
Final Supplement to Subsequent Environmental Impact Report (SSEIR)

Mammoth Yosemite Airport Expansion Project
Mammoth Yosemite Airport
(State Clearing House No. 2000-034005)

March 2002

Town of Mammoth Lakes
Post Office Box 1609
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List of Abbreviations/Acronyms

ACDP	Airport Commercial Development Plan
ADD	Airport Development District
AFB	Air Force Base
AFM	Aircraft Flight Manual
AIA	Airport Improvement Act
AIP	Airport Improvement Program
ALUC	Airport Land Use Commission
APCD	Air Pollution Control District
AQMD	Air Quality Management District
ARB	Air Resources Board
ARFF	Airport Rescue and Fire Fighting
BA	Biological Assessment
BASH	Bird Aircraft Strike Hazard
BCA	Benefit Cost Analysis
BLM	Bureau of Land Management
CAA	Clean Air Act
CCAA	California Clean Air Act
CALTRANS	California Department of Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
DBO	Date of Beneficial Occupancy
DOD	Department of Defense
EA	Environmental Assessment
EDMS	Emissions Dispersion Modeling System
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FBO	Fixed Base Operator
FONSI	Finding of No Significant Impact
GPS	Global Positioning System
GSE	Ground Support Equipment
IFR	Instrument Flight Rules
INM	Integrated Noise Model
LADWP	Los Angeles Department of Public Works
NAAQS	National Ambient Air Quality Standards
NDDB	National Diversity Database
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRS	Natural Reserve System
OHV	Off highway Vehicle
OTR	Ozone Transport Region
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge

PUD	Planned Unit Development
REIL	Runway End Identifier Lights
ROG	Reactive Organic Gases
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RWQCB	Regional Water Quality Control Board
SEIR	Subsequent Environmental Impact Report
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SNARL	Sierra Nevada Aquatic Research Laboratory
SSEIR	Supplement to Subsequent Environmental Impact Report
SWPPP	Storm Water Pollution Prevention Plan
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VFR	Visual Flight Rules
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

Summary of Proposed Project and its Consequences

California Environmental Quality Act (CEQA) Guidelines §15123 requires an Environmental Impact Report (“EIR”) to “contain a brief summary of the proposed actions and its consequences.” The summary shall identify:

- Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid the effect.
- Areas of controversy including issues raised by agencies and the public.
- Issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

Project Description

The overall proposed project is known as the Mammoth Yosemite Airport Expansion Project. The revisions to the proposed project¹ that are the subject of this Supplement to Subsequent Environmental Impact Report (SSEIR) generally include four components: extension of the runway by 1,200 feet (rather than 2,000 feet as originally proposed), widening the runway from 100 feet to 150 feet, replacement of an existing 4.8-foot barbed wire fence with an 8-foot chain link security fence, and construction of a new package wastewater treatment plant (instead of a new leach field as originally proposed).

This SSEIR will also analyze any impacts relating to the updated aviation demand forecast, and the relocation or replacement of “Green Church” building formerly used by the High Sierra Community Church.

Project Objectives

Following are the Project Objectives for the proposed Mammoth Yosemite Airport Expansion Project.

1. Amend the runway characteristics to enhance safety for narrow body air carrier aircraft up to the size of a Boeing 757-200 to operate at the Airport.
2. Provide a transportation alternative to the private automobile for residents of and visitors to Mammoth Lakes.
3. Reduce adverse vehicular air emissions associated with visitors to Mammoth Lakes and the vicinity by replacing some of the vehicle trips with air passenger trips.
4. Maintain eligibility for the Town of Mammoth Lakes to receive Airport Improvement Program (AIP) funds from the Federal Aviation Administration (FAA) or to impose Passenger Facility Charges to assist in funding some of the proposed improvements.

¹ The proposed project was initially proposed and environmentally reviewed under State and federal regulations in the *Environmental Impact Report and Environmental Assessment Mammoth/June Lakes Airport Land Use Plan*, State Clearinghouse No. 86060901 (1986 EIR/EA). It was then revised and reviewed again in 1997 in the *Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment*, State Clearinghouse No. SCH 96112089 (C1-23) (1997 SEIR/EA)

Commercial airline service to the Mammoth Yosemite Airport is scheduled to resume during the winter season of 2002/2003 with Boeing 757 aircraft serving Dallas/Fort Worth International and Chicago O'Hare International airports. This service is anticipated to expand, in the following years, to include air carrier and commuter service to other regional and national destinations such as Los Angeles.

Environmental Impacts and Mitigation Measures

Table ES-1 contains a Mitigation Monitoring and Reporting Plan (MMRP), which provides a summary of the potential project impacts and their associated mitigation measures and implementation process as identified in the 2002 Mammoth Yosemite Airport Expansion Project Final Supplement to Subsequent Environmental Impact Report (2002 SSEIR) and 1997 Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report (1997 SEIR). The purpose of this is to ensure that the mitigation measures included for potential impacts identified in the 2002 SSEIR and 1997 SEIR are implemented appropriately and in a timely manner. After application of mitigation measures, no significant adverse environmental impacts are anticipated from the Mammoth Yosemite Airport Expansion Project.

Project Alternatives

A total of ten alternatives including one No-Project alternative were initially identified for consideration in the SSEIR by the lead agency, Town of Mammoth Lakes. Keeping the project objectives in mind, an aircraft performance analysis was conducted to determine the potential for providing air service to various markets from Mammoth Yosemite Airport. On the basis of this aircraft performance analysis and airport design criteria, four alternatives were retained for future consideration with runway lengths ranging from 8,200 to greater than 9,000 feet and various airfield improvements, in addition to the No Project alternative (retain the 7,000-foot runway). The runway extensions, evaluated in the retained alternatives, could be accomplished both to the east and to the west.

The other five alternatives, which included widening the existing 7,000-foot runway, widening the runway without shifting the runway 25 feet to the south, developing another Airport in the region, using alternate modes of transportation, and developing a new Airport in the region at a different site were excluded from further evaluation. Section IV of the SSEIR contains a more detailed analysis of all the alternatives.

Alternative 1 – 7,000 Foot Runway (No Project)

Due to lack of any environmental impacts, Alternative 1 (No Project) would be environmentally superior to the proposed project. However, the No-Project Alternative is rejected from further consideration on the basis that it would not meet any of the proposed project objectives.

Alternative 2 – 8,200-Foot Runway (Proposed Project)

The proposed project meets all the project objectives and was analyzed in Section III of this SSEIR. There are no new significant environmental impacts compared with those in the 1997 SEIR associated with the proposed project other than the relocation or replacement of "Green Church" from its present location to the Sierra Nevada Aquatic Research Laboratory (SNARL) facilities in the public services category.

Alternative 3 – 9,000-Foot Runway

Alternative 3 would have environmental impacts that are greater than the proposed project in the Soil/Land transformation, Hydrology and Water Quality, and Biological Resources categories as

more land would need to be cleared and graded and there would be greater storm water runoff due to increase in pavement area. The alternative would require the use of additional U.S. Forest Service land west of existing Airport property for the runway safety area, which would potentially affect additional mule deer and sage grouse habitat compared with the proposed project. Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Traffic, Noise, Public Services, and Utilities. This length of the runway was approved in the 1986 EIR/EA and 1997 SEIR/EA, the only changes to the previously approved project needed to meet the project objectives include the widening of the runway from 100 to 150 feet and relocation of ‘Green Church’.

Alternative 4 – Extend Runway Beyond 9,000 Feet

Alternative 4 would generate impacts that are greater than the proposed project and likely to be significant in the categories of Soil/Land transformation, Hydrology and Water Quality, and Biological Resources. This alternative would meet all the project objectives but would result in a greater environmental impact than the proposed project due to an increase in the amount of land that would need to be cleared and graded along with greater storm water runoff due to a greater increase in pavement area. The additional runway length would also potentially affect additional mule deer and sage grouse habitat. Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Traffic, Noise, Public Services, and Utilities. This alternative was rejected because Alternative 2 (proposed project) provides an environmentally superior alternative and meets all the project objectives at a lesser cost.

Alternative 5 – Extend Runway to the East

Alternative 5 is the extension of Runway 9-27 to the east to achieve possible runway lengths of 8,200, 9,000, or greater than 9,000 feet. Alternative 5 would generate impacts that are greater than the proposed project and likely to be significant in the categories of Soil/Land transformation, Hydrology and Water Quality, Traffic, and Biological Resources depending on the runway length constructed. This alternative would meet all the project objectives but would result in a greater environmental impact than the proposed project due to an increase in the amount of land that would need to be cleared and graded along with greater storm water runoff due to a greater increase in pavement area. The additional length of the runway would also potentially affect additional mule deer and sage grouse habitat and the dry meadow area located east of the Airport rather than the already disturbed land west of the Airport that is currently used as a paved stopway. Benton Crossing Road would have to be relocated, because it would conflict with associated safety areas or aeronautical pavement.

Environmental Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Noise, Public Services, and Utilities. This alternative was rejected because alternative 2 (proposed project) provides an environmentally superior alternative and meets all the project objectives at a lesser cost.

Table ES-1: Mammoth Yosemite Airport Mitigation Monitoring and Reporting Plan

This table provides a summary of the potential project impacts and their associated mitigation measures as identified in the 2002 Mammoth Yosemite Airport Expansion Project Final Supplement to Subsequent Environmental Impact Report (2002 SSEIR) and 1997 Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment (1997 SEIR/EA). The purpose of this Mitigation Monitoring and Reporting Plan (MMRP) is to ensure that the mitigation measures required as conditions of project approval for potential impacts identified in the 2002 SSEIR and 1997 SEIR/EA are implemented appropriately and in a timely manner pursuant to the requirements of CEQA Guidelines section 15097.

The MMRP table is divided into six columns. The first column provides the potential impact identified in the 2002 SSEIR or 1997 SEIR/EA by environmental category. The second column provides the associated mitigation measure(s) identified for that impact. The third through fifth columns provide the specific steps required for implementation and monitoring of the mitigation measures identified for the impact, and are broken into three stages: Design Approval (third column), Inspection (fourth column), and Further Monitoring (fifth column). The parenthetical expressions within the third through fifth columns provide a means to track the completion of actions by responsible entities. The final column provides the effectiveness criteria or completion standard to determine the success of mitigation measure implementation.

Mitigation measures have been included for one of three reasons. These reasons are coded by number (see “Mitigation Type”) in the table and are identified as follows:

1. The measure is required to mitigate a potentially significant impact to less than significant.
2. The impact is less than significant before mitigation. The measure is designed to further reduce a less than significant effect.
3. The impact is still significant after mitigation. The measure is designed to mitigate the impact to the extent feasible.

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
1. Aesthetics and Light & Glare					
1.1. Security Fence An 8-foot security fence will be installed (per FAA requirements) adjacent to and visible from a state designated scenic highway.	Use non-reflective, neutral or dark colored fencing (2002 SSEIR). Use chain link material for fencing to enhance through-vision and minimize view obstruction (2002 SSEIR). Prohibit topping the fence with barbed wire (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> USFS and TML will approve the final colors. TML Planning Commission will provide Design Review approval. (USFS: _____) (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permit. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	The security fence is installed to approved design standards.
1.2. Terminal A 25,000 square foot terminal would be constructed that is visible from a state designated scenic highway and National Forest lands used for public recreation.	Emphasize earth tone colors and natural materials in terminal design to enhance compatibility with the natural setting (2002 SSEIR, 1997 SEIR/EA). Mitigation Type: 3	1. TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permit. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	The terminal is constructed to approved design standards.

Agency Key: USFS (United States Forest Service), TML (Town of Mammoth Lakes), CDFG (California Department of Fish & Game), Caltrans (California Department of Transportation), FAA (Federal Aviation Administration), LRWQCB (California Water Quality Control Board – Lahontan Region), GBUAPCD (Great Basin Unified Air Pollution Control District), MC (Mono County).

The Mitigation Monitoring and Reporting Coordinator, designated by the Town of Mammoth Lakes, is responsible for compliance tracking using this form to mark the appropriate dates and attach approval documents or other evidence of completion if possible.

Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
1.3. Signs Signs will be erected for business and usage identification that may be visible from off-site.	Strictly regulate all signs (number, location, appearance) via the TML Design Review approval process and Municipal Code requirements (1997 SEIR/EA, 2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of sign permits. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	Any new sign erected as part of the proposed project complies with approved design standards and TML Municipal Code.
1.4. Grading and Clearing Graded areas may be visible from a state designated scenic highway resulting in adverse visual impacts.	Re-vegetate with indigenous plant species where appropriate to blend into the natural environment (2002 SSEIR). Limit vegetation to those areas that are to be graded, constructed upon, or landscaped. Clearly delineate grading limits, and impose penalties for earth disturbance or equipment parking outside of the identified grading limits in accordance with the Town of Mammoth Lakes grading and civil penalties regulations (1997 SEIR/EA). Mitigation Type: 1	1. <i>Design:</i> TML will use a plant list provided by USFS to design re-vegetation. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of landscaping plans and grading permit approvals. (TML: _____)	3. <i>Field monitoring:</i> TML staff will monitor compliance with plan/permit conditions during construction. (TML: _____) <i>Field Confirmation:</i> TML inspector will verify compliance with plan/permit conditions by final inspection. (TML: _____)	4. <i>Monitoring:</i> Future re-vegetation projects will use list of USFS approved plant species. Annual inspection will be performed until vegetation is established (2-3 years minimum). (TML: _____)	All re-vegetation installed as part of the project conforms to the list of approved indigenous plant species and is successfully established.
1.5. Site/ Building Design Improvements would be constructed that are visible from a state designated scenic highway and from National Forest lands used for public recreation that may result in adverse visual impacts.	Require all project developments to comply with the Town of Mammoth Lakes Design Review regulations and policies and property maintenance regulations (1997 SEIR/EA). Mitigation Type: 1	1. <i>Design:</i> TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	The improvements are constructed to the TML Municipal Code and approved design standards.

Agency Key: USFS (United States Forest Service), TML (Town of Mammoth Lakes), CDFG (California Department of Fish & Game), Caltrans (California Department of Transportation), FAA (Federal Aviation Administration), LRWQCB (California Water Quality Control Board– Lahontan Region), GBUAPCD (Great Basin Unified Air Pollution Control District), MC (Mono County).

The Mitigation Monitoring and Reporting Coordinator, designated by the Town of Mammoth Lakes, is responsible for compliance tracking using this form.

Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
1.6. Parking New parking areas may be visible from a state designated scenic highway and from National Forest lands used for public recreation.	Use landscaping and site design to minimize the visual impacts of automobile parking areas (1997 SEIR/EA). Mitigation Type: 1	1. <i>Design:</i> TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	The improvements are constructed to approved design standards.
1.7. Utilities New aboveground utilities may be visible from off-site.	Install new utilities underground (1997 SEIR/EA). Mitigation Type: 1	1. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	2. <i>Field Confirmation:</i> TML inspector will verify compliance with permit conditions by final inspection. (TML: _____)	Not applicable.	New utilities are installed underground.
1.8. Aircraft Parking Apron Lighting New lighting may cause glare visible from off site.	Install new apron parking lights that are shielded or cutoff, and replace existing lights with new shielded or cutoff lights, to reduce glare impacts for drivers on US 395 (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	Lighting is installed per approved design standards.
1.9. General Exterior Lighting New lighting may cause glare visible from off site.	Require all new exterior lighting to conform to TML Design Review and Municipal Code requirements for shielding and direction downward to prevent glare and light trespass. Use the minimum level of lighting as necessary for security and safety (1997 SEIR/EA). Mitigation Type: 1	1. <i>Design:</i> TML Planning Commission will provide Design Review approval. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permit. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with Design Review approval conditions by final inspection. (TML: _____)	Not applicable.	Lighting is installed per approved design standards.

Agency Key: USFS (United States Forest Service), TML (Town of Mammoth Lakes), CDFG (California Department of Fish & Game), Caltrans (California Department of Transportation), FAA (Federal Aviation Administration), LRWQCB (California Water Quality Control Board– Lahontan Region), GBUAPCD (Great Basin Unified Air Pollution Control District), MC (Mono County).

The Mitigation Monitoring and Reporting Coordinator, designated by the Town of Mammoth Lakes, is responsible for compliance tracking using this form.

Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
2. Air Quality					
2.1. Airborne Dust Construction could produce airborne dust that reduces visibility and violates federal and state standards.	Continuously implement dust control measures, including the use of watering trucks and/or pumped systems, throughout construction. Stabilize and re-seed all exposed soil areas in accordance with an approved landscape/re-vegetation plan. Remove and dispose of all stockpiles of unsuitable soil materials at approved sites designated by TML. Implement appropriate recommendations from FAA Advisory Circular 150/5370-10A, Standards For Specifying Construction at Airports (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML staff will develop dust control measures for the project. (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. Plan approval by GBUAPCD. (TML: _____) (GBAPCD: _____)	3. <i>Field Monitoring:</i> TML inspectors will monitor the effectiveness of dust control measures during construction. Violations of permit conditions reported. (TML: <u>Throughout construction</u>) 4. <i>Field Confirmation:</i> TML inspectors will verify final site cleanup and re-vegetation pursuant to construction permit plans. (TML: _____)	Not applicable.	Nuisance conditions caused by construction-generated airborne dust are minimized during construction. Final site cleanup and re-vegetation of disturbed areas controls dust generation.
3. Wildlife					
3.A. <u>Sage Grouse</u> 3.A.1. Perimeter Fence Design The new fence may provide for raptor perching and increased sage grouse predation.	Construct the new security fencing around the runway with chain link material. Design and construct the portion of the fence situated along the north side of the runway, and east and west of existing buildings, using methods developed in consultation with the USFS and CDFG, to minimize raptor perching opportunities (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> USFS and Caltrans will approval final fence design in consultation with DFG. TML Planning Commission will provide Design Review approval. (USFS: _____) (Caltrans: _____) (TML: _____) 2. <i>Incorporation into Project:</i> TML staff to include as condition of building permit. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify design conditions by final inspection. (TML: _____)	Not applicable.	Fence installation meets approved design standards.

Agency Key: USFS (United States Forest Service), TML (Town of Mammoth Lakes), CDFG (California Department of Fish & Game), Caltrans (California Department of Transportation), FAA (Federal Aviation Administration), LRWQCB (California Water Quality Control Board– Lahontan Region), GBUAPCD (Great Basin Unified Air Pollution Control District), MC (Mono County).

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Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
3.A.2. Sagebrush Habitat Clearing. The project could result in sage grouse habitat loss.	Implement the mule deer habitat restoration to mitigate the number of acres of sagebrush lost (2002 SSEIR). See 3.B.2. Mitigation Type: 2	See 3.B.2.	See 3.B.2.	See 3.B.2.	Vegetation is established per USFS re-vegetation plan. See 3.B.2.
3.B. <u>Mule Deer</u> 3.B.1. Deer / Aircraft Collisions. Existing wildlife control measures do not meet FAA wildlife control standards.	Construct a fence around the airport in consultation with CDFG, USFS, and Caltrans deer biologist reduce the potential for collisions (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> USFS and Caltrans will approval final fence design in consultation with CDFG. TML Planning Commission will provide Design Review approval. (Caltrans: _____) (USFS: _____) (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permit. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with design conditions by final inspection. (TML: _____)	4. <i>Monitoring:</i> Airport staff will conduct regular inspections and record results in an inspection / maintenance log. (TML: <u>Inspections as required by FAR Part 139</u>)	The security fence installed meets the approved design standards and FAA wildlife control requirements. FAA FAR Part 139 Certification
3.B.2. Sagebrush / Bitterbrush Removal The project could reduce sagebrush / bitterbrush habitat.	Restore habitat at or near the Airport to replace the number of acres of high-quality mule deer habitat lost as a result of implementing the proposed project. Compensate for the habitat loss at a ratio of one acre for every one acre of degraded deer habitat (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> The USFS has developed a specific mitigation and re-vegetation plan (2001) for the loss of mule deer habitat. It will be implemented on designated and approved sites during project grading. (TML _____) (USFS _____)	2. Field confirmation: USFS inspector will verify restoration according to plan. (USFS _____)	3. <i>Monitoring:</i> A report will be provided 1, 3, and 5 years following completion of the project. Failure to meet the success standards set in the plan will require reevaluation of the mitigation. (USFS _____)	Vegetation established per USFS re-vegetation plan.

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3.B.3. Perimeter Fence. The new fence could alter deer/highway crossing patterns and lead to increased deer mortality.	Although it has been shown that no established deer migration corridors exist in the vicinity of the proposed fence, TML to coordinate with Caltrans, CDFG, and USFS on the perimeter fence design (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> TML staff will coordinate with Caltrans, CDFG, and USFS on fence design. Caltrans will issue encroachment permit. USFS will issue special use permit. TML Planning Commission will provide Design Review approval. (Caltrans: _____) (USFS: _____) (TML: _____)	3. <i>Field Confirmation:</i> TML inspector to verify design conditions, if any, by final inspection. (TML: _____)	Not applicable.	New fence is constructed to approved design standards to minimize impacts.
3.B.4. Vehicle/Deer Collisions on Access Road. Collisions may occur.	Install speed limit and deer crossing signs to slow and alert motorists to the presence of deer on Airport Road (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> TML will coordinate with MC on the number and location of signs. (TML: _____)	2. <i>Field Confirmation:</i> TML inspector will verify sign installation according to agreement with MC. (TML: _____)	Not applicable.	Signs are installed per approved design standards.
3.C. <u>Raptors</u> 3.C.1. Perimeter Fence, Power Pole, and Light Fixture Design New locations for raptor perching could be created by the project, thus leading to potential increased raptor mortality due to aircraft collisions.	Design and construct fences, power poles, and light fixtures to minimize perching opportunities through the use of rounded or pointed caps (2002 SSEIR). Mitigation Type: 2	1. <i>Design:</i> Caltrans and USFS will provide design approval as appropriate. TML Planning Commission will provide Design Review approval. (Caltrans: _____) (USFS: _____) (TML: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML inspector will verify compliance with design conditions by final inspection. (TML: _____)	Not applicable.	Fences, power poles, and light fixtures are installed per approved design standards.

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Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
4. Transportation / Traffic					
4.1. Increased Traffic at Hot Creek/395 Intersection An increase in traffic to US 395/Hot Creek Hatchery Road could be caused, potentially resulting in a deterioration of Level of Service (LOS).	Construct a northbound right turn deceleration lane on US Highway 395 at Hot Creek Hatchery Road (2002 SSEIR). Extend the southbound left turn lane on US 395 at Hot Creek Hatchery Road (2002 SSEIR). Design and construct all improvements on US 395 to current Highway Design Manual standards (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML will design and submit to Caltrans for approval and encroachment permit issuance. Caltrans will approve a Traffic Operations Monitoring Program for the US 395/Hot Creek Hatchery Road intersection. (TML: _____) (Caltrans: _____) 2. <i>Incorporation into Project:</i> TML staff will include as conditions of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML and Caltrans inspectors will verify compliance with design conditions by final inspection. (TML: _____) (Caltrans: _____)	4. <i>Monitoring:</i> TML and Caltrans inspectors will implement the Traffic Operations Monitoring Program described at 4.1.1. with appropriate reporting. (TML: <u>per monitoring program</u>) (Caltrans: <u>per monitoring program</u>)	Prevention of US 395/Hot Creek Hatchery Road intersection from operating below LOS D. All improvements on US 395 are to current Highway Design Manual standards.

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Table 1: Mammoth Yosemite Airport MMRP

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4.2. Long Term / Cumulative Traffic Increase. The project combined with other possible future projects could decrease LOS below D at Hot Creek/395 intersection.	Plan, design, and fund the construction of a connection of the Airport Access road to Benton Crossing Road (2002 SSEIR). Complete the connection of Airport Road to Benton Crossing Road prior to the intersection operating below LOS E (2002 SSEIR). TML may re-stripe the center median lanes of the US 395/Hot Creek Hatchery Road to provide separate eastbound and westbound left and through lanes. This is expected to increase the capacity of this intersection but may not prevent the long-term need for construction of the connector to Benton Crossing Road (2002 SSEIR). Mitigation Type: 1	1. <i>Action Trigger</i>: The monitoring program described at 4.1.4 indicates operation below LOS D at the US 395/Hot Creek Hatchery Road intersection. (TML: _____) 2.A. <i>Design – Connection Road</i>: TML will initiate the planning, design, and funding of a connection of the Airport Access Road to Benton Crossing Road. Caltrans to provide design approval and permit issuance. (TML: _____) (Caltrans: _____) 2.B. <i>Design – Re-striping</i>: TML may design re-striping the center median lanes of the US 395/Hot Creek Hatchery Road to provide separate eastbound and westbound left and through lanes. Caltrans will provide approval. (TML: _____) (Caltrans: _____)	Not applicable.	3. Monitoring: TML and Caltrans will continue to monitor the operations of Hot Creek Hatchery Road and also monitor the Benton Crossing/US 395 intersection after the completion of the Airport Road/Benton Crossing Road Connection. If movements at either location reach LOS of E or an accident rate greater than 1.5 times the State Average develops at either location, TML will work with Caltrans to develop and fund corrective action associated with this project. (TML: _____) (Caltrans: _____) Monitoring Note: Any development beyond what is currently proposed for this project by TML or any other lead agency may have significant impacts on the state highway and the operations of the impacted intersections. Any further development in this area may trigger the need to realign Hot Creek Hatchery Road and construct an interchange/frontage at that location. Securing funding for improvements will be the responsibility of the lead agencies. After the completion of the connector road to Benton Crossing Road, a yearly monitoring report will no longer be required.	Maintenance of LOS D or better, construction of connection to Benton Crossing Road, or other intersection improvements TML and Caltrans agree is necessary to maintain LOS D or better.

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Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
5. Soil/Land Transformation					
5.1. Grading/Clearing The proposed project involves the grading of approximately 200 acres of land could result in loss of soil stabilization.	Conduct all grading and earthwork activities in accordance with approved construction/grading plans. Within the construction/grading plans, include a detailed project schedule that provides for stabilization in a single construction season, and clear delineation of the limits of construction to avoid unnecessary disturbance of adjacent soils and vegetation. Require bonds or other security to guarantee performance of the required work within the time periods delineated in the project schedule (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML will develop grading plans to include mitigation measures. USFS will provide approval for grading on USFS land. (USFS: _____) (TML: _____) 2. <i>Incorporation into Project:</i> TML staff to include as conditions of construction permits. (TML: _____)	3. <i>Field Monitoring:</i> TML inspectors will monitor compliance with permit conditions during construction. Violations of permit conditions reported. (TML: <u>Throughout construction</u>) 4. <i>Field Confirmation:</i> TML inspector will verify compliance with permit conditions by final inspection. (TML: _____)	Not applicable.	Grading and earthwork are conducted in compliance with approved plans. Unnecessary disturbance of adjacent soils and vegetation is minimized. Work is completed within required time periods.

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Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
5.2. Erosion and Sedimentation Grading activities create the potential for soil erosion, loss of topsoil, and off-site sediment transport.	Implement a comprehensive plan to minimize soil erosion and sediment transport that effectively controls erosion and sediment transport using best management practices (BMPs) during construction activities (i.e. stockpile management, perimeter protection against sediment transport, dust control, siltation basins, and runoff diversion as required) and permanent BMPs (including final soil stabilization) following the completion of construction. Monitor and maintain all temporary and permanent BMPs (2002 SSEIR). Implement site winterization techniques for construction activities involving earthwork between November and May (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML staff will prepare a Stormwater Pollution Prevention Plan (SWPPP) to describe comprehensive erosion and sediment measures for LRWQCB approval. (TML: _____) (LRWQCB: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Monitoring:</i> TML and LRWQCB inspectors will monitor compliance with permit conditions, including all erosion and sediment control measures, throughout construction. Violations of permit conditions reported. (TML: <u>Throughout construction</u>) (LRWQCB: <u>Throughout construction</u>) 4. <i>Field Confirmation:</i> TML and LRWQCB inspectors will verify compliance with permit conditions and effectiveness of permanent BMPs by final inspection. (TML: _____) (LRWQCB: _____)	5. <i>Monitoring:</i> Permanent drainage and erosion control facilities will be periodically inspected and maintained as required. All re-vegetated areas will be maintained to ensure adequate establishment and growth. (TML: <u>As required</u>)	Compliance during construction with approved erosion and sediment control measures, TML Municipal Code, and LRWQCB regulations. Implementation of all approved permanent erosion and sediment control measures.
6. Hydrogeology, Water Supply, and Water Quality					
6.1. Wastewater Wastewater has the potential to adversely impact groundwater quality.	Construct a new wastewater treatment plant to replace the previously approved septic system. Direct all waste from all new development in the project, including hangars built by Hot Creek Aviation, to the wastewater treatment plant. Mitigation Type: 1	1. <i>Design:</i> TML, LRWQCB, and MC will approve wastewater treatment plant design and sampling well program. LRWQCB will issue discharge permit. (TML: _____) (LRWQCB: _____) (MC: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Confirmation:</i> TML, LRWQCB, and MC inspectors will verify compliance with permit condition by final inspection. (TML: _____) (LRWQCB: _____) (MC: _____)	4. <i>Monitoring:</i> Groundwater monitoring wells will be installed to monitor the performance of the wastewater treatment plant. Sampling will be performed by plant operator with reports submitted to LRWQCB. (TML: <u>per sampling program</u>)	Wastewater treatment plant is constructed to approved standards. Groundwater quality meets applicable state and federal standards.

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Table 1: Mammoth Yosemite Airport MMRP

Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
6.2. Roadway Runoff Deicing material could impact stormwater runoff.	Prohibit the use of salt for roadway deicing (1997 SEIR/EA). Mitigation Type 2	1. <i>Design:</i> TML staff will include condition in roadway maintenance specifications and contracts. (TML: _____)	Not applicable.	Not applicable.	Salt is not used for roadway de-icing.
6.3. Potential Spill Impacts The storage and transfer of aviation fuels and fluids creates a potential for spill incidents.	Adopt and implement a Spill Prevention, Control and Countermeasure Plan (SPCCP) for the Airport. Use Best Management Practices (BMPs) to mitigate potential water quality impacts (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML and LRWQCB will approve and certify SPCCP. (TML: _____) (LRWQCB: _____)	2. <i>Implementation:</i> TML staff will implement SPCCP. Spill responses will be reported and logged according to SPCCP. (TML: _____)	3. <i>Monitoring:</i> TML will monitor airport related activities involving the use of oil and/or hazardous materials to ensure use of appropriate BMPs pursuant to the SPCCP. (TML: <u>As required per SPCCP</u>)	SPCCP is approved and implemented consistent with the 2002 SSEIR. Spills are responded to effectively in a timely manner. BMPs are employed as necessary during Airport operation.
6.4. Waste Discharge Stormwater runoff may contain pollutants and adversely impact groundwater quality.	Require all development to conform to LRWQCB and TML requirements for runoff control. Prepare a Stormwater Pollution Prevention Plan (SWPPP) for all construction activities in accordance with LRWQCB regulations. Implement and maintain temporary and permanent BMPs (2002 SSEIR). Direct runoff from the ramp/apron, parking areas, and buildings to a collection system and run through an oil/water separator prior to discharge. Design the separator system to meet state and federal water quality requirements (2002 SSEIR). Mitigation Type: 1	1. <i>Design:</i> TML staff will prepare SWPPP and design collection system for LRWQCB approval as part the NPDES permit. (TML: _____) (LRWQCB: _____) 2. <i>Incorporation into Project:</i> TML staff will include as condition of construction permits. (TML: _____)	3. <i>Field Monitoring:</i> TML and LRWQCB inspectors will monitor compliance with NPDES permit conditions throughout construction. Violations of permit conditions reported. (TML: <u>Throughout construction</u>) (LRWQCB: <u>Throughout construction</u>) 4. <i>Field Confirmation:</i> TML and LRWQCB inspectors will verify compliance with NPDES permit conditions by final inspection. (TML: _____) (LRWQCB: _____)	5. <i>Monitoring:</i> Sampling will be performed pursuant to NPDES permit. (TML: <u>Per NPDES permit</u>)	All stormwater management infrastructure in installed and operational pursuant to approved plans. Oil/water separator provides effective effluent treatment pursuant to applicable state and federal regulations.

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Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
6.5. Drainage Modification The project may alter existing drainage patterns and impact local waterways.	Design the project to retain and infiltrate all runoff from the 20-year, one-hour design storm event. Prohibit significant modification to existing drainage patterns and avoid drainage concentrations. Construct and maintain permanent drainage collection, retention, and infiltration facilities to prevent waste discharges from the completed site (2002 SSEIR). Mitigation Type: 1	1. Design: TML will design permanent drainage, collection, and retention facilities as part of the NPDES permit application. LRWQCB will approve and issue NPDES permit. (TML: _____) (LRWQCB: _____) 2. Incorporation into Project: TML staff will include as condition of construction permits. (TML: _____)	3. Field Confirmation: TML and LRWQCB inspectors will verify compliance with NPDES permit conditions. (TML: _____) (LRWQCB: _____)	Not applicable.	Compliance with NPDES permit requirements.
7. Noise					
7.1. Aircraft Noise Aircraft noise from existing run-up area could impact existing and future land use in the area.	Although not associated with the proposed project, to reduce existing noise levels due to noise reflection off Doe Ridge towards the Sierra Nevada Aquatic Research Laboratory (SNARL) facility, a new mid-field run up area will be constructed in conjunction with the first phase of Airport improvements (2002 SSEIR). Mitigation Type 2	1. Design: TML will redesign project to include as condition. (TML: _____) 2. Incorporation into Project: TML staff will include in construction permit plans. (TML: _____)	3. Field Inspection: TML inspector will confirm run-up area construction to approved plans by final inspection. (TML: _____)	4. Monitoring: TML staff will monitor land use compatibility with respect to aircraft noise in the vicinity of the Airport. (TML: _____)	Eastern run-up area is constructed per approved plans.
8. Public Services					
8.1 Emergency Response Existing emergency and fire protection facilities should be upgraded.	Develop an emergency response plan for the proposed project. Purchase an Airport Rescue and Fire Fighting (ARFF) vehicle to support air carrier operations (2002 SSEIR). Mitigation Type 2	1. Design: TML will design and implement an emergency response plan and purchase ARFF vehicle. (TML: _____)	Not applicable.	Not applicable.	Implementation of approved emergency response plan and purchase of ARFF vehicle. FAA FAR Part 139 Certification for air carrier operations.

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Potential Impact (Without Mitigation)	Mitigation Measure (Source Document)	Implementation / Monitoring Action I Design Approval	Implementation / Monitoring Action II Inspection	Implementation / Monitoring Action III Further Monitoring	Effectiveness Criteria/ Completion Standard
8.2. Closure of Green Church to Public Assembly The use of the “Green Church” would be incompatible with Airport safety area requirements.	Replace the Sierra Nevada Aquatic Research Laboratory (SNARL – University of California at Santa Barbara) meeting facility at the “Green Church” with similar facilities at another location on the site of the main SNARL campus in accordance with the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970 (2002 SSEIR). Mitigation Type: 2	1. <i>Design</i> : TML and the University of California will locate an appropriate site and design a class room / lecture hall facility. TML will ensure compliance with the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970. (TML: _____)	Not applicable.	Not applicable.	Occupancy of new meeting facility at SNARL campus.
9. Historical, Architectural, Archaeological, and Cultural Resources					
9.1 Construction Disturbance Grading and construction of new Airport facilities could disturb cultural resources.	Use a qualified archeologist to monitor land disturbance activities. Should any cultural remains be uncovered, halt construction in the vicinity of those remains immediately, and notify the FAA and the State Historic Preservation Officer (SHPO) for evaluation of the situation by a qualified professional (2002 SSEIR). Mitigation Type 1	1. <i>Design</i> : TML will include archaeologist services in construction bid package or contract for inspection. (TML: _____)	2. <i>Field Monitoring</i> : Monitoring during initial grading. (TML: _____)	Not applicable.	Compliance with Section 106 of the National Historic Preservation Act.
10. Hazards and Hazardous Materials	No mitigation measures. See 6.3.				Compliance with Spill Prevention, Control, and Countermeasure Plan (2002 SSEIR). See 6.3.
11. Population and Housing					
11.1. Increased Employment at Airport. New employees may increase the demand for affordable housing in the Town of Mammoth Lakes.	Provide for affordable housing in accordance with TML Municipal Code requirements (2002 SSEIR). Mitigation Type 1	1. <i>Design</i> : TML approval of Housing Development Mitigation Program (HDMP). (TML: _____)	2. <i>Implementation</i> : Acquisition or construction of housing per HDMP. (TML: _____)	Not applicable.	Housing available for occupancy.

Source: Town of Mammoth Lakes

Prepared By: Town of Mammoth Lakes

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Introduction

This Supplement to a previously certified Subsequent Environmental Impact Report (SSEIR) is prepared by the Town of Mammoth Lakes, California to review the environmental effects of proposed changes to the previously approved plans for expansion of the Mammoth Yosemite Airport (Airport). The Airport serves the Town of Mammoth Lakes, California and other Eastern Sierra communities. The Town of Mammoth Lakes lies within Mono County, which is located in the Eastern Sierra Nevada Mountain Range. The Town operates the Airport, which predominantly serves general aviation aircraft. The airfield accommodates approximately 40 based aircraft and approximately 6,000 annual operations.

The Airport has a single runway, designated as Runway 927, which is 7,000 feet long by 100 feet wide. A full parallel taxiway system, 50 feet in width, supports this runway. Apron and hangar facilities are available for both based and transient aircraft.

The primary proposed changes to the Airport under consideration in this SSEIR include:

- Extension of the runway by 1,200 feet – the proposed project in the 1986 Environmental Impact Report/Environmental Assessment (EIR/EA) and the Subsequent EIR/EA in 1997 included a runway extension of 2,000 feet.
- Increase in the runway width from 100 feet to 150 feet – the proposed project in the 1986 EIR/EA and 1997 SEIR/EA retained the runway width of 100 ft.
- Replacement of an existing 4.8-foot barbed wire fence with an 8-foot chain link security fence – the proposed project in the 1986 EIR/EA and 1997 SEIR/EA did not include replacing the perimeter security fence.
- Construction of a new package wastewater treatment plant – the proposed project in the 1986 EIR/EA and the 1997 SEIR/EA included a new leach field as part of the project.
- Relocation or Replacement of Green Church - the proposed project in the 1986 EIR/EA and the 1997 SEIR/EA did not include relocating or replacing the Green Church.

Prior approvals and environmental documentation have allowed for lengthening of the runway to 9,000 feet to accommodate narrow body air carrier jet aircraft. These approvals have been in place since 1978. The major change now proposed is a widening of the runway to meet the operational and safety requirements of many air carriers, including the carrier planning to operate at Mammoth Yosemite Airport as well as a reduction in the length of the runway extension to 1,200 feet from the original 2,000 feet to result in a runway length of 8,200 feet.

Table 1 includes a comparison of the proposed project with the previously certified projects.

The following components of the project remain the same as approved under the 1986 EIR/EA and the 1997 SEIR/EA.

- Strengthen the runway and taxiways to accommodate narrow body jet aircraft.
- Extend the parallel taxiway to match the runway extension.

