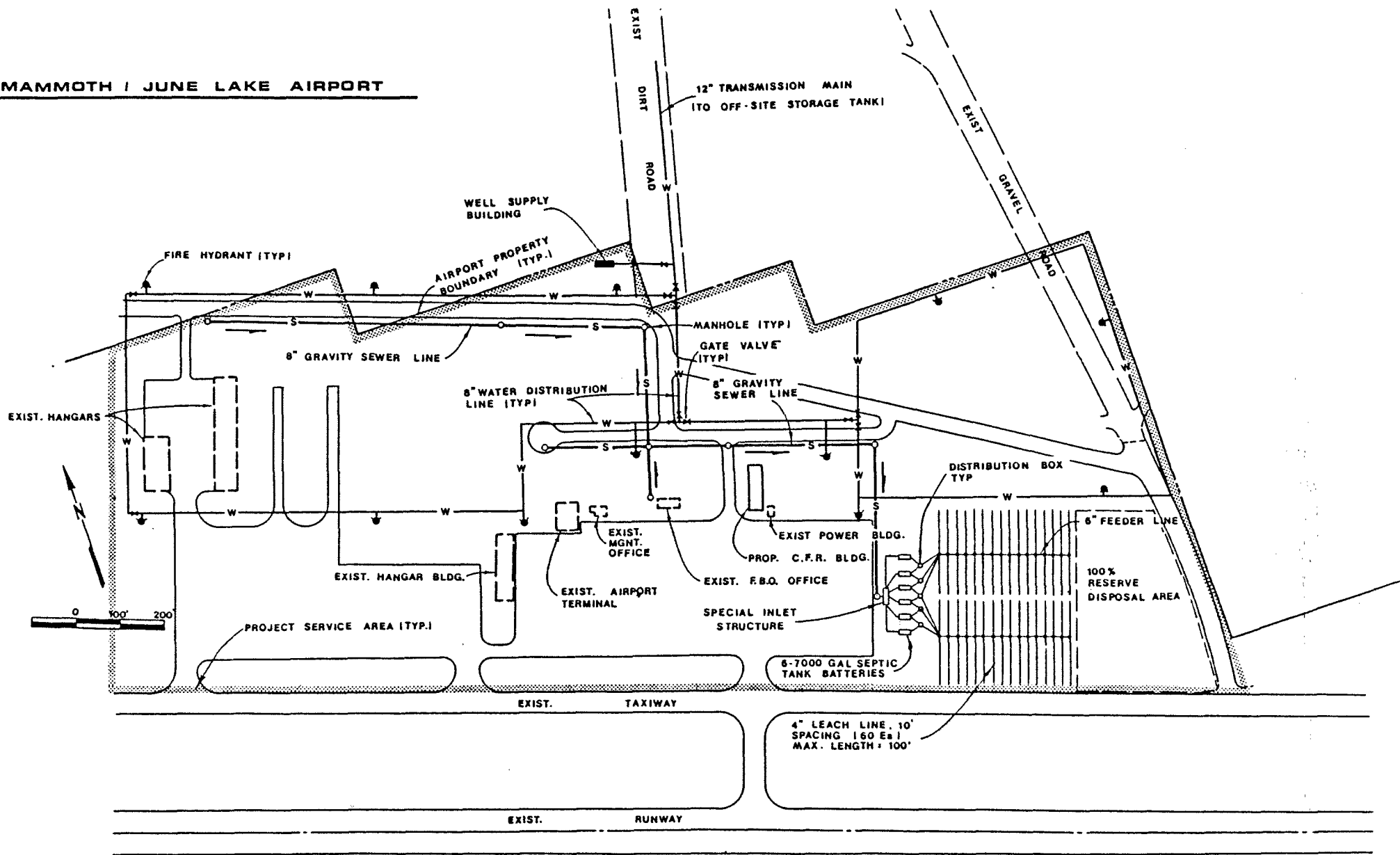
Infrastructure Improvements. The proposed improvements consist of the installation of complete water supply, fire protection, and sewage disposal systems for the central development core of the airport terminal complex. The proposed water and sewer improvements are shown schematically on Figure 9. Water system improvements include a 250 gpm deep well water supply, a complete distribution system sized to accommodate required fire flows and domestic demands, and an off-site 420,000 gallon storage tank with connecting main transmission line. The location of the proposed storage tank is shown on Figure 10. The proposed sewerage improvements include a complete gravity sewer collection system and a centralized septic tank/leach field treatment and disposal facility.

Airport Hotel. The proposed airport resort hotel will include 150 rooms in a two-story building structure which will have a total floor area of approximately 101,000 square feet. It will include shops, offices, convention rooms, indoor exercise and spa facilities, two restaurants (220 seat total capacity) and a bar/lounge room (200 seat capacity.) The hotel facility will be designed as a "destination" development which will accommodate virtually all personal services and amenities on site. Total area occupied by ancillary outdoor recreation facilities is anticipated to be approximately 25,000 square feet. The project proposal includes approximately 250 surface parking spaces for hotel patronage and employees. Gasoline pumps may be provided for the convenience of patrons. Due to the proximity of the site to the airport terminal facilities, there is an opportunity for providing joint parking facilities.

The hotel development plan includes the construction of an 18-hole golf course on Inyo National Forest land adjacent to the airport. The golf course is considered by the project proponent to be an essential element for the financial viability of the hotel development. Preliminary applications have been filed with the U.S. Forest Service for a use permit for the proposed golf course. A site-specific environmental assessment of the proposed golf course will be required prior to Forest Service approval of the project.

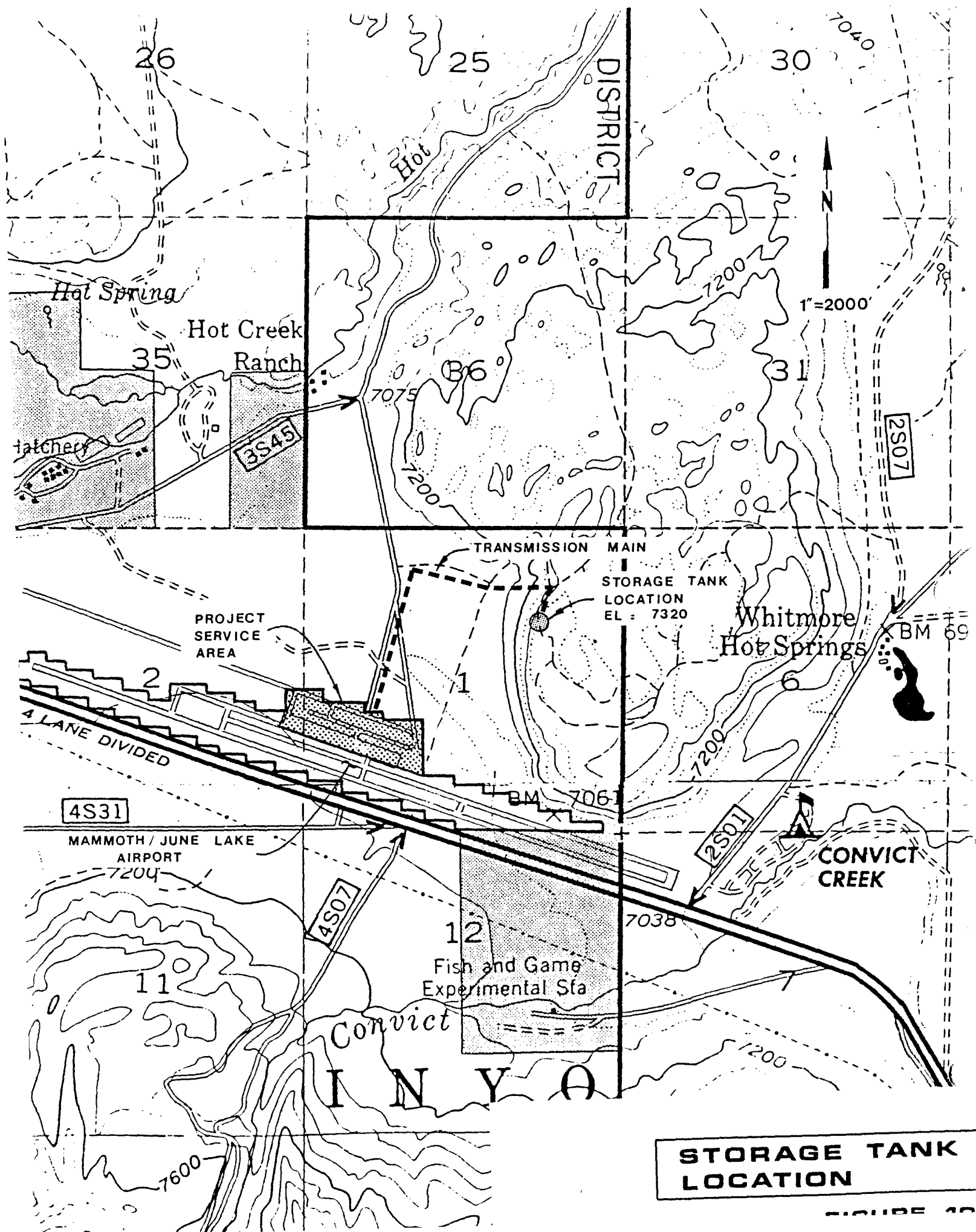
Airport Master Plan Update. An update of the Mammoth/June Lake Airport Master Plan is in progress. The update will address current aircraft activity levels, the status of existing airport improvements, and potential future expansions and improvements. It will also consider potential runway extensions and the need for an additional cross-wind runway.

MAMMOTH / JUNE LAKE AIRPORT



PROPOSED INFRASTRUCTURE IMPROVEMENTS

FIGURE 9



STORAGE TANK LOCATION
FIGURE 10

Airport Land Use Policy Plan

The general purpose of the Airport Land Use Plan is to promote the orderly development of the area surrounding the Mammoth/June Lake Airport in order to protect the general welfare of the public, enhance the safety of air navigation and traffic, and maintain the utility and economic viability of the facility. The authority and jurisdiction of the Airport Land Use Commission (ALUC) extends to the establishment of land use policies and the review of all new land uses within the airport planning area. The proposed Land Use Policy Plan for the Mammoth/June Lake Airport is presented in Appendix B. All of the designated land uses within the planning area boundary are subject to the specific policies established by the Airport Land Use Commission.

General Land Use Policy. The Policy Plan of the Land Use Commission includes the following general provisions:

1. All land uses designated for the airport planning area are subject to the requirements of the Mono County Zoning and Development Code except as specifically modified by the Airport Land Use Plan.
2. The ALUC must review and approve all proposed private land uses prior to formal action by jurisdictional agencies. ALUC review will focus on compatibility with the adopted airport land use plan and compliance with the safety provisions, height restrictions, and noise elements of the Policy Plan.
3. ALUC criteria regarding land use policy is intended to augment and amend the County General Plan and Zoning Ordinance and, where applicable, shall be incorporated into the BLM and U.S. Forest Service unit plans for the planning area.
4. The ALUC land use plan and policies will establish the general parameters for regulation of development within the planning area. Each local agency or jurisdiction shall be required to amend its general plan to incorporate the provisions of the ALUC land use plan and policies.