Table 1 (1of 2)

Mammoth Yosemite Airport – Airport Development Analysis

Item	1986 Report		1997 Report		2002 Report	
	Existing	Planned/ Forecast	Existing	Planned/ Forecast	Existing	Planned/ Forecast
Runway 9-27	7,000' x 100'	9,000' x 100'	7,000' x 100'	9,000' x 100'	7,000' x 100'	8,200' x 150'
Cross Wind Runway	-	5,000' x 100'	-	-	-	-
Taxiway A (Parallel to RW 9-27)	7,000' x 50'	9,000' x 50'	7,000' x 50'	9,000' x 50'	7,000' x 50'	8,200' x 75'
Cross Taxiways (to Taxiway A)	5 - 225' x 50'	6 - 225' x 50'	5 - 225' x 50'	6 - 225' x 50'	5 - 225' x 50'	3 - 205' x 50' 3 - 205' x 75'
Taxiway B (Parallel to Cross Wind RW)	-	5,000' x 50'	-	-	-	-
Cross Taxiways (to Taxiway B)	-	5 - 225' x 50'	-	-	-	-
Aircraft Tie Downs						
- Permanent	35	75	35	52	35	52
- Transient	50	125	95	100	95	100
Aircraft Apron						
- Main Ramp (Acres)	3.9	7.9	3.9	8.6	3.9	8.6
- West Ramp	3.8	4.1	3.8	-	3.8	-
- East Ramp (Acres)	-	3.9	-	6.8	-	6.8
- Air Carrier Ramp (Acres)	2.1	2.9	2.1	4.6	2.1	4.6
- Corporate Ramp (Acres)	-	-	-	2.7	-	2.7
Hangars						
- Transient (Units)	5	10	5	10	5	10
- Permanent (Units)	20	106	20	135	20	135
Passenger Terminal Building (sq. ft.)	4,000	20,000	4,000	25,000	4,000	25,000
FBO Building (sq. ft.)	2,000	2,000	2,000	10,000	2,000	10,000
Fire Crash & Snow Plow Storage Building (sq. ft.)	7,200	7,200	7,200	7,200	7,200	7,200
Restaurant (Seats)	-	In Hotel	-	300	-	300
Hotel Condominium (Units)	-	150	-	250	-	250
Service Station/Market Retail (Acres)	-	-	-	2.0	-	2.0
Access Road (ft.)	24' x 7,700'	24' x 7,700'	24' x 7,700'	24' x 14,500'	24' x 7,700'	24' x 14,500'
Automobile Parking Stalls (each)						
- Employee			10	20	10	20
- Passenger Terminal			26	294	26	294
- Transient			20	30	20	30
- Hotel/Restaurant			0	350	0	350
Total	56	310	56	694	56	760
Golf Course (Acres)	-	120	-	-	-	-

Source: Mammoth/June Lakes Airport, Environmental Impact Assessment, July 1986, Hodges and Shutt and Mammoth/June Lakes Airport, Master Plan Report, Mono County, California, December, 1988, Hodges and Shutt. Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment, Reinard W. Brandley, March 1997. Mammoth Yosemite Airport Expansion Project, Final Environmental Assessment, December 2000. Ricondo & Associates, Inc.

Prepared By: Ricondo & Associates, Inc.

Table 1 (2of 2)

Mammoth Yosemite Airport – Airport Development Analysis

Item	1986 Report		1997 Report		2002 Report	
	Existing	Planned/ Forecast	Planned/ Existing	Planned/ Forecast	Existing	Planned/ Forecast
Luxury RV Parking						
- Sites	-	-	-	100	-	100
Based Aircraft	35	75	35	75	35	75
Transient Tie Downs	50	125	50	100	50	100
Passengers – Enplanement ⁴	5,200	310,000	0	125,000	0	333,000
Aircraft Operations – Annual	13,000	30,000 (1995)	18,000	34,000 (2015)	6,000	23,650 (2022)
R/W 9-27 Capacity						
- Annual Operations	90,000	95,000	90,000	95,000	90,000	95,000
- Hourly Operations	85	85	85	85	85	85
Population						
- Permanent	4,600	8,000	5,500	10,000	5,500	10,000
- Service and Visitors	-	-	30,000	42,000	30,000	42,000

1. The forecasts shown in the 1986 Report are for the year 1995.
2. The forecasts shown in the 1997 Report are for the year 2015.
3. The forecasts shown in the 2002 Report are for the year 2022.
4. The passengers – enplanement numbers are for commercial enplanements only.

Source: Mammoth/June Lakes Airport, *Environmental Impact Assessment*, July 1986, Hodges and Shutt and Mammoth/June Lakes Airport, *Master Plan Report*, Mono County, California, December, 1988, Hodges and Shutt. Mammoth Lakes Airport Expansion, *Subsequent Environmental Impact Report and Updated Environmental Assessment*, Reinard W. Brandlely, March 1997. Mammoth Yosemite Airport Expansion Project, *Final Environmental Assessment*, December 2000. Ricondo & Associates, Inc.

Prepared By: Ricondo & Associates, Inc.

- Add an air carrier apron for three air carrier aircraft with expansion capabilities to accommodate up to six air carrier aircraft.
- Construct Airport access road improvements.
- Expand the automobile surface parking facilities.
- Acquire land to the east of the Airport that is currently leased from the Los Angeles Department of Public Works (LADWP) for Airport use.
- Construct a passenger terminal complex and related support areas.

Purpose of this Supplement to the Subsequent EIR

This SSEIR has been prepared by the lead agency, the Town of Mammoth Lakes, in compliance with the California Environmental Quality Act (CEQA, Cal. Pub. Res. Code §§ 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§ 15000-15387). CEQA applies to “discretionary projects proposed to be carried out or approved by public agencies.” CEQA, § 21080(a). CEQA § 21151; State CEQA Guidelines §§ 15060, 15063. The purpose of an EIR in general is to “inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects and describe reasonable alternatives to the project.” State CEQA Guidelines § 15121(a). The EIR is the heart of CEQA, whose purpose is to “compel government at all levels to make decisions with environmental consequences in mind.” *Bozung v. Local Agency Formation Commission*, 13 Cal. 3d 263, 283 (1975). State CEQA Guidelines § 15162 provides that when an EIR has been previously certified or a negative declaration adopted for a project, “no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more

significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative..."

A lead agency may choose to prepare a supplement to an EIR instead of a subsequent EIR if: any of the above conditions would require preparation of a subsequent EIR, but that only "minor additions or changes would be necessary to make the previous EIR adequately apply to the project under the changed situation." CEQA Guidelines §15163. The Town of Mammoth Lakes has determined that the proposed changes to the Airport would require minor changes to two previously certified EIRs and that a supplement to the previously certified Subsequent EIR/EA would be required.

Previous Environmental Review

The Town of Mammoth Lakes certified an EIR and a Subsequent EIR on earlier planned changes to the Mammoth Yosemite Airport. These EIRs, a summary of the projects evaluated in them, and the environmental issues previously evaluated are summarized below.

- The Mono County Airport Land Use Commission (ALUC) prepared an Environmental Impact Report (EIR) entitled, *Environmental Impact Report and Environmental Assessment Mammoth/June Lakes Airport Land Use Plan*, State Clearinghouse No. 86060901 (1986 EIR/EA) [I-1]. The project evaluated was an airfield improvement program initiated by Mono County in 1983, which partly relied upon funds to be received under the Airport Improvement Program. As such, the project required environmental review under both CEQA and the National Environmental Policy Act (NEPA) and the Federal Aviation Administration (FAA) was the designated federal lead agency. The document was certified by the Mono County Board of Supervisors in 1986.

The project evaluated in the 1986 EIR/EA included an Airport Land Use Plan (ALUP) for the Airport and creation of an Airport Development District (ADD) for the Airport and surrounding land. The ADD planned developments included the continuation of improvements contemplated under the 1978 Mammoth/June Lake Airport Master Plan including the construction of a runway 7,000 feet in length by 100 feet in width which was underway but had not yet been completed, a 5,000 foot by 100 foot cross wind runway, additional taxiways, and additional aircraft support facilities, a new passenger terminal, an airport hotel, a 120-acre golf course, and extensive infrastructure improvements. The ADD also planned light industrial, manufacturing, warehousing, and similar economic development uses and, potentially, low intensity recreational uses. Under the ALUP, land use policies were developed to protect public welfare and the safety of aircraft operations including policies regarding airport safety zones, overflight zones and traffic patterns, height restrictions and noise.

The key environmental topics evaluated in the 1986 EIR/EA included: soils/land transformation; geologic/volcanic hazards; hydrology/water resources; water quality; mineral/energy resources; air quality; visual/aesthetic resources; biological resources; archaeological/cultural resources; regional planning and population; employment and

economic development; traffic and transportation; noise; safety and welfare; cumulative impacts and other CEQA-required topics.

- The Town of Mammoth Lakes purchased the Airport from Mono County in September 1992. A 1997 Airport expansion program was environmentally reviewed in a 1997 EIR entitled *Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment, State Clearinghouse No. SCH 96112089 (C1-23)* (1997 SEIR/EA) [I-2]. This report evaluated environmental issues relative to changes in the project proposal, and substantial new information or changes in conditions since 1986. The Town of Mammoth Lakes certified the 1997 SEIR/EA as adequate. There was no FAA action taken at that time.

The Airport development reviewed in the 1997 SEIR/EA included both airside and landside developments by a private developer. Airside improvements included the extension of the current Runway 927 from 7,000 feet to 9,000 feet, strengthening the runway and associated taxiways to accommodate air carrier aircraft and a proposed construction of up to approximately 135 private and public use hangars, an aviation fuel storage complex and facilities for the operation of a fixed base operator (FBO). The crosswind runway and the 120-acre golf course were eliminated from the originally proposed project along with the 120-acre golf course. Landside development included a hotel and residential condominium complex, retail development, a restaurant complex and a recreational vehicle park. The 1997 SEIR/EA also included evaluation of the right to construct an access road from Benton Crossing Road to the Airport and signage on Town property along Highway 395. Initial construction of this project began shortly after the SEIR certification and has continued to date.

The key environmental issues evaluated in the 1997 SEIR/EA included: noise; special-status species and wetlands; cultural resources; airport facilities; drainage; airport land use planning; and additional visual impact analysis.

In addition to the certified environmental documents summarized above, the FAA prepared a *Mammoth Yosemite Airport Expansion Project Final Environmental Assessment* in December 2000 (2000 EA) [1-3]. This document contains an environmental evaluation of the currently proposed project. As permitted under State CEQA Guidelines § 15150, relevant data and findings from the 2000 EA are incorporated by reference in this SSEIR where applicable.

Scope of this Supplement to the Subsequent EIR (SSEIR)

The Town of Mammoth Lakes determined that the proposed project would require an SSEIR, thereby bypassing the need for preparation of an Initial Study for determination of any significant adverse impact on the environment. Pursuant to CEQA Guidelines §§ 15060(d), 15063(a), if the lead agency can determine that an EIR will be clearly required for a project, an Initial Study is not required and the agency may skip further initial review of the project and immediately commence with the EIR process. As the State CEQA Guidelines §15082(a) provide, the Town of Mammoth Lakes circulated a Notice of Preparation (NOP) for the current proposed project to “responsible” and other interested agencies on April 16, 2001 and the comment period was open until May 15, 2001. The NOP is included as Appendix B. The Town of Mammoth Lakes received eight comment letters in response to the NOP. These comment letters are included as Appendix C.

Issues raised in these comment letters were related to the following topics or desired evaluations:

- Number of daily enplanements at the Airport.
- Construction of a new Airport Road access road to connect both Hot Creek Hatchery Road and Benton Crossing Road from the east/back side of the Airport facility and traffic mitigation measures.
- Convict Lake Access to the Airport facilities.
- Extension of left turn pocket at U.S. Highway 395 south and Hot Creek Hatchery Road intersection and a new left turn pocket at U.S. Highway 395 south and Hot Creek Hatchery Road intersection.
- Development and implementation of a traffic and deer monitoring program.
- Future traffic mitigation measures and collection of developer fees fund.
- Requirement of a State Airport Permit.
- Comprehensive traffic analysis concerning potential impacts to the existing road system.
- Record search for cultural resources and provisions for accidental discovery of archeological resources or Native American human remains.
- Cumulative effects of development on water quality.
- Environmental site assessment regarding past site contamination.
- Wetlands site assessment.
- Design and construction of industrial stormwater runoff system to handle higher runoff during times of greater than 20-year storm.
- Septic system impacts.
- Hazardous material storage and spill issues.
- Evaluation of potential overdraft and recharge (water balance), as it relates to protection of beneficial uses.
- Alteration of stream or drainage course(s).
- Increased noise and adjacent use impacts to Department of Fish and Game's hatchery operations and residences at the Hot Creek Fish Hatchery.
- Direct loss of important wildlife habitat for mule deer, sage grouse, and mountain lion.
- Indirect impacts to sage grouse as a result of project fencing.
- Disturbance to deer migration areas and increased road kills from project-related facilities and operation.
- Disruption of seasonal foraging areas and patterns for raptors including the bald and golden eagle, northern harrier, American peregrine falcon, Swainson's hawk, prairie falcon, American kestrel, red-tailed hawk, ferruginous hawk, rough-legged hawk, and other raptors.
- Disturbance to nesting water fowl and other aquatic and riparian birds.
- Alteration to the quality of surface or ground water, including impacts to spring flow, habitat for Owens tui chub, and domestic water supply for Fish Hatchery residences.
- Effects of widening the runway from 100 feet to 150 feet on the south side of the runway.
- Effect on visual quality objectives on National Forest lands by placement of security fencing to meet FAA standards.
- Analysis of effects of off-site mitigation for wildlife enhancement purposes on United States Forest Service (USFS) land in the vicinity of the gravel pit.
- Analysis of amount and type of habitats that may be affected by the proposed project or project alternative, along with quantitative and qualitative information concerning fish and wildlife resources associated with each habitat type.

- A list of federal, candidate, proposed or listed threatened and endangered species, State listed species, and locally declining or sensitive species that are found at or near the project site. A detailed discussion of these species, focusing on their site-related distribution and abundance and the anticipated effects of the project on these species.
- Assessment of the effects on biological resources, including those which are direct, indirect, and cumulative.
- Analysis of the effects of the project on the hydrology of associated drainages, and any other riparian or wetland communities within the sphere of influence of the project.
- Specific plans to offset project-related effects, including cumulative habitat loss, degradation, and modification resulting from the direct, indirect and cumulative consequences of the project.

After lead agency consideration of the environmental evaluations for the Mammoth Yosemite Airport project contained within the 1986 EIR/EA and 1997 SEIR/EA, and review of agency comments responding to the NOP, the Town of Mammoth Lakes determined that the following additional environmental impact areas will be analyzed in this SSEIR.

- Aesthetics/Light and Glare - related to the replacement of an existing fence.
- Air Quality – with respect to the updated aviation demand forecast, construction, and vehicular emissions.
- Biology - update to respond to comments and address grading and replanting on area of land, which would require issuance of a revised special use permit from the United States Forest Service (USFS).
- Traffic – with respect to the updated aviation demand forecast and cumulative effects of other proposed projects.
- Soils/Land Transformation – regarding the construction of a package wastewater treatment plant and grading and replanting an area of land, which would require issuance of a revised special use permit.
- Hydrology and Water Quality - regarding the construction of a package treatment plant instead of the previously planned and evaluated septic system/leach field, use of an oil/water separator, and the extension of the runway by 1,200 feet rather than 2,000 feet and the increase in the runway width to 150 feet.
- Noise – with respect to the updated aviation demand forecast.
- Public Services and Utilities - regarding relocation or replacement of the Green Church and construction of a package wastewater treatment plant instead of previously evaluated septic system/leach field.

The following categories were not included in the SSEIR, as they were all previously evaluated in 1986 EIR/EA and the 1997 SEIR/EA and there have been no changes in the environmental impacts from the changes in the proposed project under the criteria set forth by CEQA Guidelines § 15162.

- Agricultural Resources
- Geology
- Historical, Archeological and Cultural Resources
- Hazards and Hazardous Material
- Land Use and Planning
- Mineral Resources
- Population and Housing

- Recreation

A summary of the evaluations of impacts relative to each of these categories, the significance of their impacts, and proposed mitigation measures from the 1986 EIR/EA and the 1997 SEIR/EA are included as Appendix A.

Table 2 lists the environmental categories (based on CEQA Guidelines Appendix G [3-1]) that are addressed in this SSEIR because changes in the proposed project along with those other categories that are not affected by the changes in proposed project for which the previous certified analysis documented in *Environmental Impact Report and Environmental Assessment Mammoth/June Lakes Airport Land Use Plan*, (1986 EIR/EA) and *Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment*, (1997 SEIR/EA) is deemed adequate.

Table 2

List of Environmental Categories Analyzed in SSEIR

Changes in the Proposed Project between this Supplemental EIR and the proposed project certified in 1986 EIR/EA and 1997 SEIR/EA.

1. Extension of Runway 9-27 by 1,200 feet (rather than 2,000 feet) and increase in its width to 150 feet.
2. Replacement of an existing 4.8-foot barbed wire perimeter security fence with an 8-foot chain link security fence.
3. Construction of a new package wastewater treatment plant (instead of a new leach field).
4. Updated aviation demand forecasts
5. Relocation or replacement of Green Church to Sierra Nevada Aquatic Research Laboratory (SNARL) campus.

CEQA Environmental Impact Category	Level of Analysis in 2002 SSEIR
1. Aesthetics/Light and Glare	Environmental Impacts analyzed due to Changes 1,2 , and 3.
2. Agricultural Resources	No new significant environmental impacts from the proposed changes.
3. Air Quality	Environmental Impacts analyzed due to Change 4.
4. Biological Resources	Environmental Impacts analyzed due to Change 1, 2, 3, and 4.
5. Cultural Resources	No new significant environmental impacts from the proposed changes.
6. Geology and Soils	No new significant environmental impacts for Geology from the proposed changes. Environmental Impacts for Soil/Land transformation analyzed due to Changes 1 and 3.
7. Hazards and hazardous materials	No new significant environmental impacts from the proposed changes.
8. Hydrology and Water Quality	Environmental Impacts analyzed due to Changes 1 and 3.
9. Land use and Planning	No new significant environmental impacts from the proposed changes.
10. Mineral Resources	No new significant environmental impacts from the proposed changes.
11. Noise	Environmental Impacts analyzed due to Changes 1 and 4.
12. Population and Housing	No new significant environmental impacts from the proposed changes.
13. Public Services	Environmental Impacts analyzed due to Change 5.
14. Recreation	No new significant environmental impacts from the proposed changes.
15. Transportation/Traffic	Environmental Impacts analyzed due to Change 4.
16. Utilities	Environmental Impacts analyzed due to Change 3.

Source: Ricondo & Associates, Inc.

Prepared By: Ricondo & Associates, Inc.

Public Review and Environmental Approval Process

This SSEIR is an informational document for both Town of Mammoth Lakes decision makers and the public. "Public review is an essential part of the CEQA process." State CEQA Guidelines § 15201. Pursuant to CEQA Guidelines §15082(a), the Town of Mammoth Lakes circulated a Notice

of Preparation (NOP) describing the proposed project to “responsible” and other interested agencies from April 16, 2001 to May 15, 2001. The NOP is included as Appendix B. The Town of Mammoth Lakes received 8 comment letters in response to the NOP. These comment letters are included as Appendix C. The Town considered the NOP comment letters during preparation of this SSEIR.

The Draft SSEIR was circulated for public review and comment from October 9th through November 26, 2001, a total of 48 days. The Draft SSEIR was sent to the State Clearing House (SCH # 2000034005) for distribution to public agencies. The distribution list of the SSEIR is provided in Appendix B. The draft SSEIR was also made available at the Town of Mammoth Lakes offices for individuals. During this period, the Town of Mammoth Lakes solicited comments on the Draft SSEIR from other agencies and from the public.

The Town of Mammoth Lakes, as the CEQA Lead Agency, received 32 comment letters on the Draft SSEIR from public agencies, organizations, and individuals. In accordance with CEQA Guidelines § 15088, the Town of Mammoth Lakes evaluated the comments and prepared written responses to each pertinent comment related to the adequacy of the environmental analysis contained in the Draft SSEIR or to the environmental issues related to the proposed project. A list of the persons and agencies, that commented on the Draft SSEIR, and the written responses to comments are included as Appendix N of this Final SSEIR.

The written responses were provided to the responsible and trustee agencies, that had commented on the Draft SSEIR from February 22, 2002 to March 6, 2002 for review. The Town Council certified the SSEIR on March 6, 2002. In a separate action from the certification of the Draft SSEIR, the Town Council will consider approving the changes to the proposed project since the previous environmental document was certified.

Approvals and Entitlements For Which This SSEIR Will be Used

The intended use of this SSEIR is to assist Town of Mammoth Lakes in making decisions with regard to the Mammoth Yosemite Expansion Project. This SSEIR shall be used in connection with all permits and other approvals necessary for the construction and operation of the proposed project. No final actions (approval, denial, or amendment) will be taken on the project requests until the Final SSEIR has been reviewed, certified as complete and considered by the appropriate decision-makers. This SSEIR may be used by the following public bodies in the approval, construction and development of the Expansion project: Great Basin United Air Pollution Control District, Lahontan Regional Water Quality Control Board; California Department of Transportation (Caltrans), United States Forest Service, Los Angeles Department of Public Works, and all other public agencies which must approve activities undertaken with respect to the project.

Background

Mammoth Yosemite Airport was originally constructed by the United States (U.S.) Army for use as an auxiliary landing strip during World War II. The original dimensions of the landing strip were less than 4,000 feet in length by 30 feet in width. Mono County acquired the airfield from the U.S. Army after the war and renamed it Long Valley Field. The runway was an unpaved dirt strip and the Airport was a seasonal facility closed by winter snows until the runway was paved in 1959. The Airport was operated as an unattended landing strip until the early 1960s.

Mono County transferred the property to the U.S. Forest Service in 1965 with the understanding that Airport facilities would be improved and expanded. Mono County then contracted with private interests for improvement and expansion of airfield facilities. In 1965, the runway was extended to 5,000 feet and widened to 100 feet. Also at this time, the runway was relocated 300 feet to the north to accommodate the future widening of U.S. Highway 395, which runs adjacent to the Airport. The Airport was renamed Mammoth Lakes Airport and private interests operated the airfield, under U.S. Forest Service special use permits.

Mammoth Sky Lodge Corporation, then the Airport operator, extended the runway to 6,500 feet in 1971. A terminal building and an Airport office were constructed in 1972. During this time, the Airport became formally known as Mammoth-June Lakes Airport. In 1973, Sierra Pacific Airlines initiated service using Convair 440 aircraft and served Mammoth Lakes until 1980.

Mono County entered into an agreement with Mammoth Sky Lodge Corporation to acquire the Airport facilities in 1978; however, the acquisition of the Airport was not consummated until 1980. During the intervening time, Mono County prepared an Environmental Impact Report for the acquisition of the Airport and extension of the runway. Mono County re-established public operation of the Airport in 1980.

Mono County began an airfield improvement program in 1983. Using grant funds received under the Airport Improvement Program, a new runway, 7,000 feet by 100 feet, was constructed. This new runway began 3,400 feet east of the west end of the previous runway in order to provide the required line of sight along the runway's length. The western 3,400 feet of pavement of the previous runway became the present day paved overrun. In 1985, Trans World Express began commuter service to Los Angeles and San Francisco using 19-seat Beechcraft 1900 turboprop aircraft. Airport development and land use changes were proposed by Mono County in 1986 that included a plan for a 5,000-foot by 100-foot crosswind runway, additional supporting taxiways, and a 120-acre golf course.

The 1986 proposed improvements required the preparation of environmental documents under the California Environmental Quality Act (CEQA). Mono County commissioned the preparation of an Environmental Impact Report (EIR) entitled, *Environmental Impact Report and Environmental Assessment Mammoth/June Lakes Airport Land Use Plan*. The EIR document was certified as adequate by the unanimous action of the Mono County Board of Supervisors in 1986.

Royal West Airlines began seasonal winter service only for the 1987 ski season, using British Aerospace Bae 146 turbojet aircraft, but ceased all operations in 1988.

The Town of Mammoth Lakes purchased the Airport from Mono County in September 1992. United Express operated flights from Mammoth Lakes to Fresno, using 19-seat Jetstream 31 turboprop aircraft for the winter seasons of 1993 and 1994. Service reliability problems associated with overbooking the 19 seat Jetstream aircraft led to passenger dissatisfaction causing United Express to discontinue service.

Additionally, Trans World Express terminated flight operations in 1995 due to reorganization of its major code share partner, Trans World Airlines. This reorganization of Trans World Airlines was required under Chapter 11 of the Federal Bankruptcy Code.

In 1997, new development was proposed for the airfield. Previous plans for the crosswind runway and supporting taxiways and the golf course were eliminated. An extension of the current Runway 9-27 from 7,000 feet to 9,000 feet was proposed as was the construction of a hotel/condominium complex. The elimination of both the crosswind runway and golf course from the airport development plan resulted in much less land disturbance, as the majority of the project would remain within the current boundaries of the Airport.

The 1997 Airport expansion program was environmentally reviewed in the 1997 EIR *Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment* [I-2]. This report re-examined the 1986 *Environmental Impact Report and Environmental Assessment Mammoth/June Lake Airport Land Use Plan* [I-1] for environmental impacts that had arisen or changed since 1986. The Town of Mammoth Lakes certified the 1997 SEIR/EA as completed in compliance with CEQA.

The new Airport development reviewed in the 1997 SEIR/EA included both airside and landside developments by a private developer. Airside improvements included the construction of approximately 135 private and public use hangars, an aviation fuel storage complex and facilities for the operation of a fixed base operator (FBO). Landside development would consist of a hotel and residential condominium complex, retail development, a restaurant complex and a recreational vehicle park. Also included in the new Airport development reviewed in the 1997 SEIR/EA was the right to construct an access road from Benton Crossing Road to the Airport and signage on Town property along U.S. Highway 395. The above projects received environmental clearance upon 1997 certification of the SEIR. Initial construction began shortly after the SEIR certification and has continued to date. This project, having previously been environmentally reviewed, is not the subject of this SSEIR.

In 2000 the Town of Mammoth Lakes changed the name of the Airport from Mammoth Lakes Airport to Mammoth Yosemite Airport and an Environmental Assessment was prepared for the current proposed expansion project. This environmental review for the project was conducted under NEPA guidelines and had been prepared to provide the community full disclosure of the proposed project and potential environmental impacts of the development alternatives. The FAA issued a Finding of No Significant Impact (FONSI) for the project in December 2000.

Development at the Airport that would improve the airfield's ability to safely and efficiently accommodate commercial airline service is currently being proposed. This development differs in certain respects from development plans analyzed in the past, principally because it calls for less land disturbance. The current plan would extend the current runway from the existing 7,000 feet to 8,200 feet rather than the previously approved length of 9,000 feet. The project proposal also includes widening the runway by 50 feet on the south side of the runway to obtain a runway width of 150 feet.

Commercial airline service to the Mammoth Yosemite Airport is scheduled to resume during the winter season of 2003/2004 with Boeing 757 aircraft serving Dallas/Fort Worth and Chicago O'Hare International airports. This service is anticipated to expand, in the following years, to include air carrier and commuter service to other regional and national destinations.

I. Description of the Project

The overall proposed project is known as the Mammoth Yosemite Airport Expansion Project. The revisions to the proposed project that are the subject of this Supplement to the Subsequent Environmental Impact Report (SSEIR) generally include four components: extension of the runway by 1,200 feet (rather than 2,000 feet as approved in 1997), increase in the width of the runway from 100 feet to 150 feet (no change in the runway width was proposed in 1997), replacement of an existing 4.8-foot barbed wire fence with an 8-foot chain link security fence (no changes in the fence were approved in 1997), and construction of a new package wastewater treatment plant (instead of a new septic system and leach field). The impacts of an updated aviation demand forecast, and relocation or replacement of “Green Church” are also analyzed in this SSEIR.

The following section describes the project’s (1) location and boundaries, (2) statement of project objectives, and (3) planning, construction, and operation.

1.1 Location and Boundaries

Mammoth Lakes, California, is a resort town located in the Eastern Sierra Nevada Mountain Range approximately 170 miles south-southeast of Reno, Nevada. The Airport is located approximately seven miles east of the Town of Mammoth Lakes. The Airport property is not contiguous to the community of Mammoth Lakes. Unincorporated portions of Mono County border the Airport property on all sides. The Airport location and vicinity are depicted on **Exhibit I-1**.

The Airport is situated on the north side of U.S. Highway 395 with primary access from U.S. Highway 395 to Hot Creek Hatchery Road west of the Airport and Airport Road, which runs along north side of the Airport. U.S. Highway 395 provides access to the Mammoth Lakes area and the Reno/Lake Tahoe region to the north, and to Crowley Lake, Bishop, and Southern California to the south. Hot Creek Hatchery Road is an undivided, two lane road with an at-grade intersection with U.S. Highway 395. A new Airport access road along the northern side of the Airport is planned to connect with Benton Crossing Road east of the Airport. Benton Crossing Road connects to U.S. Highway 395 on the eastern side of the Airport.

The Airport is surrounded by Inyo National Forest land (U.S. Forest Service) to the north, south and west. A small private landholding is located near the west end of the Airport and across U.S. Highway 395. The eastern end of the Airport is located on City of Los Angeles (Los Angeles Department of Public Works - LADPW) property. Land administered by the U. S. Department of the Interior Bureau of Land Management is adjacent to the northeastern end of the Airport.

1.2 Purpose and Need of the Proposed Project

The Mammoth Lakes region has year-round recreational attractions consisting of skiing in the winter and numerous outdoor recreational opportunities in the spring, summer, and autumn, which include major attractions such as Yosemite National Park, Mono Lake, June Lake, and Devil’s Postpile National Monument. Winter skiing at Mammoth Mountain attracted nearly 1.0 million skier days during the 1998/99-winter season. Based on statistics provided by the California Department of Transportation (Caltrans), approximately 1.5 million summer tourists visit the Mammoth Lakes region annually. Nearly 6.0 million tourists visited nearby Yosemite, and Death Valley National Parks in 1998.

The nearest commercial service airport to the Mammoth Lakes area is in Reno (170 miles). The next closest commercial service airports are in Fresno, California (190 miles), Sacramento, California (230 miles), the three San Francisco, California Bay Area airports (San Francisco/Oakland/San Jose, about 250 miles), Las Vegas, Nevada (310 miles), and Los Angeles, California (320 miles).

Mammoth Lakes' location with respect to these cities is depicted on **Exhibit I-2**. Most travelers from outside of the California and Nevada areas fly to either Reno or Los Angeles and drive to the Mammoth Lakes area via U.S. Highway 395. For tourists living west of the Sierra Nevada Mountains in the San Joaquin Valley, the shortest route to Mammoth Lakes is via the Tioga Pass through Yosemite National Park. However, heavy snows cause closure of this highway between November and May every year. Northern California visitors travel by automobile to Mammoth Lakes via U.S. Highways 50 and 395. Visitors from Southern California use U.S. Highway 395 to Mammoth Lakes.

Mammoth Lakes was one of the most frequented ski resorts in North America during the 1980s. However, direct flights into other western U.S. ski resorts drew visitors away from the Mammoth Lakes area in the 1990s. It has been determined through market research that one of the methods of improving service and regaining the market share in the region would be by reducing visitor travel times to the Mammoth Lakes area. The development of airport facilities to accommodate commercial airline and charter operations would allow direct access to the region, thereby reducing visitor travel time. The introduction of airline service would further the Town's goal of reducing vehicular traffic to the area and meet transportation needs of residents and visitors.

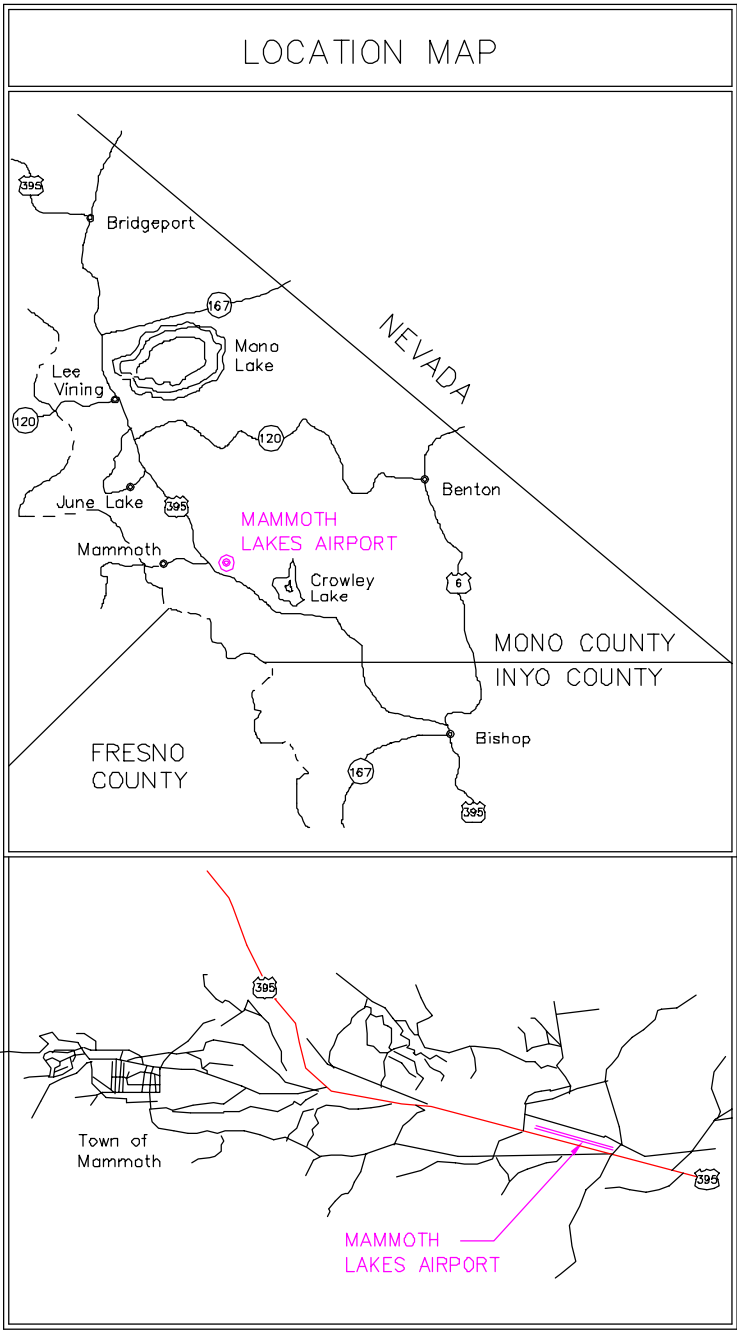
Assuming the proposed project is approved and constructed, commercial airline service to the Mammoth Yosemite Airport is scheduled to begin during the winter season of 2002/2003 and would include air carrier service to and from Dallas/Fort Worth International Airport and Chicago O'Hare International Airport using narrow-body turbojet aircraft up to the size of the Boeing 757-200. Commuter and regional jet aircraft service is also anticipated in future years to other regional markets such as the Los Angeles and San Francisco areas.

1.2.1 Project Objectives

As required by CEQA Guidelines § 15124, "a clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary."

The context for the Project Objectives of the Mammoth Yosemite Airport Expansion Project are described in the Purpose and Need of the Proposed Project (Section 1.2). Following are the Project Objectives for the proposed Mammoth Yosemite Airport Expansion Project.

1. Change runway characteristics to enhance safety for narrow-body air carrier aircraft up to the size of a Boeing 757-200 to operate at the Airport.
2. Provide an alternative to the private automobile for transportation of residents of and visitors to Mammoth Lakes.
3. Reduce adverse vehicular air emissions associated with travel by visitors to Mammoth Lakes and vicinity by replacing some of the vehicle trips with air passenger trips.
4. Maintain eligibility for Airport Improvement Program (AIP) funds from the FAA or impose Passenger Facility Charges to assist in funding some of the proposed improvements.



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit I-1

NOT TO SCALE

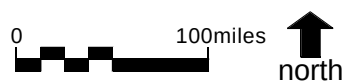
↑
north

**Airport Location
and Vicinity**



Source: C Artesia Software, MapArtGeopolitical Deluxe - USA, Version 2.0, 1998
Prepared by: Ricondo & Associates, Inc.

Exhibit I-2



Town of Mammoth Lakes Location and Vicinity

1.2.2 Updated Forecast of Aviation Demand

Updated forecast levels of aviation demand were based on available data and on forecasts provided and prepared by the Town of Mammoth Lakes. Forecasts of commercial airline demand for the Airport were projected through the year 2022, 20 years from the start of air carrier operations, including passenger enplanements and airline operations. The airline forecasts provide the basis for proposed future Airport development over the 20-year planning horizon. Airport operational levels allow for estimates of the timing of certain events, and thereby serve as the basis for effective planning and decision making. Appendix H contains the analysis of the updated aviation demand forecast for Mammoth Yosemite Airport.

Table I-1 summarizes projected general aviation and airline activity, in terms of passenger enplanements and aircraft departures, for the Airport. The following points summarize key findings with regard to projected airline activity:

- In order to provide a basis for the potential for air carrier service at Mammoth Yosemite Airport, historical activity, local demographics and tourism-related visitor statistics were reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance. The five comparable airports selected for Mammoth Yosemite Airport include:
 - Yampa Valley Regional Airport (Steamboat Springs, CO)
 - Vail/Eagle County Airport (Vail, CO)
 - Aspen-Pitkin County Airport (Aspen, CO)
 - Jackson Hole Airport (Jackson, WY)
 - Glacier Park International Airport (Kalispell, MT)
- For the purpose of developing the initial enplanement projections, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. Skier-days represent the total number of days visitors skied at the ski resort. The number of skier-days was found to have a strong correlation to the activity levels at each comparable airport.
- A number of scenarios were examined for the Airport to give an idea of the range of enplanement activity that might occur at the Airport. The enplanement projections were based on a relationship of skier-days to annual enplanements at several comparable airports.
- It is anticipated that the Airport would not immediately realize its full demand potential. As a result, the rate of growth in activity at the Airport during the first five years of operation is expected to be strong until the market's full potential is realized. Once the market matures, the rate of growth in activity at the Airport is expected to slow to more typical levels as experienced at airports throughout the U.S. This high initial growth is best illustrated by examining the enplanement growth that occurred at Vail/Eagle County Airport. During the first five years of operations from 1990 to 1995, enplanements at Vail/Eagle County Airport increased at an annual compounded growth rate of over 67 percent per year. From 1995 to 1998, however, enplanement growth at the airport slowed to an annual compounded growth rate of 27 percent per year. While this rate of growth is still much higher than that of the U.S. overall, it is lower than exhibited during the initial startup of service at the Airport.

Table I-1

Summary of Forecast Aviation Activity at Mammoth Yosemite Airport

	Annual Airline Enplanements					
	<u>1999</u>	<u>2003</u>	<u>2007</u>	<u>2012</u>	<u>2017</u>	<u>2022</u>
Enplanements	--	37,000	159,900	242,700	287,500	333,800
	Annual Aircraft Operations					
	<u>1999</u>	<u>2003</u>	<u>2007</u>	<u>2012</u>	<u>2017</u>	<u>2022</u>
Air Carrier	--	600	2,420	3,800	4,360	5,000
Regional/Commuter/RJ	--	1,480	4,080	5,040	5,800	6,600
General Aviation/Military	<u>6,050</u>	<u>6,650</u>	<u>7,650</u>	<u>8,950</u>	<u>10,350</u>	<u>12,050</u>
Total Operations	6,050	8,730	14,150	17,790	20,510	23,650

Note: Enplanements represent passengers boarding an aircraft. Total passengers are twice that number. Aircraft operations refer to total takeoffs and landings. It should also be noted that these forecasts are estimates assuming that there are no limitations to accommodating demand and that airline service could be accommodated as early as 2003. The actual numbers may be materially different than those indicated.

Source: Ricondo & Associates, Inc., July 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

- Under the Base Case Scenario, the number of enplanements at the Airport were projected to increase from approximately 37,000 in 2003 (the anticipated first full year of operation), to approximately 333,800 per year in 2022, representing an annual compounded growth rate of 12.3 percent overall. Estimated winter enplanements per ski visitor day for the Airport are projected to increase from a ratio of approximately 0.035 winter enplanements per skier day in 2003 to approximately 0.085 winter enplanements per skier day by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2003, with their share decreasing thereafter to approximately 60 percent of total enplanements at the Airport by 2022.

1.3 Existing Facilities

The current Airport facilities include a 7,000-foot by 100-foot runway, a parallel taxiway system, general aviation hangars, tie-down, support facilities, and limited landside passenger processing facilities. These facilities are depicted on the previously approved FAA Airport Layout Plan, which is presented on **Exhibit I-3**.

The Airport has a Global Positioning System (GPS) non-precision instrument approach to Runway 27. Aircraft executing this approach but then landing on Runway 9 must circle north of the airfield due to rising terrain south of the Airport. It has been determined that modifications to the Airport facilities would be required to comply with Airport Design Standards and commercial airline operating policy for safe and efficient flight operations and for accommodation of the projected air service. An evaluation of the airfield design requirements is provided in Appendix E.

Calculations for runway length were conducted using the methodology prescribed in the FAA approved Aircraft Flight Manual (AFM) for the B757-200. The calculations were based on operations from Mammoth Yosemite Airport to Dallas-Ft. Worth and to Chicago-O'Hare International Airports. It was determined that on the maximum mean temperature of the hottest month, the runway length required for a full passenger and baggage load on the aircraft is 9,000 feet.

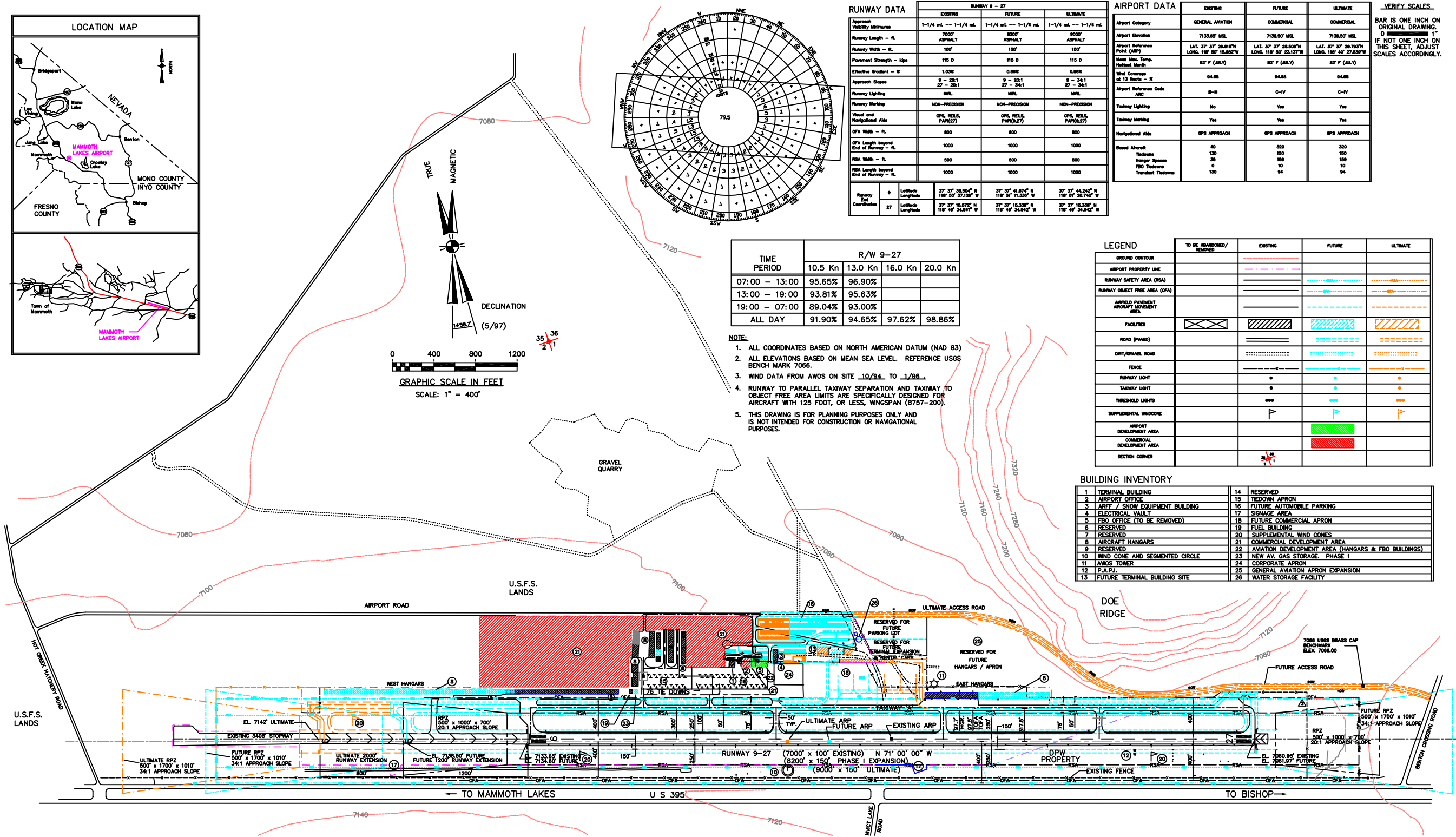
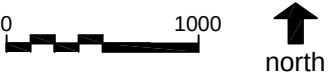


Exhibit I-3



Approved Airport Layout Plan

The land that is owned at the Airport allows the construction of an 8,200-foot runway. Additional runway length could be obtained by acquiring additional land to the west. Therefore, the Master Plan depicted an ultimate runway length of 9,000 feet. While a 9,000-foot runway was previously evaluated in the 1997 SEIR/EA and approved by the Town, it was not constructed. The current project proposal is to extend the runway to 8,200 feet (rather than 9,000 feet) and to widen the runway by 50 feet on south side, thereby shifting the runway center line 25 feet to the south.

Calculations were made to determine the allowable load factors for a B757-200 flying from Mammoth Yosemite Airport to Dallas-Ft. Worth and Chicago-O'Hare at the maximum mean temperature. The results of these studies indicate that the B757-200 flying to Dallas-Ft. Worth can operate at 100 percent load factor; whereas, the B757-200 operating to Chicago-O'Hare must download to 94 percent load factor at the maximum mean temperature.

Consultation with the airlines and the Town indicated that there would be no time in the winter and only a very few days in the summer that would require a load factor of less than 100 percent to fly the B757-200 to Chicago-O'Hare with an 8,200-foot runway. From economic and environmental considerations it was agreed that the first stage runway length of 8,200 feet would be adequate for development of the Mammoth Yosemite Airport to serve the B757-200 type aircraft with reasonable load factors and stage lengths. Appendix E contains the load factor and ranges calculations.

The safety criteria for certifying airports for commercial service are contained in the Federal Aviation Regulations (FAR) Part 139. FAR Part 139 prohibits an airport from serving any scheduled passenger operation of an airline operating an aircraft with a seating capacity of more than 30 passengers if all criteria are not met. The certification process ensures that the safety of the airport environment is adequate for the proposed operation, considering such items as safety areas, pavement condition, obstructions, lighting, and aircraft rescue and firefighting capabilities. Mammoth Yosemite Airport currently only possesses a limited FAR Part 139 certificate, which would not allow the operation of a commercial airline operating aircraft with more than 30 seats on scheduled basis. The commercial airline service scheduled for the 2002/2003 winter season would use narrow body jet aircraft up to the size of a Boeing 757-200, which has a capacity of 176 seats.

The proposed project is needed to bring the current airfield facilities into compliance with Airport Design Standards to allow the safe operation of commercial airline narrow-body aircraft up to the size and seating capacity of a Boeing 757-200. The proposed project will adequately address the facility requirements of the FAR Part 139 certification process.

1.4 Description of the Proposed Project

The changes in the proposed project for which this SSEIR was performed include extension of Runway 927 to the west to a length of 8,200 feet (rather than the previously approved 9,000 feet) and an increase in the width of the runway from 100 feet to 150 feet, replacement of an existing 4.8-foot barbed wire fence with an 8-foot chain link security fence, construction of a new package wastewater treatment plant (instead of a new leach field), and relocation or replacement of "Green Church". The Airport facility changes to the proposed project are depicted in **Exhibit I-4**. The Town of Mammoth Lakes would be required to obtain a special use permit from the United States Forest Service (USFS) for an additional 25 feet of land along the length of the runway to the south and west.

1.5 Description of Planning, Construction and Operational Characteristics

The following is a general description and background of the planning, construction, and operation of the Mammoth Yosemite Airport Expansion Project.

1.5.1 Planning Characteristics

The Mammoth Yosemite Airport Expansion Project is subject to the planning criteria established in FAA Advisory Circulars 150/5360-13, *Planning and Design Guidelines for Airport Terminal Facilities*, and 150/5300-13, *Airport Design*. FAA Advisory Circular 150/5300-13 provides terminal facility design guidance such as design methodologies, functional relationships and terminal concepts, terminal apron areas, building space and facility guidelines, ADA accessibility features, and airport access systems. Among other guidance, FAA Advisory Circular 150/5360-13 provides FAA direction on airport geometry, runway design, taxiway and taxilane design, surface gradient and line of sight, site requirements for navigational aids, the effects of jet blast, wind analysis, and airplane types and characteristics.

In addition to the FAA guidelines, the proposed project is subject to local, State and federal code provisions and approvals. The State, federal and local provisions are reviewed in Section II, Brief Overview of the Project's Environmental Setting and, as applicable, in Section III, Environmental Impacts of the Proposed Project.

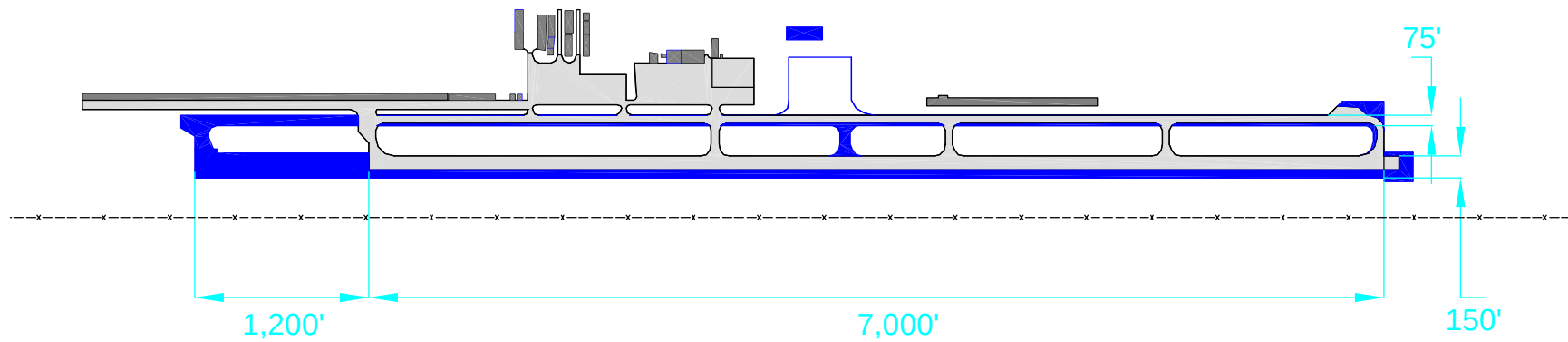
1.5.2 Construction Characteristics

The proposed project is to be phased with a Date of Beneficial Occupancy (DBO) estimated to be the winter of 2002/2003. A DBO is defined as “the date at which the Primary facilities can accommodate the air carrier operations and initiation of such operations”.

Construction is planned to occur in multiple phases (clearing and grubbing, excavation, sub-grade-scarify and recompact, aggregate subbase, aggregate base, heater remix, bituminous surface course, Portland cement concrete pavement, saw and seal pavement, groove runway, marking: remove old marking, paint new marking, drainage, lighting, structures construction, and terminal construction), commencing in 2002. The overall duration of construction is anticipated to occur over approximately one year. Construction would commence with clearing and grubbing and excavation for the runway modifications and proceed sequentially as follows: runway pavement construction, marking runways, runway lighting and terminal construction. It is anticipated that an average of approximately 130-150 construction workers will be working over the duration the duration of construction. Appendix G contains details regarding the construction equipment is anticipated to be used.

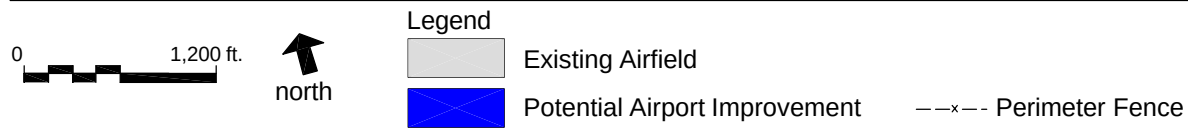
The construction of the Mammoth Yosemite Airport Expansion Project is subject to all Town, State, and federal applicable standards. The following is a list of laws, regulations, permits, and agreements to be obtained for the proposed project:

- Industrial plant operations, including airports, are required to obtain storm water permits under the 1987 amendments to the *Clean Water Act* [I-4]. A National Pollution Discharge Elimination System (NPDES) permit would be required. As part of the NPDES permit, all contracts prepared for construction of this project will include a requirement for the contractor to develop a Storm Water Pollution Prevention Plan (SWPPP) and submit this plan and have it approved prior to



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit I-4



Proposed Project

the start of any construction. The plan will be submitted for review by the California Regional Water Quality Control Board. This plan will include gading, drainage, and erosion control plans. The plan will be enforced on the contractor by the Town of Mammoth Lakes Project Manager.

- Air quality and water quality certifications required by the State of California.
- The acquisition of land from the Los Angeles Department of Public Works that is used by the Airport is in progress.
- An easement from the Los Angeles Department of Public Works for land east of the Airport within the runway safety area.
- A revised special use permit from the U.S. Forest Service for the land within the runway safety area including a strip of land 25 feet wide on the south side of the Airport and an additional strip of land 25 feet wide on the west side of the Airport.
- A building permit and grading permit from the Town of Mammoth Lakes.
- If future modifications are made to the intersection of U.S. Highway 395 and Hot Creek Hatchery Road, a new Access Control Agreement between Caltrans and Mono County would be required.
- An encroachment permit for any work required in the State right-of-way for U.S. Highway 395 would require an Encroachment Permit.
- A new State Airport Operating Permit from Caltrans Division of Aeronautics prior to resumption of commercial air service at Mammoth Yosemite Airport

Construction contract specifications would be subject to provisions of the FAA Advisory Circular 150/5370-10, *Standards for Specifying Construction of Airports*, (Change 10), notably Item P-156, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control, and 150/5320-5B, *Airport Drainage*.

1.5.3 Operational Characteristics

The completion of the Expansion Project would allow the operation of commercial airline service to the Mammoth Yosemite Airport, which were scheduled to begin during the winter season of 2002/2003 with Boeing 757 aircraft serving Dallas/Fort Worth International Airport and Chicago O'Hare International Airport.

Given historic operation of the Airport, air passenger demand is anticipated to be greatest during the winter ski season (generally between late November and early April). As discussed in Section 1.2.2 (Summary of Aviation Demand Forecast), total enplanements are projected to increase from approximately 37,000 in 2003 to 333,800 by 2022. This would include the introduction of about 48,000 summer enplanements in 2007. Total operations are forecast to increase from 8,730 in year 2003 to 23,650 in year 2022. The air passenger service is also scheduled to include expansion of air carrier and commuter service to other regional and national destinations. The current runway field length does not allow for narrowbody turbojet aircraft, such as the Boeing 757 and Boeing 737, to operate efficiently to major airports such as Dallas/Fort Worth, Denver, or Chicago O'Hare. Therefore, the primary purpose of the proposed project is to enable air carrier jet service, using aircraft up to the size of a Boeing 757, to safely and efficiently operate at the Airport.

The Airport serves piston prop, turboprop and turbine powered aircraft operating under both visual flight rules (VFR) and instrument flight rules (IFR). Pilots of aircraft arriving and departing under

VFR navigate visually using prominent easily identifiable land marks such as U.S. Highway 395 north and south of the Airport and Crowley Lake to the south of the Airport. VFR operational procedures at the Airport would remain unchanged by the expansion project.

Pilots of aircraft operating under IFR would follow the published non-precision instrument approach procedures to Runway 27. Pilots of aircraft executing this approach currently would land straight in on Runway 27, or would visually circle north of the Airport to Runway 9 should wind conditions preclude the use of Runway 27. The non-precision approach procedure described uses the U.S. Department of Defense (DOD) Global Positioning System (GPS) satellite navigation system. Non-precision GPS procedures of this type do not require supporting terrestrial navigational aid. Boeing 757 aircraft operating between Dallas/Fort Worth International Airport, Chicago O'Hare International Airport and Mammoth Lakes would use onboard Flight Management Systems (FMS) that would derive the required navigational information from both satellites and terrestrial navigational aids. The terrestrial navigational facility that would be used by the commercial operators FMS is currently located in Bishop, California and would not need to be relocated for service to Mammoth Lakes.

Pilots of aircraft departing from Mammoth Yosemite Airport under IFR flight plans receive clearance and initial departure instructions from the FAA Flight Service Station located in Riverside California. The proposed project would not change the current instrument departure procedures.

Airport management indicates that there have been only three times over the past three years when aircraft have required deicing services. Deicing, when required, would generally be accomplished by the use of glycol diluted to a 50 percent solution by water. While it is not anticipated that a large quantity of deicing fluids will be used on aircraft, it will be necessary that facilities be available on site when needed. All aircraft would be deiced at the same location on the commercial airline apron. The area on which the aircraft would park during the deicing operations would be graded such that all of the runoff from this area would be collected at one drop inlet. The pipes from this inlet would be constructed such that in normal operations, without any deicing fluid, the stormwater runoff would be discharged into the oil/water separator. When deicing operations are being performed, the valves would be set such that all of the deicing fluids would be diverted to a holding tank. The runoff would be collected in the holding tank and removed from the site and disposed in a suitable fashion.

The current aircraft fueling plan calls for a capacity of 20,000 to 24,000 gallons in existing above ground storage tanks. On airfield fuel trucks would deliver fuel from the storage areas to the aircraft. The fuel supplier to the Airport currently utilizes an 8,000-gallon transport that makes deliveries to the Airport two times a month. Under the anticipated operation at the Airport, the daily fuel uplift requirements for the initial year of operation would be estimated to range from 7,400 gallons to 9,000 gallons, and 14,800 gallons to 18,000 gallons are estimated by 2007. The largest transport available from the current fuel supplier is 14,000 gallons. Depending on the size of the vehicle and the actual demand, 1 to 2 daily round trips would be anticipated.

The Airport currently possesses a limited Federal Aviation Regulation (FAR) Part 139 certificate for operations. A limited FAR Part 139 certificate allows the Airport to be able to accept air carrier aircraft into the airfield on an unscheduled (i.e. charter) basis. Should operators of aircraft with a passenger seating of more than 30 seats elect to provide regularly scheduled service to the Airport in the future, Mammoth Yosemite Airport would have to fulfill the obligations and requirements of full FAR Part 139 certification. An important part of meeting FAA safety regulations for scheduled

operations is the required security fencing and a secure terminal building for the Airport. Before scheduled operations could start, the Town of Mammoth Lakes would have to install improved security fencing and a terminal building that meets FAA security regulations. The fencing requirement is a function of both safety/operations as well as security. The fence is required as a means of protecting the public from the hazards associated with the Airport, under FAR Part 139 as well as providing secure operations under FAR Part 107. The current 4.8-foot barbed wire fence would need to be replaced with an eight-foot chain link fence. This fence would be in the same area as the existing fence on the south side of the runway (running east-west). To minimize any institutional look to the facility, an eight-foot chain link fence without the barbed wire is recommended. The chain link security fence can be seen through, and therefore, minimizes obstruction of the viewshed. The use of neutral colored fencing material would aid in making the fence more aesthetically pleasing and it is recommended that this be incorporated into the specifications.

II. Brief Overview of the Project's Environmental Setting

The following section discusses, as required by CEQA § 15125, (1) the existing physical environmental conditions in the vicinity of the project, (2) a list of projects related to the proposed project, and (3) applicable general, specific, and regional plans.

2.1 Existing Conditions

The following is a brief overview of the environment in the vicinity of and as it exists prior to commencement of the proposed project from both a local and a regional perspective.

The Airport is located approximately seven miles east of Town of Mammoth Lakes. The Airport property is not contiguous to the community, but is incorporated as an island. Unincorporated portions of Mono County borders the Airport on all sides.

2.1.1 Existing Land Use

The Airport environs are primarily undeveloped open spaces used for agriculture, natural resource management, recreation, and stream conservation. Small parcels are used for public agency purposes, industrial/manufacturing, and residential uses. Existing land use is depicted on **Exhibit II-1**.

The Hot Creek Ranch, a privately owned family fly fishing camp, is located approximately one mile north of the Airport along Hot Creek. The facility has nine cabins for rent and the Ranch retains ownership of the two and a half acres of the stream that the facility occupies.

The U.S. Forest Service (USFS) gravel/borrow pit lies to the north of the current Airport Access Road by approximately one-quarter mile. Most resource extraction has stopped and the site is currently being used for the disposal of non-organic waste, principally rock, soil, concrete, and asphalt.

The remaining portions of the abandoned Mammoth Lakes Elementary School is located approximately one and one-half miles northwest of Mammoth Lakes Airport on Hot Creek Hatchery Road. Most of the structure has been demolished.

Northwest of the Airport approximately, one and one-half miles along Hot Creek, is the Hot Creek Fish Hatchery. The Fish Hatchery produces approximately 11 million trout eggs annually, which are distributed to other fish hatcheries in the State of California.

The Mammoth Geothermal Project is located approximately two miles northwest of the Airport. This facility generates electricity for the regional power grid.

To the east of the airfield, on either side of Benton Crossing Road, lies the Whitmore Hot Springs Recreational Area and the Mono County Animal Shelter. These facilities are located approximately one mile from the Airport. The recreation area consists of various athletic fields and a swimming pool. The animal shelter facility makes abandoned companion animals available for adoption, controls pet over-population, and assists in other animal welfare issues.

The Sierra Nevada Aquatic Research Laboratory (SNARL) is located about one-mile southeast of the Airport and south of U.S. Highway 395. It is a unit of the University of California's Natural Reserve System (NRS). The campus provides lab office and computer facilities to researchers studying stream ecology. Part of off campus SNARL facilities is the former High Sierra Community Church. Known locally as the "Green Church," it is located across U.S. Highway 395 from the SNARL facility, southeast of the Airport at the northeast corner of U.S. Highway 395 and Benton Crossing Road. SNARL uses this building as a large classroom and lecture hall.

The California Department of Transportation (Caltrans) Maintenance Station and Bureau of Land Management (BLM) Gravel Pit are located approximately two miles and one and one-half miles, respectively, southeast of the airfield along U.S Highway 395. The Caltrans Maintenance Station provides state road right-of-way maintenance and snow removal services.

Approximately one and one-half miles due south of the Airport is Convict Lake Recreational Area. Campground facilities, fishing, and water activities are available to users.

Approximately three miles west of the Airport, along U.S. Highway 395, are the Mono County Sheriff Substation and Mono County Government Center. These buildings were abandoned in the early to mid 1990s due to health and welfare concerns. The County governmental units moved to the Town of Mammoth Lakes, while the Mono County Sheriff moved to facilities at Crowley Lake.

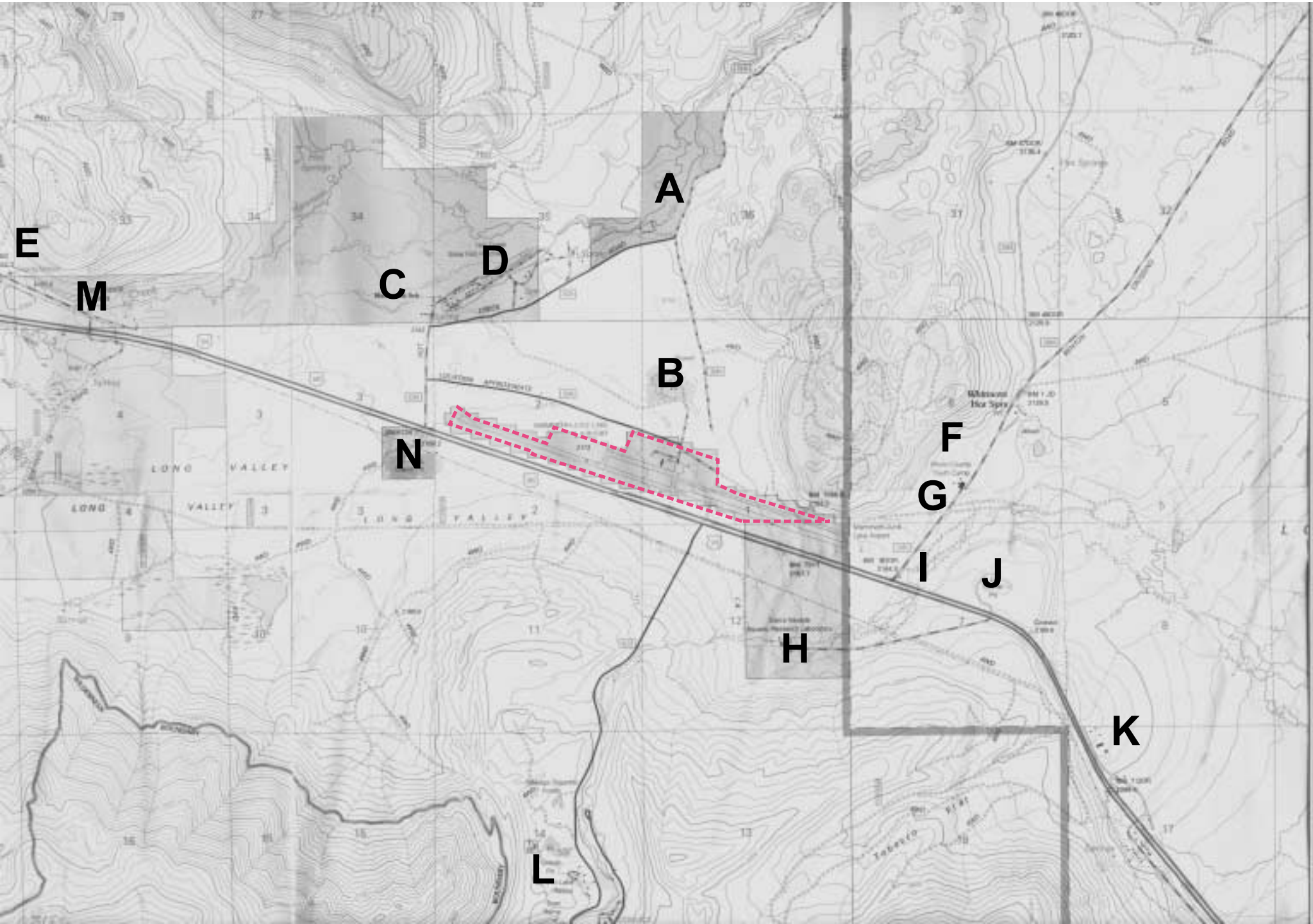
Sierra Quarry is located south of the intersection of U.S. Highway 395 and Hot Creek Hatchery Road. A portion of this site is currently seasonally leased for a dog sled concession, which consists of a domestic water well and miscellaneous buildings used for office, storage, and kennel space. A concrete batch plant that has been in operation since 1995 is also located at the quarry site. The remainder of this property is unused.

2.1.2 Land Ownership

The ownership of the land around Mammoth Yosemite Airport is an important factor in the existing and planned land use. Existing land ownership in the Airport vicinity is shown on **Exhibit II-2**. Most of the land surrounding the Airport is in public ownership. There are only two small privately owned parcels of land in the vicinity of the Airport property.

The area north and northwest of the Airport is owned by the United States government and administered by USFS (Inyo National Forest) and includes the area occupied by the USFS gravel/borrow pit and a portion of the Mammoth Geothermal Project. Two of the three generating plants of the facility are situated on privately held land. The City of Los Angeles owns land west and northwest of the Airport beyond land administered by the USFS, on which the abandoned Mammoth Lakes Elementary School and Hot Creek Fish Hatchery are situated. The land on which Hot Creek Ranch lies is privately owned. A large area northeast of the Airport is owned by the BLM and is undeveloped.

The area immediately east and southeast of the Airport is owned by the City of Los Angeles. This land contains the Green Church, the Whitmore Hot Springs Recreational Area, the Mono County Juvenile Probation Facility, and the Mono County Animal Shelter. The eastern portion of the Airport, including portions of the runway, is on land owned by and leased from the City of Los Angeles Department of Public Works (LADWP). The Town of Mammoth Lakes is currently in the process of acquiring that land for Airport use.



Legend

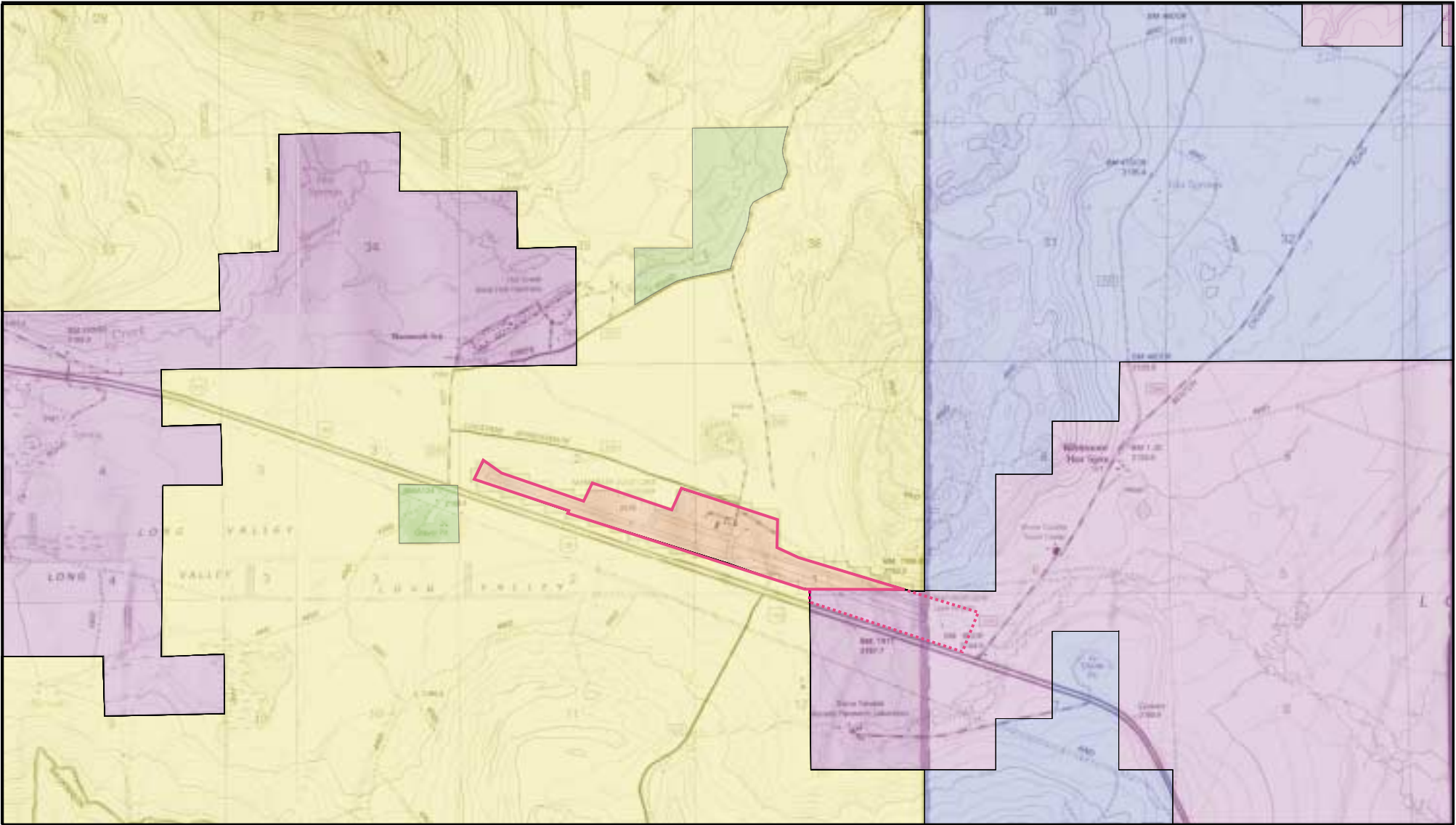
- A Hot Creek Ranch
- B USFS Gravel / Borrow Pit
- C Mammoth Lakes Elementary School (abandoned)
- D Hot Creek Fish Hatchery
- E Mammoth Geothermal Project
- F Whitmore Hot Springs Recreational Area
- G Mono County Animal Shelter
- H Sierra Nevada Aquatic Research Laboratory (SNARL)
- I Green Church
- J BLM Gravel Pit
- K CalTrans Maintenance Station
- L Convict Lake Recreational Area
- M Mono County Sheriff Substation / Government Center (Abandoned)
- N Sierra Quarry, Proposed Site for Morgan Industrial Park
- Existing Property Line

Source: U.S. Geological Survey; Mammoth Lakes Airport Expansion Subsequent EIR and Updated EA, March 1997.
Prepared by: Ricondo & Associates, Inc.

Exhibit II-1

 north Scale 1" = 3,700'

Existing Land Use



- Legend**
- Town of Mammoth Lakes
 - City of Los Angeles
 - INYO National Forest
 - Bureau of Land Management
 - Private
 - Current Airport Property Line
 - Proposed Airport Property Line

Source: U.S. Geological Survey Revised: U.S. Forest Service
Prepared by: Ricondo & Associates, Inc.

Exhibit II-2


north

Scale 1" = 3,700'

Area Land Ownership

The land southeast of the Airport, on which the Caltrans Maintenance Station and Gravel Pit are located, is owned by the BLM. The City of Los Angeles also owns the land to the southeast where the SNARL facilities are located, while the USFS owns land to the south, which contains the Convict Lake Recreational Area.

The Mono County Sheriff Substation and Mono County Government Center are on land owned by the City of Los Angeles. The second private land parcel is occupied by the Sierra Quarry just west of the Airport.

2.1.3 Zoning

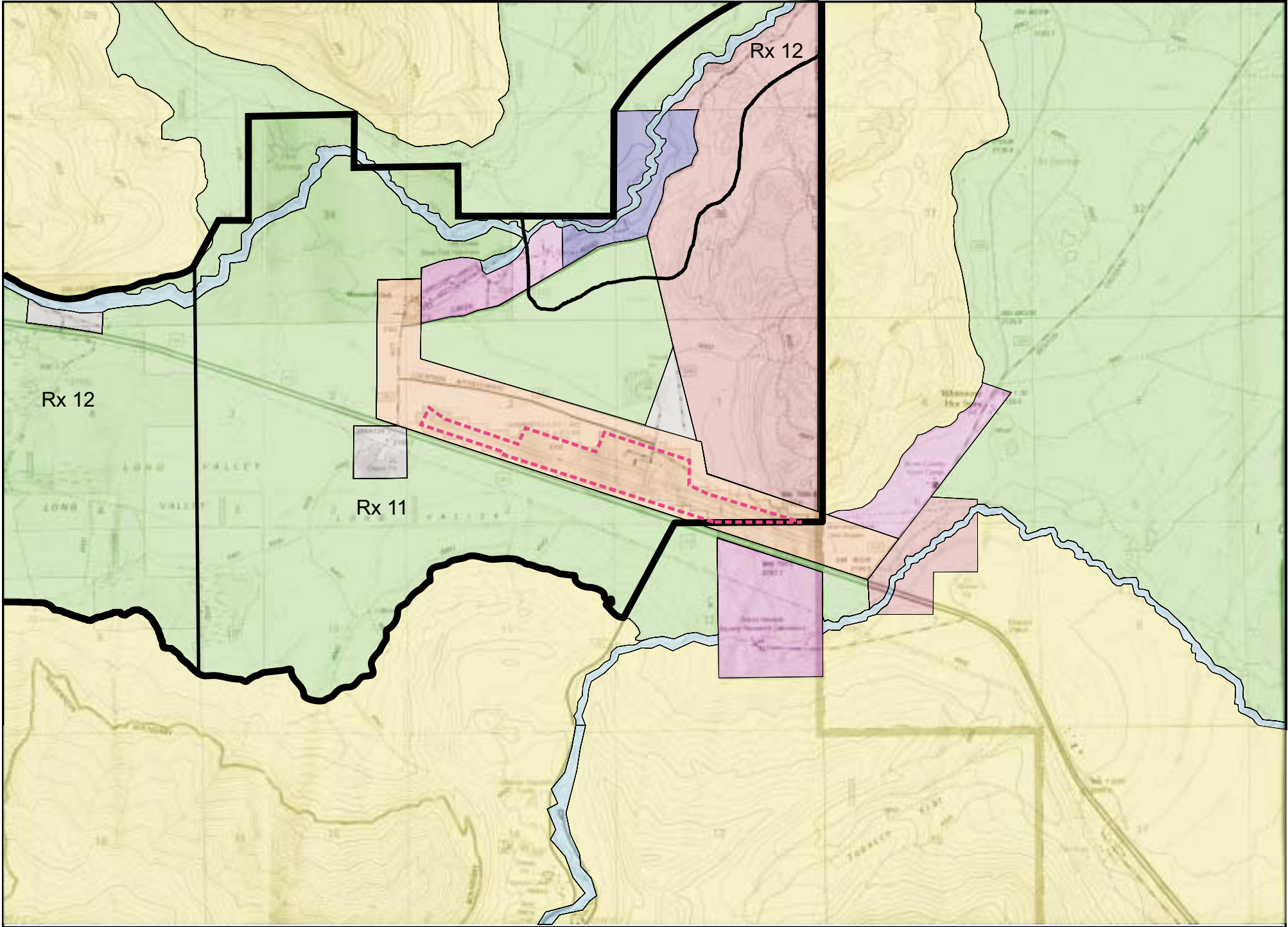
The Airport is situated approximately seven miles east of the community of Mammoth Lakes and is not contiguous with the Town of Mammoth Lakes proper. Unincorporated Mono County surrounds the Airport. Therefore, the various land uses designated in the Airport Land Use Plan are intended to be consistent with either the provisions of Title 19, Mono County Zoning and Development Code [2-1] or Title 17 of The Town of Mammoth Lakes General Plan [5-1] as appropriate. The land use areas, as prescribed by these two governmental bodies, are depicted in **Exhibit II-3**.

The open area (OA) designation is intended to protect and preserve those lands that provide low-intensity recreational opportunities, visual open space, habitat for wildlife resources, open range, and permitted land uses as 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 that is presently utilized for non-intensive agricultural uses. The designation primarily includes Inyo National Forest, BLM, and City of Los Angeles range lands utilized for stock grazing.
- OA-M indicates open space land that requires resource management for the protection of visual quality, wildlife habitat, and wilderness value. The designation primarily includes Inyo National Forest and BLM lands under federal jurisdiction.
- OA-R indicates open space land that provides specific low-intensity recreational opportunities. The designation reflects existing picnic, day use, hot springs facilities along Hot Creek, and an existing campground adjacent to Convict Creek. The westerly portion of the ridge northeast of the Airport, Doe Ridge, is designated for future recreational uses including Nordic and cross-country ski trails and equestrian facilities.
- 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. The conservation zones extend 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.
- The institutional/public land (PA) designation is intended to define those public lands that are utilized for regional recreational, natural resource development, institutional, and governmental service purposes. The PA District is described in Chapter 19.0 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 development proposals within the PA zone on the basis of the code.