Airport Safety Zone Policies. The airport safety zone includes a Clear Zone adjacent to the runway and the Approach/Departure Surface as defined in Appendix C. The limits of the safety zone are shown schematically on Figure 11. It is the most critical zone where aircraft operations might affect the safety of people and property in the airport environs. The Airport Policy Plan includes restrictive land use and height provisions within this zone.

Airport Overflight Zone Policies. The overflight zone consists of two components: areas affected by normal approach/departure traffic patterns, and lands within the general overflight influence area of the

airport. The features of the overflight zone and its components are shown schematically on Figure 12. The Airport Policy Plan specifies density limitations and land use restrictions.

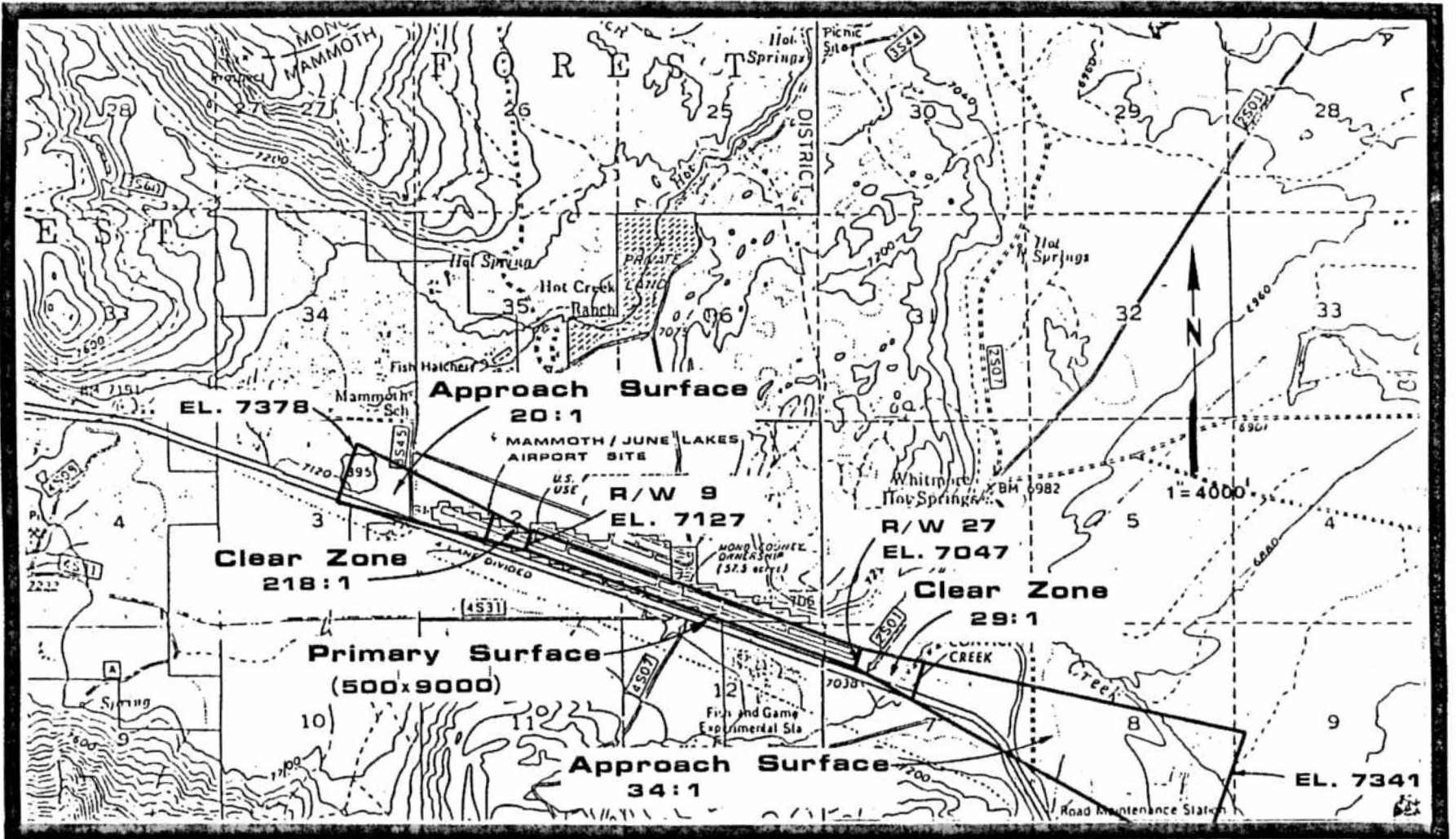
Airport Height Restriction Policies. The airport height restriction area is defined by an Approach and Clear Zone Plan (ACZP) which is specified by Federal Aviation Regulations (FAR) Part 77. The ACZP for the Mammoth/June Lake Airport is described in Appendix C and shown on Figure 13. Height restrictions are specified for the safety of aircraft navigation and the general public.

Airport Noise Policies. Within the planning area, the impact of airport or aircraft generated noise will be considered by the ALUC in the review of all development proposals. A noise impact analysis prepared for the 1978 Airport Master Plan is presented in Appendix D. The analysis describes the airport noise environment by determination of Community Noise Equivalent Level (CNEL) contours using the methodology defined in Title 21 of the California Administrative Code. The impact of aircraft noise associated with airport operations is the most obvious factor in determining land use compatibility within the planning area.

Project Approval Requirements:

The proposed Airport Land Use Plan requires the following approvals from Mono County and governmental agencies:

<u>Agency</u>	<u>Approval</u>
Mono County Airport Land Use Commission	Airport Land Use Plan Airport Land Use Policy Draft EIR/Final EIR
Mono County Planning Commission	Zoning and Development Code Revisions General Plan Amendment
Mono County Board of Supervisors	Draft EIR/Final EIR Zoning and Development Code Revisions General Plan Amendment
U.S.D.A. Forest Service Inyo National Forest	Environmental Assessment Forest Plan Amendment Special Use Permits Airport Land Exchange
State of California, Office of Planning and Research	Environmental Review Procedures General Plan Amendment



AIRPORT SAFETY ZONE

FIGURE 11

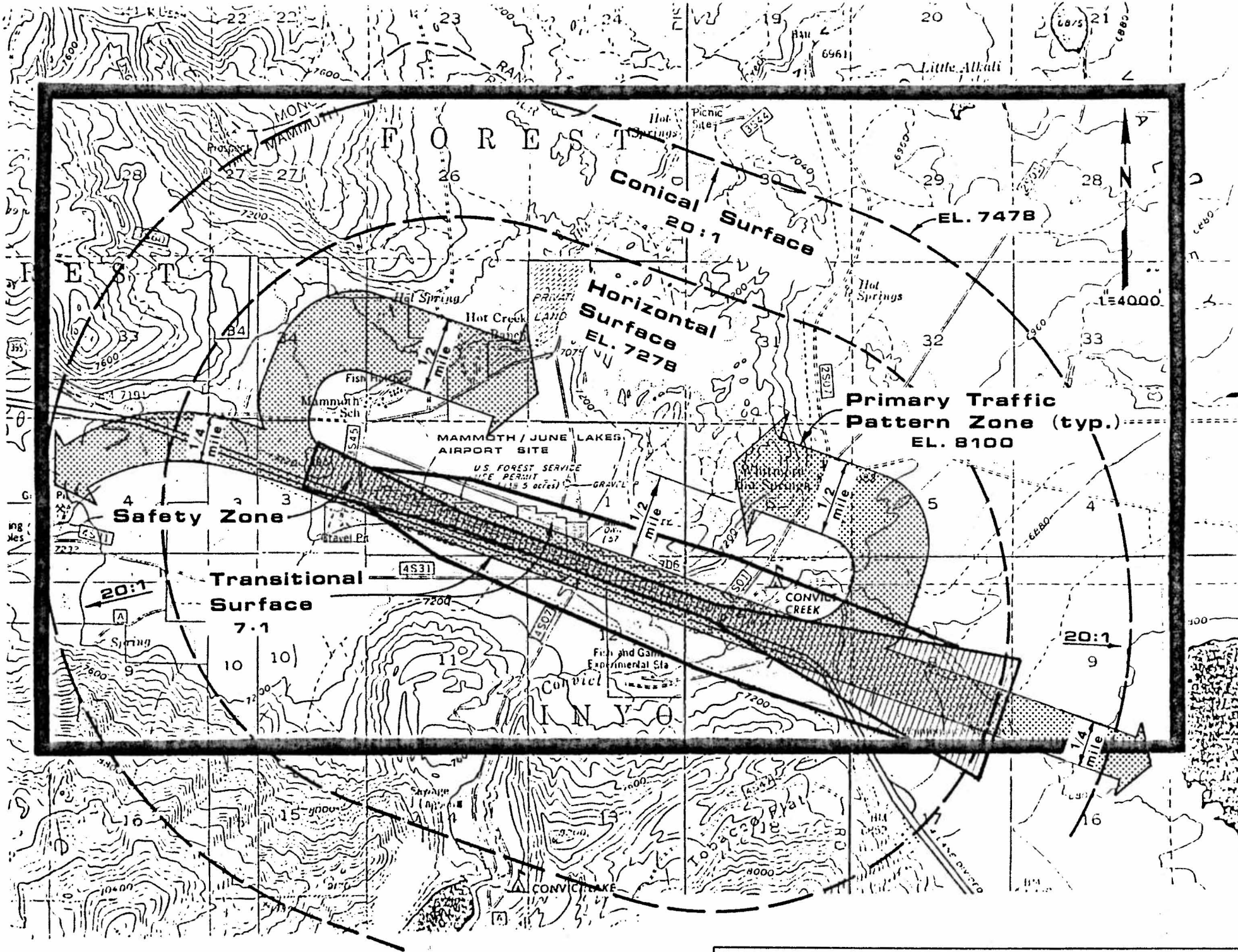
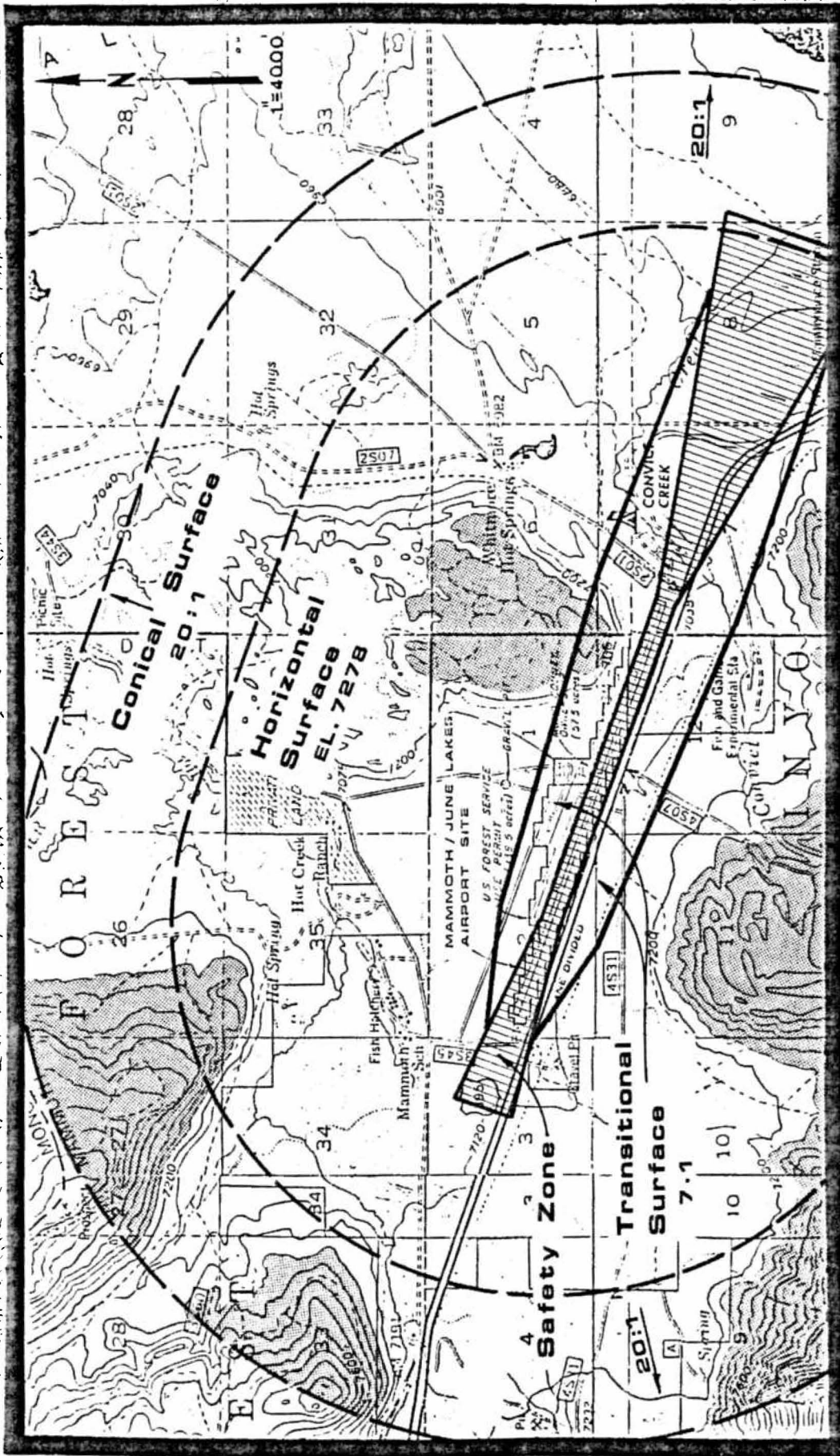