- Industrial/Manufacturing (I) designation conforms with Chapter 19.17 of the Mono 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 uses are limited to two existing sites in the Airport planning area: the Sierra Quarry private property and the USFS gravel pit on Inyo National Forest land.
- The use of the Planned Unit Development (PUD) designation is for resort land uses subject to natural resource protection requirements and environmental constraints. Maximum overall development density within the zone 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. The 130-acre Hot Creek Ranch property is the only site within the planning area that is designated for Planned Unit Development land use.
- The intent of the Airport Development District (ADD) designation is to permit the development of appropriate commercial, industrial, airport facilities, and other related uses on lands adjacent to the Mammoth Yosemite Airport. The ADD was 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 recreational, residential, and agricultural land uses. This inherent incompatibility has limited the land resources available for economic development within the Mono County. Subject to the constraints associated with the proximity of aircraft activities, the following land uses are appropriate for the Airport Development District:
 - Airport operational facilities
 - Aviation products and services
 - Housing for Airport employees
 - Hotel and residential condominium developments
 - Light industrial and warehousing
 - Office, business, and commercial
 - Public buildings
 - Retail sales and services ancillary to airport terminal or hotel/motel facilities
 - Automobile service stations
 - Recreational vehicle park
 - Low intensity recreational development

The USFS has instituted a land management plan for the Inyo National Forest. The plan described in *Inyo National Forest Land and Resource Management Plan* [2-2] divides the forest into various Management Areas. The Management Areas are contiguous areas for planning to which one or more sets of management practices, called “prescriptions,” are applied to attain specific objectives. These management prescriptions are written as a result of allocating solutions to specific Management Areas and imposing identified standards and guidelines.



- Legend**
- OA-A Open Space-Agriculture
 - OA-M Open Space-Resource Management
 - OA-R Open Space-Recreation
 - OA-SC Open Space-Stream Conservation
 - ADD Airport Development District
 - I Industrial/Maufacturing
 - PA Institutional/Public Land
 - PUD Planned Unit Development
 - Existing Property Line
 - Management Area Boundary
 - Prescription Area Boundary
 - Rx 11 Range Emphasis
 - Rx 12 Concentrated Recreation Area

Source: U.S. Geological Survey Revised: U.S. Forest Service, Mammoth Lakes Airport Land Use Plan
Prepared by: Ricondo & Associates, Inc.

Exhibit II-3

↑
north
Scale 1" = 3,700'

Planned Land Use

The Airport is located within Management Area #9. The Management Area and prescription area boundaries are depicted on Exhibit II-3. The Airport lies with prescription area 11, which has been designated as Range Emphasis. Prescription areas designated for Range Emphasis are areas, which are readily accessible, have available water and would be given priority to be used for grazing before livestock would graze in other areas. Prescription area 12 lies both north and west of the Airport. This prescription area is designated a Concentrated Recreation Area. Areas with this prescription currently receive or would potentially receive high-density recreation use.

2.1.4 Planned Land Use

Because of the public ownership of most of the land surrounding the Airport, planned land use does not significantly differ from the existing land use.

There is currently no known development planned for the privately owned parcel of land that contains Hot Creek Ranch. The owner of other privately owned parcel has plans for the development of an industrial park. This proposed project, named the Sierra Business Park, is located on a 36-acre parcel that formerly was used by the Sierra Quarry. The developers propose to subdivide the parcel into 37 smaller parcels to be used for industrial use. The use of the individual lots will be pursuant to the requirements of the individual lot purchasers. The individual lots will be developed by the respective lot purchasers.

The Town of Mammoth Lakes has entered into a public-private partnership with a local developer with the goal of making the Airport a self-sustaining and profitable enterprise that would provide substantial long-term benefits to the local economy and traveling public. A phased airside development is planned to add additional aircraft hangars, a general aviation terminal, and fuel storage facilities. Planned landside improvements could include a hotel/condominium complex, a recreational vehicle park, restaurants and retail facilities. This development is proposed to remain within Airport property.

2.2 Related Projects

As defined in Section 15355 of the CEQA Guidelines, a cumulative impact consists of “two or more individual effects, which considered together are considerable” or “compound or increase other environmental impacts.” Pursuant to Section 15130(a) of the aforementioned Guidelines, “An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable, as defined in Section 15065(c).” Section III of this SSEIR provides a cumulative impact assessment for each applicable environmental impact category affected by the changes in the proposed project.

As discussed above, a cumulative impact involves two or more individual effects. Such effects can be internal to, and confined solely to, a proposed project itself, or also be attributable to other external projects, producing a related or cumulative effect. Per CEQA Guidelines Section 15130, the discussion shall be guided by the standards or practicality and reasonableness. The following elements are necessary in an adequate discussion of cumulative impacts:

1. Either:
 - a. A list of relevant past, present and probable future projects producing related or cumulative impacts, if necessary, including those projects outside the control of the Agency, or

- b. A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact;
2. A summary of the expected environmental effects associated with those projects with specific reference to additional information stating where that information is available;
3. A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable feasible options for mitigation or avoiding the project's contribution to any significant cumulative effects; and
4. With some projects, the feasible mitigation for cumulative impacts may involve the adoption of ordinance or regulation rather than the imposition of conditions on a project-by-project basis.

Exhibit II-4 shows the other projects currently proposed in the region. These include:

- Intrawest Development
- Eastern Sierra College
- Sherwin Bowl Ski Area
- Sierra Business Park
- Mammoth Lakes Airport Commercial Development Plan located at Mammoth Yosemite Airport
- Inaja Ranch Land Company
- Lake Ridge Ranch
- Rimrock Ranch
- Pacifica Residential Development

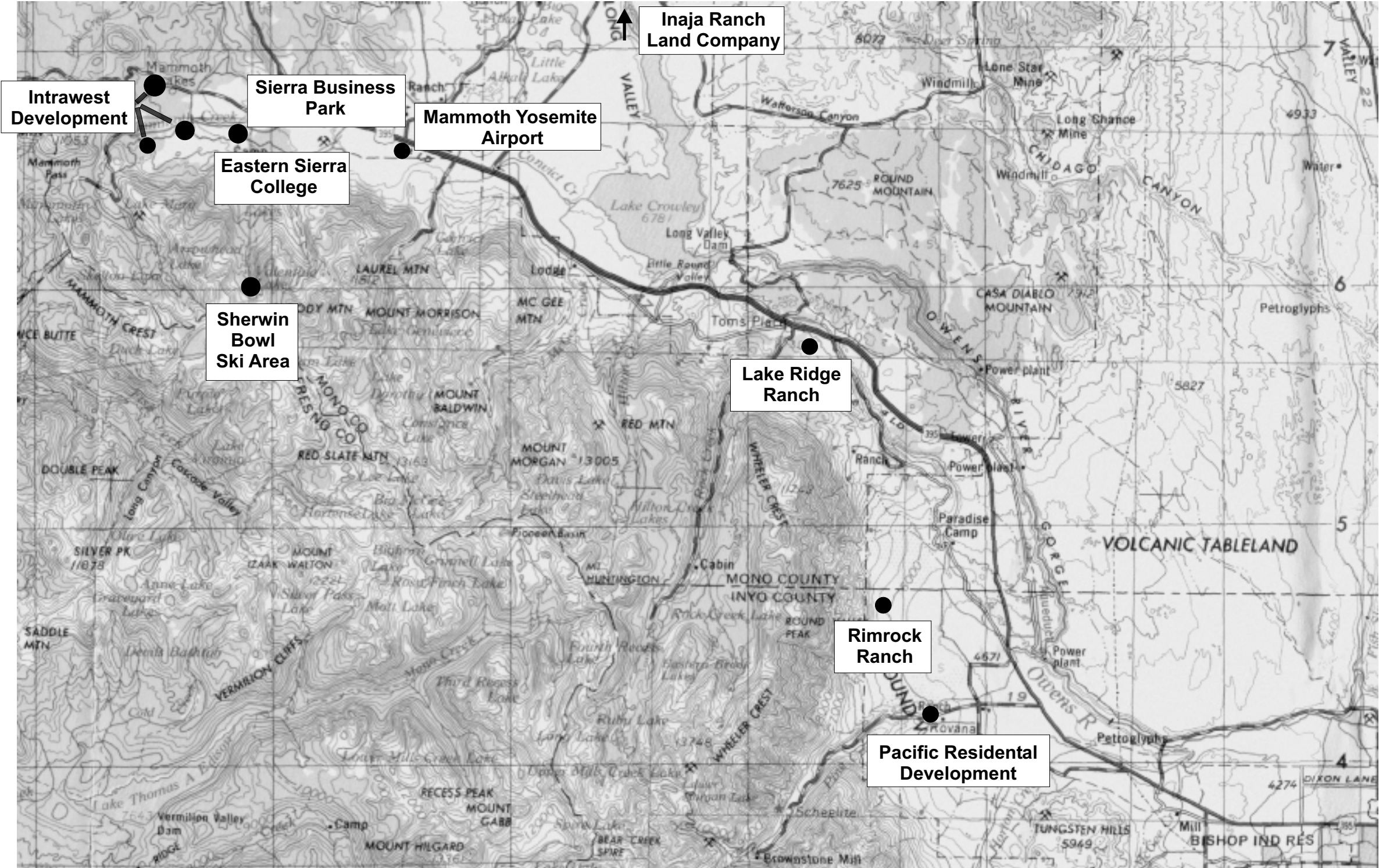
After analyzing the possible impacts of these projects in conjunction with the changes to the proposed project and its cumulative impacts, the Town of Mammoth Lakes determined that there are two projects currently under consideration in the vicinity of the Airport that need to be considered part of the cumulative impact. These two projects are discussed in this section.

2.2.1 Mammoth Yosemite Airport Commercial Development Plan

The commercial development area proposed at Mammoth Yosemite Airport would encompass 25.6 acres of land within the Airport boundary. Apart from the proposed changes to the proposed project in Section I of this SSEIR, the Airport Commercial Development plan was environmentally reviewed for full buildout in 1997 pursuant to the CEQA Guidelines Section 15162. The development is proposed to take place in four phases.

Phase I development would consist of the construction of both Airport infrastructure improvements and 30 commercial aircraft hangars, a gas storage building consisting of aboveground storage tanks and associated structures, and a general aviation terminal consisting of building improvements normally associated with the operations of a fixed base operator.

Proposed Phase I commercial development would consist of a minimum of 60 units of time-share, hotel, condominium, or commercial lodging facilities for transient guests. Construction of a retail building, signage directing visitors to or advertising the development, and remodeling of existing terminal buildings is also proposed.



Source: Mammoth Mountain
Prepared by: Ricondo & Associates, Inc.

Exhibit II-4

↑
north

Not to Scale

Other Projects

Under the agreement with the Town of Mammoth Lakes, the developer has the right, but not the obligation, to develop Phase II, Phase III, and Phase IV. Possible additional commercial development that may occur in Phase II could be the construction of a 300-seat restaurant complex, additional lodging units similar to those constructed in Phase I, and a recreational vehicle park with a capacity of up to 100 vehicles. Phase II airfield development could consist of two additional community hangars for maintenance and aircraft storage and additional individual aircraft hangars. Phase III and Phase IV could include additional lodging units and additional individual hangars.

The developer has retained the right to construct an additional access road from Benton Crossing Road to the Airport. Portions of this access road could be constructed on lands owned and/or administered by the City of Los Angeles, the Bureau of Land Management and the USFS. Rights of way, easements, or grants would have to be obtained from these entities.

2.2.2 Sierra Business Park

The proposed Sierra Business Park site is located on a 36-acre site along U. S. Highway 395 west of Mammoth Yosemite Airport. The site was originally established as the Sierra Quarry, which was a surface mining site for the extraction and processing of raw material for the production of sand and aggregate product.

Resource extraction and manufacturing operations ceased in 1984. The present owner purchased the property in 1994 for the construction of a concrete batch plant and industrial park subdivision. The proposed plan calls for the property to be subdivided into 37 parcels to be used for industrial use. The project would be constructed in two phases. Phase I will consist of the construction of 24 lots, utilities, and an access road on the property. Construction of Phase I is currently scheduled to begin in the summer or fall of 2000. Phase II, the construction of the remaining 12 lots, will begin at a unspecified future date.

The uses of the subdivided lots will be pursuant to the needs of the individual lot purchasers as allowed under the Mono County Code, Section 19.17.020 and 19.17.030, as applicable. The current owner would not develop the individual lots. Each purchaser, in accordance with applicable laws and regulations, would develop their respective lots.

The Sierra Business Park was environmentally reviewed under CEQA Guidelines 15162 and has received certification for the project. [3-2].

2.3 Applicable General, Specific, and Regional Plans

Applicable planning documents include (1) Mono County General Plan, (2) Town of Mammoth Lakes General Plan, (3) the Air Quality Management Plan, (4) the Water Quality Plan, (5) Mammoth Lakes Noise Ordinance, (6) Bishop Resource Management Plan, and (7) Inyo National Forest Land and Resource Management Plan.

2.3.1 Mono County General Plan

The purpose of the Mono County General Plan [2-3] is to establish policies that will guide decisions on future growth, development, and conservation of natural resources on private lands in the unincorporated area of the County through the year 2010 in the manner required by law. An effort has been made through the public review process to make the policies in this plan consistent with the desires of County residents.

Government Code § 65300 requires each county to "adopt a comprehensive long-term general plan for the physical development of the county." The general plan must contain a statement of development policies, including diagrams or maps and text, setting forth objectives, principles, standards, and plan proposals. The plan must include the following elements: land use, conservation, open space, circulation, housing, noise, and safety. Section 65301 (a) allows local agencies to adopt a general plan in any format "deemed appropriate or suitable... including the combining of elements." Accordingly, the Conservation and Open Space Elements have been combined in the Mono County General Plan. The Mono County General Plan also includes the Hazardous Waste Management Element required by State law.

The 1992 Mono County General Plan is a revision of previously adopted general plan elements; it supercedes and replaces those elements. In adopting the 1992 update of the General Plan, the Mono County Board of Supervisors repealed the following elements of the prior plan: Seismic Safety, Geothermal, Public Facilities, Recreation and Scenic Highways. The policies contained in the repealed elements were incorporated as necessary into appropriate elements of the 1992 plan.

2.3.2 Town of Mammoth Lakes General Plan

Adopted in 1987, the Town of Mammoth Lakes General Plan [5-1] contains the State-mandated elements that govern all development on private property, including residential, commercial, and industrial uses over a 20-year planning horizon. The elements included in the General Plan include the following: Land Use (including Public Facilities), Transportation and Circulation, Housing, Conservation and Open Space, Safety (including seismic safety), Noise and Parks and Recreation. Each element is described in terms of policies and objectives.

2.3.3 The Air Quality Management Plan

The following is a brief description of air quality regulations that apply to Mammoth Yosemite Airport and the existing air quality conditions in the region of the proposed project.

2.3.2.1 Regulatory Setting

Air quality is regulated by federal, State, and local laws that include the federal Clean Air Act and the California Clean Air Act.

Federal Clean Air Act

On November 15, 1990, the most recent amendments to the federal Clean Air Act [2-3] were signed into law. The federal Clean Air Act Amendments (CAAA) of 1990 [2-4] require all air quality planning regions in the country to be designated according to the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, i.e. pollutants causing human health impacts due to their release from numerous sources. If air pollutant concentrations in these regions do not exceed the NAAQS for any of the criteria pollutants, they are designated attainment areas. If such concentrations do exceed the NAAQS for one or more of the criteria pollutants they are designated nonattainment areas. The following criteria pollutants have been identified: ozone, particulate matter less than 10 microns in diameter (PM₁₀), carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide. The CAAA also mandates that states submit and implement State Implementation Plans (SIPs) for regions not meeting the NAAQS for one or more of the criteria pollutants. The SIP must include a pollution control plan, which demonstrates how and when the standards will be met. The Town of Mammoth Lakes is within the Great Basin Valley Air Basin, which has been designated a non-attainment area for PM₁₀.

The CAAA identify specific emission reduction goals for regions not meeting the NAAQS, and require both a demonstration of reasonable further progress toward attainment and the incorporation of additional sanctions into the SIP for failure to attain or to meet interim milestones.

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California ambient air quality standards by the earliest practical date. California ambient air quality standards are similar to those of the CAAA, with notable differences. Local air quality management districts regulate air pollution from commercial and industrial facilities. As in the CAAA, air pollution control districts have been formally designated as attainment or nonattainment. Nonattainment designations are further categorized into four levels of severity: (1) moderate, (2) serious, (3) severe, and (4) extreme.

The Great Basin Unified Air Pollution Control District

The State of California is divided into Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs). These agencies are County or regional governing authorities that have primary responsibility for controlling air pollution in California's air basins. Their primary responsibility is preparing State Implementation Plans (SIPs) and/or air quality management plans for nonattainment areas under their jurisdiction.

Air quality in the Great Basin Valleys air basin is managed by the Great Basin Unified Air Pollution Control District (GBUAPCD). In 1990, the GBUAPCD prepared an air quality management plan for the Town of Mammoth Lakes and its vicinity to address PM-10 pollution in the region. [3-4] The plan contains several control measures geared to improve air quality in the region. The plan also contains air quality modeling information for the region, including PM-10 emissions factors. To date, the GBUAPCD has not developed an air quality management plan to address ozone pollution in the region.

2.3.4 Water Quality Plan

The following is a brief description of water quality regulations that apply to Mammoth Yosemite Airport.

The *Federal Water Pollution Control Act of 1972* (also known as the Clean Water Act) [1-4] was instituted to protect the nation's water resources. A major component of the Clean Water Act involved the establishment of regulations designed to prohibit the discharge of pollutants into waters of the United States from any point source unless the discharge is in compliance with National Pollutant Discharge Elimination System (NPDES) standards. Initially, this legislation established a permitting program for industrial process and municipal sewage discharges. However, with the passage of the *Water Quality Act of 1987* [2-6], the Clean Water Act was revised to include permit requirements for storm water discharges as well.

In the State of California, the permitting of surface water discharges is administered by the California Environmental Agency through Regional Water Quality Control Boards (RWQCB). The RWQCB has assumed the responsibility of implementing the Clean Water Act in California including issuing discharge permits and setting water quality standards. Mammoth Yosemite Airport is in the RWQCB Lahontan region.

In 1975, the RWQCB prepared a comprehensive Water Quality Control Plan for the South Lahontan Basin Area, which includes the Airport. The Plan outlines a coordinated program for water quality protection in accordance with the policy of non-degradation. This policy states that the existing level of water quality resources shall be maintained unless potential beneficial uses are unreasonably affected.

2.3.5 Mammoth Lakes Noise Ordinance

Chapter 8.16 of the Town of Mammoth Lakes Municipal Code [2-7] pertains to the regulation of excessive noise from existing uses. Section 8.16.070 (exterior noise limits) of the Municipal Code establishes noise levels that may not be exceeded based upon the nature of the receiving land use, the time of day that the noise occurs and the statistical distribution over time of the noise levels generated by the source of concern. Section 8.16.090 of the Noise Ordinance specifically addresses noise from construction activities.

2.3.6 Bishop Resource Management Plan

Bishop Resource Management Plan (RMP) provides a comprehensive framework for managing public lands administered by the BLM Bishop Resource Area. [2-8] Located in the eastern Sierra region of California in Inyo and Mono Counties, the Bishop Resource Area encompasses 750,000 acres of public land and about 9,000 acres of federal mineral estate under private land. The area office also administers mineral leases on 2 million acres of the Inyo and Toiyabe National Forests. Less than 15 percent of the total land base in the resource area is in private ownership. Significant resources and program emphasis include recreation, wildlife, locatable and salable minerals, realty, livestock grazing, and cultural resources.

2.3.7 Inyo National Forest Land and Resource Management Plan

The Inyo National Forest Land and Resource Management Plan was approved on August 12, 1988. [2-2] The purpose of the Plan is to provide integrated, multiple resource management direction for all Forest resources. The Plan prescribes management direction for the most suitable combination of management practices, sets ten to fifteen year objectives, provides for the multiple use and sustained yield of goods and services, maximizes long term net public benefits, proposes environmentally sound management, and responds to major public issues and management concerns.

In September 1984 Congress designated the Mono Basin, National Forest Scenic Area, which encompasses approximately 116,000 acres of land within the Inyo National Forest boundary. Resource and development planning for the Scenic Area is being conducted under a separate planning process. The new Comprehensive Management Plan for the Scenic Area will be incorporated into the Forest Plan.

III. Environmental Impacts of Proposed Project

Under CEQA, an EIR should identify and analyze the possible significant environmental impacts of a proposed project. CEQA § 21100(b)(1); CEQA Guidelines §§ 15126(a), 15126.2(a). A "Significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance..." In addition, "a social or economic change related to a physical change may be considered in determining whether the physical change is significant." CEQA Guidelines § 15382. "The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence. CEQA Guidelines § 15143; see also CEQA §§ 21002.1(e), 21100(c); CEQA Guidelines § 15128. Analysis should therefore contain a discussion of the environmental setting, to "constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." CEQA Guidelines § 15125(a). For the purpose of this study, the baseline conditions are the existing Airport infrastructure, the environmental setting (as described in Section II), and additional existing setting information provided throughout Section III. "A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project." CEQA Guidelines § 15065. "Drafting an EIR...necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can." CEQA Guidelines § 15144.

The EIR should also identify feasible mitigation measures and feasible project alternatives for the agency's consideration. CEQA §§ 21002, 21081(a); CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15091(a)(1). The EIR should describe those significant environmental impacts that cannot be avoided because there are no feasible mitigation measures or because feasible measures cannot mitigate the impacts to a less than significant level. CEQA Guidelines §§ 15126(b), 15126.2(b). If such unmitigatable significant impacts can be avoided by adopting an alternative design, the EIR must describe the "implications" of not adopting that alternative. CEQA Guidelines § 15126(b); CEQA § 21100(b)(2)(A). The EIR should additionally identify "cumulative impacts," defined as "two or more individual effects which, when considered together, are considerable or...compound or increase other environmental impacts." CEQA Guidelines § 15355. Cumulative impacts take into account the project's impacts combined with the impacts of other projects in the study area. CEQA Guidelines § 15130(a)(1).

State CEQA Guidelines § 15162 provides that when an EIR has been previously certified or a negative declaration adopted for a project, "no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project that would require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken that would require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration;
 - b. Significant effects previously examined would be substantially more severe than shown in the previous EIR;
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative..."

After lead agency consideration of the environmental evaluations for the Mammoth Yosemite Airport project contained within the 1986 EIR/EA and 1997 SEIR/EA, and review of agency comments responding to the NOP for the SSEIR, the Town of Mammoth Lakes determined that the following environmental impact areas meet the above mentioned criteria to be included in this SSEIR and will be analyzed:

- Aesthetics/Light and Glare - related to the replacement of an existing fence.
- Air Quality - regarding the modified aviation demand forecast, construction, and vehicular emissions.
- Biological Resources - update to respond to comments and address grading and replanting and area of land, which will be issued a revised special use permit from the United States Forest Service (USFS).
- Traffic - regarding the modified aviation demand forecast and cumulative effects of other proposed projects.
- Soils/Land Transformation – regarding construction of a package wastewater treatment plant and grading and replanting an area of land, which would be issued a revised special use permit.
- Hydrology and Water Quality - regarding the construction of a package treatment plant instead of the previously evaluated septic system/leach field, use of an oil/water separator, and the extension of the runway by 1,200 feet rather than 2,000 feet and the increase in the runway width from 100 to 150 feet.
- Noise - regarding modified aviation demand forecast.
- Public Services and Utilities - regarding relocation or replacement of the Green Church and construction of a package wastewater treatment plant instead of previously evaluated septic system/leach field.

The following categories were eliminated from the SSEIR, as they were all previously evaluated in 1986 EIR/EA and the 1997 SEIR/EA and there have been no changes in the environmental impacts from the changes in the proposed project under the criteria set by CEQA Guidelines § 15162. A

summary of these categories, the significance of their impacts, and proposed mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA) is included as Appendix A.

- Agricultural Resources
- Geology
- Historical, Archeological and Cultural Resources
- Hazards and Hazardous Material
- Mineral Resources
- Population and Housing
- Recreation

3.1 Aesthetics/Light and Glare

The aesthetics/light and glare effects of the Airport improvements have been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of aesthetics/light and glare impacts, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

This section discusses potential environmental impacts with respect to aesthetics/light and glare as a result of the proposed modifications to the Airport, which were not previously evaluated. The changes in the current Airport proposal which may impact aesthetics/light and glare include construction of a new package wastewater treatment plant (instead of a new leach field), the extension of the runway by 1,200 feet (rather than 2,000 feet) and increase in its width from 100 feet to 150 feet, and the replacement of an existing 4.8 feet barbed-wire perimeter security fence with an 8 foot chain link fence. No other changes are proposed to the Airport, which would result in aesthetic/light and glare effects that have not already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

3.1.1 Environmental Setting

3.1.1.1 Aesthetics

The portion of U.S. Highway 395 between Long Valley Resort, which is 3 miles south east of the Airport to 1.1 mile north of State Route 203, which is 5 miles north of the Airport, was designated as a State Scenic Highway in November 1971 by California Department of Transportation (Caltrans). In the summer of 2000, an additional portion of U.S. Highway 395 starting approximately 21 miles south of the Airport at the Inyo County limit and ending near Long Valley Resort was also designated as State Scenic Highway. The State of California's Scenic Highway program preserves and protects scenic highway corridors from development that would diminish the aesthetic value of the natural landscape and scenic quality of that landscape.

The local agency responsible for protecting this corridor is Mono County. In 1981, Mono County adopted a Scenic Highways Element for the countywide general plan. The portion of U.S. Highway 395 south of the Airport has been considered a scenic highway since 1981. The Scenic Highway Element establishes policies and requirements for all development located within 1,000 feet of the designated scenic highways.

The existing setting is largely characterized by expansive views of the Sierra Nevada and Long Valley. The area adjacent to U.S Highway 395 in the immediate vicinity of the Airport is characterized by sagebrush and bitterbrush with virtually no trees to obstruct views from the highway. Drivers on U.S Highway 395 approaching the Airport from the east first view the Airport from approximately one mile east of the eastern threshold of the runway. The primary views approaching the Airport from the east are due west to Mammoth Mountain, the Minarets, and Mounts Ritter and Banner. Mount Morrison and Laurel Mountain are on the left (south). The Airport parallels the Highway on the north for a distance of approximately two miles. Beyond the Airport to the north are low hills with the Glass Mountains and Bald Mountain forming the distant horizon. Approaching the Airport from the west, low rises intermittently block visibility of the Airport until approximately one the half mile west of Hot Creek Hatchery Road. The primary views from this direction are Sierra Nevada on the right, the White Mountains in the distance to the east/northeast, and the Glass Mountains to the north with low hills in the middle ground. The only structures readily

visible from this segment of the Highway are the improvements at the Airport, the old elementary school, the Green Church, the Sierra Nevada Research Labs, power lines paralleling the south side of the Highway, and the Sierra Quarry. None of the existing improvements block any view from U.S Highway 395 to the mountains beyond.

3.1.1.1 Light and Glare

The major sources of light emissions at the Airport are the runway lights, airfield lights, terminal building, the parking lot, and buildings. The existing airfield lighting consists of the following:

- Runway
 - a. Runway Edge Lights – There is a row of medium intensity runway edge lights along each side of the existing Runway 9-27. The lights are 45 watts. They are located 30 inches above the ground and situated at an approximately 200-foot spacing.
 - b. Threshold Lights – Eight threshold lights are located at each end of Runway 9-27. These lights are 45 watts with red/green color lenses and are located 30 inches above the ground.
 - c. Precision Approach Path Indicator (PAPI) – Two-box PAPI units are located at each end of the runway. These lights are split lens with the upper portion white and the lower portion red. The chain link security fence would act as a shield between the PAPI units and drivers on the highway. The PAPI units are located on the edge of the runway approximately 500 feet from the runway threshold.
 - d. Runway End Identifier Lights (REIL) – At the end of Runway 27 REILs exist. These lights are white strobe lights.
- Apron - The general aviation apron is lighted with floodlights on poles.
- There are also some automobile parking lot lights and building lights.

3.1.2 Significant Environmental Impacts

3.1.2.1 Aesthetics

Based upon CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact with respect to aesthetics if the project:

- Has a substantial adverse effect on a scenic vista;
- Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway;
- Substantially degrades the existing visual character or quality of the site and its surrounding.

Virtually all of the Airport is within the scenic viewshed of U.S. Highway 395. Drivers and passengers passing by the Airport at approximately 65 miles per hour can see the Airport for approximately two minutes. The primary views approaching the Airport from the east are due west to Mammoth Mountain, the Minarets, and Mounts Ritter and Banner. Mount Morrison and Laurel Mountain are on the left (south). The primary views approaching the airport from the west are Sierra Nevada on the right, the White Mountains in the distance to the east/northeast, and the Glass Mountains to the north with low hills in the middle ground. From this direction, low rises intermittently block visibility of the Airport until approximately one half mile west of the Hot Creek Fish Hatchery Road. Most of the land uses visible to drivers along U.S. Highway 395 have been in existence for many years. The current proposed modifications to the Airport would not alter any of

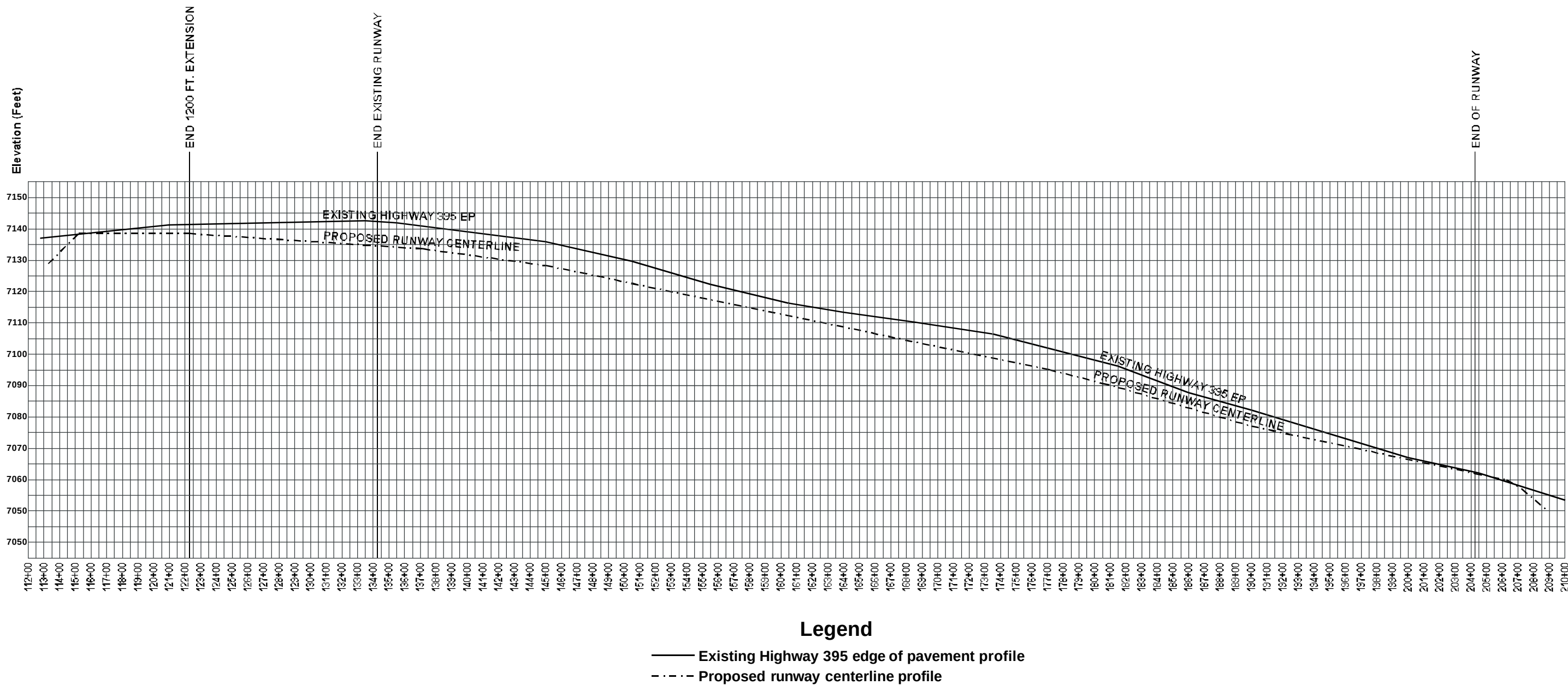
the existing on-Airport structures or substantially modify previously approved changes to existing structures on the Airport. Instead, the current proposal includes the following physical changes to the Airport: lengthen the existing runway from 7,000 feet to 8,200 feet rather than to 9,000 feet as previously approved; widen the runway to 150 feet; replace an existing 4.8 foot barbed wire perimeter security fence with a 8 foot chain link fence. The package wastewater treatment plant would likely not be visible from U.S. Highway 395.

As shown on **Exhibit III-1**, the elevation of the runway would not be higher than the elevation of the roadway, and any difference between the elevations would not be significant over any extended distance. The embankment required for the extension of the runway would be at or below the roadway elevation and would be contoured and planted to appear natural. The embankment for the currently proposed 8,200-foot runway would also be lower than the embankment for the 9,000-foot runway proposed in the 1986 EIR/EA and 1997 SEIR/EA. The final appearance of the embankment area would be similar to the Moraine east of the Airport. Therefore, the runway alteration would not significantly obstruct scenic views of the area, substantially damage scenic resources, or substantially degrade the existing visual character or quality of the site and its surrounding.

There would be periods of time when air carrier aircraft would be parked on the Airport ramp. Initial ramp development could support up to three air carrier aircraft with expansion capability of the ramp area of up to six aircraft. These aircraft would typically only be parked on the apron for the period of time it requires to unload disembarking passengers and load embarking passengers, fuel and provisions. The air carrier aircraft at the Airport would be visible to drivers along U.S. Highway 395 but only for a short duration of time as are the existing general aviation aircraft. Because the runway itself would not be substantially visible to passersby on U.S. Highway 395, and the embankment would be completed with natural looking landscaping and aircraft on the new runway extension would be limited in number and in the duration of time sitting on the runway, the extension of the runway would result in less than significant impacts regarding scenic mountain vistas, scenic visual resources within a scenic highway, and degradation of the existing visual character of the Airport and its surrounding.

As requested by FAA regulations, a security fence around the airfield is required around the perimeter of the airfield. This fence could be either a six-foot chain link (also referred to as cyclone) fence topped with three stands of barbed wire or an eight-foot chain link fence without barbed wire. This fence would replace an existing 4.8-foot barbed wire fence in the same location. Fencing would be designed to meet State Highway Standards as set forth in Highway Design Manual Topic 201 and 14 CFR Part 107 FAA requirements for Airport security. Fences would not be located on the Highway right of way and would be placed far enough away from the road to protect against damage from snow accumulation resulting from snow removal operations. Exhibit I-4 shows the location of the current and planned security fence south of the runway.

Due to the type of existing fencing, views of existing terrain and vegetation around the Airport is unobstructed, albeit views are through a "manmade" fence. Replacement of the barbed-wire fence with a taller cyclone fence would result in a fence similar in nature to the existing fence in that it would not obstruct views on and around the Airport.



Source: Reinard H.Brandley, Consulting Engineer.
Prepared by: Ricondo &Associates, Inc.

Exhibit III-1

Elevation Profiles of Proposed Runway and U.S. Highway 395

To minimize any institutional look of the facility, the eight-foot chain link fence without the barbed wire is recommended. The use of neutral-colored fencing material would aid in making the fence more aesthetically pleasing. **Exhibit III-2** and **Exhibit III-3** are photographs with digital representations of neutral colored fencing material superimposed. These digital representations have been reviewed with the U.S. Forest Service, whose land the fence would lie on, and are acceptable to that Agency. A copy of that coordination appears in Appendix D.

Because existing views would remain largely unchanged with the replacement of the security fencing, it would also result in less than significant impacts regarding scenic mountain vistas, scenic visual resources along a segment of a scenic highway, or degradation of the existing visual character of the Airport and its surrounding.

3.1.2.2 Light and Glare

Based on CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact with respect to Light and Glare if the project creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Nighttime air carrier operations are not anticipated. Therefore, light emissions would be minimized. As the length of the runway has decreased to 8,200 feet from 9,000 feet as proposed in 1997 EIR, the light and glare effects would be reduced as a result of the reduction in the number of runway light over the length of the proposed runway extension. Property lighting and signs would be designed to conform to State Highway Standards as set forth in the Caltrans Highway Design Manual Topic 207 [3-28] and the Vehicle Code Section 21466.5 unless superseded by FAA requirements for security and safety.

The following characteristics were incorporated in the design for the proposed facilities to conform with the Town of Mammoth Lakes' design review requirements for lighting:

- Lighting needs to direct downward so that there is no direct light shining up into the sky.
- All lights need to be shielded so that no source of the light is visible from offsite.

The new lighting and modified existing lighting required with the airfield modifications would consist of the following:

- Runway – The runway edge lights would be extended approximately 1,200 feet to the west to provide lights on the runway extension. These would be the 45-watt lamps located 30 inches above the ground and spaced at approximately 200-foot centers. The threshold lights on Runway 9 would be moved 1,200 feet to the west. The existing runway lights, the PAPI for Runway 27 and the REIL for Runway 27 would be moved 25 feet to the south to accommodate the widening of the runway.
- Apron – New floodlights would be added for the terminal apron. There would be new building lights associated with the construction of the new terminal building and new parking lot lights associated with the new parking lot. These lights would be located on 40 to 60 foot high poles and would be 150 to 400 watt high pressure sodium lamps. All flood lights would be shielded with metal cut offs such that the lamp and reflector would not be visible from the runway or U.S. Highway 395.

A new 8-foot chain link fence would be constructed around the Airport perimeter for security. The fence would be sufficiently high in all locations so that the line of sight from the driver in the vehicle on U.S. Highway 395 to all of the runway lights would be below the top of the fence. As a result, the fence would partially block the vision to the existing and relocated runway lights for all small angle views from the normal straight ahead vision of the driver, but the side view would be unobstructed.

The existing general aviation aircraft parking lighting is a legal non-conforming use to current local zoning ordinances. When the new terminal and air carrier ramp areas are constructed, these ramp lights would be replaced with the new state-of-the-art shielded lights and the additional lights would be shielded as well. The overall result would be less intrusive lights for drivers on U.S Highway 395 compared with existing conditions

As these replacement and additional light sources would not create a new source of substantial light or glare, that would adversely affect day or nighttime views in the area due to lamp shields and other design improvements, there would be no new significant environmental impacts in terms of light and glare.

3.1.3 Mitigation Measures

The aesthetic/light and glare impacts of the proposed modifications to the Airport would be less than significant, and therefore, no mitigation measures would be required for aesthetics/light and glare.

3.1.4 Unavoidable Significant Impacts

With respect to aesthetics/light and glare, no new significant impacts would be anticipated with the proposed project, and therefore no new unavoidable significant impacts would be expected to occur.

3.1.5 Cumulative Impacts

3.1.5.1 Aesthetics

There are two other projects under development in the vicinity of the proposed project. Both, the Airport Commercial Development Area and Sierra Business Park, will be designed to blend into the local environment. Certain requirements for building separation, external colors and appearance, building and tower heights would be applied to those projects to minimize the the effects of the cumulative projects to the viewshed of the surrounding natural landscape. For example, usage of earth tone colors and wood and rock as building materials would be preferred.

The 1997 SEIR/EA concluded that the Mammoth Lakes Airport Commercial Development Plan could result in significant and unavoidable visual impacts even with extensive mitigation measures applied to the project. "Visual impacts are subjective...A number of mitigation measures have been added to those proposed in the 1986 Report [i.e., 1986 EIR/EA], and construction must comply with Town of Mammoth Lakes building design standards. In addition, landscaping will be utilized which is consistent with natural surroundings." However, "it is possible that visual impacts would not be reduced to less than significant levels."



Source: Mammoth Mountain Ski Area
Prepared by: Ricondo & Associates, Inc.

Exhibit III-2

Fence Alternative 1- Tan Color



Source: Mammoth Mountain Ski Area
Prepared by: Ricondo & Associates, Inc.

Exhibit III-3

Fence Alternative 2- Green Color

The Sierra Business Park, located across U.S. Highway 395 approximately 1 mile west of the Airport terminal, is a previously disturbed site occupying approximately 36 acres. This property has been used for sand and gravel mining. This type of mining use is frequently noticeable and not considered "aesthetically" pleasing to most passers by on U.S. Highway 395. Since the cessation of mining activity, the site has not been used. The Sierra Business Park project structures would be visible to the southbound motorists on U.S. Highway 395 but would have less than significant impact as certified in the Sierra Business Park Specific Plan and EIR [3-2]. Flat-roof structures would pose the greatest visual impact on the unity of the visual field along the scenic corridor. Project elevations would have little impact on aesthetic values as seen from the east, including views from U.S. Highway 395 for north bound motorists.

Based upon the conclusion of the 1997 SEIR/EA that significant visual impacts may result from the Mammoth Lakes Airport Commercial Development Plan, and because the proposed Sierra Business Park would add new urban development close to the Airport, expansion of the Airport together with other cumulative development would contribute to a significant and unavoidable cumulative aesthetic impact. However, based upon the scope of changes to the Airport expansion being evaluated in this SSEIR, and the fact that existing views would remain largely unchanged as set forth above, the modifications evaluated in this Supplement would not result in a new significant cumulative impact or a substantially more severe significant cumulative impact.

3.1.5.2 Light and Glare

The cumulative impacts of the proposed project and the Mammoth Lakes Airport Commercial Development Plan on light and glare were reviewed in the 1986 EIR/EA and 1997 SEIR/EA and were considered not significant.

The light and glare impacts of the Sierra Business Park were environmentally reviewed in Sierra Business Park Specific Plan and EIR [3-2] which concluded that the effects of the Sierra Business Park project were less than significant with the implementation of mitigation measures.

The proposed project, Mammoth Lakes Airport Commercial Development Plan, and Sierra Business Park would require appropriate shielding of lighting for all the structures and parking lots. This lighting would be appropriately shielded and as indirect as possible consistent with security and public safety requirements.

Based on the conclusion of the 1997 SEIR/EA that light and glare impacts of the overall project would not be significant, the conclusion of the Sierra Business Park EIR that its light and glare impacts will be mitigated, and the conclusion in this SSEIR that the project changes would not result in any significant light and glare impacts, the conclusion that the overall project would not result in significant cumulative impacts on light and glare remains valid, and the changes in the project evaluated in this SSEIR would not result in any new significant impacts or substantially more severe significant impacts relating to light and glare

3.2 Air Quality

The air quality effects of the Airport and planned future uses have been evaluated in the previously certified 1986 EIR/EA and 1997 SEIR/EA documents. Please refer to Appendix A for a summary of the conclusions from these previous analyses.

This air quality analysis is provided to address changes to the Mammoth Yosemite Airport or its circumstances since approval of the 1997 Airport project, for which these changes were not previously evaluated. The changes in the current Airport proposal, which may impact air quality include construction emissions from the construction of a new package wastewater treatment plant (instead of a new leach field), the extension of the runway by 1,200 feet (rather than 2,000 feet) an increase in its width to 150 feet, and the updated aviation demand forecast. No other changes are proposed to the Airport, which would result in air quality effects, which have not already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

The federal *Clean Air Act* [2-2], as amended, requires states to identify those areas where the National Ambient Air Quality Standards (NAAQS) are not met for specific air pollutants. The U.S. Environmental Protection Agency (EPA) has designated such areas as nonattainment areas. A state with a nonattainment area must prepare a State Implementation Plan (SIP) that details the programs and requirements that will be used in order to meet the NAAQS by the deadlines specified in *Clean Air Act Amendments of 1990* (CAAA). [2-3]

Additionally, the Clean Air Act, as amended, requires that federal projects be found in conformity with State Implementation Plans (SIPs). Projects not in conformity with the applicable SIP may not be eligible for federal funding. The EPA has published a final rule regarding conformity determinations [3-3]. The final rule includes annual emission thresholds for nonattainment areas and maintenance areas that trigger the need for a conformity determination. Generally, to comply with the basic conformity requirements, two criteria must be met: (1) it must be shown that total direct and indirect pollutant emissions resulting from a project are below *de minimis* emissions levels, and (2) it must be demonstrated that pollutant emissions from the project would not be regionally significant (i.e., the project would not contribute 10 percent or more of the region's total emissions for a criteria pollutant).

3.2.1 Environmental Setting

The Town of Mammoth Lakes is located in a valley on the eastern slopes of the Sierra Nevada Mountains at an approximate elevation of 7,800 feet. The Airport is located approximately eight miles outside of the Town at an elevation of approximately 7,100 feet. The Town, which was incorporated in 1984, has grown steadily in the past four decades from a population of 390 in 1960 to a population of approximately 5,400 in 2000. The region in and around Mammoth Lakes, attracts several million visitors to the area every year.

Most homes and rental units in the vicinity of Mammoth Lakes have wood stoves or fireplaces. Temperature inversions during the winter season cause a buildup of wood smoke in the stagnant valley air. Particulate emissions from resuspended road dust and cinders add significantly to the particulate emissions problem in the area.

Currently, the Great Basin Valleys airshed, which encompasses Mono County and within which Mammoth Yosemite Airport is situated, is designated a nonattainment area for particulate matter less than 10 microns in diameter (PM-10) under federal and State standards. Mono County is also designated a nonattainment area for the State ozone standard. Mono County is currently designated an ozone transport region (OTR).

3.2.1.1 Jurisdictional Control

Jurisdictional control of air pollution is divided among federal, State, and local authorities. Over the past several decades, both the State and federal governments have set, and periodically revised, ambient air quality standards for the six criteria pollutants with the greatest health risks. These standards encompass the most common varieties of airborne materials that may pose a health hazard.

Federal Clean Air Act (CAA)

Title I of the CAA identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and sets deadlines for all areas to reach attainment for the following criteria pollutants: ozone, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulates (PM₁₀), carbon monoxide, and lead (Pb). The CAA requires each state with one or more nonattainment areas to prepare a State Implementation Plan (SIP) to describe how and when each area of the state will meet attainment for all criteria pollutants.

Title II of the CAA contains a number of provisions with regard to mobile sources, including requirements for reformulated gasoline, new tailpipe emission standards for cars and trucks, nitrogen oxides (NO_x) standards for heavy-duty vehicles, and a program for cleaner fleet vehicles. Identification and regulation of hazardous air pollutants are addressed in Title III. Under Title V, conditions for operating permits are specified. In 1997, EPA promulgated new ambient air quality standards for fine particulates (PM_{2.5}) and ozone. The implementation guidelines, including deadlines, are under development.

California Clean Air Act (CCAA)

The CCAA designates air basins as either in attainment or nonattainment for State air quality standards. The CCAA set specific targets for achieving clean air, including an annual five-percent reduction in pollutants (averaged every five consecutive three-year periods) until attainment is reached. It also incorporates the permit programs of the CAA, including New Source Review (NSR) of stationary sources, and requires a mandatory vehicle inspection program for vehicles registered in nonattainment areas (smog check).

The Great Basin Unified Air Pollution Control District

The State of California is divided into Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs). These agencies are county or regional governing authorities that have primary responsibility for controlling air pollution in California's air basins. Their primary responsibility is preparing State Implementation Plans (SIPs) and/or air quality management plans for nonattainment areas under their jurisdiction.

Air quality in the Great Basin Valleys air basin is managed by the Great Basin Unified Air Pollution Control District (GBUAPCD). In 1990, the GBUAPCD prepared an air quality management plan [3-4] for the Town of Mammoth Lakes and its vicinity to address PM-10 pollution in the region. The plan contains several control measures geared to improve air quality in the region. The plan also

contains air quality modeling information for the region including PM-10 emissions factors. To date, the GBUAPCD has not developed an air quality management plan to address ozone pollution in the region.

3.2.1.2 Standards and Pollutants

As discussed above, The Clean Air Act establishes federal air quality standards for six “criteria” pollutants. The “criteria” pollutants include the following: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂), lead (Pb), and particulate matter less than 10 microns in diameter (PM-10). The California Clean Air Act establishes State standards for the six criteria pollutants and also promulgates standards for visibility reducing particulates, sulfates, and hydrogen sulfide. Federal and State air quality standards are summarized in **Table III-1**. Descriptions of the pollutants evaluated in the air quality analysis performed for Mammoth Yosemite Airport (PM-10 and ozone) are described below.

Table III-1

Ambient Air Quality Standards

<u>Pollutant</u>	<u>Averaging time</u>	<u>Federal Standard</u>	<u>California Standard</u>
Ozone	1-hour	0.12 ppm	0.09ppm
Carbon Monoxide	8-hour	9.0 ppm	9.0 ppm
	1-hour	35.0 ppm	20 ppm
Nitrogen dioxide	Annual	0.05 ppm	None
	1-hour	None	0.25 ppm
Sulfur dioxide	Annual	0.03 ppm	None
	24-hour	0.14 ppm	0.04 ppm
	3-hour	0.50 ppm	None
	1-hour	None	0.25 ppm
PM-10	AGM	50 ug/m3	30 ug/m3
	24-hour	150 ug/m3	50 ug/m3
Lead	Calendar quarter	150 ug/m3	1.5 ug/m3
Visibility Reducing Particulates	8 hour (10 a.m. to 6 p.m., PST)	None	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent
Sulfates	24 hour	None	25 ug/m3
Hydrogen Sulfide	1 hour	None	0.03 ppm

AGM = Annual geometric mean

Ug/m3 = Micrograms per cubic meter

Ppm = Parts per million

Sources: U.S. Congress, Clean Air Act Amendments of 1970 (Public Law 91-604, 109 and 110) and Table of Standards, Title 17, Section 70200, California Code of Regulations

Prepared by: Ricondo & Associates, Inc.

Particulate Matter Less than 10 microns in Diameter (PM-10)

Particulate matter consists of solid and liquid particles of dust, soot, aerosols, and other matter small enough to remain suspended in the air for a long period of time. PM-10 is particulate matter less than 10 microns in diameter, which is the portion of particulate matter thought to represent the greatest hazard to public health.

A portion of the particulate matter in the air comes from natural sources, such as windblown dust and pollen. Manmade sources include combustion, automobiles, field burning, factories, unpaved roads, and photochemical reactions in the atmosphere.

The effects of high concentrations of PM-10 on humans include the aggravation of chronic disease and heart/lung disease symptoms. Non-health effects include reduced visibility and soiling of surfaces.

Ozone

Ozone is produced by chemical reactions involving nitrogen oxides (NO_x) and reactive organic gases (ROG) and/or volatile organic compounds (VOC) that are triggered by sunlight. NO_x is created during combustion of fuels, while VOC/ROG are emitted during combustion and evaporation of organic solvents. As ozone is not directly emitted to the atmosphere but is formed as a result of photochemical reactions, it is considered a secondary pollutant. Ozone is a seasonal problem occurring primarily during the summer months as a result of abundant sunlight and warmer temperatures, two factors required for enhanced photochemical reactions in the atmosphere.

Ozone is a strong irritant that attacks the respiratory system, and leads to lung tissue damage. Asthma, bronchitis, and other respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to ozone. A healthy person exposed to high concentrations of ozone may become nauseated or dizzy, may develop a headache or cough, or may experience a burning sensation in the chest.

3.2.2 Significant Environmental Impacts

Based upon CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact with respect to air quality if the project:

- Conflicts with or obstructs implementation of the applicable air quality plan;
- Violates any air quality standard or contributes substantially to an existing or projected air quality violation;
- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed thresholds for ozone precursors);
- Exposes sensitive receptors to substantial pollutant concentrations;
- Creates objectionable odors affecting a substantial number of people.

Because the proposed project is located in a nonattainment area, approval of the proposed project is subject to an evaluation of the project's conformity with the air quality management plan for the Great Basin Unified Air District. Under the general conformity regulations [3-38] issued by U.S. Environmental Protection Agency (EPA), if the total of direct and indirect emissions resulting from the project are less than the *de minimis* thresholds given in 40 CFR 51.853, then the project is presumed to conform and no further conformity review is required. Total direct and indirect emissions are the sum of the emissions increases and decreases from the proposed project, or the "net" change in emissions anticipated to occur as a result of the proposed project (40 CFR 93.152). The *de minimis* thresholds that apply to PM-10 nonattainment areas, including the Mammoth Lakes

region, are 100 tons per year. The *de minimis* thresholds that apply to ozone transport regions are 50 tons per year of VOCs and 100 tons per year of nitrogen oxides (NO_x).

Potential emissions associated with the proposed project generally fall into the following two categories: construction related emissions and operational emissions. **Table III-2** summarizes emissions sources that fall into each category.

Based on available information, it is anticipated that construction of the improvements recommended in the proposed project would occur in 2002 and that introduction of air carrier activity and the corresponding change in Airport operations levels and the aircraft fleet mix would not occur until 2003. Consequently, operational emissions and construction emissions are not expected to be cumulative. Regardless, the proposed project is not expected to result in direct or indirect emissions that exceed applicable *de minimis* thresholds. Operational emissions and construction emissions are discussed in further detail in the following sections.

Table III-2

Emission Sources

Operational Emissions Sources	Construction Emissions Sources
Aircraft engines	Construction employee vehicles (gasoline)
Passenger and employee motor vehicles	Diesel and gasoline-powered trucks
Aircraft ground support equipment	Diesel and gasoline-powered construction equipment
Stationary sources/point sources	

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

3.2.2.1 Operational Emissions

This section documents the results of an emissions analysis conducted for Mammoth Yosemite Airport for the base year (1999) and future years (2003, 2007, and 2022). An emissions inventory was prepared for the proposed project. It was developed using the FAA's Emissions and Dispersion Modeling System (EDMS) and other standard air quality modeling techniques. Pollutant emissions were calculated for all Airport-related sources of pollution including: aircraft, airport motor vehicle traffic (on roads and in parking areas), ground support equipment (GSE), and stationary sources (generators, fuel tanks, etc.). Emissions from these sources were then added together to determine total emissions for the proposed project. Total emissions for the proposed project, Alternative 2, were compared to the no action alternative, Alternative 1, to determine the change in operational emissions.

Aircraft landing takeoff cycles (LTOs) information and other data used to calculate aircraft emissions are summarized in **Tables III-3 and III-4**. Ground vehicle traffic volumes and vehicle miles traveled (VMT) for the proposed project are summarized in **Table III-5**. For the ground vehicle emissions inventories it was assumed that all passenger vehicles originating at the Airport would travel a roundtrip distance of approximately 19 miles (i.e., to and from the Town of Mammoth Lakes). The number of vehicle trips modeled included direct vehicle trips that would originate or terminate at the Airport.

Default EDMS emissions factors were used to calculate emissions of CO, NO_x, VOC, and SO_x. PM-10 emissions factors for ground vehicles are based on information contained in the document *Air*

Quality Management Plan for the Town of Mammoth Lakes. [3-4] As discussed in the AQMP, cars and other on-road motor vehicles on average generate approximately 36 grams of resuspended road cinders per vehicle mile traveled. Motor vehicle exhaust and tire-wear also contribute to PM-10 pollution in the Mammoth Lakes region. Vehicle tail pipe and tire-wear emissions factors are summarized below.

- Light Duty Passenger 5.0×10^{-4} lbs/VMT
- Light Duty Trucks 4.9×10^{-4} lbs/VMT
- Medium Duty Trucks 5.8×10^{-4} lbs/VMT
- Heavy Duty Diesel 4.8×10^{-3} lbs/VMT

EDMS Version 3.23 is not capable of predicting PM-10 emissions for aircraft; however, the U.S. EPA has developed some guidance for calculating aircraft PM-10 emissions. Aircraft PM-10 emissions factors were derived from information contained in the U.S. EPA document, *AP-42, Compilation of Air Pollutant Emissions Factors, Volume II: Mobile Sources, Fourth Edition (September 1985)*. [3-39] AP-42 contains detailed information regarding fuel flow rates and pollutant emissions (CO, NO_x, SO_x, HC, and PM-10) for a variety of aircraft engines. However, AP-42 contains particulate emissions factors for only nine types of commercial aircraft engines. **Table III-6** lists the particulate emissions factors (expressed in kg/hr) for the nine different engine types. The emissions factors are broken down into the four modes that comprise a landing/take-off cycle (LTO).

Table III-3

1999 Aircraft Landing Takeoff Cycles – Mammoth Lakes Airport

INM Aircraft Type	EDMS Type	EDMS Engine	PM-10 Engine	Annual Operations	LTO Cycles
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	60	30
Lear 35	Lear 35/36	TFE 731-2-2B	SPEY MK511	270	135
Citation	Cessna Citation	JT15D-1	SPEY MK511	270	135
Twin Turboprop	KingAir 200	PT6A-41	TPE331-3	270	135
Twin Prop	Navajo	TIO-540-J2B2	TPE331-3	1130	565
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2000	1000
Small single engine prop	Cessna 150	O-200	TPE331-3	2000	1000
Total				6000	3000

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Table III-4

Aircraft Landing Takeoff Cycles – Proposed Project

INM Aircraft Type	EDMS Type	EDMS Engine	PM-10 Engine	Annual operations	LTO Cycles
2003					
B-757-200	B-757-200	RB211-535e4	CF6-50C	600	300
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	0	0
BAE-146	BAE 146	LF507 Series	CF6-50C	0	0
Regional jet	Embraer	PT6A-27	CF6-50C	0	0
30 seat commuter	DHC-8	PW120	TPE331-3	780	390
19 seat commuter	DHC-6	PT6A-27	TPE331-3	700	350
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	70	35
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	300	150
Citation	Cessna Citation	JT15D-1	SPEY MK511	300	150
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	300	150
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1240	620
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2200	1100
Small single engine prop	Cessna 150	0-200	TPE331-3	2200	1100
Total				8690	4345
2007					
B-757-200	B-757-200	RB211-535e4	CF6-50C	860	430
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	780	390
BAE-146	BAE 146	LF507 Series	CF6-50C	290	145
Regional jet	Embraer	PT6A-27	CF6-50C	490	245
30 seat commuter	DHC-8	PW120	TPE331-3	2040	1020
19 seat commuter	DHC-6	PT6A-27	TPE331-3	2040	1020
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	80	40
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	340	170
Citation	Cessna Citation	JT15D-1	SPEY MK511	340	170
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	340	170
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1430	715
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2530	1265
Small single engine prop	Cessna 150	0-200	TPE331-3	2530	1265
Total				14090	7045
2022					
B-757-200	B-757-200	RB211-535e4	CF6-50C	1800	900
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	1600	800
BAE-146	BAE 146	LF507 Series	CF6-50C	750	375
Regional jet	Embraer	PT6A-27	CF6-50C	850	425
30 seat commuter	DHC-8	PW120	TPE331-3	3300	1650
19 seat commuter	DHC-6	PT6A-27	TPE331-3	3300	1650
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	120	60
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	540	270
Citation	Cessna Citation	JT15D-1	SPEY MK511	540	270
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	540	270
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	2270	1135
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	4020	2010
Small single engine prop	Cessna 150	0-200	TPE331-3	4020	2010

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc

Table III-5

Ground Vehicle Trips – Mammoth Lakes Airport

	<u>Total Vehicles</u>	<u>Vehicle Miles Traveled</u>
1999		
Buses	n.a.	0
Shuttle vans	n.a.	7,335
Rental cars	n.a.	0
Cabs	n.a.	58,721
Private vehicles, parking	n.a.	146,822
Private vehicles, dropoff/pickup	n.a.	39,284
total	n.a.	252,181
2003		
Buses	1,505	28,018
Shuttle vans	623	11,594
Rental cars	3,736	69,563
Cabs	2,283	42,511
Private vehicles, parking	2,076	38,646
Private vehicles, dropoff/pickup	1,071	19,941
Indirect vehicle trips	0	0
total	11,294	210,273
2007		
Buses	4,565	84,984
Shuttle vans	1,889	35,166
Rental cars	11,333	210,995
Cabs	6,926	128,941
Private vehicles, parking	6,296	117,219
Private vehicles, dropoff/pickup	3,249	60,485
Indirect vehicle trips	0	0
total	34,257	637,790
2022		
Buses	9,177	170,865
Shuttle vans	3,798	70,703
Rental cars	22,785	424,215
Cabs	13,924	259,243
Private vehicles, parking	12,658	235,675
Private vehicles, dropoff/pickup	6,532	121,608
Indirect vehicle trips	0	0
Total	68,875	1,282,309

Source: Ricondo & Associates, Inc.
 Prepared by: Ricondo & Associates, Inc.

Table III-6

Particulate (PM-10) Emissions Factors by Aircraft Engine Type and Mode

Particulate Emissions Factors By Mode (kg/hr)

<u>Engine Type</u>	<u>Approach</u>	<u>Climbout</u>	<u>Takeoff</u>	<u>Taxi/Idle</u>
CF6-50C	0.20	0.24	0.24	0.02
CF6-6D	0.20	0.24	0.24	0.02
F100-PW-100	0.50	3.90	0.00	0.05
JT3D-7 SERIES	3.60	3.90	3.70	0.20
JT8D-17	0.68	1.20	1.70	0.16
JT9D-7	1.00	1.80	1.70	1.00
JT9D-70A	1.00	1.80	1.70	1.00
SPEY MK511	0.68	4.50	7.30	0.08
T56-A-7	1.40	1.40	1.70	0.70
TPE331-3	0.27	0.27	0.36	0.14

Source: AP-42, *Compilation of Air Pollutant Emission Factors, Volume II: Mobile Sources, Fourth Edition*. September 1985
 Prepared by: Ricondo & Associates, Inc.

The annual emissions inventories are presented in **Table III-7**. As shown in Table III-7, the primary source of particulate emissions at the Airport are ground access vehicles (including passenger vehicles, courtesy shuttles, taxis, etc.) on roadways and in parking areas. Emissions of ozone precursor pollutants (VOCs and NO_x) are predominantly generated by aircraft and ground support equipment. Motor vehicles are also significant sources of NO_x emissions.

Implementation of the proposed project would increase NO_x and VOC emissions in the region due to additional aircraft activity at the Airport and the introduction of ground support equipment. Introduction of air carrier service at the Airport would also increase the number of ground motor vehicle trips originating at the Airport and hence could cause additional particulate emissions. However, while introducing air carrier service to Mammoth Yosemite Airport would increase aircraft-related pollution in the future, as demonstrated in Table III-8 it could significantly reduce “highway” related emissions in the region as more people access the region by air in the long term.

As presented in **Table III-8**, it is expected that the change in operational emissions associated with the implementation of the proposed project would fall below established *de minimis* thresholds for ozone precursors and PM-10. The introduction of air carrier jet operations into Mammoth Yosemite Airport would increase aircraft NO_x emissions and VOC emissions, however the project emissions are expected to be below *de minimis* thresholds.

[The Mammoth region is currently in attainment of the federal and State NAAQS for CO and SO_x. CO and SO_x emissions are presented in Table III-7 for informational purposes only.]

Table III-7

Airport Emissions Inventories – 1999, 2003, 2008, and 2022

Year and Source	CO (tons/yr)	VOC (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM-10 (tons/yr)
1999					
Aircraft	81.44	2.16	0.16	0.02	0.07
GSE (a)	6.09	0.13	0.32	0.01	0.01
Roadways and Parking (b)	3.20	0.82	0.69	0.03	10.07
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	94.08	3.42	1.18	0.06	10.15
2003 Proposed Project					
Aircraft	87.71	2.50	9.20	0.28	0.12
GSE (a)	13.94	0.31	0.85	0.03	0.03
Roadways and Parking (b)	4.55	0.63	0.53	0.03	8.40
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	106.20	3.74	10.58	0.34	8.55
2007 Proposed Project					
Aircraft	121.66	6.69	20.29	0.84	0.24
GSE (a)	78.36	1.81	6.59	0.17	0.22
Roadways and Parking (b)	12.55	1.75	1.48	0.08	25.47
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	212.57	10.57	28.37	1.09	25.93
2022 Proposed Project					
Aircraft	200.00	11.27	41.44	1.67	0.44
GSE (a)	138.44	3.21	11.55	0.30	0.38
Roadways and Parking (b)	20.68	2.72	2.86	0.16	51.21
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	359.12	17.52	55.85	2.13	52.03

(a) EDMS default GSE settings used .

(b) PM-10 emissions include exhaust, tire wear, break wear, and entrained road dust.

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table III-8

Changes in Operational Emissions for the Proposed Project and De Minimis Criteria (Tons per year)

	<u>PM-10</u>	<u>VOC</u>	<u>NOx</u>
2003 Operational Impacts			
No Project	20.02	3.64	1.23
Proposed Project	8.55	3.74	10.58
Change in Emissions	(-11.47)	(+ 0.10)	(+ 9.4)
2007 Operational Impacts			
No Action	52.06	4.05	1.33
Proposed Project	25.93	10.57	28.37
Change in Emissions	(-26.13)	(+ 6.52)	(+ 27.04)
2022 Operational Impacts			
No Project	86.53	5.94	2.07
Proposed Project	52.03	17.52	55.85
Change in Emissions	(-34.50)	(+ 11.58)	(+ 53.78)
<i>De minimis criteria</i>	100	50	100

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

3.2.2.2 Construction Emissions

Under the General Conformity regulations, emissions associated with construction activities must be calculated, added to operational period emissions directly or indirectly attributable to the project, if appropriate, and the total compared to the annual *de minimis* standards/levels for criteria pollutants. As discussed earlier in this section, the Airport is located in a nonattainment area for PM-10 and an ozone transport region (OTR). Pollutants evaluated in the construction emissions analysis, therefore, included PM₁₀ and ozone precursors: volatile organic compounds (VOCs) and oxides of nitrogen (NO_x).

Construction Schedule

Construction schedules for the proposed airfield and terminal facility improvements at Mammoth Yosemite Airport were developed by Ricondo & Associates, Inc. in association with Brandley Engineering and Mammoth Yosemite Airport staff. The construction schedules are estimates of the actual construction sequencing of the proposed project (due to the conceptual level of project design) and were used to determine annual estimates of pollutant emissions for 2002 (the proposed year of construction).

The methodology used to determine annual construction-related emissions estimates is discussed below.

Methodology

Construction related emissions are a factor of: (1) the type and horsepower of the construction equipment, (2) the operating time of the equipment (expressed in annual hours or number of vehicle miles traveled), (3) equipment fuel type, (4) equipment age (newer construction equipment is assumed to be subject to stricter emissions standards) (5) equipment loading (load factor), and (6) local climatologic variables. Construction equipment types, model year, and equipment usage data were developed by Ricondo & Associates. These data are presented in Appendix G.

Emissions caused by non-road equipment (bulldozers, loaders, cranes, etc.), which can not travel on highways and local roadways and by on-road equipment (tractor trailers, light duty trucks, employee travel vehicles, etc.) were evaluated separately to account for national emissions standards that are in place for on-road vehicles. Emissions from these two broad types of construction equipment were then added together to determine total annual construction emissions.

Diesel and Gasoline Engine Non-Road Equipment Emissions

Emissions factors for non-road diesel equipment were derived from the Tier 1 controlled emission standards regulated under *40 CFR, Part 89.112* (USEPA, September 1997) for equipment models built since 1996.

Emissions factors for non-road gasoline equipment were based on the following source:

- Gasoline emission factors in AP-42: Compilation of Air Pollutant Emission Factors, Mobile Sources (April, 1998) [3-39]

Horsepower data for each equipment type were obtained either from the Caterpillar *Performance Handbook* [3-40] or from the USEPA document *Non-road Engine and Vehicle Emission Study - Report* (USEPA, November 1991) and subsequent reports. [3-41]

Vehicle emission factors, expressed in grams per hour per horsepower, for the three criteria pollutants of interest (VOC, NO_x, and PM₁₀) were multiplied by the estimated running time, load factor, and horsepower for each piece of construction equipment. In this manner, it was possible to calculate the total emissions (in grams) from each piece of equipment for each year of the analysis. Estimates of pollutant emissions were subsequently converted from grams to tons.

USEPA recommends the following technique for calculating hourly emissions from non-road engine sources :

$$M_i = N \times HP \times LF \times EF_i$$

where:

M_i	=	mass of emissions of i^{th} pollutants during inventory period;
N	=	source population (units);
HP	=	average rated horsepower;
LF	=	typical load factor;
EF_i	=	average emissions of i^{th} pollutant per unit of use (e.g., grams per mile).

A sample calculation of NO_x emissions from a grader (CAT 12G-1988 model) that is expected to be used during 12 months of construction is provided below:

Operational hours	=	1,040 hours (provided by the contractor)
Total Emissions	=	1,040 hours/year x 140 hp x 61% x 9.6 grams/hp-hr
	=	852,634 grams/year
	=	0.94 tons/12-month

The estimate of non-road equipment emissions for 2002 is presented in Appendix G and summarized in **Table III-9**.

Table III-9

2002 Construction Emissions for the Proposed Project and De Minimis Criteria (Tons per year)

	<u>PM-10</u>	<u>VOC</u>	<u>NOx</u>
Non-road emissions	2.02	1.51	21.83
On-road emissions	56.71	1.41	13.66
Total	58.73	2.92	35.49
<i>De minimis criteria</i>	100	50	100

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates Inc.

Diesel and Gasoline Engine On-Road Equipment Emissions

During construction, a variety of light duty trucks and tractor trailers would be used for moving construction materials and people on and off the project site. Emissions factors for these on-road motor vehicles were determined using the California Air Resources Board's EMFAC7G model. EMFAC, derived from the abbreviation for "Emission FACTor," was used to calculate calendar year specific vehicle emissions factors. The latest release of EMFAC, EMFAC7G, produces emissions factors whose magnitudes are a function of calendar years (1970 through 2020), seasons (summer & winter), processes (exhaust and evaporative), pollutants (Total Organic Gases, Reactive Organic Gases, Hydrocarbons, Volatile Organic Compounds, Carbon Monoxide, Oxides of Nitrogen, Carbon

Dioxide, exhaust particulate matter, particulate matter-tire wear, and particulate matter-break wear), vehicle class/technologies, speeds, temperature, and soak times. Assumptions used in the on-road vehicle emissions analysis for the Town of Mammoth Lakes are described in detail in Appendix G.

Emissions factors calculated by EMFAC7G are supplied in the form of grams per mile traveled. For the construction emissions analysis, the number of vehicle miles traveled in a year by each piece of on-road construction equipment was multiplied by the EMFAC7G emissions factor to calculate the total pollutant emissions by equipment (in grams per year). This figure was then multiplied by a conversion factor to convert from grams to tons.

The following formula details the process of calculating pollutant emissions associated with on-road construction equipment.

$$M_i = N \times DY \times EF_i$$

where:

M_i	=	mass of emissions of i^{th} pollutants during inventory period;
N	=	source population (units);
DY	=	distance traveled per year;
EF_i	=	average emissions of i^{th} pollutant per unit of use (e.g., grams per horsepower-hour).

A sample calculation of NO_x emissions from two trucks that would be used during 12 months of construction is provided below:

Operational miles	=	1,040 miles (provided by the contractor)
Total Emissions	=	2 Trucks x 1,040 miles/year x 1.35 grams/mile
	=	2,808 grams/year
	=	6.19 tons/12-month

The estimate of on-road equipment emissions for 2002 is presented in Appendix G and summarized in Table III-9.

3.2.2.3 Project Related Emissions and De Minimis Threshold Criteria

Total project related emissions (construction and operational) for the proposed project are summarized in **Table III-10**. Based on the preceding analyses, it is expected that *de minimis* thresholds for criteria pollutants being analyzed in this SSEIR would not be exceeded in any year if the proposed project is implemented.

As discussed in the air quality management plan for the Town of Mammoth Lakes, particulate emissions in the Mammoth Lakes region are predominantly caused by woodburning stoves and motor vehicle traffic. As shown in Table III-10, introduction of commercial air service to Mammoth Lakes Yosemite Airport is expected to reduce particulate emissions in the region when compared to the no project alternative. In summation the proposed project would have a beneficial impact to air quality in the region. As discussed in Appendix N, Response to Comments FF-2, and Tables N-2 and N-3, the proposed project would reduce visitor vehicle miles traveled (VMT) as more people are accommodated in higher occupancy vehicles. It is noted that reduction/control of VMT in and around the Town of Mammoth Lakes is a stated goal in SIP.

Table III-10

Total Project Emissions for the Proposed Project and De Minimis Criteria (Tons per year)

	<u>PM-10</u>	<u>VOC</u>	<u>NOx</u>
2002 Construction Impacts			
No Project	0	0	0
Proposed Project	58.7	2.9	35.5
2003 Operational Impacts			
No Project	20.0	3.6	1.2
Proposed Project	8.6	3.7	10.6
Change in Emissions	(-11.5)	(+ 0.1)	(+ 9.4)
2007 Operational Impacts			
No Action	52.1	4.1	1.3
Proposed Project	25.9	10.6	28.4
Change in Emissions	(-26.1)	(+ 6.5)	(+ 27.0)
2022 Operational Impacts			
No Project	86.5	5.9	2.1
Proposed Project	52.0	17.5	55.9
Change in Emissions	(-34.5)	(+ 11.6)	(+ 53.8)
<i>De minimis criteria</i>	100	50	100
Total Annual Emissions Great Basin Valleys (a)	20,075	4,745 (b)	3,285
Total Annual Emissions Mono County (c)	9,950	2,256 (b)	843

(a) 1996 Estimated Value. Produced by the California Air Resources Board.

(b) Estimate is for Reactive Organic Compounds (ROC)

(c) 2000 Estimated Value. Produced by the California Air Resources Board

Source: Ricondo & Associates, Inc.
 Prepared by: Ricondo & Associates, Inc.

As discussed above, the Great Basin Valleys Air Basin including Mono County is an ozone transport region. The proposed project would increase emissions of ozone precursor pollutants (NO_x and VOC), however the “net” increase in emissions would not exceed federal and State *de minimis* thresholds. As shown on Table III-10, Airport related emissions of Ozone precursor pollutants associated with the proposed project would also be a fraction of the total pollutant emissions generated in the Great Basin Valleys Region and Mono County and hence would not be regionally significant (would not contribute 10 percent or more of the pollution). Therefore, it is anticipated that the proposed project would not cause any exceedances of State ambient air quality standards (AAQS).

It is also assumed that project-related emissions would not contribute to new violations of the ambient air quality standards for Ozone precursors or otherwise increase the frequency of such violations. Project related emissions of NO_x and VOC are expected to be highest during winter months when visitor demand to the region is the highest. As discussed in the report *Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentration in California* prepared by the Air Resources Board [3-42], historical exceedance events/extreme concentrations measured at the Mammoth Lakes air monitoring site occurred in July and August. It is also noted that the Air Resources Board determined that all violation days in Mono County and in the Great Basin Valleys Air Basin were overwhelmed by transport from the San Joaquin Valley. As stated in the report, “based on the time of day that the violations occurred, the characteristics of the

violations, the predominantly westerly wind patterns, and the comparatively small emissions in the GBVAB, the staff considers these violations to be the result of overwhelming transport from the San Joaquin Valley.” In light of these findings it is assumed that the proposed project would not contribute to new violations of the ambient air quality standard for Ozone precursors as the historical violations were overwhelmingly the result of transport from the San Joaquin Valley by westerly winds. It is important to note that the Airport is located east of the Town of Mammoth Lakes and therefore Airport-related emissions would not contribute to concentrations in the Town during an exceedance event because of the predominance of winds blowing from the west to the east.

The proposed project is presumed to conform with air quality standards promulgated in the Clean Air Act and the California Clean Air Act. As the preceding analysis demonstrates, the project would not result in emissions that would exceed the applicable *de minimis* threshold rates, nor would the project be considered “regionally significant” with regard to air pollution emissions because project emissions would represent less than 10 percent of the total emissions in the region. A formal conformity determination, therefore, is not legally required for this project. EPA’s rules and guidance are clear that where the net emissions increase resulting from the project do not exceed the applicable threshold rates, there are no further obligations with regard to the conformity rules. Thus, the proposed project is assumed to conform with the SIP and has no unavoidable significant impacts. Because project related emissions of federal and State criteria pollutants are below *de minimis* levels, no new significant impacts to air quality would be expected to result from the proposed project.

3.2.1 Mitigation Measures

3.2.1.1 Operation

Implementation of the proposed project is not expected to result in an increase of emissions that exceed the thresholds as promulgated in the Clean Air Act and the California Clean Air Act. Implementation of the proposed project would potentially reduce particulate emissions in the Mammoth Lakes region as a result of reducing motor vehicle traffic. The proposed project would increase emissions of NO_x and VOC but these emissions increases would be less than *de minimis* levels. Therefore no mitigation measures are required.

Apart from the proposed project the Town of Mammoth Lakes is also examining the feasibility of providing transit service to the Airport with vehicles powered by compressed natural gas or other alternative fuels instead of using existing diesel vehicles.¹ In 1998 the Air Resources Board identified diesel particulates as a toxic air contaminant². The Town of Mammoth Lakes will continue to work with the California Air Resources Board to identify feasible and cost effective measures to reduce any air quality impacts of the proposed project. Conversion of airport ground support equipment to compressed natural gas when and if feasible would also reduce project related emissions of NO_x and VOC. Conversion of the transit system and ground support equipment to alternative fuels would also reduce particulates emitted by diesel fuel engines.

¹ At this time the City of Mammoth Lakes has not made a final determination regarding the feasibility of alternative fueled vehicles.

² California Environmental Protection Agency Air Resources Board. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. [3-43]

3.2.1.2 Construction

The proposed project and alternatives involve construction activities that may result in temporary environmental impacts, primarily from excavation and subsurface preparation. However there are mitigation measures which can be used to lessen these impacts.

Fugitive dust, which may be emitted during construction as well as a result of wind erosion over exposed earth surfaces, has the greatest nuisance potential. Dust generation is highly variable. The amount of dust generated on a given day depends on the types and amount of construction activity and on meteorological and soil conditions. Although construction activities may have a discernable impact within a short distance from the project site, the potential for nuisance is limited and the impact is temporary, because the impact would cease when construction activity ceases. The most likely impact of construction would be increased dustfall immediately downwind of the area of active construction.