FIGURE 1E

AIRPORT OVERFLIGHT ZONE



APPROACH AND CLEAR ZONE PLAN

FIGURE 13

Provisions of California state law require that Mono County must make its general plan consistent with the Airport Land Use Plan. This is generally accomplished by incorporating the ALUP into the county general plan and amending applicable implementation regulations including zoning ordinances and building codes as necessary. If the county does not agree with certain elements of the ALUP, it can adopt different provisions only if specific findings are made that the changes are consistent with the purposes of state law regarding airport land use. The change in the ALUP and the necessary findings must be adopted by a four-fifths vote.

The Mono County Planning Commission is an advisory agency to the Board of Supervisors for zoning, land use, and development matters. Although the Planning Commission does not have the authority to approve or disapprove the ALUP, any corresponding amendments to the general plan or zoning ordinances must be reviewed by the commission.

The Airport Land Use Commission has no jurisdiction over federal lands. The U.S. Forest Service is the administering agency for Inyo National Forest lands within the planning area. Approval of the Airport Land Use Plan by the U.S. Forest Service will amend those portions of the Mammoth-Mono Unit Plan affected by the plan. It is anticipated that following appropriate review and comment, the Airport Land Use Plan will eventually be incorporated into the Forest Plan for the Inyo National Forest.

INITIAL STUDY OF ENVIRONMENTAL
IMPACTS AND EFFECTS FOUND NOT
TO BE SIGNIFICANT

Initial environmental studies conducted by the Mono County Planning Department have determined that the proposed Mammoth/June Lake Airport Land Use Plan is not categorically exempt and implementation may have potential impacts on the environment. The Initial Study for the project is presented in Appendix E. Areas of potential environmental impact identified in the Initial Study include:

1. Soils/Geology
2. Hydrology and Water Quality
3. Mineral/Energy Resources
4. Air Quality
5. Visual/Aesthetic Resources
6. Biological Resources
7. Archaeological and Cultural Resources
8. Regional Planning and Population
9. Employment and Economic Development
10. Traffic and Transportation
11. Noise
12. Safety and Welfare
13. Cumulative Environmental Impacts

On the basis of the Initial Study, an environmental determination was made by the Planning Department that an environmental impact report should be prepared for the Airport Land Use Plan which addresses the above areas of potential adverse impact.

Those environmental effects which were determined not to be significant for the proposed project are listed in the Initial Study. The determination of insignificance for these effects was generally based on one, or more, of the following reasons:

- o The potentially affected environmental resource does not occur, or is not known to occur, within the project area.
- o Previous environmental studies have indicated that the potential impact on existing resources is insignificant.

A Notice of Preparation was distributed to the State Clearinghouse and responsible local agencies in June, 1986. The following agencies and organizations offered comments in response to the notice:

1. Bureau of Land Management--Bishop Resource Area
2. Economic Development Administration--Southern California Area
3. California Department of Fish and Game
4. California Regional Water Quality Control Board
5. California Department of Transportation--Division of Aeronautics
6. California Department of Conservation
7. California Department of Transportation
8. Long Valley Fire Protection District
9. Hot Creek Ranch/Rayson Associates

The comments submitted by these agencies were considered in the preparation of this report and are included verbatim in Appendix E for reference.

ENVIRONMENTAL IMPACT ASSESSMENT

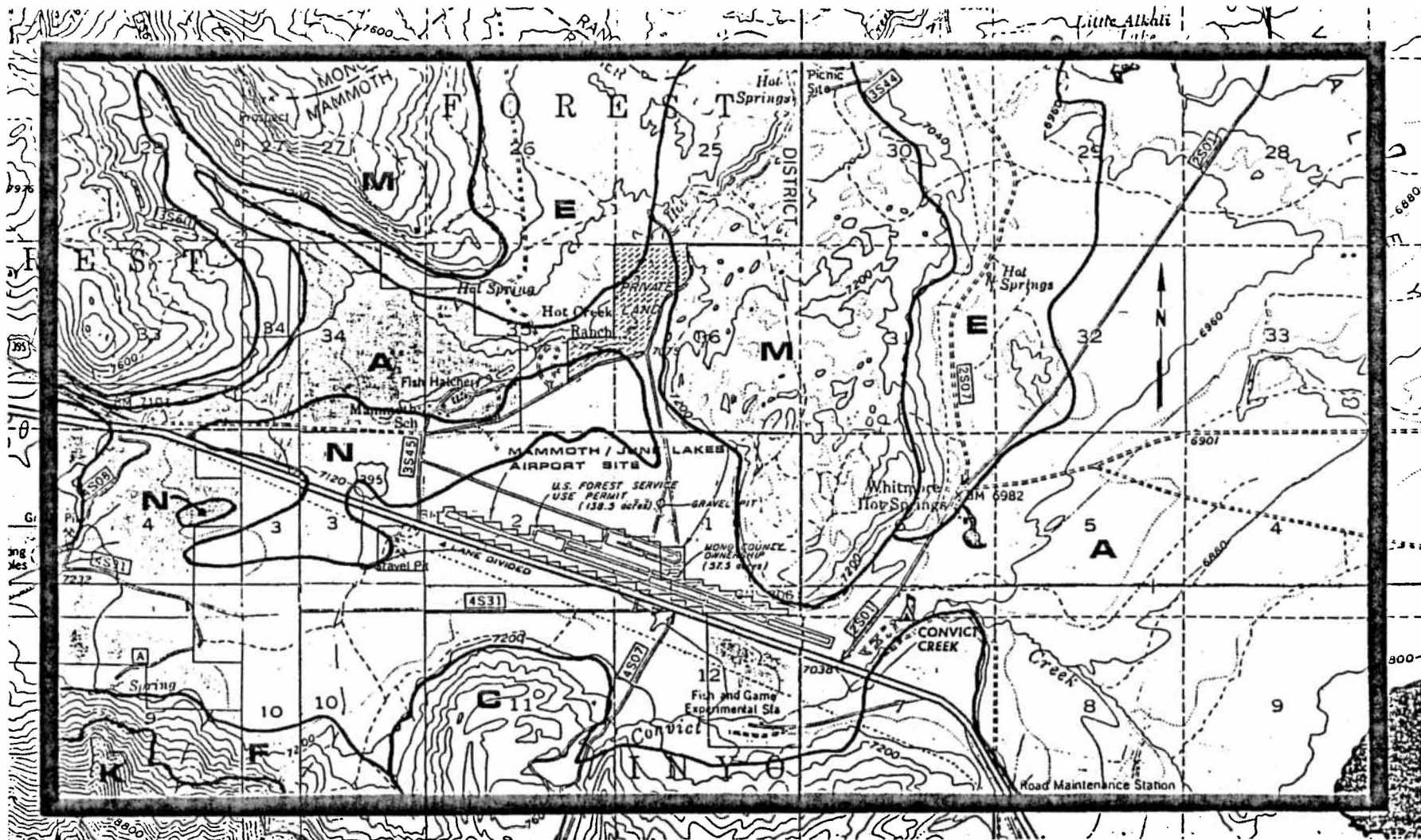
The following discussions consider the potential environmental effects of the Mammoth/June Lake Airport Land Use Plan. For convenience of evaluation, the assessment of each general area of impact includes three separate sections: The existing environmental setting or conditions associated with each impact; an analysis of the potential impacts of the Land Use Plan; and, mitigation measures or project modifications which would reduce potentially adverse impacts to insignificant or acceptable levels.

Soils/Land Transformation

Setting and Conditions. The planning area is situated in the westerly portion of Long Valley and has several unique topographical features. It can be generally characterized as a relatively broad plain which is confined by low hills and ridges to the north and the lower slopes of the Sierra Nevadas to the south. Doe Ridge, a large 200-foot high mesa-like feature topographically dominates the eastern-central portion. The flatter central portions of the study area generally slope easterly or northeasterly at moderate grades of less than 5%, but the surrounding mountains and ridges rise abruptly from the valley floor at steep slopes ranging from 25% to over 50%.

The planning area includes five major landforms as shown on Figure 14. These landforms are described as follows:

<u>Landform</u>	<u>Description</u>
Alluvial	Unconsolidated sediments and detrital material deposited by water transport. Usually below 7,500 feet in flatter terrain.
Moraine	Undifferentiated till occurring as scattered knolls or ridges between 7,200 and 9,000 feet.
Lacustrine	Lake bed deposits, including consolidated sandstones, clays, and gravels. Occurs at lower elevations along Hot Creek.
Dissected Domeland	Rhyolitic domes and intrusions of recent volcanic origin which include Doe Ridge and the northwesterly ridges of the planning area.