The preliminary design for this runway extension and supporting taxiways keeps a relatively even cut and fill. Consequently significant amounts of cut and fill material would not be required to be transported on or off the project site. Dust control measures, such as watering trucks and/or pumped systems, would be continuously implemented throughout the construction period. All exposed soil areas would be stabilized and re-seeded in accordance with an approved landscape/re-vegetation plan as soon as feasible. All stockpiles of unsuitable soil materials would be removed and disposed of at approved sites designated by the Town of Mammoth Lakes.

Air quality impacts resulting from construction activities can be significantly reduced through the application of the recommendations set forth in FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction at Airports* [3-5]. These procedures would restrict the emission of dust (particulate matter) and provide a series of measures that can be taken to prevent particulate matter from becoming airborne.

3.2.2 Unavoidable Significant Impacts

Because the proposed project is not expected to result in a new significant impact on regional air quality, no new unavoidable adverse impacts would occur.

3.2.3 Cumulative Impacts

The cumulative environmental impacts of the proposed project and the Airport Commercial Development Plan were reviewed in the 1986 EIR/EA and 1997 SEIR/EA. The airfield improvements analyzed for air quality in the 1986 EIR/EA were more extensive than the current proposed project. The airfield improvements analyzed for air quality impacts in the 1986 EIR/EA included a new crosswind runway and supporting taxiway structure as opposed to just a runway extension sought under the proposed project. The air quality impacts in the 1986 EIR/EA and 1997 SEIR/EA for both the airfield improvements and the Airport Commercial Development Plan were found not to be significant provided that “best management” practices were followed during the construction of the projects and followed the guidelines of the Great Basin Unified Air Pollution Control District (GBAUPCD)

The Sierra Business Park Specific Plan and EIR [3-2] calculates the construction exhaust emissions that are shown to be well below significant thresholds. Dust emissions from grading activities are anticipated to be less than significant provided that best available control measures

are used for dust control. Long-term traffic related emissions are anticipated to be well below relevant thresholds of significance. **Table III-11** summarizes the long-term emissions of the Proposed Project with the anticipated emissions generated by the Sierra Business Park. As shown in Table III-12 the emissions associated with the two projects together do not result in annual emissions above the established de-minimis thresholds.

Table III-11

Cumulative Operational Emissions and De Minimis Criteria (Tons per year)

Project/Year	<u>PM-10</u>	<u>VOC</u>	<u>NOx</u>
Airport Development Plan	24.04	12.92	47.40
Sierra Business Park	<u>7.85</u>	<u>9.13</u>	<u>20.44</u>
Emissions Sub Total	31.89	22.05	67.84
<i>De minimis criteria</i>	100	50	100

Source: Airport Development Plan: 1986 EIR/EA and 2000 EA, Sierra Business Park: Sierra Business Park Specific Plan and Final EIR.
 Prepared By: Ricondo & Associates, Inc.

It should be noted that Table III-11 applies the de minimus criteria established for evaluating air quality impacts, which criteria were developed by the U.S. Environmental Protection Agency as part of the general air quality conformity regulations. This reference to *de minimus* criteria does not refer to the separate *de minimus* criteria set forth in the CEQA Guidelines.

Based on the analysis in this SSEIR and the information and conclusions in the prior environmental reviews, the project changes evaluated in this SSEIR would not result in any new significant cumulative impact on air quality or any substantially more severe cumulative impact on air quality.

3.3 Biological Resources

The biological resources impacts of the Airport have been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of biological resources impacts, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

This section discusses potential environmental impacts with respect to biological resources as a result of the proposed modifications to the Airport, which were not previously evaluated. The changes in the current Airport proposal which may impact biological resources include construction of a new package wastewater treatment plant (instead of a new leach field), the extension of the runway by 1,200 feet (rather than 2,000 feet) an increase in it's the runway width to 150 feet, and the replacement of an existing 4.8 feet barbed-wire perimeter security fence with an 8 foot chain link fence. No other changes are proposed to the Airport, that would result in biological resources effects, which have not already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

A Biological Assessment (BA) for the impacts of the proposed project on special status species was prepared by the office of Jones & Stokes Associates, Sacramento, California to comply with Section 7 of the U.S. Endangered Species Act of 1973 (16 USC 1536). The BA is included as Appendix I, and is entitled Biological Assessment for the Mammoth Yosemite Airport Expansion Project Mono County, California, March 2001 [3-12]. Also a Biological Opinion was issued by the U.S. Fish and Wildlife Service (USFWS) on July 23, 2001 for the FAA activities related to the Final Environmental Assessment for the Mammoth Yosemite Airport Expansion Project. This biological opinion is included as Appendix J.

The following categories of biological resources are discussed: (1) Vegetation, (2) Wildlife, (3) Threatened and Endangered Species, and (4) Water Resources.

3.3.1 Environmental Setting

The project site is located within the Eastern Sierra Nevada Region of the Great Basin Floristic Province at approximately 7,080 to 7,130 feet above sea level. Much of the project area lies close to the Mammoth Yosemite Airport, U.S. Highway 395, and Airport Road, and has been previously disturbed by these developments.

The project site is dominated by big sagebrush scrub, which is mostly disturbed, and includes a non-jurisdictional dry meadow located between the east end of the Airport runway and Benton Crossing Road. Both of these communities are described in detail in Section 3.3.1.1 and in Appendix I. The habitats in the project area were evaluated for their suitability to support feeding, nesting, breeding, and germination habitats for various wildlife and plant species.

3.3.1.1 Vegetation

Two plant communities occur in the project area: big sagebrush scrub and dry meadow. Big sagebrush scrub is the predominant plant community. Much of this community has been disturbed by construction, use and maintenance of the Airport facilities, access roads, and highway facilities.

The big sagebrush scrub community is underlain by a well-drained, sandy to gravelly loam substrate with volcanic rock outcrops. This community is dominated by big sagebrush (*Artemisia tridentata*),

antelope bitterbrush (*Purshia tridentata*), and rabbitbrush (*Chrysothamnus nauseosus*), with scattered desert peach (*Prunus andersonii*) and horsebush (*Tetradymia canescens*). Rabbitbrush is the dominant shrub in localized areas. Common grass species include cheatgrass (*Bromus tectorum*), needle-and-thread (*Hesperostipa comata* ssp. *comata*), Indian ricegrass (*Acnatherum hymenoides*), and squirreltail (*Elymus elymoides*). Common native herbs include sulphur buckwheat (*Eriogonum umbellatum* ssp. *Subaridum*), buckwheat (*E. elatum* var. *elatum*), spurred lupine (*Lupinus argenteus*), Eriastrum (*Eriastrum sparsiflorum*), Nuttall's tiqulia (*Tiquilia nutallii*), mentzelia (*Mentzelia* sp.), cryptantha (*Cryptantha circumcissa*), prickly phlox (*Leptodactylon pungens*), Stansbury's phlox (*Phlox stansburyi*), groundsmoke (*Gayophytum diffusum*), nama (*Nama* sp.), and others. Ruderal non-native species include goosefoot (*Chenopodium* sp.), amaranth (*Amaranthus* sp.), and woolly mullein (*Verbascum thapsus*).

The non-jurisdictional dry meadow is located within the eastern portion of the project area between the east end of the runway and Benton Crossing Road. This community supports hydrophytic vegetation and exhibits low chroma (10YR 2/1), which is a hydric soil indicator. The site lacks primary or secondary indicators of hydrology and, therefore, does not meet the definition of a jurisdictional wetland. Water appears to enter the site in the form of seasonal snowmelt and overland runoff from the adjacent highway and Airport runway surfaces. A small, artificially excavated drainage feature drains surface runoff toward the site from the north margin of U.S. Highway 395. Although the site does not qualify as a jurisdictional wetland, it does perform limited wetland functions such as stormwater sediment and pollution retention, and wildlife forage.

The dry meadow is dominated by native hydrophytic rhizomatous grass and grasslike species, including Baltic rush (*Juncus balticus*), straight-leaved rush (*Juncus orthophyllus*), clustered field sedge (*Carex praegracilis*), Nebraska sedge (*Carex nebrascensis*), and Kentucky bluegrass (*Poa pratensis*). Common herbaceous forbs include long-stalked clover (*Trifolium longipes*), long-stalked starwort (*Stellaria longipes* var. *longipes*), Missouri iris (*Iris missouriensis*), and dandelion (*Taraxacum officinale*). Also present are a few scattered interior roses (*Rosa woodsii*) and several small willow shrubs (*Salix* sp.)

3.3.1.2 Wildlife

The following wildlife species were observed in big sagebrush scrub habitat: gopher snake (*Pituophis melanoleucus*), sage thrasher (*Oreoscoptes montanus*), green-tailed towhee (*Pipilo chlorurus*), common raven (*Corvus corax*), black-billed magpie (*Pica pica*), rock wren (*Salpinctes obsoletus*), Nuttall's cottontail (*Sylvilagus nuttallii*), and California ground squirrel (*Spermophilus beecheyi*). Wildlife that prefer big sagebrush scrub habitat include sagebrush lizard (*Sceloporus graciosus*), Brewer's sparrow (*Spizella breweri*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

Wildlife species observed in the dry meadow habitat include killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), and sage grouse (*Centrocercus urophasianus*). Most of the wildlife species found in the adjacent big sagebrush scrub habitat would also forage in the dry meadow habitat.

The project area contains marginally suitable habitat for the white-tailed hare (*Lepus townsendii*) and the pygmy rabbit (*Brachylagus idahoensis*). However, these special status species have not been recorded in the project area or vicinity. The northern harrier (*Circus cyaneus*), golden eagle (*Aquila chrysaetos*), loggerhead shrike (*Lanius ludovicianus*), spotted bat (*Euderma maculatum*), and

Townsend's western big-eared bat (*Plecotus townsendii townsendii*) are special status wildlife that have not been reported to occur at the project site but may occasionally forage or roost at the site.

A total of seventeen species of diurnal raptors may be found in the Long Valley area. These are listed in **Table III-12**. The osprey (*Pandion haliaetus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), and California gull (*Larus californicus*) may occasionally fly over the project site.

Table III-12

Raptor Species present in Long Valley area

Osprey (<i>Pandion haliaetus</i>)	Spring/fall migrants
White Tailed Kite (<i>Elanus leucurus</i>)	Occasional migrant
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Roosting and spring/fall migrants
Northern Harrier (<i>Circus cyaneus</i>)	Resident and spring/fall migrant populations
Sharp-shinned Hawk (<i>Accipiter striatus</i>)	Resident and spring/fall migrant populations
Coopers Hawk (<i>Accipiter cooperii</i>)	Resident and spring/fall migrant populations
Northern Goshawk (<i>Accipiter gentilis</i>)	Resident and spring/fall migrant populations
Red-shouldered Hawk (<i>Buteo lineatus</i>)	Spring/fall migrants
Swainsons Hawk (<i>Buteo swainsoni</i>)	Spring/summer migrant populations
Red-tailed Hawk (<i>Buteo jamaicensis</i>)	Resident and spring/fall migrant populations
Ferruginous Hawk (<i>Buteo regatus</i>)	Winter roosting species
Rough-legged Hawk (<i>Buteo lagopus</i>)	Winter roosting species
Golden Eagle (<i>Aquila chrysaetos</i>)	Resident and spring/fall migrant populations
American Kestrel (<i>Falco sparverius</i>)	Resident and spring/fall migrant populations
Merlin (<i>Falco columbarius</i>)	Winter migrant
Peregrine Falcon (<i>Falco peregrinus</i>)	Spring/fall migrants
Prairie Falcon (<i>Falco mexicanus</i>)	Resident and spring/fall migrant populations

Source: Written Communication from Floyd F. Berro, Eastern California Research Project. February 2001

Prepared By: Ricondo & Associates, Inc.

Sage Grouse

The sage grouse is a California Department of Fish and Game (CDFG) species of special concern, a U.S. Forest Service (USFS) management indicator species, and a harvest species. It is the largest species of grouse in North America and occurs scattered throughout the sagebrush-dominated rangelands in the western United States. Sage grouse were once abundant throughout their range; however, hunting, drought, and competing land uses, such as livestock grazing, have greatly reduced their numbers.

Sage grouse occur in Long Valley and in the surrounding region. Signs of sage grouse (fecal droppings) were noted on the western boundary of the study area near the Hot Creek Hatchery Road during the June 2000 surveys. One of Long Valley's largest sage grouse lek sites is located approximately three miles east of the Airport along the flight path to Runway 27. This site is identified as Bureau of Land Management (BLM) Lek 2.

Mule Deer

Mule deer are a CDFG species of concern because they are considered an important harvest species. Deer present in the vicinity of the project area are primarily from the Round Valley herd (Kucera 1988 [3-7], Taylor 1988 [3-8], U.S. Forest Service 1990 [3-9]) and Casa Diablo herd. [3-10]

The Round Valley herd has experienced a dramatic decline and fluctuation in population numbers. The number of deer counted on the Round Valley winter range declined from 5877 deer in 1985 to 939 deer in 1991. In 1993, the number of deer in winter range counts increased to 1,334 (CDFG,

Unpublished data) and deer numbers since 1993 have increased to approximately 2,350 [Bleich personal communication]. The 1985 to 1991 decline in the Round Valley deer herd has been attributed to poor forage conditions on the winter range as a result of drought-induced changes in habitat quality. Intensive livestock grazing, plant succession, predation, road kills, and residential development on the winter range and in the migration corridor have also reduced deer numbers (Thomas 1985 [3-11]).

Field pellet group counts confirmed past survey investigations that deer frequent the project site during spring, summer, and fall. Calculations revealed that the project area supports an estimated 1,025 deer-use days during the spring migration period (early April to early June). Further analysis of pellet-group data revealed that 95 percent of all pellet groups were counted on plots located in the western half of the project area.

Variation in pellet group density between the eastern and western portions of the project area was related to differences in habitat quality. Most deer use was associated with the western half of the project area, which was characterized by dense patches of antelope bitterbrush. Bitterbrush cover provides increased foraging opportunities and visual concealment for deer. Foraging opportunities for mule deer in the eastern half of the study area were greatly reduced due to decreased bitterbrush presence and increased habitat disturbance from roads, Airport facilities, and livestock grazing. Other factors, such as noise, night lighting, and human activities associated with the Mammoth Yosemite Airport, may also contribute to the disproportionate levels of deer use between the eastern and western portions of the project area.

3.3.1.3 Threatened and Endangered Species

Wildlife field surveys were conducted June 1-3, 2000. The field surveys identified and characterized suitable habitat for endangered and threatened species. The survey was conducted by walking the project area using straight line transects. Evaluation of some endangered and threatened species was based on literature reviews, discussions with agency personnel, and knowledge of habitat conditions in the project area.

No records of endangered or threatened wildlife species for the project area or surroundings were identified from the Natural Diversity Data Base 2000 (NDDB) search of the U.S. Geological Survey quadrangles. Based on existing information, distribution data, and communication with agency personnel, three endangered or threatened species were identified as having the potential to occur in the project area: peregrine falcon, wolverine, and bald eagle.

The peregrine falcon has not been reported at the Airport site or vicinity, but could occasionally forage or roost at the site. Suitable habitat for wolverines is not present in the project area or adjacent areas. Wolverines are locally and regionally scarce, and no observations of this species in or near the project area have been recorded.

The Biological Assessment [3-12] determined the effects of the proposed project on species that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS). The following species could potentially be affected by the proposed project: Owens tui chub (*Gila bicolor snyderi*), Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), bald eagle (*Haliaeetus leucocephalus*), and Sierra Nevada bighorn sheep (*Ovis canadensis californianus*).

Vegetation

The pre-field investigation identified the following three endangered plant species that could exist in the vicinity of the Airport: Long Valley milkvetch (*Astragalus johannis-howellii*), Mono milkvetch (*Astragalus monoensis* var. *monoensis*), and Mono Lake lupine (*Lupinus duranii*).

Botany field surveys were conducted on June 16, 2000. The field surveys determined the potential presence of special-status plant species, and identified and characterized potentially important natural communities. Meandering transects were used to cover the study area, with survey intensity varying by habitat type. All plant species were identified to the level necessary to determine their legal status. No special status plant species were identified in the project area. No Significant Natural Areas as identified under Chapter 12 of the Fish and Game Code or Rare Natural Communities were located in the project area.

Owens Tui Chub

The Owens tui chub is a federally listed endangered species. Critical habitat for this species was designated on August 5, 1985 (50 Federal Register 31592) and includes two areas: (1) the Owens River and 50 feet of riparian vegetation on either side of the river, from the Long Valley Dam downstream for a distance of eight stream miles, encompassing approximately 97 acres in the Owens Gorge; and (2) two spring provinces, including 50 feet of riparian vegetation on either side of spring brooks, encompassing approximately five acres at Hot Creek Fish Hatchery.

The decline of the Owens tui chub has been attributed to the introduction of the Lahontan tui chub into Crowley Lake. Hybridization of the Lahontan tui chub and the Owens tui chub has spread throughout the lower reaches of the Owens River system. Only those populations of Owens tui chub that are isolated by barriers have not hybridized. Water development, competition and predation by exotic species, and habitat alteration and destruction have also led to the decline of native populations. The nearest occurrence of the Owens tui chub is located at Hot Creek headsprings, approximately 0.75 mile northwest of the Airport runway.

Lahontan Cutthroat Trout

The Lahontan cutthroat trout was federally listed as an endangered species on October 13, 1970, and was reclassified as a threatened species on July 16, 1975. A recovery plan was prepared for the Lahontan cutthroat trout by the USFWS in 1995. The USFWS is in the process of preparing an updated recovery plan.

This cutthroat trout subspecies is endemic to the Lahontan Basin in northern Nevada, eastern California, and Southern Oregon. Reasons for the decline of the Lahontan cutthroat trout include loss of riparian vegetation, channelization, water management practices, and human development. These actions have exacerbated temperature fluctuations as they expose more surface water to solar radiation and to convective heat exchange with the air. Reduced flows have decreased the species' access to spawning habitat.

Lahontan cutthroat have hybridized with Yellowstone cutthroat and rainbow trout so extensively that there are only a few genetically isolated populations with uncertain purity. This hybridization either decreases the phenotypic variability or allows the rainbow trout phenotype to become dominant. In addition, it reduces the Lahontan fitness by producing a less fertile offspring.

Lahontan cutthroat trout inhabit the Lahontan Drainage, with the southern end of its range just below the Walker River. According to the USFS, the closest population of Lahontan cutthroat trout is six miles northwest of the project site in O'Harrel Canyon Creek, which is a tributary to the Owens River.

Bald Eagle

The bald eagle is a federally listed threatened species. Since the population status of the bald eagle has improved in most of the country, the USFWS is considering removing the bald eagle from the threatened species list.

Historically, the bald eagle nested throughout California. However, the current nesting distribution is mostly restricted to mountainous habitats in the northern third of the state, primarily in the northern Sierra Nevada, Cascade, and northern Coast Ranges. As a result of reintroduction programs, bald eagles have recently nested in southern and central California and on Santa Catalina Island. Bald eagles winter at lakes, reservoirs, and along river systems throughout most of central and northern California and in a few southern California localities.

Early declines in bald eagle populations have been attributed to human persecution and disturbance and to destruction of riparian, wetland, and coniferous forest habitats. However, the most important factor that contributed to the decline of bald eagle populations was environmental contamination resulting from the introduction of the agricultural pesticide diphenyl-dichloroethylene (DDE), a metabolite of the agricultural pesticide dichloro-diphenyl-trichloroethane (DDT), into the food chain.

CDFG personnel have observed a pair of wintering bald eagles perched on telephone poles near the project area, at the Hot Creek Fish Hatchery. This pair has also been observed roosting on sagebrush at the hatchery. The pair does not nest at the site, but occasionally roost onsite during other activities, which center on foraging for fish along Hot Creek, the Upper Owens River, and the fish hatchery.

Biologists from the USFS have recorded up to six bald eagles at one time during the winter months at Laurel Pond, located approximately one mile southwest of the project site. The BLM biologists have observed wintering bald eagles foraging in the project vicinity along Convict Creek, Crowley Lake, and the alkali ponds and flats east of the project area. Winter resident bald eagles probably roost at the Alpers Fish Hatchery located approximately seven miles northwest of the project site, Hot Creek gorge approximately two miles north of the Airport, and Convict Lake approximately two miles south of the Airport. No nesting bald eagles have been recorded in the project area or vicinity.

Sierra Nevada Bighorn Sheep

The Sierra Nevada bighorn sheep is a federally listed endangered species. The Sierra Nevada bighorn sheep is one of three bighorn sheep subspecies to occur in California. This subspecies is considered a distinct vertebrate population segment. Although this species pelage exhibits a great deal of color variation, they are similar in appearance to other desert-associated bighorn sheep. They range from almost white to fairly dark brown, with a white rump. Both males and females have permanent horns, with males possessing larger horns and females' horns lacking coiling.

Historically, in California, their range included the eastern slope and a portion of the western slope of the Sierra Nevada from Sonora Pass in Mono County south to Walker Pass in Kern County. Disease is believed to be the main factor responsible for the disappearance of Sierra Nevada bighorn sheep

subpopulations. Today five distinct subpopulations occupy the eastern escarpments of the Sierra Nevada in Mono and Inyo Counties. These populations occur at Lee Vining Canyon, Wheeler Crest, Mount Baxter, Mount Williamson, and Mount Langley.

Currently, the number of Sierra Nevada bighorn sheep comprising these five subpopulations is thought to total no more than 125 animals. Disease, mountain lion predation, and loss of genetic variability because of the small number and isolated nature of the populations threaten the continued existence of the Sierra Nevada bighorn sheep.

The closest populations of bighorn sheep to the project site are located in Lee Vining Canyon and Wheeler Crest. The Lee Vining bighorn sheep population is located approximately 20 miles northwest of the Airport, and the Wheeler Crest bighorn sheep population is located approximately 12 miles southeast of the Airport.

3.3.1.4 Water Resources

Wetlands

Wetlands are those areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, rivers, and natural ponds. Moreover, wetlands provide a valuable source of nutrition and habitat for a wide variety of plant and animal life.

A wetlands analysis and delineation was prepared by the office of Jones and Stokes Associates, Sacramento, California along with a special-status species survey in a report entitled Biological Study for the Mammoth Yosemite Airport Expansion Project, September 2000 [3-13]. The results of these studies show that there are no waters of the United States, including wetlands, located on the project site for the proposed Runway 9-27 extension and the Airport development area.

3.3.2 Significant Environmental Impacts

Based upon CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact with respect to biological resources if the project:

- Substantially degrades the quality of the environment, substantially reduces the habitat of fish or wildlife species, causes a fish or wildlife population to drop below self-sustaining levels, threatens to eliminate a plant or animal community, reduces the number or restrict the range of an endangered, rare, or threatened species;
- Directly or through habitat modifications has a substantial adverse effect on any species identified as a candidate, sensitive or special status species in local or regional plans;
- Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS,
- Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impedes the use of native wildlife nursery sites;
- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or State habitat conservation plan.

The following categories of biological resources were analyzed: (1) Vegetation, (2) Wildlife, (3) Threatened and Endangered Species, and (4) Water Resources.

3.3.2.1 Vegetation

Under the proposed project, approximately 10.5 acres of sagebrush scrub habitat would be removed. Sagebrush scrub habitat is locally and regionally abundant. Therefore, the loss of this habitat type is not considered a significant adverse effect.

No significant natural areas of rare natural communities were located in the project area. Therefore, no impacts to these resources would occur from the proposed project.

3.3.2.2 Wildlife

Sage Grouse

Habitat Loss

The dry meadow east of the approach end of Runway 927 is suitable habitat for sage grouse winter use and summer foraging. (See Appendix I, Figure 2) It could not be determined during the conduct of the Biological survey if sage grouse were using this area as a lek site. [3-13] A small portion of the dry meadow might be removed or disturbed by construction activities for the proposed project. This small area of the dry meadow would also be disturbed by construction of the proposed security fencing.

Although the dry meadow site could potentially be used as a lek, data on lek locations collected for more than 30 years by agency personnel (e.g., BLM, CDFG) and university researchers (e.g., Dr. Robert Gibson, University of Nebraska) indicates that the dry meadow has never been used by sage grouse as a lek. Therefore, the removal or disturbance of a small portion of the dry meadow habitat is not considered a significant impact.

For the proposed project, an eight-foot high security fence would be constructed around the airfield. Although sage grouse could fly over the fence to use the enclosed sagebrush scrub habitat, the fence could inhibit their use of this habitat. However, data from sage grouse at the Jackson Hole Airport indicates that the chain link fence is unlikely to inhibit grouse use of the habitat. During the summer, sage grouse at the Jackson Hole Airport regularly fly over the chain link fence that surrounds the airport to forage in the meadow habitat at the end of the runway. [3-15]

Fencing

Wire fences may adversely affect sage grouse. Sage grouse mortality from colliding into wire strand fences has been documented by BLM biologists. Sage grouse often fly low when moving short distances, and most likely collide into fences in the dark or at low light levels. Thirty-seven sage grouse mortalities were recorded along the cattle fence located north of Lek 2 between April 1997 and February 1999. [3-37] In the Bodie Hills, sage grouse abandoned a lek after construction of a five-strand wire fence adjacent to the lek site in 1995. Sage grouse returned to the lek in fewer numbers after the fence was relocated, but continued to use other areas as strutting grounds. [3-37]

The eight-foot high security fence that would be constructed for the proposed project would create a barrier with greater visibility to sage grouse than the existing barbed wire fence. The new fence would likely reduce potential mortality to sage grouse from bird-fence collisions. Since 1998, no

radio-collared sage grouse (there are 61 collared birds) have collided with the eight-foot high security fence that surrounds the Jackson Hole Airport, nor have any non-collared birds been found next to the fence. [3-15] It should be noted that four collared roosters have collided with overhead power lines, two of these collisions occurred near the Town of Jackson. As noted above, sage grouse regularly fly in and out of the fenced area that surrounds the Jackson Hole Airport.

Aircraft Flight Path

The telemetry data collected from radio-collared sage grouse reveal two areas east of the Airport where grouse detections are concentrated: Section 4 (Lek 2), approximately three miles east of the Airport, and Section 34 (Lek 4), approximately four miles northeast of the Airport (see **Exhibits III-4** and **III-5**).

This information shows where concentrations of grouse were located during breeding season (lek) and depicts historical lek sites. The telemetry data also provides information on areas of grouse use in the winter.

Wind conditions at the Airport dictate the flight direction of arriving and departing planes. Planes coming from the east will sometimes land at the west end of the Airport, and departing planes traveling east will sometimes take off from the west end of the runway. Under both scenarios, the aircraft will fly north over the western portion of Crowley Lake.

Exhibit III-6 and **III-7** show the location of various lek sites in relation with the proposed aircraft flight tracks for arrivals and departures at Runway 27 and Runway 9 respectively. At its closest point to the existing aircraft landing and departure path, Lek 2 is at a distance of 0.5 miles horizontally and 1,500 to 2,000 feet vertically; Lek 4 is approximately at a distance of 1.5 miles horizontally and 1,500 to 2,000 feet vertically; and Lek 9 is approximately at a distance of seven miles horizontally and 3,500 to 4,000 feet vertically. The existing flight paths would remain the same under the proposed project. Impacts to sage grouse leks from the use of the existing aircraft flight paths would not be adverse.

Because of the elevation of the aircraft, and distance between the leks and flight path, disturbance to grouse on Lek 2, Lek 4, and Lek 9 is not likely, particularly if flights are at mid-day when birds would be away from the lek sites. According to Holloran [3-15], once male sage grouse establish a territory on a lek, they exhibit little reaction to disturbance. This behavior likely accounts for the continued use of the lek at the Jackson Hole Airport in Wyoming. However, in other cases, such as the upgrade of haul roads associated with surface coal mining activity in Colorado, males on leks were affected by disturbances. One sage grouse lek that was 164 feet from a road became inactive, and another lek approximately 1/3 mile from a road experienced an 83% reduction in the number of displaying cocks within three years post-upgrade [3-16]. The decline was attributed to the absence of yearling cock recruitment.

While males show less response to disturbance, females do appear more sensitive. One study found that road related disturbance during the breeding season results in lower nest initiation rates and greater distances between lek and nests. [3-17] However, once hens initiate nesting they appear more able to tolerate disturbance. Hens have been recorded nesting in the flight path of aircraft at the Jackson Hole Airport. Two nests were located directly outside the airport security fence in a location where aircrafts fly only 160 feet above ground. [3-15]

Nest initiation rates and the distances females move to establish nests could play a role in the long-term viability of the Long Valley sage grouse population. However, little information on the effect of these factors on grouse populations has been collected. The survival of chicks during their first two weeks might also be a significant factor that affects sage grouse population. A decline in the number of males strutting on a lek would indicate a decline in recruitment of yearling cocks. However, the general trend at the Jackson Hole Airport, as elsewhere in the western states, is a decline in grouse numbers that cannot be attributed to one factor and might be the result of cumulative long term impacts such as drought, habitat loss, and harvesting.

Noise

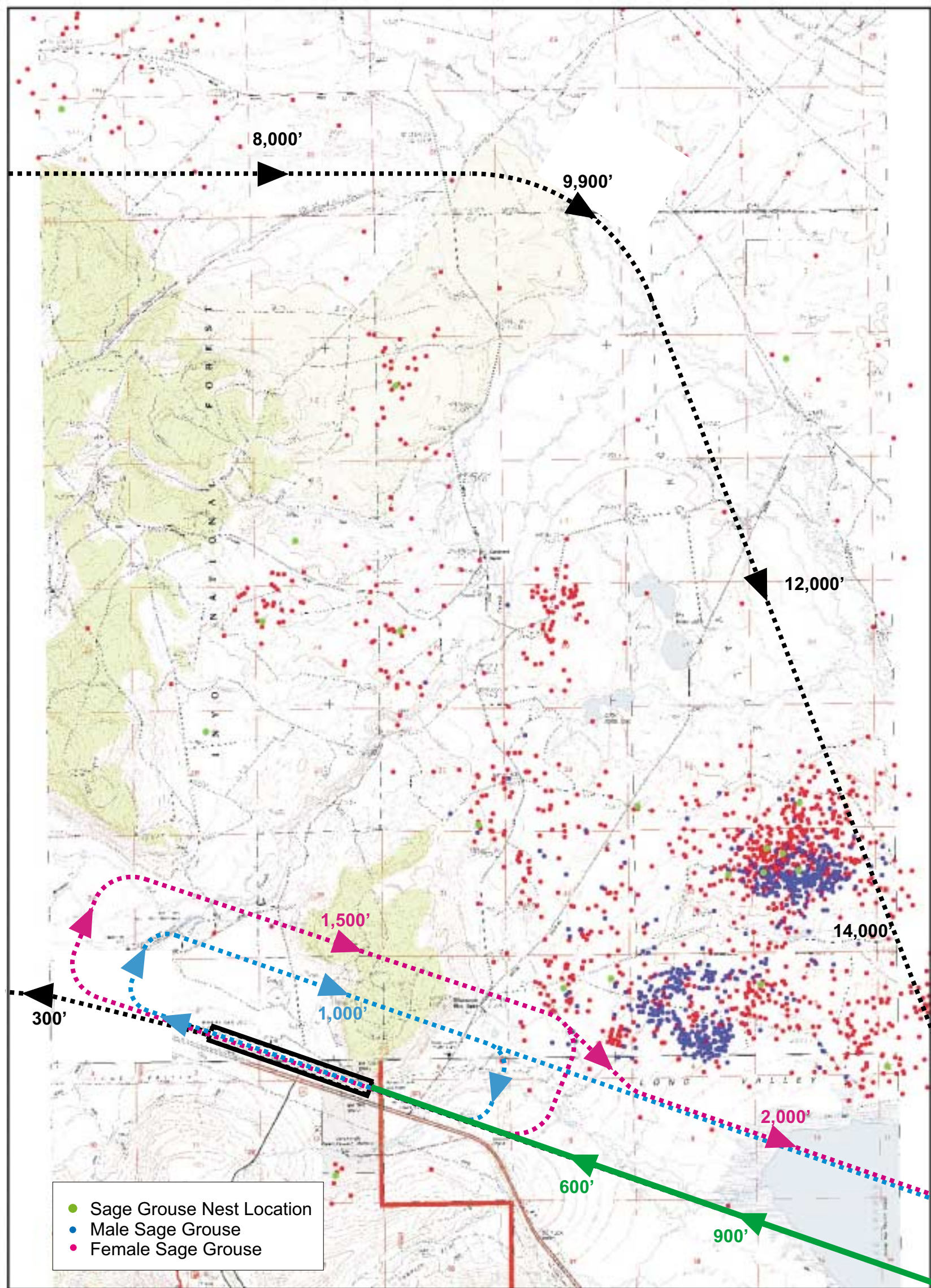
An aircraft noise analysis was also conducted for Leks 2, 7, and 8. Noise levels in the vicinity of Leks 7 and 8, which are north of the Airport, were below 30 CNEL. The air carrier aircraft would not overfly these sites as shown in Exhibits III-6 and III-7. The cumulative aircraft noise level in the vicinity of Lek 2 is anticipated to be CNEL 38 by 2022 with the addition of air carrier operations.

A single-event noise analysis was also conducted for Lek 2. The Lmax metric is "Maximum A level" and represents the estimated maximum audible noise level (i.e., what a person at the site would experience as the maximum noise level) for a single aircraft overflight. The following is a comparison of the Lmax levels at the Lek 2 site for the primary aircraft noise contributors compared with the B-757:

<u>Aircraft</u>	<u>Lmax</u>
Lear 35 business jet	74 dBA
Twin-engine piston prop	73 dBA
B-757-200	68 dBA

The calculations of noise levels were made using the FAA Integrated Noise Model version 6.0. The B-757 aircraft would produce lower single-event noise than aircraft in the existing fleet following existing flight patterns at the Airport. Based on this information, there would be no more significant aircraft noise impact on the lek sites than currently exists under present operations. After project completion, the number of commercial flights would increase from zero to two per day, and are estimated to eventually increase to 14 per day in the year 2022. There are no limits on the number of personal aircraft that can fly into and out of the Airport. It is assumed these numbers would remain the same; therefore, the number of daily commercial flights is not expected to significantly increase disturbance to sage grouse over existing levels.

These conclusions are compatible with information obtained from Wyoming's Jackson Hole Airport, which is also located in a sage grouse habitat and has a lek at the end of the runway, within the security fence. [3-15] The Jackson Hole Airport operates 24 hours per day and personal aircraft can arrive and depart at any suitable time. Operators of variety of personal aircraft use the airport, including operators of Lear jets and Gulf Streams. Commercial aircraft that use the airport include 737, 757, and Brazilia twin engine. The amount of use the airport receives is seasonal. Twenty-eight commercial flights occur each day in summer, including two Boeing 757 flights. Fewer flights occur in winter; no Boeing 757 flights are currently scheduled during winter. The number of commercial flights also decreases during the "shoulder seasons" of spring and fall. The beginning and ending commercial hours of operation remain fairly consistent throughout the year, with the first flight departing at 0615 hours and the last flight departing at 2323 hours. The first arriving flight is at 0900 hours and the last arriving flight is at 2330.