LEGEND

- | | |
|---------------------|---------------------------------|
| A Alluvial | K Glaciated Graniticland |
| C Moraine | M Dissected Domeland |
| E Lacustrine | N Dissected Flowland |
| F Colluvial | |

AREA LANDFORM

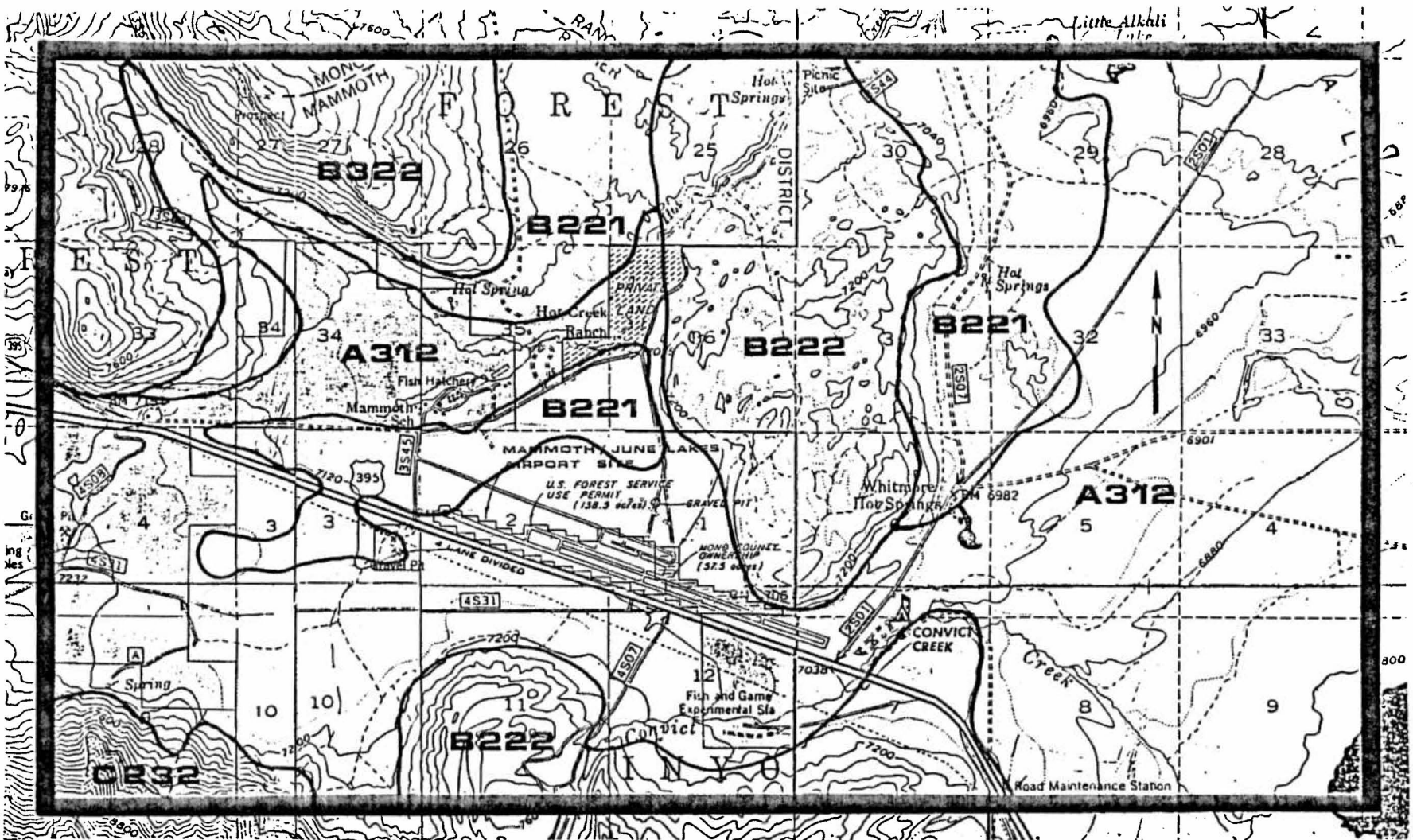
<u>Landform</u>	<u>Description</u>
Dissected Flowland	Basalt flows, weathered and glaciated, which dominate the central portion of the valley floor. Lower reaches of Mammoth Creek traverse this landform near Highway 203 and U.S. Highway 395.

Surficial soils throughout the planning area reflect parent landform and rock materials and are generally coarse grained and non-cohesive. Area surficial soil types classified on the basis of erosion and runoff potential are shown on Figure 15. The classification system is based on four characteristics: runoff potential, surface soil depth, erodability, and potential vegetative productivity. In general, the potential for significant erosion hazards within the planning area is low to moderate due to the high permeability of surface soils and predominately sheet flow drainage patterns. The most sensitive areas to disturbance are lands adjacent to the Mammoth Creek, Hot Creek, and Convict Creek stream environment zones. The least sensitive disturbance areas are the alluvial soils in the vicinity of the airport site.

Potential Impacts. Eventual development of lands designated for PA, I, PUD, ADD, and OA-R uses in the plan will require earthwork operations including stripping and clearing of vegetation, excavation and landfill, stockpiling of unsuitable materials, trenching, and other land disturbances associated with site grading, roadway grading, underground utility installations, and building construction. During earthwork operations most sites will consist of disturbed, exposed soil surfaces subject to significant erosion hazards in the event of a major storm event. Erosion from exposed soil surfaces could result in the direct loss of valuable topsoil materials as well as secondary impacts associated with the deposition of silt and sediment on adjacent downstream properties. Secondary water quality impacts could also result from the eventual discharge of silt-laden runoff to adjacent surface streams, primarily Mammoth Creek, Hot Creek and Convict Creek.

Construction activities will necessarily involve considerable dust, noise, and vibration generated by the movements of heavy earthmoving equipment. Short-term adverse impacts will include general visual disturbances, local air quality deterioration, inconveniences for area residents, and a possible reduction in recreational use of adjacent Inyo National Forest lands. Encroachment of construction activities and equipment on adjacent properties could result in vegetative removals and the creation of long-term erosion hazards.

Potentially significant erosion hazards and water quality impacts could occur if earthwork operations for a particular project are not stabilized before the onset of winter weather conditions. Snowmelt runoff from uncompacted exposed soil surfaces or loose stockpiles of



SOIL TYPE CODE

Runoff Potential	Soil Depth	Erosion Potential	Vegetative Productivity
A Very Low	1 0 to 20 in.	1 Low hazard	1 Low potential
B Low	2 20 to 36 in.	2 Moderate hazard	2 Medium potential
C Moderate	3 Over 36 in.	3 High hazard	3 High potential
D High	4 Variable conditions		

AREA SOIL TYPE

FIGURE 15

material would be difficult to control and could result in significant on-site soil loss as well as downstream siltation and sediment problems. In the event that a development project is abandoned after grading begins, the exposed and disturbed soil surfaces could result in long-term erosion, siltation, and water quality impacts.

Potential adverse effects associated with land transformations include visual impacts if disturbed soils are not properly stabilized and revegetated, increased erosion hazards arising from the concentration of surface runoff, and reductions in wildlife populations due to loss of habitat.

Mitigation Measures. Potential long-term impacts associated with soil disturbances and land transformations can be significantly mitigated by appropriate design, construction, and stabilization considerations. All grading and earthwork activities for developments within the ALUP will require the approval of site specific grading plans and the issuance of a grading permit by the Mono County Department of Public Works. In addition, the Lahontan Regional Water Quality Control Board requires the submittal of a waste discharge report and the approval of a drainage and erosion control plan for all major projects within the Mammoth Creek watershed. The following specific mitigation measures are required for all developments within the planning area:

1. All grading and earthwork activities must be conducted in accordance with an approved construction grading plan and grading permit issued by the Mono County Department of Public Works. The following provisions must be included in the grading permit:
 - a. All earthwork must be conducted in accordance with a detailed project schedule submitted with the grading application. The schedule shall provide for completion of earthwork in a single construction season.
 - b. Existing drainage patterns shall not be significantly modified and drainage concentrations shall be avoided.
 - c. All loose piles of earthwork materials shall be protected to avoid discharges of silt-laden runoff.
 - d. Limits of construction work should be clearly delineated and disturbances of adjacent soil and vegetation should be strictly avoided. Where considered necessary by the Director of Public Works, temporary fencing shall be erected to delineate the work area.
 - e. Dust control measures (watering trucks or pumped systems) shall be continuously implemented throughout the construction period.

- f. All exposed soil areas shall be stabilized and reseeded in accordance with an approved landscape/revegetation plan as soon as possible. All stockpiles of unsuitable soil materials (boulders and stripped vegetation) shall be removed and disposed of at approved sites designated by Mono County.
 - g. Bonds or other security shall be required to guarantee completion of site stabilization and revegetation measures within the time periods delineated in the project schedule.
2. A drainage and erosion control plan for all major projects shall be submitted to and approved by the Mono County Public Works Department and the Lahontan RWQCB. In addition, a waste discharge report must be submitted to the Lahontan RWQCB. The plan shall include the following provisions:
- a. Interim erosion control measures shall be implemented during the construction period, including such facilities as temporary dikes, filter fences, hay bales, and retention basins as necessary.
 - b. No discharges of silt, waste materials, toxic substances, or other deleterious matter to surface waters shall be permitted.
 - c. Permanent drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent waste discharges from the completed site.
 - d. All projects shall be designed to retain and infiltrate all runoff from a 20-year, one-hour design storm event.
 - e. Revegetated areas shall be maintained in order to insure adequate establishment and growth. All permanent drainage and erosion control facilities shall be periodically inspected and maintained as required.
3. Large scale earthwork, grading, or soil disturbances within the stream conservation zones of Mammoth Creek, Hot Creek, and Convict Creek are prohibited. The number of utility or road crossings shall be minimized.
- a. All activities within the stream conservation zone shall be conducted in accordance with the requirements of a Stream Alteration Permit (Section 1603) issued by the California Department of Fish and Game.

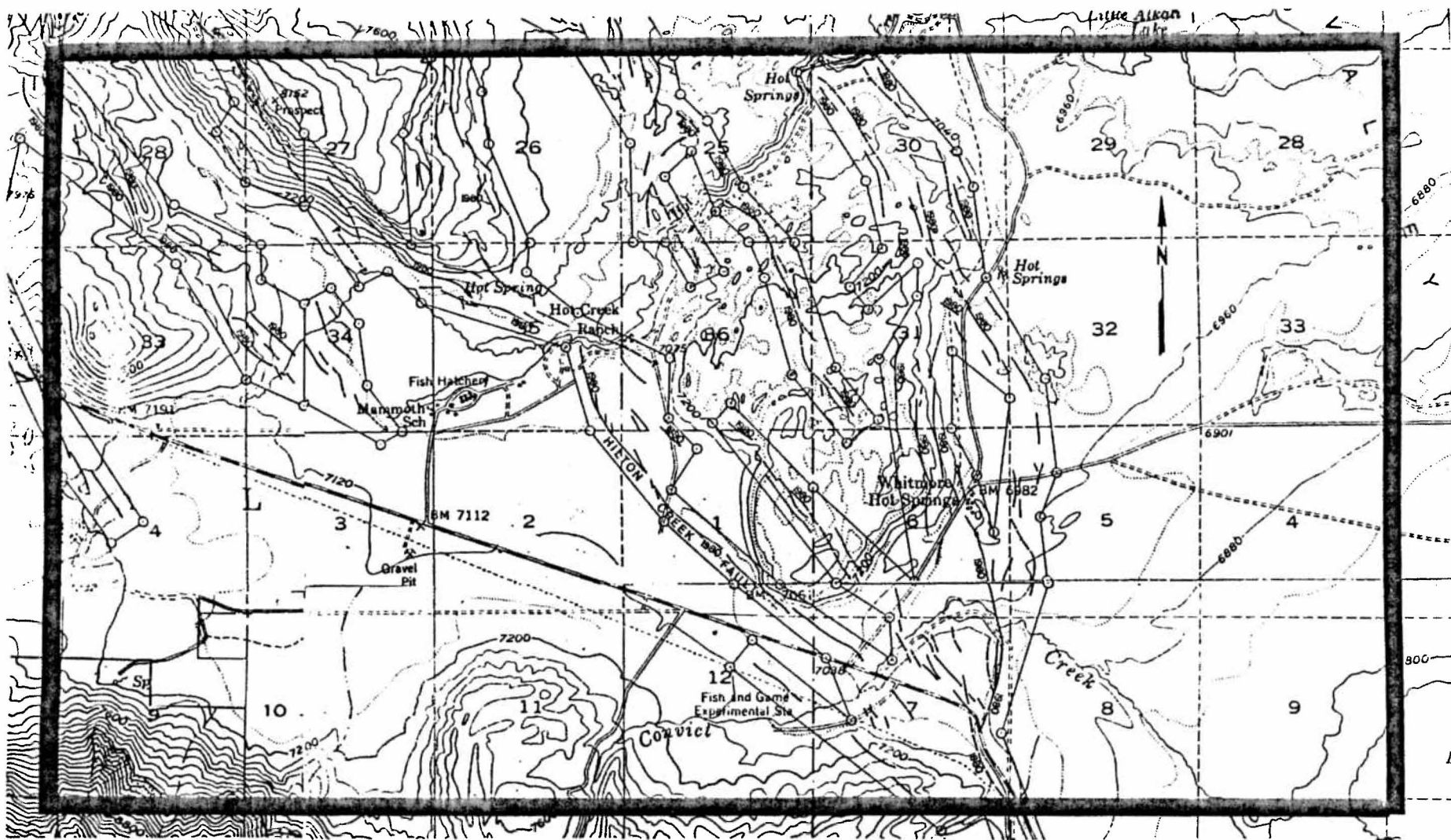
- b. All construction activities shall be scheduled during the lowest streamflow period, usually September through November.
- c. Special control measures shall be implemented to prevent the discharge of silt, sediment, and debris or any other adverse water quality impacts on surface streams.

Noise and vibration during earthwork operations cannot be eliminated, but potential impacts are mitigated by the fact that the planning area is generally remote from residential areas or population centers. All earthwork activities should be limited to normal daylight working hours. Potential long-term visual impacts associated with soil disturbances and land transformations can be reduced by appropriate design considerations and revegetation. Large cut and fill slopes must be avoided. All projects must be required to establish dense, permanent vegetative ground covers to protect disturbed soil surfaces. The selection of drought resistant vegetative species is essential for the long-term mitigation of potential soil erosion, air quality, and visual impacts.

Geologic/Volcanic Hazards

Setting and Conditions. The planning area is situated in the south-central portion of the Long Valley Caldera, a 175 square mile elliptical depression of volcanic origin. The caldera contains a complex series of volcanic rhyolite flows (resurgent domes) which are prominent in the planning area. The entire Long Valley region is characterized by geologically recent volcanism and seismic activity. Earthquake swarms which occurred in 1980-81, coupled with evidence of localized uplifts or "bulges" prompted the U.S. Geologic Survey to issue a hazard watch for the Long Valley area in late 1981. The most probable site designated by the U.S.G.S. for volcanic activity was the Sherwin Creek Campground area, approximately two miles west of the planning area boundary. Although seismic activity has subsequently subsided, the U.S.G.S. hazard watch generated considerable controversy and publicity and insured that the area would be closely monitored for potential volcanic hazards.

The entire Eastern Sierra region is seismically active, and there area at least four major active or potentially active faults within a 25-mile radius of the Mammoth/June Lake Airport. All of these faults have undergone substantial movement in Quaternary times (approximately the last two million years) and are capable of producing significant earthquakes. During the seismic activity of 1980-81, several earthquakes of magnitude 6.0 to 6.5 occurred in the vicinity of the Hilton Creek fault near the center of the airport planning area. Alquist-Priolo Special Studies Zones (updated to 1982) which indicate the location of the Hilton Creek fault are presented in Figure 16.



MAP EXPLANATION

IMPORTANT - PLEASE NOTE

- 1) This map may not show all faults that have the potential for surface fault rupture, either within the special studies zones or outside their boundaries.
- 2) Faults shown are the basis for establishing the boundaries of the special studies zones.
- 3) The identification and location of these faults are based on the best available data. However, the quality of data used is varied. Traces have been drawn as accurately as possible at this map scale.
- 4) Fault information on this map is not sufficient to serve as a substitute for the geologic site investigations (special studies) required under Chapter 7.5 of Division 2 of the California Public Resources Code.

Potentially Active Faults

- 1906 E
- Faults considered to have been active during Holocene time and to have a relatively high potential for surface rupture: solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed; query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by creep or possible creep.

Special Studies Zone Boundaries

- These are delineated as straight-line segments that connect encircled turning points so as to define special studies zone segments.
- Seaward projection of zone boundary.

GEOLOGIC HAZARD ZONES

Potential Impacts. There is a high probability that seismic events in the magnitude range of 6.0 to 7.0 will occur in the airport planning area within a 25 year time period. Based on previous events, fault rupture will most likely occur along defined and documented fault lines. Horizontal ground accelerations of approximately 0.4 to 0.6 g (equivalent to Modified Mercalli Scale intensities of VII to VIII) can be expected to accompany major seismic events. In the event of a catastrophic earthquake, developments in the planning area could suffer extensive property damage and/or personal injuries and casualties.

The most likely volcanic hazard would be associated with an eruption of one of the dormant rhyolite volcanoes which extend in a chain from Mammoth Mountain to the Mono Craters (eight miles westerly of the planning boundary). Although the average recurrence of an eruptive phase in these volcanoes is estimated at once every 500 years, such a volcanic event is possible at any time. If the eruption is moderate, the primary hazard would be falling ash and debris. If the eruption is cataclysmic, pyroclastic flows of hot, gas-laden clouds of ash could result in widespread devastation. The series of seismic events which occurred in 1980-81 prompted considerable concern, and the Long Valley Caldera is currently being extensively monitored and studied by the U.S.G.S. It would therefore appear unlikely that a major volcanic event would occur without advance warning.

The Mammoth/June Lake Airport is the primary aircraft access point for Mono County. Disruption of airport activities during a major seismic or volcanic event would hamper emergency assistance efforts, medical evacuation, and could significantly lengthen emergency response times.

Mitigation Measures. The recent series of large earthquakes centered in the Long Valley/Mammoth Lakes area is significant for two basic reasons. Firstly, the seismic activity generally verified the predicted maximum earthquakes associated with the known Long Valley faults to be in the range of 6.5 to 7.0 on the Richter scale. Secondly, the occurrence of numerous large magnitude earthquakes over a period of several days would appear to be the worst possible case of seismic hazard, yet there was surprisingly little damage to structures in the area. The primary conclusion to be drawn from the events of the summers of 1980 and 1981 is that conventional one and two-story, wood-frame structures can withstand considerable seismic forces when designed and constructed in accordance with modern Uniform Building Code Standards. The building industry itself has recognized the potential seismic hazards of the area, and virtually all building structures constructed during the last five years have been of wood or steel frame construction. Experience with earthquakes in other areas of California, as well as Mammoth Lakes itself, has shown that such structures have considerable flexibility and are not subject to catastrophic collapses when properly designed. The use of reinforced concrete or concrete block structures should generally be avoided, especially for public buildings.

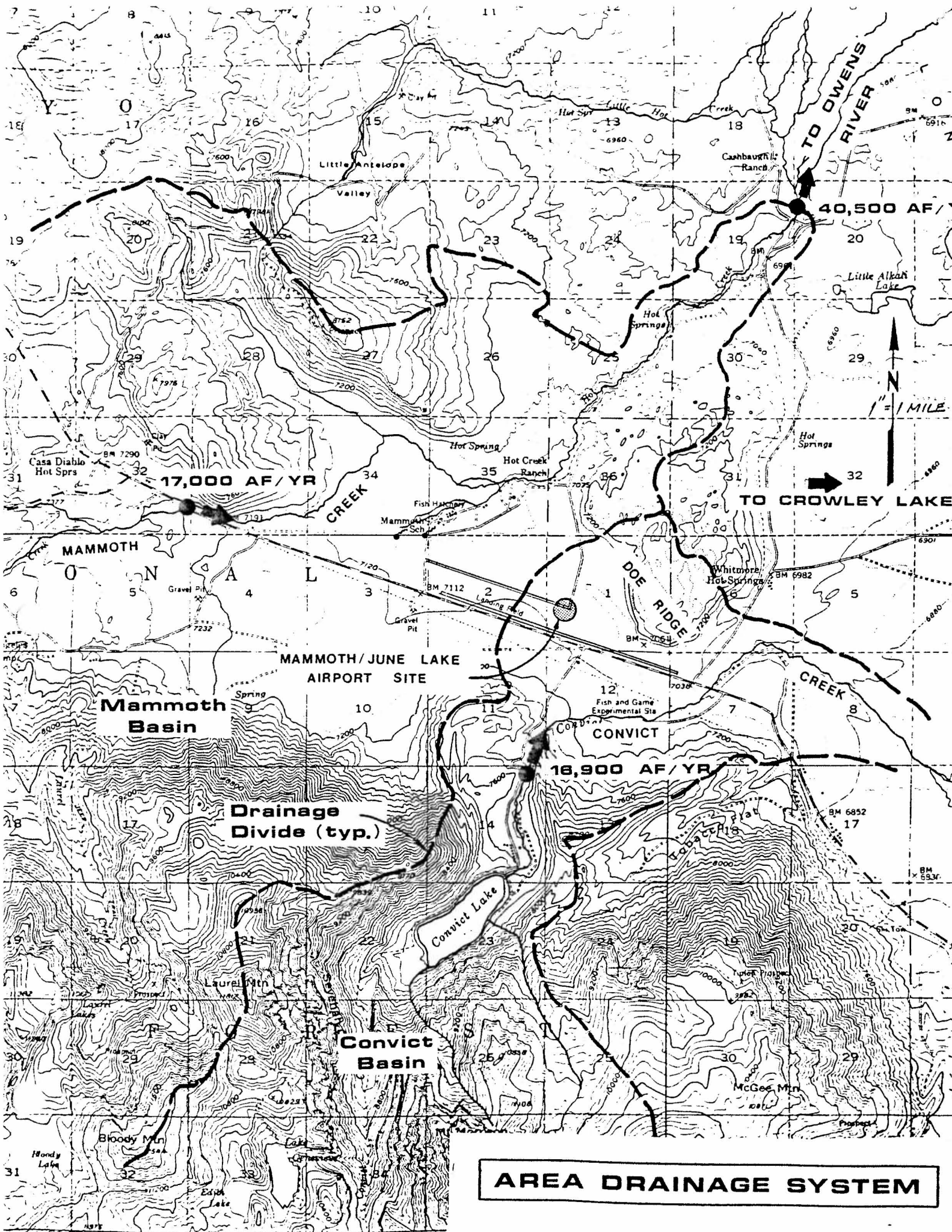
The following mitigation measures are necessary to reduce potential impacts arising from geologic and volcanic hazards:

1. A building permit shall be obtained from the Mono County Building Department for all structures in the planning area. The permit shall incorporate the following design provisions.
 - a. All structures must be designed in accordance with the Uniform Building Code, incorporating lateral force requirements for Seismic Zone 4 (maximum seismic loads).
 - b. A lateral force (seismic) analysis is required to be submitted by a licensed structural or civil engineer for all public, commercial, and residential structures.
 - c. All structures must be designed for seismic forces under maximum snow loading conditions (presently 60 psf).
2. No residential or commercial building structures are permitted within the Alquist-Priolo Special Studies Zones unless site specific geologic and soils investigations conclude that the designated fault zones are inactive or do not represent a hazard.
3. An emergency response plan shall be prepared for the Mammoth/June Lake Airport. All essential facilities, such as power supply and fire protection systems shall be provided with emergency back-up provisions (i.e., engine generators).