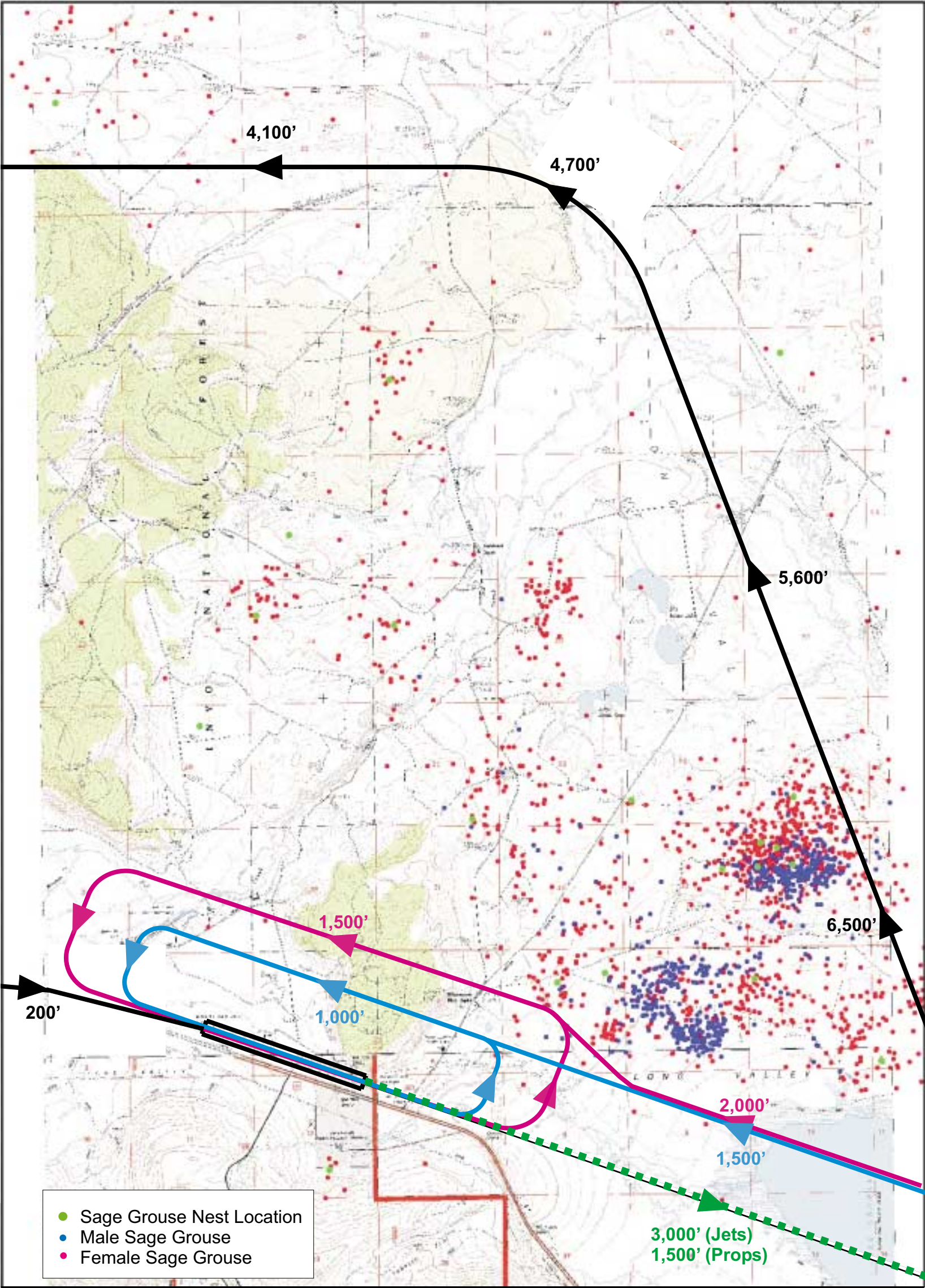
- Proposed Air Carrier Departure
- Multi-Engine General Aviation Departure (Existing and Future Conditions)
- Single-Engine General Aviation Departure (Existing and Future Conditions)
- ➔ Height Above Airport Elevation
- All Arrivals

Source: Base Map- United States Geological Survey; Sage Grouse Data- Robert Gibson, Biologist, University of Nebraska;
Flight Tracks- American Airlines, Mammoth Yosemite Airport, and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-4



Flight Tracks in Relation to Sage Grouse Locations Landing and Departing to the West



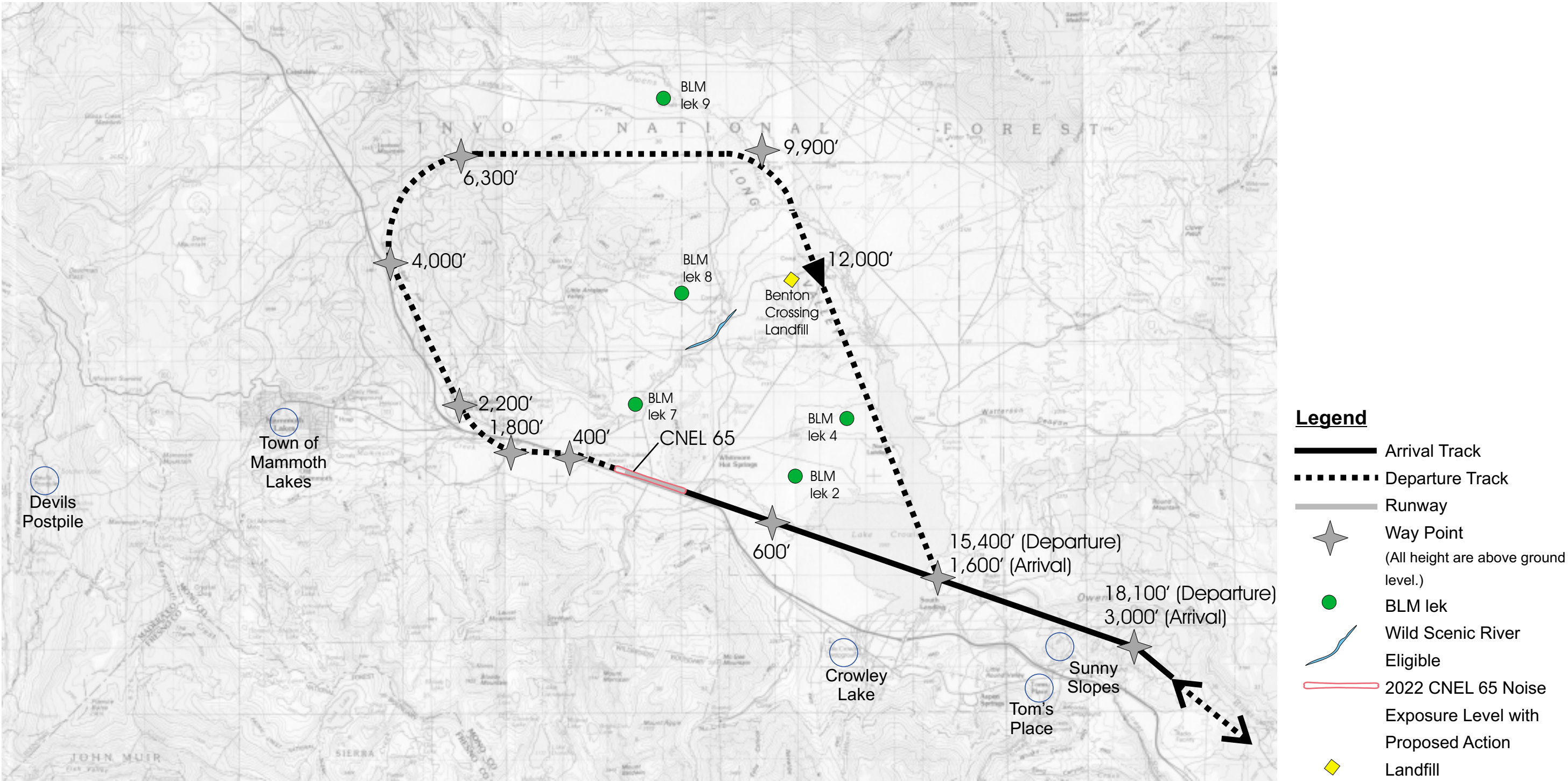
- Proposed Air Carrier Arrival
- Multi-Engine General Aviation Arrival (Existing and Future Conditions)
- Single-Engine General Aviation Arrival (Existing and Future Conditions)
- Height Above Airport Elevation
- All Departures

Source: Base Map- United States Geological Survey; Sage Grouse Data- Robert Gibson, Biologist, University of Nebraska;
Flight Tracks- American Airlines, Mammoth Yosemite Airport, and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-5

↑ north
Scale 1" = 4,700'

Flight Tracks in Relation to Sage Grouse Locations
Landing and Departing to the East



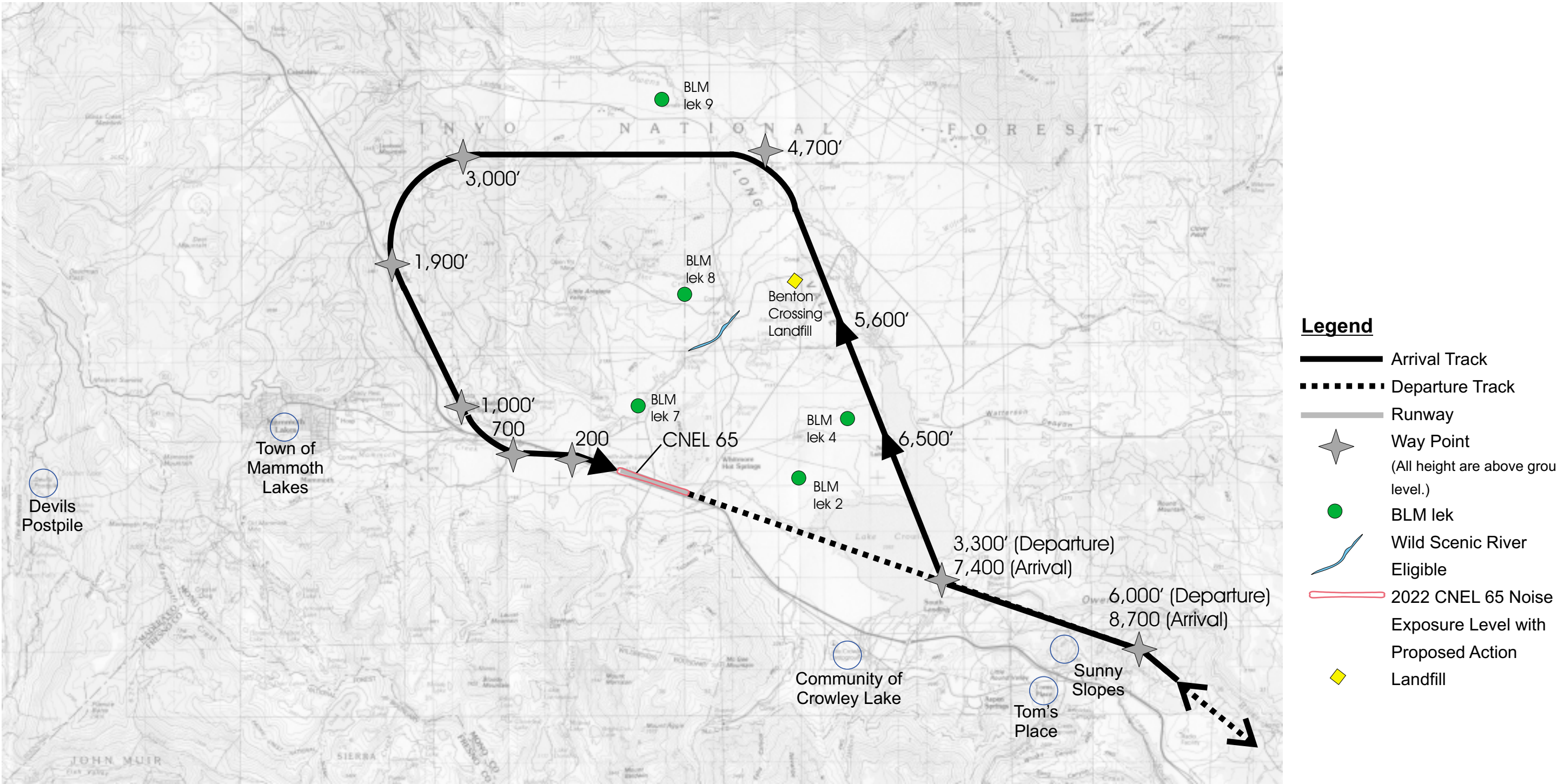
Source: American Airlines Flight Track, Brown-Buntin Associates, Inc. Noise Contours, Bureau of Land Management leks & Wild and Scenic River, Landfill Town of Mammoth Lakes.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-6

↑
north

Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 27



Source: American Airlines Flight Track, Brown-Buntin Associates, Inc. Noise Contours, Bureau of Land Management leks & Wild and Scenic River, Landfill Town of Mammoth Lakes.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-7

↑
north
Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 9

For the month of April, 13 daily commercial flights are scheduled. Early planes arrive when male grouse are on the lek, at 0615, 0710, 0755, 0813, and 0941 hours. Observations of sage grouse at the Jackson Hole Airport indicate that males are not easily disturbed by aircraft noise while on a lek. Males on the lek at the end of the runway at Jackson Hole Airport will stay on the lek while jet aircraft are performing preflight engine “run-up” tests.

The Jackson Hole Airport has never implemented flight restrictions to protect grouse on leks from aircraft disturbance. In some years, morning commercial flights have been scheduled after strutting males have departed the lek for day use areas, although grouse returning to the lek in late afternoon may be present during aircraft operations. Sage grouse using the Airport area are apparently accustomed to potential disturbance factors related to normal airport operations. Sage grouse have used the Jackson Hole Airport area for strutting activities for over 40 years and have adapted to the development of the Airport as evidenced by the long history of attendance at the site. [3-18] The majority of the mating activity within Jackson Hole Airport property occurs in an area that is over flown by aircraft during landing and takeoff.

Modifications of sagebrush habitat used by sage grouse often lead to reduced bird numbers, most likely because sage grouse are specific in their habitat requirements and cannot tolerate serious alterations of use areas. [3-18] The Jackson Hole Airport lek is somewhat unique in its ability to withstand development pressure. The majority of suitable sage grouse habitat in the Jackson Hole area occurs within the boundary of Teton National Park, which surrounds the Airport. The Park land in the vicinity of the Airport consists of sagebrush scrub. This land has minimal disturbance in the form of recreation, roads, and cattle grazing.

The elevation above ground level of aircraft along the flight path near grouse use areas when operating north of the Airport would be 7,400 descending to 4,700 feet for arriving aircraft as depicted in Exhibit III-6 and 9,900 feet climbing to 15,400 feet for departing aircraft as depicted in Exhibit III-7. Based on these aircraft horizontal and vertical locations, the noise generated by the aircraft is unlikely to increase disturbance to the grouse.

Using the information on Airport use from Jackson, Wyoming, the distance of the flight path from the lek sites, aircraft noise analysis and discussions with Mr. Holloran, it is unlikely that the proposed project would affect sage grouse by causing a disturbance that would lead to a reduction in the local population. Therefore, no significant impact to sage grouse or their habitat is expected to occur as a result of the introduction of commercial aircraft service at Mammoth Yosemite Airport.

Mule Deer

Increased Light, Noise, Airport and Vehicle Traffic, and Human Disturbance

Light emissions could increase somewhat under the proposed project as a result of the increased number of runway lights over the length of the proposed runway extension, airfield apron lighting and parking lot lights. However, the existing ramp lights would be replaced with new state of the art shielded lights, and the new lights would be shielded as well. Since the lights would be shielded, minimal light would be visible offsite. In addition, the lights would be oriented so that there was no direct light shining up into the sky. The additional light emissions would be insignificant and would not adversely affect mule deer use of adjacent habitat.

The increased noise due to additional aircraft landing and departures, and motor vehicle use as a result of the proposed project could disturb sensitive individuals who might be forced farther away from the project area. Some deer use the surrounding habitat for summer habitat foraging, it is assumed that these individuals are adapted to the disturbed nature of the project site and its environs.

The proposed project would generate approximately 898 daily trips and 158 p.m. peak hour trips. Seventy-nine vehicles (shuttles, taxis, buses etc.) would be entering and exiting the Airport once during the p.m. peak hour; each would have an inbound and outbound trip, for a total of 158 trips. The increased vehicle traffic on Airport Road and Hot Creek Hatchery Road would increase the potential for deer vehicle mortality. Proposed mitigation measures would reduce the potential impacts.

The increased use of the project area by people arriving and departing on aircraft would not adversely affect mule deer. It is assumed that people would use the Airport facilities, and would not venture into the unimproved habitat that surrounds the Airport.

Fencing and Habitat Loss

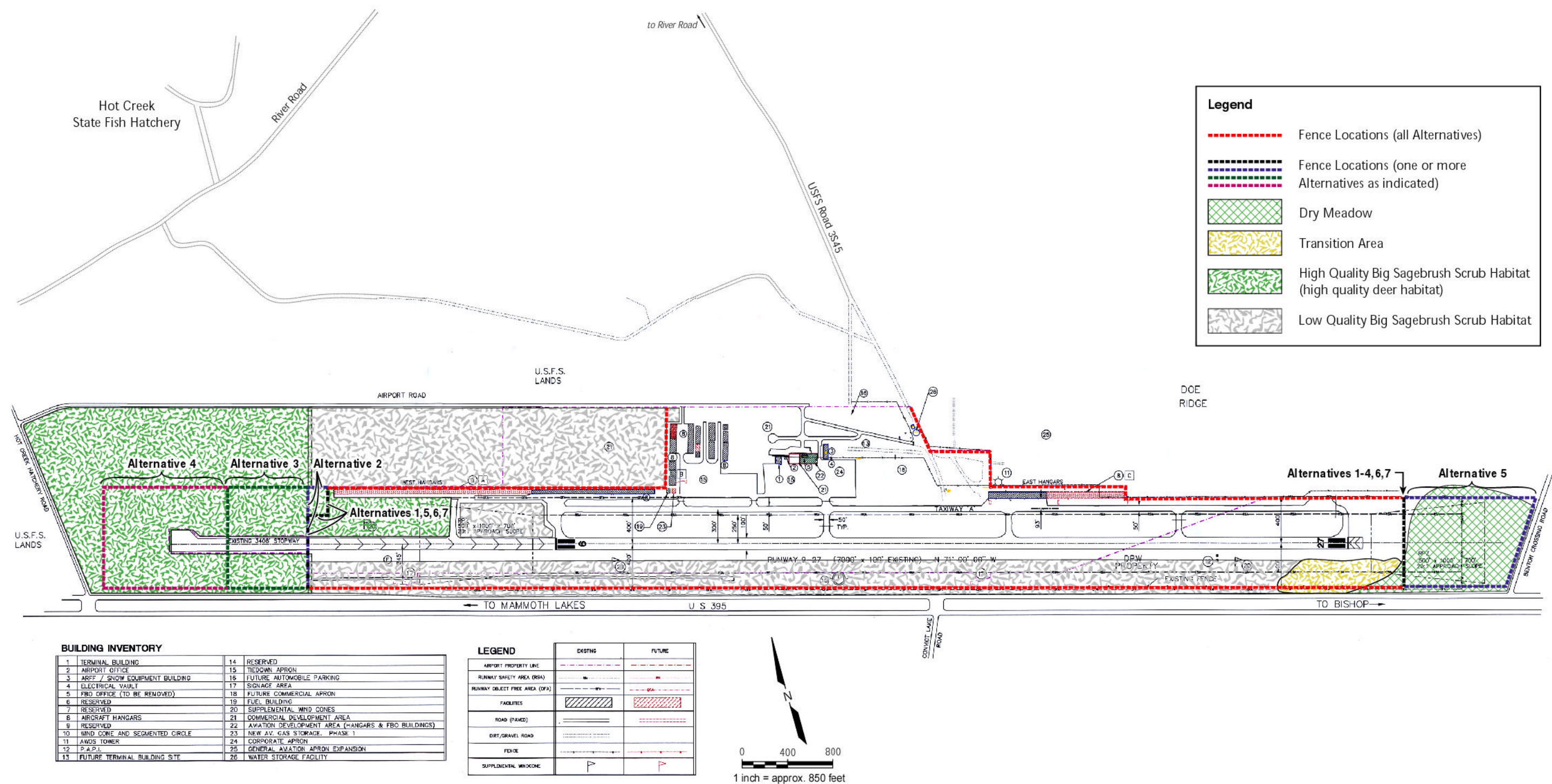
An eight-foot high perimeter security fence would be constructed around the airfield for the proposed project. The FAA Advisory Circular 150/5200-33 Hazardous Wildlife Attractants on or Near Airports [3-19] considers deer hazardous wildlife because they have been associated with wildlife-aircraft strikes. Deer were responsible for 11 percent of the reported damaging strikes to civilian aircraft in the United States between 1993 and 1995. The security fence would reduce wildlife incursions on the runway and taxiway system, thereby increasing aircraft safety.

The eight-foot high security fence would eliminate mule deer use of 9.5 acres of high quality big sagebrush scrub. The location of the fence and the affected deer habitat for the proposed project, Alternative 2, is depicted in **Exhibit III-8**.

The proposed project is not expected to directly impact mule deer migration. The migration corridor for mule deer from the Round Valley herd follows the base of the Sierra Nevada escarpment and passes immediately south of the Mammoth Yosemite Airport. Heavy fall use by deer from this herd occurs west of the Airport in the vicinity of Hot Creek Road, and south and east of the Airport towards Whitmore Road.

The deer migrate north from their winter range in Round Valley and cross the Sierra Crest at four locations. The Hopkins Pass herd segment diverts from the main migration corridor south of the project area near the McGee Creek drainage. The three other herd segments migrate across various passes from the Sherwin Holding Area, which is located on the south side of U.S. Highway 395 from the project area. [3-20] The migratory movements of some deer from the Casa Diablo herd occur across Doe Ridge and continue towards their summer range near June Lake.

Establishment of the security fence around the Airport could disrupt some migratory movements in the vicinity of the Airport. Deer that move from the north to the south would be deflected either east or west of the Airport before crossing U.S. Highway 395. In this case, no additional crossing of U.S. Highway 395 by deer would occur from installation of the security fence. However, the location where some deer cross the highway might be moved to either end of the Airport rather than occurring in the section of U.S. Highway 395 adjacent to the Airport.



Source: Jones & Stokes, Inc.
Prepared by: Ricondo & Associates, Inc

Exhibit III-8

Security Fencing and
Deer Habitat Locations

Deer that cross U.S. Highway 395 from the south to the north in the area adjacent to the Airport would encounter the security fence within approximately 100 feet of the highway. The deer could move parallel to the fence and west to continue their northward movement, or they might cross back over U.S. Highway 395 in order to move north around the Airport. In the latter case, there may be an increase in the number of deer crossings of U.S. Highway 395. This may result in increased deer mortality through encounters with traffic on U.S. Highway 395 adjacent to the Airport.

From 1990 through 2000, a total of 169 deer were reported killed by Caltrans workers along the highway's length from mile post 0.0 to 26.5 in Mono County. Eighteen deer were killed in the vicinity of the project area, from mile post 20.4 to 22.7, which represents 10.6 percent of the deer struck over the ten year period. For the same linear distance of 2.3 miles, 35 deer, or 20.7 percent, were killed south of the project area (mile post 18 to 20.3), and 16 deer, or 9.5 percent, were killed north of the project area (mile post 22.8 to 25.1). Therefore, approximately one to two deer per year are killed by vehicles adjacent to the project area. The number of fatalities and locations (mile posts) represent incidents reported to Caltrans biologists by Caltrans maintenance workers. Certain caveats apply to the data. For example, deer can be fatally struck by a car but still be able to leave the vicinity of the highway system and are therefore, never recorded by Caltrans workers. Complete reporting of all deer removed from the highway by maintenance workers cannot be assumed. The number of dead deer reported at the mile posts does not necessarily reflect migratory crossings of U.S. Highway 395. Topographic features near the highway could cause an increase in deer collisions. The relatively few collisions reported in the vicinity of the project area could be related to the level landscape, which provides motorists with a clear view of the surrounding area.

The number of deer that migrate across U.S. Highway 395 adjacent to the Airport appears to be a small percent of the total number of deer that migrate across U.S. Highway 395 in southern Mono County. Therefore, the potential increase in deer crossings of this area due to the security fence would be limited and less than significant. In addition, the proposed mitigation measures, presented in Section 3.3.3.2, would reduce the potential impacts.

Raptors

A total of seventeen species of diurnal raptors may be found in the Long Valley area. [3-6] These are listed in Table III-14 along with their migration patterns. The bald eagle, Swainson's hawk, and peregrine falcon are listed as threatened or endangered by the State of California or the USFWS. (California Resources Agency, January 2001)

Bird Strikes

Impacts to raptors could result from either collisions with aircraft, or from disturbance caused by aircraft, which would result in a change in raptor behavior. A review of the literature ([3-21], [3-22], [3-23], [3-24]) indicated that aircraft overflights may affect raptors. The most significant effects appear to be at close distances (< 500 feet above ground level) with almost no effect at 2,000 feet or more. No significant effect on nesting or reproductive success was reported in previous analyses as a result of overflights. Other effects included flushing and taking advantage of disturbed prey species for foraging, as well as others. Overall, cited effects to raptors were transient, and did not result in long term behavior changes.

Reports on raptor use in proximity to airports indicate that if an airport installs fences, powerpoles, and similar objects, raptors will use these sites to perch. If the proposed project creates additional

perch sites, it could result in increased raptor use of the site and thus increase the potential for collisions. The proposed mitigation measures would reduce the potential impacts.

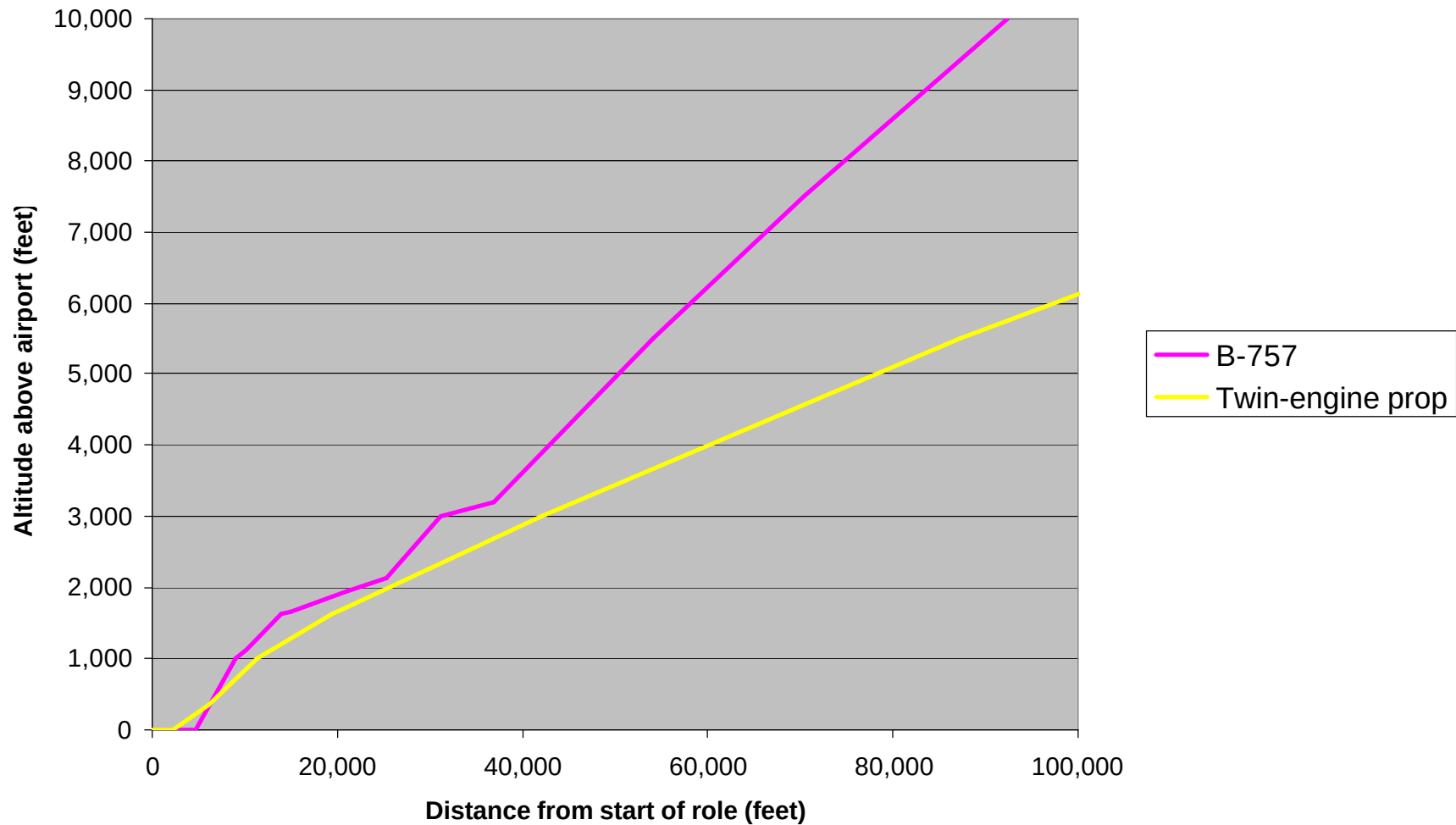
The proposed project site and surrounding area (Long Valley) are not generally considered to have high bird density for an airport in California. Sagebrush scrub is reported to have lower bird densities than other habitat types, such as riparian, wetland, and woodland habitats. The project site and adjacent area lacks substantial riparian habitat compared with other airports in California. Bird densities in the region (e.g., Laurel Pond, Crowley Lake, Mono Lake and Owens River) may increase during winter due to increased waterfowl use, although most of this use is by diving waterbirds, whose abundance decreases as snow and ice accumulate on the local water bodies.

The proposed project would not cause a substantial reduction in local populations of raptors, waterfowl, or other bird species. In general, bird strikes do not constitute a significant source of mortality for bird populations. For example, between 1990 and 1999, an annual average of only 27,433 birds were reported to have collided with civil (i.e., nonmilitary) aircraft in the entire United States (FAA 2000). Based upon FAA statistics (Terminal Area Forecasts), there were an average of 112.6 million civil aircraft operations per year in the U.S. from 1990 through 1999. This correlates to one reported bird strike for every 41,050 operations, roughly five times the annual operations level projected at Mammoth Yosemite Airport in 2003 and twice the annual operations level projected for 2022. Although the nationwide incidence of bird strikes may not directly correlate with the proposed project, the data strongly suggest that bird-aircraft collisions are generally infrequent events.

There have been no reported bird strikes at the Mammoth Yosemite Airport in the last ten years (Federal Aviation Administration 2000). This is likely the result of several factors, including a limited amount of aircraft traffic, low densities of birds, and a lack of weather conditions, such as fog, that tend to increase the risk of bird strikes. The proposed project is projected to result in air carrier aircraft operations initially generating two daily flight operations (takeoffs and landings), increasing to 14 daily operations in 2022. Takeoffs and landings are important when discussing bird strikes because 79 percent of reported bird strikes between 1990 and 1999 occurred below 1,000 feet above ground level; of these, 40 percent occurred on the ground (Federal Aviation Administration 2000). The class of aircraft was not evaluated separately from the FAA's bird strike data. However, the proposed air carrier aircraft has a steeper takeoff path and higher cruising altitude than the majority of small aircraft currently using the Airport as shown on **Exhibit III-9**. Consequently, the proposed air carrier aircraft would spend less time at low altitudes where bird strikes are most likely.

Individual resident birds would be at potentially greater risk from aircraft collisions than would migratory species because of the greater amount of time they are present near the Airport. When both resident and migratory birds are present (i.e., during spring and fall); however, they would be exposed equally to aircraft during the day. Most bird strikes (74 percent) occur during the day and twilight (Federal Aviation Administration 2000). Migratory birds would be exposed to greater risk because they typically migrate during the evening; however, this risk would be reduced because the proposed project would primarily result in an increase in flights during the day. Flights during the evening would account for a very small percentage of the increase in overall flights from the Airport.

To assess bird strikes at the Mammoth Yosemite Airport, Beale Air Force Base (AFB) data were examined. Beale AFB is very different from the Mammoth Yosemite Airport as it is located in the Central Valley just east of Marysville, California, which is considered one of the most heavily used portions of the Pacific Flyway. Beale AFB is located in a region dominated by rice production, and is



Source: Federal Aviation Administration, Integrated Noise Model version 6.0b
Prepared by: Ricondo & Associates, Inc.

Exhibit III-9

Departure Profile Comparison

in close proximity to the Yuba River, Feather River, Bear River and the Butte Sink wetland. High densities of waterfowl, raptors, and passerine birds travel through this region. Information recorded on Bird Aircraft Strike Hazard incidents at Beale AFB between 1985 and 1995 indicates that an average of 25 bird-aircraft collisions have occurred annually over the 10-year period as shown on **Exhibit III-10**. Sparrows comprised the majority of birdstrike incidents (27 percent). A large percentage of the flying hours included training missions with repeated touch-and-goes at the Base, where collisions are more likely to occur. [3-24] Beale AFB has a high level of annual aircraft use compared with Mammoth Yosemite Airport; however, the annual bird strikes at Beale AFB are very low.

Given the relatively infrequent occurrence of bird-aircraft collisions in areas with substantially higher bird populations, the lack of any bird strikes at Mammoth Yosemite Airport in the last ten years, the small increase in flight operations, the limited amount of time that air carrier aircraft are at low altitudes, the overall low bird densities at the proposed project site and project vicinity, and the ability of populations to sustain low levels of annual mortality without a long-term effect, the proposed project will not result in a significant effect to local and migratory bird populations.

Disturbance to Nesting Raptors

Disturbance to nesting raptors from the proposed project has been cited as a concern for a potential adverse effect. It was suggested that increased aircraft traffic along the approach and departure routes could create additional disturbance during breeding and nesting periods, which occur from about March 1 to mid summer. Such disturbance might preclude successful reproduction for raptors sensitive to this type of disturbance. Of the 17 species of raptors present in the Long Valley area, eight are resident species that might nest in the vicinity of Long Valley. Based upon the analyses below, no significant effects on raptors are expected.

Of the eight raptor species, suitable nesting habitat is not present in the project area for the following seven species: northern harrier, Cooper's hawk, sharp-shinned hawk, northern goshawk, prairie falcon, red-tailed hawk, and golden eagle. The American kestrel, could potentially nest in the project area. American kestrels are cavity nesters. Except for the landscape trees associated with the Airport, no trees (or wooden fence posts) suitable for American kestrel nesting are present in the project area. Additional suitable nesting habitat for American kestrels is located in the forest habitat on Doe Ridge, approximately one mile east of the project area, and in the riparian habitat associated with Hot Creek, which is located approximately one mile north of the Airport. The proposed air carrier flight path does not pass over these areas, although the existing flight paths do pass over this potential nesting habitat. Therefore, nesting American kestrels are unlikely to be adversely affected by the proposed project.

Northern harriers nest on the ground in a variety of sites, but typically nest in marshes or near water. Suitable marsh habitat is not present in the project area. Although this species could potentially nest in the dry meadow located at the eastern end of the runway, nesting habitat with preferred habitat characteristics is common in the general region. Suitable nesting habitat for this species is present two miles east of the Airport near Whitmore Hot Springs, four miles east near Lake Crowley, and four miles northeast in the vicinity of the alkali lakes. No northern harriers have been recorded nesting in the project area. Because the proposed air carrier flight paths are more than one mile above ground level over potential northern harrier nesting habitat, no adverse impacts to nesting success of this species are expected.

The Cooper's hawk, sharp-shinned hawk, and northern goshawk nest in forest habitat. In addition to forests, the Cooper's hawk sometimes nest in forest edges and river groves. Potentially suitable nesting habitat for Cooper's hawk is located in similar areas as that described for the American kestrel. Preferred nesting habitat for both the sharp-shinned and northern goshawk is older-age coniferous, mixed, and deciduous forest habitat. Northern goshawk nesting habitat is characterized by dense canopy closure (50-90%) with mature timber. The closest suitable habitat for these species is located approximately two miles west and northwest of the project area, and south of the project area in the densely forested habitat associated with the Sierra escarpment. Although these two species could fly over the Airport, suitable foraging habitat is not present. The proposed air carrier flight paths do not pass over their potential nesting habitat, nor do they pass over potential Cooper's hawk nesting habitat. Therefore, nesting sharp-shinned hawks, northern goshawks, and Cooper's hawks are unlikely to be adversely affected by the proposed project.

Suitable nesting habitat for prairie falcons is protected cliff ledges. No suitable habitat for this species is present in or immediately adjacent to the project area. The nearest suitable habitat is located in Hot Creek, approximately two miles north of the Airport and in the Owen River Gorge, more than ten miles southeast of the Airport. Red-tailed hawks and golden eagles use similar nesting habitat, although they will also nest on crags and in trees. Potential crag nesting habitat is located in the Owen River Gorge and in Hot Creek. Potential tree nesting habitat is located east on Doe Ridge, two miles west in the forest hills, and south of the project area along the Sierra escarpment. The proposed air carrier flight paths do not pass over these habitats, although the existing flight paths do pass over some of these locations. Therefore, the proposed project is unlikely to adversely affect nesting prairie falcons, red-tailed hawks, and golden eagles. These three species could potentially forage in and near the project area. However, the Airport and its immediate surroundings do not contain key foraging habitat for any raptor species, and given the elevation the air carrier aircraft would be flying, the project is not likely to adversely affect foraging habitat for raptors.

Other Wildlife

Based on the regional abundance of sagebrush scrub habitat, lack of preferred habitat characteristics, and lack of recorded sightings, the minor loss of sagebrush scrub habitat associated with the proposed project does not represent a significant loss of habitat for the white-tailed hare or the pygmy rabbit. The minor loss in extent of sagebrush scrub habitat associated with the proposed project does not represent a significant loss of foraging or roosting habitat for the following special status wildlife species: northern harrier, golden eagle, loggerhead shrike, spotted bat, and Townsend's western big-eared bat.

Although osprey, sharp-shinned hawk, Cooper's hawk, and California gull may occasionally fly over the project site, the minor loss in extent of sagebrush scrub habitat associated with the proposed project does not represent a significant loss of foraging habitat for these species.

No actions associated with the future operation of the proposed project would be expected to further reduce habitat suitability for any of the species discussed above. For these reasons, there is no potential for significant adverse impacts on the above-cited species from the proposed project.

Exhibit III-10

Species/Group ¹	Number of Air Strikes	Summary Group
Pied-billed grebe	1	Nonwading Waterbirds
Great egret	1	Waders
Canada goose	2	Nonwading Waterbirds
American wigeon	3	Nonwading Waterbirds
Duck	1	Nonwading Waterbirds
Mallard	4	Nonwading Waterbirds
Northern pintail	1	Nonwading Waterbirds
Hawk	2	Hawks
Red-tailed hawk	3	Hawks
American kestrel	1	Falcons
Falcon	1	Falcons
Gull	1	Nonwading Waterbirds
Mourning dove	2	Other
Barn owl	3	Owls
Owl	1	Owls
Western screech-owl	1	Owls
Swift	1	Other
Swallow	5	Perching birds
European starling	8	Perching birds
Sparrow	17	Perching birds
Western tanager	1	Perching birds
Blackbird	1	Perching birds
Red-winged blackbird	1	Perching birds
Western meadowlark	4	Perching birds
Subtotal	66	
Unknown species	179	
Total	245	

¹Bird species or group data were provided by Beale Air Force Base 9th Reconnaissance Wing Safety Office.

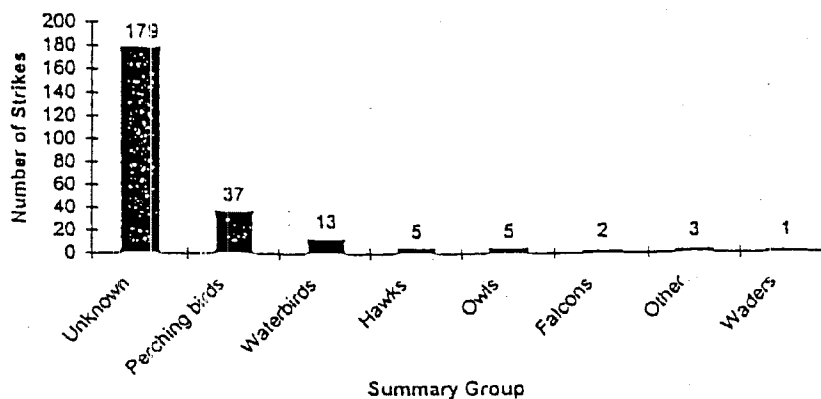


Figure 6. Number of Bird Strikes by Bird Group at Beale AFB between January 1985 and October 1995.

3.3.2.3 Threatened and Endangered Species

A project is considered to have a significant impact to endangered and threatened species if the project has a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

Jones and Stokes evaluated the proposed project's potential direct and indirect impacts on federally listed species in the Biological Assessment (BA) prepared for the project. A summary of these potential impacts for the listed species is given below. The report is attached as Appendix I.

The direct impacts are caused by the expansion of the runway, placement of the fence around the Airport, and direct disturbance to these species. Indirect effects of the proposed project include potential contamination of ground water from accidental fuel or chemical spills; ground water pumping at the Airport; potential plane crashes into Hot Creek headsprings or the fish hatchery, which result in fuel spills and ground water contamination; potential fuel spill risk associated with fuel trucks traveling to the Airport; and the potential increase or decrease in the number of automobile travelers on U.S. Highway 395 as a result of a change in travel patterns to the ski resort from automobiles to aircraft.

Vegetation

The three endangered plant species that could potentially occur in the vicinity of the airport, Long Valley milkvetch (*Astragalus johannis-howellii*), Mono milkvetch (*Astragalus monoensis* var. *monoensis*), and Mono Lake lupine (*Lupinus duranii*), were not located during the field surveys. Therefore, the proposed project would not directly or indirectly affect these species.

Peregrine Falcon

The peregrine falcon has not been reported to occur at the Airport site, but may occasionally forage or roost at the site. Therefore, it would be at lesser risk than resident birds in the project vicinity as discussed in the previous section. The minor loss of sagebrush habitat associated with the proposed project does not represent a significant loss of habitat for this species based on the regional abundance of this habitat type. Therefore, the proposed project is not expected to adversely affect the peregrine falcon.

Wolverine

Suitable habitat for wolverines is not present in the project area or vicinity. Wolverines are locally and regionally scarce, and no observations of this species in or near the project area have been recorded. Therefore, the proposed project would have no direct or indirect effects to the wolverine.

Owens Tui Chub

Construction activities at the Airport would be confined to the Airport runway area. No disturbance to designated critical habitat or other habitat occupied by the Owens tui chub would occur as a result of the project. Therefore, the project would have no direct effect on the Owens tui chub or its habitat.

Ground water flows travel in an easterly direction throughout the project vicinity. The Hot Creek headsprings are located northwest of the Airport. Thus, neither ground water flow or water quality would be affected by Airport operations. Fuel trucks traveling to the Airport would turn off Hot Creek Hatchery Road onto Airport Road. The fuel trucks would not travel past the Hot Creek

Hatchery, which is located approximately 0.75 miles north of the Airport. The probability of an accidental fuel spill from a fuel delivery truck crash is extremely remote. In the unlikely event of a spill along the travel route and if the spill migrated to the ground water, ground water flow would carry any seepage away from the Hot Creek Hatchery springs. Therefore, the project would have no indirect effects on the Owens tui chub or its habitat in relation to ground water.

The biological opinion issued by the USFWS on July 23, 2001 (included as Appendix J) found that the FAA's funding and approval of the Airport expansion, as proposed, is not likely to jeopardize the continued existence of the Owens tui chub and is not likely to destroy or adversely modify designated critical habitat.

The FAA and the Town of Mammoth Lakes have proposed some measures to monitor contamination from Airport operations in surface and ground water and to contain these chemicals during chronic and catastrophic spills. In addition, the project proponents would be subject to and would comply with applicable State and federal regulations to protect surface and ground water.