Hydrology and Water Resources

Setting and Conditions. The airport planning area is situated within the Long Subunit of the Owens Hydrologic Unit of the Lahontan Drainage Province. Principal hydrologic features of the Long Subunit are the Owens River and its associated impoundment reservoir, Crowley Lake. The primary source of virtually all the water resources of the region is runoff from winter snowfall and precipitation in the Sierra Nevada range.

There are three surface drainage systems within the planning area as shown on Figure 17. The westerly half of the planning area is within the lower portion of the Mammoth Creek/Hot Creek watershed of the Mammoth Basin drainage system. The Mammoth Basin encompasses 71 square miles and has a mean annual surface outflow of approximately 40,500 acre-feet in Hot Creek. The southern-central portion of the planning area is within the Convict Creek watershed. The drainage divide between the Mammoth Basin and Convict Creek watersheds passes through the westerly portion of the Mammoth/June Lake Airport runway. The Convict Creek drainage basin encompasses 18 square miles and has a mean annual surface outflow of 16,900 acre-feet at a point one mile north of Convict Lake. Surface drainage easterly of the Doe Ridge drainage divide is directly tributary to Crowley Lake primarily by sheet flow with no major surface stream flow concentrations.



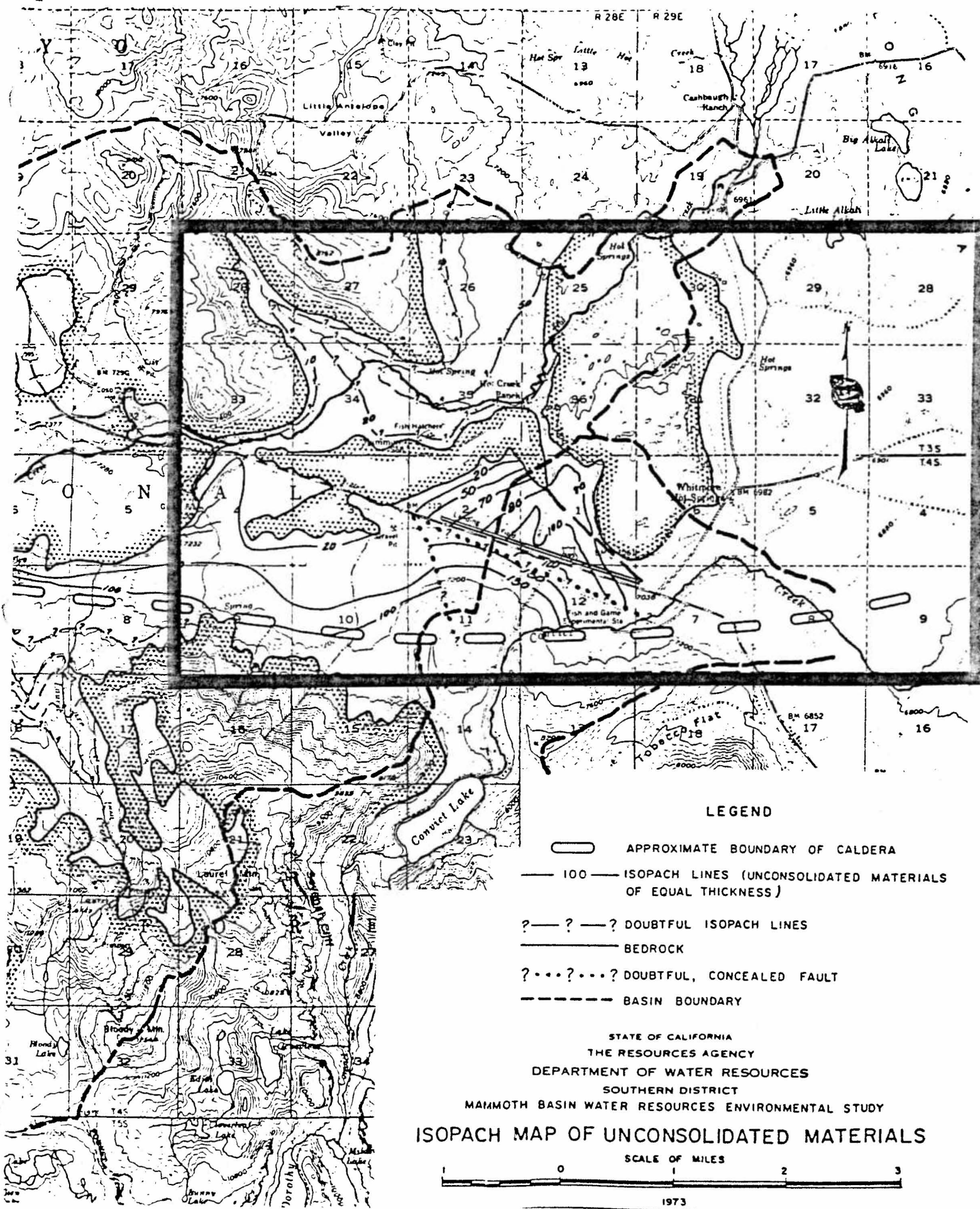
AREA DRAINAGE SYSTEM

Groundwater regimes within the planning area are a significant element of the associated hydrologic systems. Groundwater flow mechanisms are complex and include three basic components: relatively shallow cold water subsurface flows and aquifers; deep groundwater flows and reservoirs which are subject to geothermal heating and alteration; and mixtures of both hot and cold groundwater. The lower reaches of the Mammoth/Hot Creek drainage system are significantly affected by rising geothermal groundwaters which include mixed cold/ hot spring discharges at the Hot Creek Fish Hatchery and numerous hot springs within the Hot Creek Gorge. The significance of groundwater flow is demonstrated by the fact that the annual surface flow in Mammoth Creek increases from 17,000 to 40,500 acre-feet in the reach from Highway 395 to the Hot Creek Gorge without any substantial surface inflow.







In contrast, the Convict Creek drainage system appears to contain only cold groundwater elements. Cold water springs and seepage from saturated surface soils are evident in the lower reaches of the creek adjacent to Highway 395 and very shallow groundwater (five to six feet) occurs at the toe of Doe Ridge.

Studies conducted by the State Department of Water Resources and the U.S.G.S. (and confirmed by well drilling) indicate that the basaltic and rhyolitic geologic formations located north of the airport (see previous Figure 14) confine a relatively extensive cold groundwater basin. Generalized groundwater levels are shown on Figure 18 and an isopach map of unconsolidated materials is shown on Figure 19. Unconsolidated alluvial materials in the airport area range from 50 to 130 feet in depth, and known groundwater levels range from 35 to 50 feet below ground surface. Assuming an average saturated thickness of 40 feet and a $2\frac{1}{2}$ square mile area, the capacity of the confined groundwater basin is on the order of 10,000 to 15,000 acre-feet. Annual recharge includes subsurface inflow from both the Mammoth Basin and Convict Creek drainage systems and is estimated to be at least 7,500 acre-feet.

Potential Impacts. Projected ultimate water supply demands for the various development categories of the Airport Land Use Plan are summarized in Table 5. The projected annual water supply demand at ultimate development of the planning area is 756 acre-feet, including existing water uses.

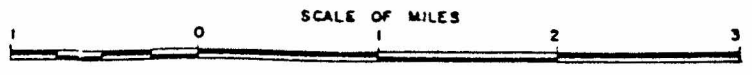


LEGEND

-  APPROXIMATE BOUNDARY OF CALDERA
-  100 — ISOPACH LINES (UNCONSOLIDATED MATERIALS OF EQUAL THICKNESS)
-  ? — ? — ? DOUBTFUL ISOPACH LINES
-  — — — — — BEDROCK
-  ? ··· ? ··· ? DOUBTFUL, CONCEALED FAULT
-  - - - - - BASIN BOUNDARY

STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 SOUTHERN DISTRICT
 MAMMOTH BASIN WATER RESOURCES ENVIRONMENTAL STUDY

ISOPACH MAP OF UNCONSOLIDATED MATERIALS



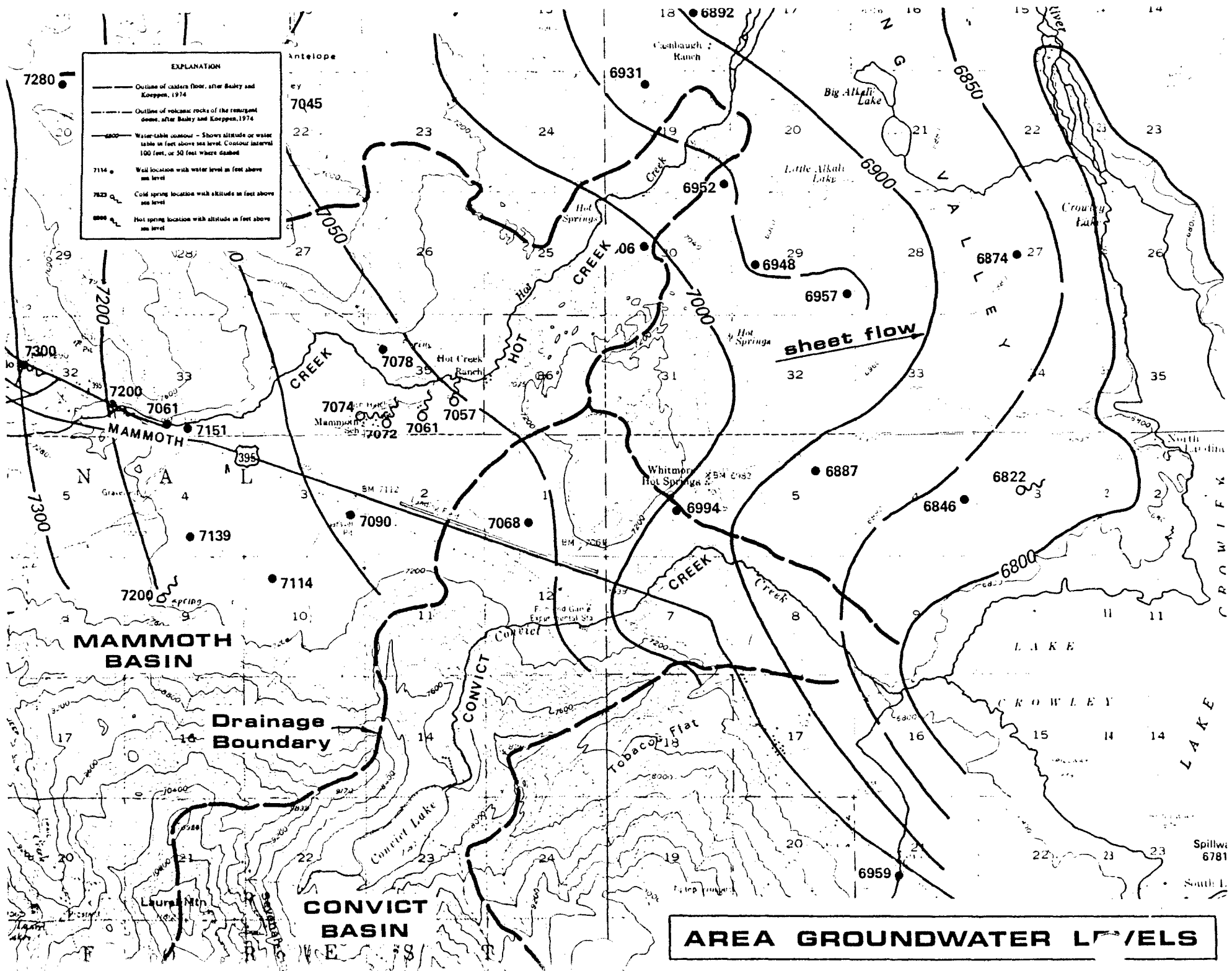


FIGURE 1E

Table 5. Ultimate Water Supply Demands

<u>Land Use</u>	<u>Acres</u>	<u>Occupancy Persons/acre</u>	<u>Unit Demand gal/cap/day</u>	<u>Average Daily Demand gpd</u>	<u>Annual Demand, acre-feet</u>
PA	490	1.0	75	36,750	41
I	65	10.0	75	56,250	63
PUD	110	3.5	100	38,500	43
ADD	455	3.5	100	159,250	178
OA-R	2,000	.5	10	10,000 **	11
(Golf Course)	150	--	5,000 *	375,000 **	420
Total:				675,750***	756

*Gallons per acre per day irrigation.

**750,000 gpd for six-month growing season.

***Equivalent to 1.05 cfs.

If all of the projected water demands were developed from surface water supplies, the net reduction in stream flow would be approximately 1.05 cfs. This potential stream flow reduction could have an adverse impact on fishery resources, stream zone vegetation, and downstream water uses especially in low-flow periods or drought conditions.

Alternatively, if all of the required water demands were obtained from groundwater resources, adverse impacts could arise from lowering of natural groundwater levels, reductions in downstream spring flows, and changes in the character of geothermally mixed waters. The subsurface geology of the area is complex, and groundwater flow mechanisms are not well defined. Any groundwater extractions which would directly reduce or alter the geothermally mixed spring flows at the Hot Creek Fish Hatchery would have significant adverse impacts. These spring flows are essential to the operation of the hatchery and are also an important contribution to the surface water flow and characteristics of Hot Creek. Significant reductions in spring flow, or changes in the temperature of discharges, could have serious impacts on the operation of the hatchery.

Mitigation. The projected ultimate water demand of development within the planning area represents approximately 2.2% of the total annual surface flow of Mammoth Creek at Highway 395 and Convict Creek. Diversions from surface stream flows would be most significant during low-flow or drought conditions, however. Under such conditions, the projected domestic diversions could represent as much as 10% of the natural surface flow. Due to the availability of groundwater resources in the planning area, it is recommended that the required domestic water supplies be developed solely from groundwater sources and that stream diversions be prohibited.

As previously shown on Figure 18, there are significant groundwater resources available within the project area. Saturated alluvial deposits associated with the Mammoth/Hot Creek hydrologic system are extensive but environmentally sensitive due to the importance of spring flows on the ecology of Hot Creek. Several existing land uses derive their water supplies from wells within the Mammoth/Hot Creek groundwater system including the Mono County Sheriff Substation, old Mammoth Elementary School, Hot Creek Fish Hatchery, and the Sierra Quarry. Geothermal development on the north side of Mammoth Creek also proposes to utilize this groundwater system as a cold water supply source for cooling purposes. In consideration of the existing and proposed demands already being imposed on the sensitive Mammoth/Hot Creek system, it is recommended that additional development of groundwaters be avoided in this area.

The preferred location for the development of water supplies is the cold groundwater basin known to exist in the vicinity of the airport. This basin is primarily associated with the Convict Creek drainage system, although there is undoubtedly some recharge from the Mammoth Basin. The projected ultimate water demand represents approximately 7.5% of the calculated capacity of this groundwater basin and 10% of the estimated annual recharge. If all of the projected land uses derived their supply from this source, groundwater levels would gradually decline during below-average precipitation years but would be replenished whenever precipitation exceeds 10% of normal. Long-term records indicate the precipitation levels necessary to replenish the basin would normally occur every five years but could extend for 10 years during prolonged drought conditions.

All available geologic and hydrologic evidence indicates that it is highly unlikely that groundwater extractions in the Convict Creek drainage basin near the airport terminal area could affect the flow of geothermally mixed springs at the Hot Creek Fish Hatchery. The groundwater levels shown on Figure 18 indicate that the elevation of the major hatchery springs are four to six feet above the elevation of groundwater levels in the vicinity of the airport. This would infer that the source of the springs is inflow from the Mammoth Basin groundwater system westerly of the Mammoth Creek/Convict Creek drainage divide. It is possible, however, that the lowering of groundwater levels in the airport area could affect the flow of hot springs further downstream in the Hot Creek Gorge. The geothermally altered character of these spring flows indicates that their primary source is a deep groundwater reservoir rather than shallow cold water systems, however. Also, the projected ultimate water demand represents less than 2% of the average annual outflow at the Hot Creek Gorge.

The potential impacts of projected water demands associated with implementation of the Airport Land Use Plan can be reduced by the following mitigation measures.

1. Diversion of surface streams for domestic, irrigation, or industrial water supplies should be prohibited.

2. Groundwater extraction should be avoided within the Mammoth/ Hot Creek watershed north of U.S. Highway 395 to protect sensitive stream environments as well as unique hot/cold water flow systems.
3. A comprehensive water supply, distribution, and storage system should be developed for the concentrated land uses associated with the Airport Development District. Whenever possible, other water supply facilities should be consolidated within the planning area.
4. The most favorable area for groundwater resource development is in the vicinity of the existing airport site. A well development and testing program should be implemented to verify the availability and capacity of the potential groundwater supply.
5. All proposed land uses within the airport planning area should be conditioned upon the availability of water supplies.

Water Quality

Setting and Conditions. State responsibility for the protection of water resources in the Eastern Sierra region is vested in the Lahontan Regional Water Quality Control Board. In 1975, the RWQCB prepared a comprehensive Water Quality Control Plan for the South Lahontan basin (6B) which includes the Owens Hydrologic Unit and the airport planning area. The plan outlines a coordinated program for water quality protection in accordance with a basic policy of non-degradation. This policy states that the existing level of quality in water resources shall be maintained unless potential beneficial uses are unreasonably affected.

Beneficial uses of groundwater resources identified in the plan for the Long Hydrologic Subunit include: municipal and domestic water supply, agricultural water use, industrial water supply, and freshwater replenishment of surface lakes and streams. Beneficial uses for surface waters in the Long Subunit are specifically defined for the major surface streams as presented in Table 6.

Table 6.

Area Code:	Hydrologic Unit, Subunit, Drainage Feature:	Description:	BENEFICIAL USES OF SURFACE WATERS SOUTH LAHONTAN BASIN											Receiving Waters:		
			Beneficial Uses:													
			MUN	AGR	IND	GWR	REC 1	REC 2	WARM	COLD	WILD	SAL	POW		RARE	
603.00	Owens hydrologic unit															
603.10	Long hydrologic subunit															
	Lake Crowley	Reservoir	-	X	-	-	X	X	-	X	X	-	X	-	-	Owens River
	Owens River	Perennial river	-	X	-	-	X	X	-	X	X	-	-	-	-	Crowley Lake
	Mammoth Creek	Perennial stream	X	X	-	X	X	X	-	X	X	-	-	-	-	Owens River
	Convict Creek	Perennial stream	-	X	-	X	X	X	-	X	X	-	-	-	-	Crowley Lake
	Convict Lake	Lake	X	-	-	-	X	X	-	X	X	-	-	-	-	Convict Creek

Surface and groundwater resources of the Long Subunit are generally of excellent quality and suitable for almost all domestic, agricultural, and recreational beneficial uses. Most surface waters are moderately soft, bicarbonate type, with low dissolved mineral content and nearly neutral pH. An exception is Hot Creek which has higher mineral content and elevated temperature due to geothermal influences. In order to reconcile potential beneficial uses with the non-degradation policy, general and specific water quality objectives for surface waters are established in the Basin Plan. Specific objectives for surface waters in the planning area are summarized in Table 7.

Table 7.
CHEMICAL WATER QUALITY OBJECTIVES FOR SURFACE WATERS
SOUTH LAHONTAN BASIN

Surface Water	Objective (mg/l) ¹							
	TDS	Cl	SO ₄	F	B	NO ₃ -N	N	PO ₄
<u>Mono-Owens Planning Area</u>								
Owens River (below East Portal)	100	6.0	6.0	0.30	0.20	0.5	0.6	0.73
	150	12.0	16.0	0.60	0.40	1.0	1.5	0.94
Hot Creek (at County Road)	275	41.0	24.0	1.80	1.80	0.2	0.3	0.65
	380	60.0	35.0	2.80	2.60	0.4	1.5	1.22
Mammoth Cr. (at Hwy. 395)	75	1.0	6.0	0.10	0.03	0.4	0.6	0.11
	100	1.4	11.0	0.30	0.05	0.8	1.0	0.22
Convict Creek	85	1.5	11.0	0.05	0.02	0.2	0.3	0.03
	95	3.0	14.0	0.15	0.06	0.4	0.5	0.05

¹ $\frac{100}{200}$ Upper number represents average value = arithmetic average of all data
Lower number represents 90-percentile value = only 10 percent of data exceed this value.

The Water Quality Control Plan generally encourages the consolidation of domestic and industrial wastewater treatment and disposal facilities and establishes general criteria for the discharge of effluents from such facilities. Discharges of the following substances to surface and groundwaters are prohibited:

- | | |
|-------------------------------|------------------------------|
| Chlorinated hydrocarbons | Grease and oil |
| Toxic substances | Phenolic compounds |
| Harmful food chain substances | Acids and gasses |
| High temperature waters | Heavy metals |
| Radioactive substances | Other deleterious substances |

In addition, discharges from treatment facilities cannot result in perceptible odors, colors, tastes or foaming of surface and groundwaters, nor can they result in nuisances or pollution. Bypasses or diversions of raw or partially treated sewage are also prohibited, and all treatment facilities must be protected against flooding for the maximum 100-year runoff period.

The plan permits the use of septic tank and subsurface leach field sewage disposal systems where geologic and soil conditions are suitable, and establishes specific criteria for such systems.

In addition to the establishment of prohibitions and specific waste discharge requirements for domestic and industrial sewage treatment facilities, the Basin Plan emphasizes the need for control of "non-point" sources of water pollution, including urban runoff. The transport of silt and sediment from disturbed soil surfaces is also recognized as a potentially significant water quality problem. A brief synopsis of the general erosion control guidelines which have been enforced by the RWQCB is presented in Table 8.

Table 8. Erosion Control Guidelines

- 1 Drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent transport of the runoff from a 20-year, 1-hour design storm from the project site.^a
- 2 Surplus or waste material shall not be placed in drainage ways or within the 100-year flood plain of surface waters.
- 3 All loose piles of soil, silt, clay, sand, debris, or earthen materials shall be protected in a reasonable manner to prevent any discharge to waters of the State.
- 4 Dewatering shall be done in a manner so as to prevent the discharge of earthen material from the site.
- 5 All disturbed areas shall be stabilized by appropriate soil stabilization measures by October 15 of each year.
- 6 All work performed between October 15 and May 1 of each year shall be conducted in such a manner that the project can be winterized within 48 hours.
- 7 Where possible, existing drainage patterns shall not be significantly modified.
- 8 After completion of a construction project, all surplus or waste earthen material shall be removed from the site and deposited at a legal point of disposal.
- 9 Drainage swales disturbed by construction activities shall be stabilized by the addition of crushed rock or riprap as necessary or other appropriate stabilization methods.
- 10 All nonconstruction areas shall be protected by fencing or other means to prevent necessary disturbance.
- 11 During construction, temporary erosion control facilities (e.g., impermeable dikes, filter fences, hay bales, etc.) shall be used as necessary to prevent discharge of earthen materials from the site during periods of precipitation or runoff.
- 12 Revegetated areas shall be continually maintained in order to assure adequate growth and root development. Physical erosion control facilities shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.
- 13 Where construction activities involve the crossing and/or alteration of a stream channel, such activities shall be timed to occur during the period in which stream flow is expected to be lowest for the year.

^aThe 20-year, 1-hour design storm for the Mammoth Lakes area is equal to 1.0 inch (2.5 cm).

Potential Impacts. Projected ultimate domestic sewage waste discharges associated with the Airport Land Use Plan are summarized in Table 9.

Table 9. Ultimate Domestic Waste Discharges

<u>Land Use</u>	<u>Acres</u>	<u>Occupancy Persons/acre</u>	<u>Unit Discharge gal/cap/day</u>	<u>Average Daily Discharge gpd</u>	<u>Annual Discharge acre-feet</u>
PA	490	1.0	60	29,400	33
I	65	10.0	60	39,000	44
PUD	110	3.5	80	30,800	34
ADD	455	3.5	80	127,400	143
OA-R	2,000	.5	7	<u>7,000</u>	<u>8</u>
Total:				233,600	262

With the exception of the projected ADD development, most of the land uses are situated on isolated parcels of land. Some are in close proximity to stream environment zones or in areas of high groundwater levels. Improper design of wastewater treatment and disposal facilities or inadequate separations from surface or groundwater could result in adverse water quality impacts.

The proposed land uses for the ADD zone represent relatively intensive development densities. The installation of numerous individual domestic wastewater treatment and disposal systems within intensive development areas usually leads to long-term maintenance problems, conflicts between adjacent land uses, and potential contamination of water supply sources. Long-term water quality impacts could occur if industrial waste discharges are not adequately controlled. Manufacturing and industrial processes frequently involve heavy metal, carcinogenic, and toxic wastes. Oils, grease, and complex hydrocarbon wastes from aircraft and vehicle maintenance facilities must also be considered. The indiscriminate or uncontrolled discharge of such wastes could not only disrupt domestic wastewater treatment facilities, but could ultimately represent significant contamination hazards for surface groundwaters in the area.

Inadequate control of earthwork operations during the construction phase of individual development projects could lead to the discharge of sediment loads to adjacent surface streams. Deposition of significant quantities of silt can adversely affect freshwater fishery resources as well as shoreline and aquatic vegetation. Replacement of natural soil materials with impervious surfaces (roadways, buildings, and parking areas) will tend to increase runoff concentrations and volumes. This could cause long-term erosion hazards and the transport of sediment loads to surface waters.

In addition to increasing the volume of runoff, impervious paved surfaces affect the relative quality of surface drainage. Runoff from paved areas contains increased quantities of nutrients, organic matter, heavy metals, rubber, asbestos, and petroleum derivatives. In sufficient quantity, nutrients and organics can stimulate vegetative growth in receiving streams while heavy metals and petroleum compounds can be toxic to fish and plant life. If large quantities of chemicals are routinely utilized for de-icing and skid control, the cumulative impacts on water quality could be significant.

Establishment and maintenance of landscaping and ground cover vegetation for parks, golf courses, and development areas will undoubtedly require the use of fertilizers which are high in phosphorous and nitrogen content. Improper irrigation practices or fertilizing methods could result in the discharge of water with high concentrations of these nutrients which could have adverse water quality impacts. Accumulations of nutrient concentrations can promote algae blooms and growth of nuisance aquatic plants in adjacent surface waters. The indiscriminate use of pesticides or weed control chemicals in large landscaped areas could have serious water quality impacts on aquatic vegetation and trout fishery resources and might ultimately affect the overall quality of surface and groundwater resources in the area.

Mitigation Measures. The following measures are considered necessary to mitigate the potential water quality impacts associated with domestic wastewater and industrial waste discharges.

1. All wastewater treatment and disposal systems shall be designed, constructed and maintained in accordance with requirements established by the Lahontan RWQCB and the Mono County Health Department. Waste discharge permits shall be obtained from both agencies prior to the installation of wastewater facilities.
2. No wastewater disposal systems shall be permitted within 100 feet of stream environment zones or in areas where groundwater is less than five feet below ground surface.
3. The direct discharge of treated (or untreated) wastewaters to perennial surface streams is prohibited within the planning area.
4. Wastewater collection, treatment and disposal systems shall be consolidated to the greatest extent possible within all designated land use areas.
5. A centralized sewage collection, treatment, and disposal system shall be developed for the Airport Development District. A sewerage maintenance district shall be established for the ADD land use area. All proposed private development within the

district shall be required to contribute to the operation and maintenance of the sewerage system and bear the cost of expansions or extensions as necessary.

6. Groundwater sampling wells shall be provided to monitor the performance of centralized subsurface disposal systems and to assess potential adverse water quality impacts. The size, location, and depth of sampling wells shall conform with Lahontan RWQCB requirements.
7. The discharge of industrial and manufacturing wastes shall be strictly controlled. Pretreatment or containment facilities shall be provided in accordance with RWQCB requirements prior to any discharges of industrial manufacturing wastes to domestic wastewater treatment or disposal systems. Wash-down wastes from aircraft or vehicle maintenance facilities shall be intercepted and pretreated prior to discharge to sewerage facilities.
8. Waste oils, greases, or industrial contaminants shall be contained in holding tanks and periodically pumped out for eventual recycling or disposal at approved industrial waste sites. All holding tanks, fuel storage tanks, and other potential sources of water contamination shall be installed in accordance with State Health Department requirements. All hazardous material storage tank installations require the issuance of permits by the RWQCB and the County Health Department.

Potential adverse water quality impacts arising from silt and sediment discharges will be most acute during construction periods. It is essential that the mitigation measures discussed under Soils/Land Transformation be effectively implemented and established as project conditions. Briefly summarized, the required mitigation measures are:

1. All grading and earthwork activities must be conducted in accordance with an approved construction grading plan and grading permit issued by the Mono County Department of Public Works.
2. A drainage and erosion control plan must be implemented for all major projects as approved by the Public Works Department and the Lahontan RWQCB.
3. No significant soil disturbances are permitted within the stream conservation zones of Mammoth Creek, Hot Creek or Convict Creek.
4. Grading and earthwork shall be expedited to attempt completion in a single summer season. Soil stabilization and initial

reseeding shall be completed prior to the onset of winter weather conditions. Bonds or security shall be posted to guarantee completion of necessary site stabilization work as required by county grading ordinance provisions.

Long-term water quality impacts associated with soil disturbances and the installation of impervious surfaces such as paved roadways, parking areas, and building structures can be mitigated to reasonable levels by following mitigation measures:

1. All disturbed areas must be revegetated with a variety of climate-adapted plants and ground cover. Consideration should be given to grasses and annuals for immediate cover, perennials for a more permanent cover, and shrubs to provide root binder for natural soil stabilization.
2. All development projects shall be required to install appropriately designed drainage retention facilities (percolation basins or infiltration trenches) in accordance with RWQCB guidelines. The function of such facilities is two-fold: peak storm drainage flows are attenuated and pollutants from impervious surfaces are filtered through natural soil materials.

The potential discharge of nutrients to adjacent surface streams as a result of the use of fertilizers in park, landscape, or golf course areas can be mitigated by appropriate precautions:

1. Fertilizers should be applied in the fall months so that chemicals will be absorbed by seepage from winter snowpack. Fertilizer applications should be avoided during peak precipitation periods when the danger of simply washing nutrients into surface streams is the greatest.
2. The use of pesticides and weed control agents should be restricted to the dry summer months. Project proponents shall consult with the Soil Conservation Service, local agricultural agencies, and the Lahontan RWQCB for appropriate weed control agents and pesticide formulas which will not have potential long-term water quality impacts.
3. Large-scale landscaping projects (such as golf courses) should incorporate decorative ponds and lakes as drainage retention basins or should specifically provide similar facilities for runoff control.

Mineral/Energy Resources

Setting and Conditions. The airport planning area is situated within the Mono-Long Valley Known Geothermal Resource Area (KGRA) which extends from Long Valley to Mono Lake. Geothermal exploration programs have

indicated that there is considerable potential for geothermal power generation in the westerly portion of the airport planning area. Initial geothermal well testing has been completed on a 400-acre parcel of City of Los Angeles land known as the Mammoth/Chance geothermal lease. Engineering and environmental studies are currently in progress for the development of at least one 10 megawatt (MW) power generation plant within the lease area. The general locations of the lease area and the proposed geothermal power plant are shown on Figure 20.

The alluvial soil materials which dominate the flat portions of the planning area contain large concentrations of sands, gravels, and cobbles. There are two existing sand and gravel pits within the area: the privately owned Sierra Quarry site, southwest of the airport and the Forest Service site 1,200 feet north of the airport terminal area. Both of these pits produce relatively high quality materials suitable for asphalt, concrete, and select construction uses. Good quality materials are excavated at both sites to depths of 30 to 40 feet.

There is an abandoned kaolinite mine located just easterly of the proposed geothermal power plant site on Inyo National Forest land. This mine has been inactive for at least 20 years. There are no other known mineral resources in the planning area.

Potential Impacts. The potential impacts of geothermal power plant development are addressed in a Draft EIR prepared for the Mono County Office of Energy Management in June, 1986. The Draft EIR identified the following impacts for the proposed geothermal development project which are directly related to the Airport Land Use Plan:

1. Vapor emissions from power plant cooling towers could cause visible plumes which might affect airport operations. Mitigation consists of the use of air cooling systems during the winter months when meteorological conditions are most conducive to vapor/steam plumes.
2. Visual impacts associated with power plant structures, cooling towers, geothermal fluid pipelines, and power transmission lines are an unavoidable consequence of the project. Mitigation includes limiting building heights to 25 feet, installation of earth berms and landscaping, and relative distance from scenic viewpoints.
3. The project requires the installation of a two-mile long, 35- to 50-foot high electrical transmission line within the geothermal lease area. The transmission line does not appear to be within the Safety or ACZP zones of the airport.
4. Proposed access to the geothermal plant site will require the use of a portion of the existing airport access road. Projected vehicular traffic for operation and maintenance personnel is minimal, however.