Lahontan Cutthroat Trout

Construction activities at the Airport would be confined to the Airport runway area and no disturbance to habitat occupied by the Lahontan cutthroat trout would occur as a result of the project. The closest Lahontan cutthroat population is more than six miles from the project site. Therefore, the project would have no direct effects on the Lahontan cutthroat trout or its habitat.

As discussed for the Owens tui chub, ground water flows travel in an easterly direction throughout the project vicinity. because O'Harrel Canyon Creek is more than six miles northwest of the Airport, and is located on the other side of the valley, neither ground water flows nor water quality could be affected by Airport operations.

The flight path at the Airport is approximately two miles from the closest population of Lahontan cutthroat trout. At the closest point to the cutthroat populations, the proposed jet aircraft would be flying at an altitude of 10,000 feet above the ground on departure and 5,000 feet on approach. The potential for an aircraft to crash into O'Harrel Canyon Creek and affect water quality is extremely remote. Therefore, based on the distance of the closest population of Lahontan cutthroat trout from the Airport, and the direction of water flow in Long Valley, the proposed project is unlikely to have any indirect, adverse effects on the Lahontan cutthroat trout or their habitat.

Bald Eagle

Bald eagles do not nest in the project area or its vicinity. During the winter months, up to six bald eagles have been observed at one time within one mile of the project site. Winter use of the project vicinity by bald eagles is largely concentrated north to northeast of the project site and outside the flight path for aircraft. Bald eagles in the vicinity of the project area occur primarily along Hot Creek, the alkali ponds, Laurel Pond, and Crowley Lake Reservoir.

The closest potential roosting area (Hot Creek gorge) is approximately two miles from the project site. No roost sites are known to occur at the project site. The closest likely roost site to the Airport is near Alpers Fish Hatchery, more than seven miles northwest of the project site and outside the aircraft flight path. Bald eagles have been reported perching on telephone poles and sagebrush at the Hot Creek Fish Hatchery, approximately 0.75 mile from the project site. No additional perch areas have been identified in or near the project site.

The proposed project would remove big sagebrush habitat, which may eliminate bald eagle roosting habitat. Because the removal would occur in areas adjacent to areas where existing Airport activity occurs, it is unlikely to disrupt roosting activity in the vicinity of the project area. The habitat type is locally and regionally abundant; therefore, the loss of potential sagebrush roosting habitat would have a negligible effect on bald eagles.

Construction at the Airport is scheduled to occur in summer when bald eagles are not generally present in the project vicinity. Therefore, construction-related activities to expand the Airport runway are unlikely to directly affect the bald eagle.

As described earlier in Section 3.3.2.2 (Bird Strikes), takeoffs and landings are important when discussing bird strikes, including bald eagles. Between 1990 and 1999, 79 percent of reported bird strikes occurred below 1,000 feet above ground, of which 40 percent occurred on the ground.

The class of aircraft was not evaluated separately in the FAA's bird strike data. However, the class of plane in the proposed project, air carrier jet aircraft, has a steeper takeoff path and higher cruising altitude than the majority of small planes currently using the Airport. Thus, the class of plane for the proposed project would spend less time at low altitudes where bird strikes are most common.

Disturbances and response characteristics for 3,122 bald eagle-plane interactions among three types of aircraft (light plane, jet aircraft, and helicopters) were assessed during a study conducted in Arizona (1983-1985) and Michigan (1989-1990). [3-26] The distance of the aircraft to the bald eagles was the most important factor related to disturbance. Bald eagles showed minimal flight response (96 percent were reported not disturbed in Arizona; 95 percent were reported not disturbed in Michigan) when the median distance to aircraft was greater than 1,150 feet. In terms of the proposed project, the closest distance to the nearest potential bald eagle perch site on Hot Creek is 3,960 feet, which is more than twice the distance that showed minimal flight response to in the 1997 study. During the study, no apparent bald eagle strikes occurred.

No bird strikes for any species have been recorded at the Mammoth Yosemite Airport in the last ten years. Aircraft departures and arrivals at Mammoth Yosemite Airport have a low likelihood to strike bald eagles. The proposed project is unlikely to result in any incidental take of bald eagles for the following four reasons: (1) bald eagles occur in low numbers in the project vicinity; (2) the primary locations used by bald eagles are outside the aircraft flight path; (3) the small increase in flight operations; and (4) the limited amount of time the planes are at low altitudes.

Because bald eagles occasionally roost near the project site (Hot Creek) and forage in the project vicinity, the chance of a bald eagle injury or mortality from an aircraft strike, however remote, cannot be ruled out. Therefore, the proposed project may affect, but is not likely to adversely affect, the bald eagle. The project would not affect any designated critical habitat for the bald eagle. No indirect effects on bald eagles, their habitat, or prey are expected to occur as a result of the proposed project.

Sierra Nevada Bighorn Sheep

Utilizing the existing flight path, the closest the air carrier aircraft could come to known Sierra Nevada bighorn sheep habitat is three miles. Jet aircraft would fly at an elevation of approximately 5,000 feet above the runway elevation, 2,500 feet above runway elevation on departure, and 2,500 feet above runway elevation on approach for the portion of the flight path that is closest to the sheep

population. Based on the large distance and elevation of planes approaching and departing from Mammoth Yosemite Airport to the bighorn sheep use areas, it is unlikely that bighorn sheep would be affected by jet aircraft. Therefore, the proposed project would not directly affect the Sierra Nevada bighorn sheep.

Potential indirect effects on Sierra Nevada bighorn sheep include disturbance to sheep and avoidance of preferred use areas due to an increase in the number of tourists arriving by jet aircraft to the Mammoth Lakes area and backpacking into the high Sierras where bighorn sheep occur. However, this indirect effect is unlikely to occur due to the location of the bighorn sheep use areas. The sheep primarily use USFS lands that are designated wilderness areas. The USFS strictly controls the number of back-country permits that are issued for wilderness area travel. The potential increase in the number of tourists arriving at the Mammoth Lakes area would have no effect on the quota of back-country use permits issued by USFS. In addition, to further reduce potential disturbance to sheep the USFS does not permit entry into some bighorn sheep use areas in the Sierra Nevada between July 1 and December 15. Therefore, the proposed project would not indirectly affect Sierra Nevada bighorn sheep or their habitat.

3.3.2.4 Water Resources

Wetlands

A project is considered to have significant impact to wetlands if the project has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

A Jones and Stokes Associates biologist conducted a botany field survey of the project site on June 16, 2000. One of the intents of the field survey was to determine the presence or absence of “Waters of the United States” on the project site including wetlands. Review of the site was conducted in accordance with the United States Army Corps of Engineers’ (Corps) Wetlands Delineation Manual (Environmental Laboratory 1987).

The field survey determined that the site did not contain any jurisdictional wetlands. While the survey did identify non-jurisdictional dry meadow habitat, it was determined that the site “lacks primary or secondary indicators of hydrology and therefore does not meet the definition of a jurisdictional wetland.” [3-13] If a field survey conducted by a qualified biologist determines that no wetlands are present, verification from the Corps is not required. Therefore, no written concurrence was requested or received.

The proposed project would have no effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Therefore, no significant impacts to wetlands would occur as a result of the proposed project.

3.3.3 Mitigation Measures

3.3.3.1 Vegetation

No special status plant species, Significant Natural Areas, or Rare Natural Communities were identified in the project area. Therefore, no mitigation measures are required.

3.3.3.2 Wildlife

Although the proposed project and alternatives would not significantly impact biological resources; however, the following mitigation measures are proposed to minimize any impacts that may result from the proposed project and alternatives.

Sage Grouse

- 1) The security fence installed around the runway would be constructed of chain link fence, which should be more visible to sage grouse than single-strand barbed wire (rangeland) fences. No barbed wire would be located at the top of the fence. Fence posts would have rounded or pointed caps to discourage use by raptors and ravens as perch sites. The portion of the fence situated along the north side of the runway, and east and west of existing buildings, would be constructed using methods developed in consultation with the USFS and CDFG to ensure that the fence be visible to grouse. The portion of the fence located along the south side of the runway (adjacent to U.S. Highway 395) would not include any additional fencing material to make it more visible to grouse. The effectiveness of the fence design for reducing raptor and raven perching would be monitored.
- 2) The number of acres of sagebrush scrub winter habitat lost as a result of implementing the proposed project would be mitigated off site via the mule deer habitat restoration. The revegetation plan for the restoration is partially described under mule deer mitigation and fully described in Appendix K.

Mule Deer

- 1) To reduce the potential for deer mortality from aircraft-deer collisions, the security fence around the Airport would be constructed as a deer proof fence. The fence would have a minimum height of eight feet. To reduce the potential for deer mortality from vehicle-deer collisions, wing fences of a similar design shall be placed at the east and west ends of the Airport security fence. The CDFG deer biologist and the Caltrans biologists should assist Town of Mammoth Lakes with the placement of these east and west wing fences so that the potential for funneling deer into areas that have the potential to increase deer vehicle collisions is minimized. The fence would be maintained by the project proponent.

The CDFG deer biologist and the Caltrans biologists should work with the project proponent to continue to evaluate the effects of the fence on mule deer. Based on this evaluation, the project proponent would modify the design of the fence within the parameters of FAA requirements and standards.

- 2) Based upon consultation with the USFS and the CDFG, the number of acres of high-quality mule deer habitat lost as a result of implementing the proposed project would be replaced by restoration of habitat at or near the Airport. Compensation for the habitat loss would occur at a ratio of one acre for every one acre of degraded deer habitat.

The Town of Mammoth Lakes, in conjunction with CDFG and USFS, has identified five possible sites for restoration of deer habitat. These sites are:

1. Runway 9-27 stopway outside of the proposed fence area;
2. Portions of USFS Road 3S45 north of the airfield;
3. The USFS gravel pit north of the Airport;
4. The mule deer holding site southwest of the Airport near the Town of Mammoth Lakes; and

5. The area southwest of the Airport that experienced the 1987 Laurel fire.

Under the proposed project, 10.5 acres of habitat would need to be restored. At least 4.5 acres of the Runway 9-27 stopway is available for restoration through the removal of the existing pavement and reseeding/replanting the area with appropriate species of vegetation. This stopway area is located near the site of the highest identified proportion of deer use. In addition to restoration of the stopway, approximately six acres of additional offsite habitat restoration would need to be designated. The other potential restoration sites listed above have sufficient acreage to meet this need.

The USFS gravel pit located north of the Airport is the primary area being considered for restoration activities for the proposed project. This site currently has little vegetation. Restoration activities, including reseeding and planting of bitterbrush and big sagebrush, would provide additional foraging opportunities for mule deer and sage grouse. The seed mix and method for seeding would be coordinated with the CDFG and the USFS. The revegetation would be monitored to ensure its successful establishment and the area would be reseeded, if necessary.

A specific, detailed mitigation plan for the loss of deer habitat was developed by the USFS botanist (K. Nelson 2/21/01). The revegetation plan (Appendix K) addresses all areas designated as mitigation sites, sources of vegetative material, the schedule for implementation and completion, a monitoring plan, and success criteria.

A temporary fence would be installed around the restoration site to exclude cattle and to allow the establishment of vegetation. The fence design and construction would be coordinated with the USFS and the CDFG to minimize the potential for sage grouse mortality. The fencing would be monitored to determine whether it has any adverse impacts on sage grouse. If substantial adverse effects are identified, the Town of Mammoth Lakes shall consult with CDFG and the USFS on additional mitigation.

Bank swallows (*Riparia riparia*) are a California state listed threatened species that have been observed nesting in the gravel pit. If the gravel pit is restored, restoration should proceed in a manner such that any bank swallow nest sites are not disturbed, and the habitat is not modified in such a way as to cause future nest failure.

Final approval of the off-site mitigation is the responsibility of the USFS. The restoration site(s) would be managed in perpetuity for the benefit of mule deer and sage grouse.

- 3) The security fence around the Airport runway could potentially force deer away from the project area during migration periods and could result in an increase in deer-highway fatalities. Caltrans is currently developing a deer fence plan for a deer undercrossing at the Hot Creek underpass. To reduce the potential adverse effect associated with a potential increase in road crossing by mule deer, the Town of Mammoth Lakes shall coordinate with Caltrans, CDFG and the USFS on the fence design and location.
- 4) There is no posted speed limit on Airport Road, and the straight road invites high speeds. A speed limit with deer crossing signs could slow motorists and alert them to the presence of deer, reducing the potential for deer-vehicle collisions.

Raptors

- 1) Fences, powerpoles, and light standards would be designed and constructed to minimize perching opportunities.

3.3.3.3 Threatened and Endangered Species

It has been determined that the proposed project would not affect Lahontan cutthroat trout, Sierra Nevada bighorn sheep, or their designated critical habitat. Therefore, no mitigation measures are required.

The biological opinion issued by the USFWS found that the FAA's funding and approval of the Airport expansion, as proposed, is not likely to jeopardize the continued existence of the Owens tui chub and is not likely to destroy or adversely modify designated critical habitat. Mitigation measures proposed by the FAA and the Town of Mammoth Lakes to monitor contamination from Airport operations in surface and ground water, and to contain these chemicals during chronic and catastrophic spills would further protect the Owens tui chub and its habitat from potential impacts.

Although the proposed project may affect bald eagles due to the remote chance of aircraft-eagle collisions, it is not likely to adversely affect the bald eagle. Therefore, no mitigation measures are needed or proposed.

While no significant effect to the Owens tui chub has been identified, the FWS included in its Biological Opinion the following conservation recommendations:

1. Development of a habitat conservation plan (HCP) to provide protection for the local and regional federally listed species within the sphere of influence of projected growth.
2. Implement a groundwater use monitoring plan as that use may affect the Hot Creek headsprings and implement a protection plan that ensures the long term viability of the Owens tui chub.
3. Assist in the development and implementation of a Service approved plan to establish a transplanted Owens tui chub population away from the area of groundwater downdrafting and potential contamination.
4. Construct and maintain an informational kiosk at the Mammoth Yosemite Airport for public education regarding conservation of endangered and threatened species.

With regard to recommendations 1 and 3, the Town of Mammoth Lakes does not own or have jurisdiction over the lands affected by these proposals. However, the Town through its role in the Mono County Collaborative Planning Team would work with the affected agencies to develop these measures consistent with the management direction of the affected agencies. The Town would install monitoring wells consistent with the direction from the California Regional Water Quality Control Board, Lahontan Region. The Town would construct a kiosk at the Mammoth Yosemite Airport for public education regarding conservation of endangered and threatened species.

3.3.3.4 Water Resources

The proposed project site does not contain any wetlands, therefore no mitigation measures are required.

3.3.4 Cumulative Impacts

3.3.4.1 Vegetation

No special status plant species were identified in the project area, therefore no new cumulative impacts to these resources are expected.

3.3.4.2 Wildlife

Cumulative effects include the effects of future federal, State, local, or private projects that are reasonably certain to occur in the vicinity of the project area. Cumulative effects to wildlife include impacts from the proposed project and from the other projects in the same geographical region.

The following projects are proposed in the general region of the proposed project: Airport Commercial Development Plan, Sierra Business Park, Sherwin/Snowcreek Ski Area, Lakeridge Ranch Estates, Rimrock Ranch, Intrawest Resort Development, and Eastern Sierra College. The latter two projects are within the urbanized area of Mammoth Lakes and are not anticipated to contribute to cumulative effects to wildlife. Development of the Sherwin/Snowcreek Ski Area has an uncertain future and might not be constructed.

The mitigation measures designed for these developments and described in the environmental documents prepared for these projects are assumed to minimize potential effects to wildlife. Such measures include limiting human disturbances during deer migration periods and measures to account for the loss of high quality habitat. For example, the 180 acre Rimrock Ranch project includes the sale of 100 acres of land to the CDFG for habitat purposes with the remaining 80 acres utilized for development. The 100-acre set aside promotes protection of the most valuable habitat on the project site.

The projects closest to the Airport, Sierra Business Park and Airport Commercial Development Plan, are most likely to contribute to the cumulative impacts to wildlife in the project area vicinity. However, the EIR for the Sierra Business Park concluded that the project would not impact existing deer habitat and therefore, would not contribute to cumulative impacts. The proposed light industrial development is located on 36 acres that were previously used as a borrow site. Consequently, the site does not have high value as wildlife habitat.

The Airport Commercial Development Plan (ACDP) was found in 1997 not to have any significant effects on biotic communities. The commercial and residential development proposed for the Hot Creek Resort, which is a portion of the ACDP, could contribute to cumulative effects if the proposed mitigation measures associated with the project are not implemented. For example, uncontrolled dogs from residents could harass deer on summer range and migration corridors. Informal user trails in the vicinity of the condominiums could cause additional disturbance to both deer and sage grouse. However, implementation of the project mitigation measures would reduce these potential effects. The development of the ACDP does not increase the extent of the existing disturbance associated with the Airport. Therefore, the proposed project would not result in any potentially significant cumulative impacts.

Other potential sources of disturbance to wildlife include a variety of other uses not associated with development. The public lands (e.g., BLM, USFS) and private land (e.g., Los Angeles Department of Water and Power (LADWP)) in the vicinity of the Mammoth Yosemite Airport are used by numerous recreationists (e.g., OHV, hikers, mountain bikers), some of whom are accompanied by off

leash dogs. Informal camping (i.e., undeveloped sites) by recreationists on these lands occurs in all seasons, but less often in winter. Increased use of hot springs in these areas is reflected in management activities taken by LADWP to prohibit camping. Additional sources of disturbance to wildlife include the network of formal (e.g., USFS system roads and OHV inventory) and informal roads (e.g., unmapped spur roads) in the project vicinity. These roads permit access to deer migration corridors, winter and summer habitat, and holding areas (south of U.S. Highway 395), as well as to sage grouse winter, summer, and breeding habitat. Other identified elements of conflicting resource management have to do with grazing management and allotment plans. Competition for forage between deer and cattle has been identified as a potential problem. [3-8]

Future developments could reduce the amount of habitat available for special status species such as sage grouse and mule deer. However, additional opportunities for development in the immediate vicinity of the project area are limited by the small percentage of private lands available for development. All lands surrounding the proposed project are located within the jurisdictional control of Mono County and the majority of land in the vicinity of the Project is controlled by two federal agencies, the BLM and the USFS, and one public agency, the LADWP. In order for any growth to occur, development would have to occur on lands now owned or managed by one of these agencies. This would require changes to the current policies of the subject agencies, which is not considered likely, as the BLM, USFS, and the Town of Mammoth have been working to decrease existing fragmentation on federal lands. [3-27]

Future proposed projects on federal lands (e.g., mines, geothermal) and on private lands (e.g., residential, commercial) would be subject to environmental analysis, including identification of any potential adverse effects to wildlife resources on an individual and cumulative basis. Any significant effects would be mitigated before the project(s) could be implemented.

Following project completion, increased human use of the project area would increase the potential for human caused fires, litter, and general disturbance to plants and wildlife. In general, increased human use has been associated with air- and water-borne pollutants, overdraft of local aquifers, a reduction in water tables, subsidence and ground erosion. [3-16] The proposed project would not substantially increase these potential disturbances, therefore they would not have a significant cumulative impact.

The proposed project would not have any unavoidable significant impacts on the biotic communities after the proposed mitigation measures have been implemented.

3.3.4.3 Threatened and Endangered Species

The project area does not contain significant habitat for any threatened or endangered species. Previous disturbances associated with the existing runway and Airport facilities and U.S. Highway 395 have reduced the project area's habitat values. Other projects, including the Airport Commercial Development Plan and Sierra Business Park, scheduled in the vicinity of the proposed project do not contain significant habitat for threatened and endangered species, nor are they expected to have any significant adverse impacts to threatened or endangered species. Therefore, the proposed project is not expected to contribute to any cumulative impacts to endangered or threatened species or to their habitat.

The proposed project has no unavoidable significant impacts on the endangered or threatened species.

3.3.4.4 Water Resources

The proposed project and Airport Commercial Development Area project would not affect any jurisdictional wetlands, therefore, no cumulative impacts to wetlands would occur from the proposed project.

3.4 Transportation/Traffic

The transportation/traffic effects of the Airport and planned future uses have been evaluated in the previously certified 1986 EIR/EA and 1997 SEIR/EA documents. Please refer to Appendix A for a summary of the conclusions from these previous analyses.

This transportation/traffic analysis is provided to address changes to the Mammoth Yosemite Airport or its circumstances since approval of the 1997 Airport project, that were not previously evaluated. The change in the project or project assumptions that could affect transportation/traffic is the updated aviation demand forecast which would result in an increase in trip generated to and from the Airport. There are no other changes that would result in transportation/traffic effects, which have not already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

3.4.1 Environmental Setting

The environmental setting for the proposed project consists of (1) existing roadways and access facilities, and (2) the existing traffic conditions upon these roadways and access facilities in the vicinity of the proposed project.

The Airport is currently located on the north side of U.S. Highway 395, with primary access at Hot Creek Hatchery Road. **Exhibit III-11** shows the road network in the vicinity of the Airport. South of the project site, U.S. Highway 395 provides access to Mammoth Lakes and the Lake Tahoe region. South of the project site, U.S. Highway 395 provides access to Crowley Lake, Bishop, and Southern California. Local access to the Airport is provided via Hot Creek Hatchery Road (Hot Creek Road). Hot Creek Road is an undivided, two lane road with an at-grade intersection with U.S. Highway 395. An approximately 70-foot median exists on U.S. Highway 395 at its intersection with Hot Creek Road. This intersection is characterized with high vehicle speeds on U.S. Highway 395 (60 to 70 mph), and stop control along Hot Creek Road, including the vehicle storage lanes within the median.

The U.S. Highway 395 intersection at Hot Creek Road currently operates with a satisfactory level of service at LOS B (10.8 seconds).

3.4.2 Significant Environmental Impacts

Based on CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact to transportation/traffic public services if the proposed project:

- Causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of street system (i.e., results in a substantial increase in either the number of vehicle trips, the volume to capacity ration on roads, or congestion at intersections.)
- Exceeds, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

A traffic study, provided in Appendix L, has been prepared to assess the Airport specific short-range and long-range impacts, and to consider the cumulative impacts of two adjacent development projects: the on-Airport commercial development area and Sierra Business Park. The study examines conditions in 2000 and 2020 and considers growth in through traffic on U.S. Highway 395. Information for the Sierra Business Park is taken from the traffic study dated May 2000, and November 2000, prepared by Traffic Safety Engineers.

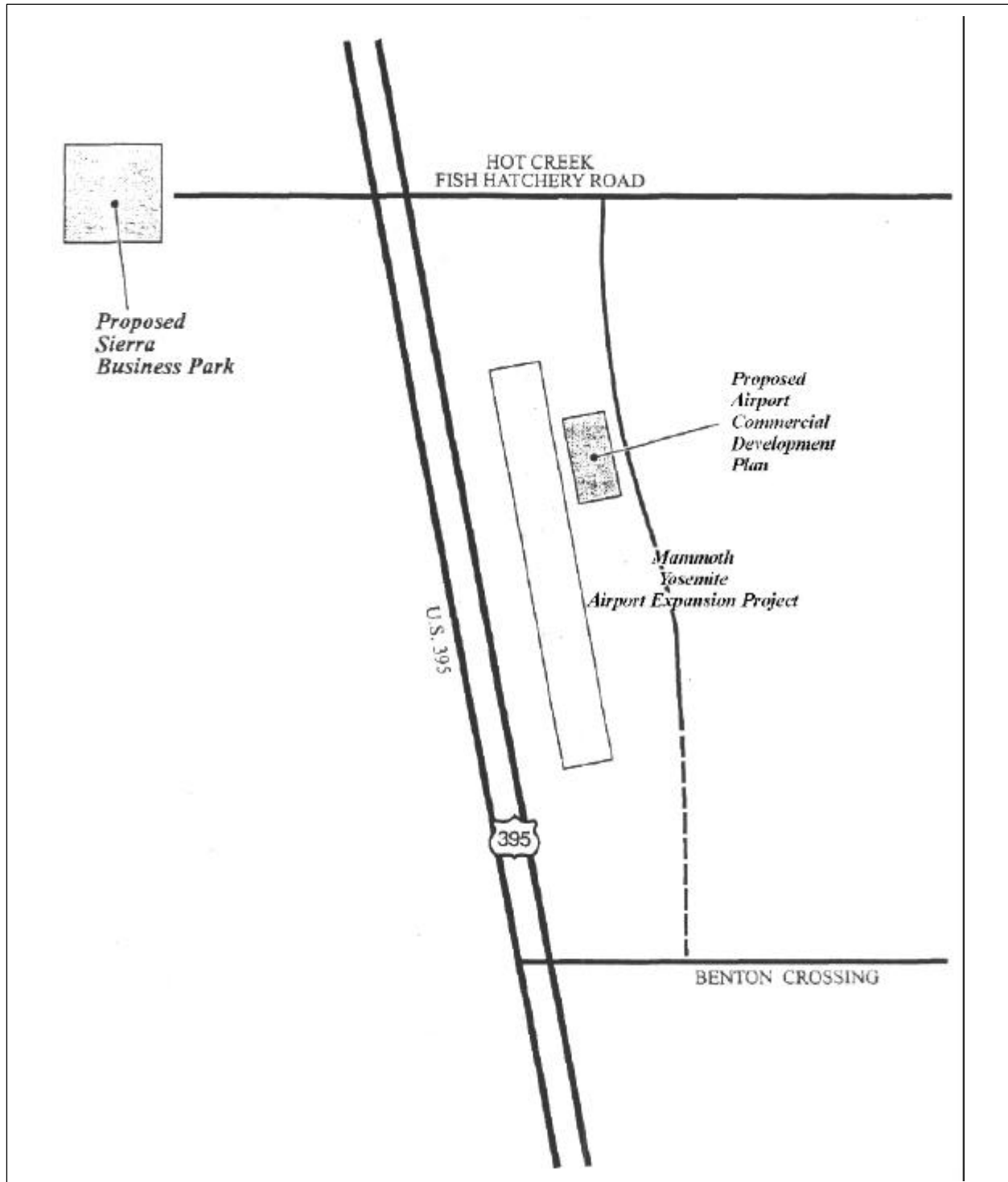
Several different development combinations are considered in order to isolate the substantial impacts and to consider proportionate share responsibilities. An additional access to U.S. Highway 395 at the existing Benton Crossing intersection is considered with the Airport Commercial Development Plan project only. When the intersection of U.S. Highway 395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. In this case, a traffic signal is not considered acceptable by Caltrans due in part to the high vehicular speeds along U.S. Highway 395; therefore, either minor intersection channelization is recommended or alternative access locations on U.S. Highway 395. **Table III-13** illustrates the various land and access alternatives and provides the LOS results.

There would be increased traffic on U.S. Highway 395 and other highways in the region as a result of the growth in tourism. This might be offset on a micro scale by fewer tourists driving automobiles from farther airports or their homes, through which the air pollution emissions would be improved. The traffic congestion in the Town of Mammoth Lakes would also be reduced through the provision of bus service to the Airport as specified in memo on bus transportation provided in Appendix D.

Bus service between the Town and the Airport is anticipated to be the primary mode of ground transportation for passengers. This is in keeping with the Town's goals to reduce the reliance on private cars in the Town. However, the use of other modes of ground transportation are anticipated, including private vehicles by local area residents and Airport employees and rental cars by visitors. It is anticipated that approximately 70% of Airport users would use the bus system, 13% would use rental cars, and 17% would use other private or commercial vehicles. These modes of ground transportation were incorporated into the traffic and air quality analyses performed in this SSEIR.

The percentage of passengers that would use buses for access to or exit from the Airport was estimated based on the following data sources:

- Discussions with Mammoth Mountain staff members indicate that ski package promotions would likely be structured so that air passengers would access Mammoth Mountain from the Airport via a bus scheduled to meet incoming flights. Mammoth Mountain staff members expect that almost all visitors arriving by aircraft would use this vehicle mode to access Mammoth Mountain's facilities.
- Existing vehicle mode choices made by current general aviation users that would continue in the future.
- Discussions with airport managers at comparable airports indicate that buses capture 60 to 90 percent of visitors destined for ski areas:
- Yampa Valley Regional Airport serving the Steamboat Springs ski area in Colorado reports that 90 percent of visitors are shuttled by bus to the ski area.
- Gunnison County Airport serving Crested Butte and Monarch ski areas in Colorado reports that 60 to 65 percent of visitors are shuttled by bus to the ski areas.



Source: LSA Traffic Study
Prepared by: Ricondo & Associates, Inc.

Exhibit III-11

not to scale



north

Project Study Area

ExhibitIII-11.dwg

Table III-13

Vehicular Traffic Impacts

Year 2000					
US Highway 395/Hot Creek Road ¹					
Intersection Delay / LOS					
Scenario	Max Delay (sec.)	Approach	LOS	NB/SB max queue (veh.)	EB/WB max queue (veh.)
With Existing Circulation System					
Existing Year 1999/2000 Conditions ⁴	10.8	westbound	B	0.04	0.09
Existing + Airport	10.9	westbound	B	0.29	0.49
Existing + Airport + Hot Creek Resort	18.5	westbound	C	0.65	3.29
Existing + Sierra Business Park	14.6	eastbound	B	0.04	1.70
Existing + Airport + Hot Creek Resort + Sierra Business Park	32.3	eastbound	D	0.65	4.59
With Connection to Benton Crossing ³					
Existing + Airport + Hot Creek Resort	11.6	westbound	B	0.57	1.2
Existing + Airport + Hot Creek Resort + Sierra Business Park	29.9	eastbound	D	0.57	4.22
Year 2020					
US Highway 395/Hot Creek Road ¹					
Intersection Delay / LOS					
Scenario	Max Delay (sec.)	Approach	LOS	NB/SB max queue (veh.)	EB/WB max queue (veh.)
With Existing Circulation System					
Year 2020 Baseline Conditions ⁴	11.6	westbound	B	0.04	0.10
2020 + Airport	11.6	westbound	B	0.33	0.54
2020 + Airport + Hot Creek Resort	22.2	westbound	C	0.74	4.13
2020 + Sierra Business Park	16.4	eastbound	C	0.05	2.00
2020 + Airport + Hot Creek Resort + Sierra Business Park	>50	eastbound	F	0.74	7.09
2020 + Airport + Hot Creek Resort + Sierra Business Park with Mitigation	37.8	eastbound	E	0.74	5.07
With Connection to Benton Crossing ³					
Existing + Airport + Hot Creek Resort	12.5	westbound	B	0.65	1.36
Existing + Airport + Hot Creek Resort + Sierra Business Park	43.3	eastbound	E	0.64	6.18
Existing + Airport + Hot Creek Resort + Sierra Business Park with Mitigation	33.6	eastbound	D	0.64	4.47

Note: See Table C in Appendix L for footnotes.

Source: LSA Associates, Inc.
Prepared By: LSA Associates, Inc.

The Convict Lake Road is a direct emergency access point to the midpoint of the airfield from U.S. Highway 395. This access is currently gated, thereby restricting access to only emergency vehicles. Discussions have taken place with Caltrans representatives (personal communication: Carolyn Yee) regarding the Convict Lake Emergency Road. There are no environmental differences between an emergency only gate and a fence at this point. The determination regarding permitting of a gate resides solely with Caltrans District 9, and emergency access from U.S. Highway 395 will be as permitted by Caltrans.

Coordination with the Fire Chief of the Long Valley Fire Protection District (LVFPD) has been ongoing throughout the planning of the Airport improvements. A letter from the fire chief is provided in Appendix D of the SSEIR stating that this emergency access point is adequate for emergency response requirements.

Vertical Separation between Operating Aircraft and U.S. Highway 395

The runway serving the Mammoth Yosemite Airport is designated as Runway 927. This runway runs parallel to U.S. Highway 395. The centerline of the runway is 426 feet north of the northerly fog line on the highway.

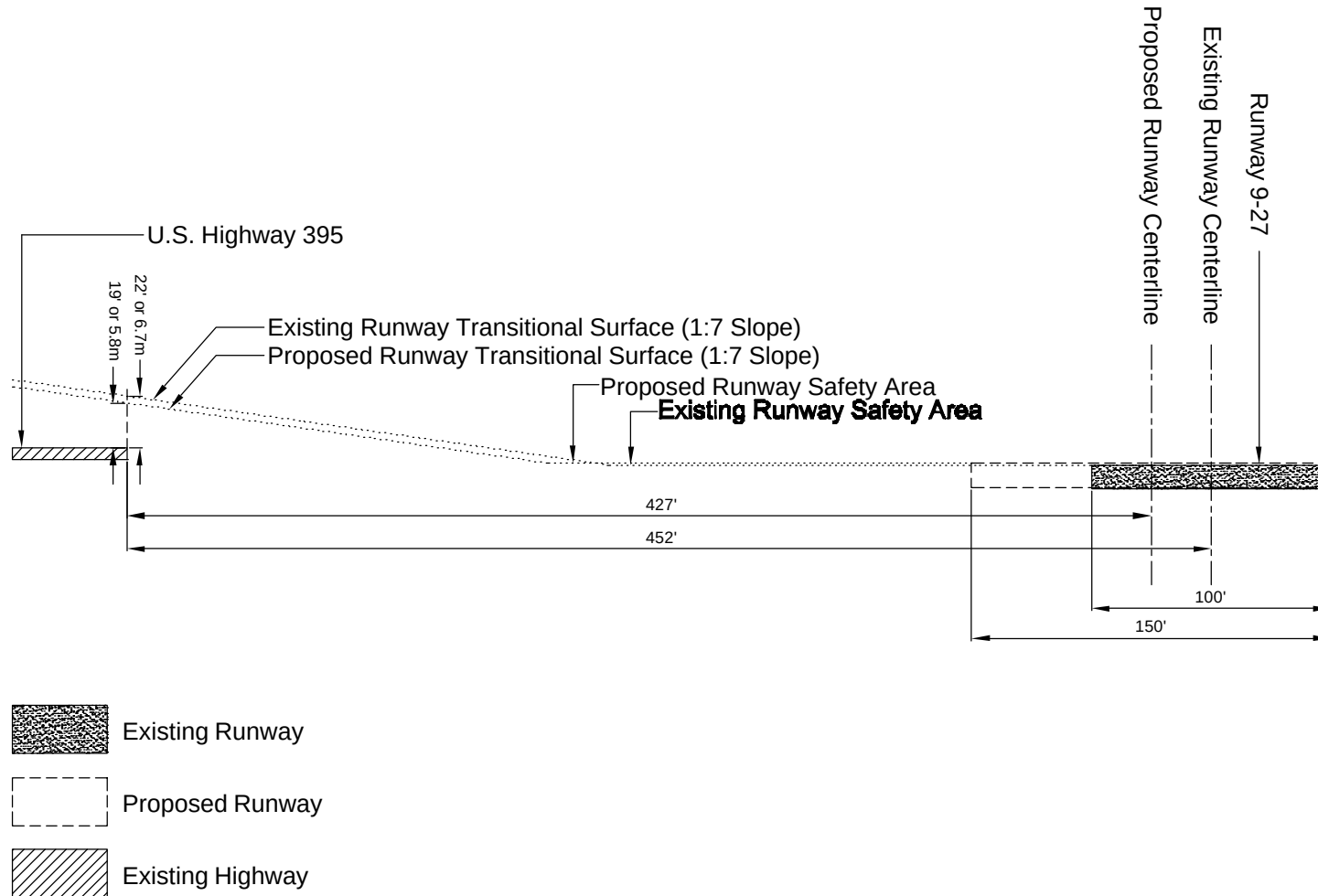
The California Department of Transportation (Caltrans) has established criteria for runway-highway separation. The *Caltrans Highway Design Manual* [3-28] requires that the U.S. Highway 395 shoulder edge must be at least 5.2 meters (17 feet) below a 1:7 transition surface beginning at the edge of the Runway 927 primary safety area. The dimensions of the primary safety area of Runway 9-27 is a rectangle 153 meters (500 feet) wide x 31 meters (100 feet) beyond each runway end. The rectangle is at the same elevation as the runway and is centered on the runway centerline. The shoulder edge of U.S. Highway 395 must be at least approximately 112.9 meters (370 feet) from the runway centerline. These separation requirements are established to protect both the aircraft occupants and persons on the ground and on the roadways. As illustrated on **Exhibit III-12**, the distance between the proposed runway centerline and the shoulder edge of U.S. Highway 395 is 427 feet, exceeding Caltrans requirements.

Some other airports such as San Francisco International Airport, San Jose International Airport, and Long Beach Airport all have highways within 1000 feet of the runway.

The proposed project would not cause a substantial increase in existing traffic and would not cause the level of service to deteriorate beyond standards established by Caltrans. Therefore, the project would have no adverse significant impact on transportation/traffic.

3.4.3 Mitigation Measures

As part of the initial airport expansion program, minor mitigation improvements would be installed at the U.S. Highway 395 intersection with Hot Creek Road. Those mitigation improvements include both northbound U.S. Highway 395 right turn deceleration and acceleration lanes and the lengthening of the southbound U.S. Highway 395 left turn deceleration lane. These mitigation improvements would be consistent with the design requirements of Topic 405 - Intersection Design Standards of the *Highway Design Manual* (July 1, 1995).



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-12

Runway-Roadway Separation

As discussed above, when the intersection of U.S. Highway 395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. Mitigation would be in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes, and constructing a connector road to Benton Crossing Road from the Airport developments. **Exhibit III-13** shows the new configuration of the median lanes, which would be built when level of service at the intersection falls below LOS D. The costs of either improvement (Benton Crossing access or restriping the center median) should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation. With either mitigation measure constructed, long-term levels of service for the baseline + Airport expansion + Hot Creek Aviation/Airport Commercial Development + Sierra Business Park scenarios would operate with satisfactory levels of service (LOS D or better).

3.4.4 Unavoidable Significant Impacts

As stated above, the proposed project is not expected to cause any new significant impacts in relation to Transportation or Circulation; therefore, no new unavoidable significant impacts are anticipated.

3.4.5 Cumulative Impacts

The slight growth in traffic as a result of the Airport Commercial Development Plan and Sierra Business Park has already been included in the significant environmental impact section for the proposed projects and it was determined that they would have no significant impact on traffic individually, but cumulatively, they would require the implementation of mitigation measures either in the form of intersection improvements mentioned above or the construction of Benton Crossing Road.

3.5 Soils and Land Transformation

The impact of the proposed project on Soils and land transportation has been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of Soil/Land Transformation impacts, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

This section discusses potential environmental impacts with respect to soil/land transformation as a result of the proposed modifications to the Airport that were not previously evaluated. Changes in the current Airport proposal that may impact soil/land transformation include construction of a new package wastewater treatment plant (instead of a new leach field), the extension of the runway by 1,200 feet (rather than 2,000 feet) and an increase in the runway width to 150 feet. No other changes that would result in soil and land transformation effects are proposed to the Airport and already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

3.5.1 Environmental Setting

The proposed project area is within the existing Airport boundary. The existing runway is 7,000 feet long and 100 feet wide. Under the proposed project, a revised special use permit for an additional 25 feet of United States Forest Service (USFS) land along the length of Runway 9-27 would be acquired. This strip of land would then be graded to provide FAA required runway safety areas after widening the runway to 150 feet. Currently this land is between the runway safety area and U.S. Highway 395. On the west end of the existing runway there is 3,400 feet of paved overrun that will be used to extend the runway by 1,200 feet. This paved overrun was part of the original runway before the new runway was built in 1983. The existing runway's center line would be displaced 25 feet south as the runway width would be increased to 150 feet by adding 50 feet of pavement on the south side of the runway.

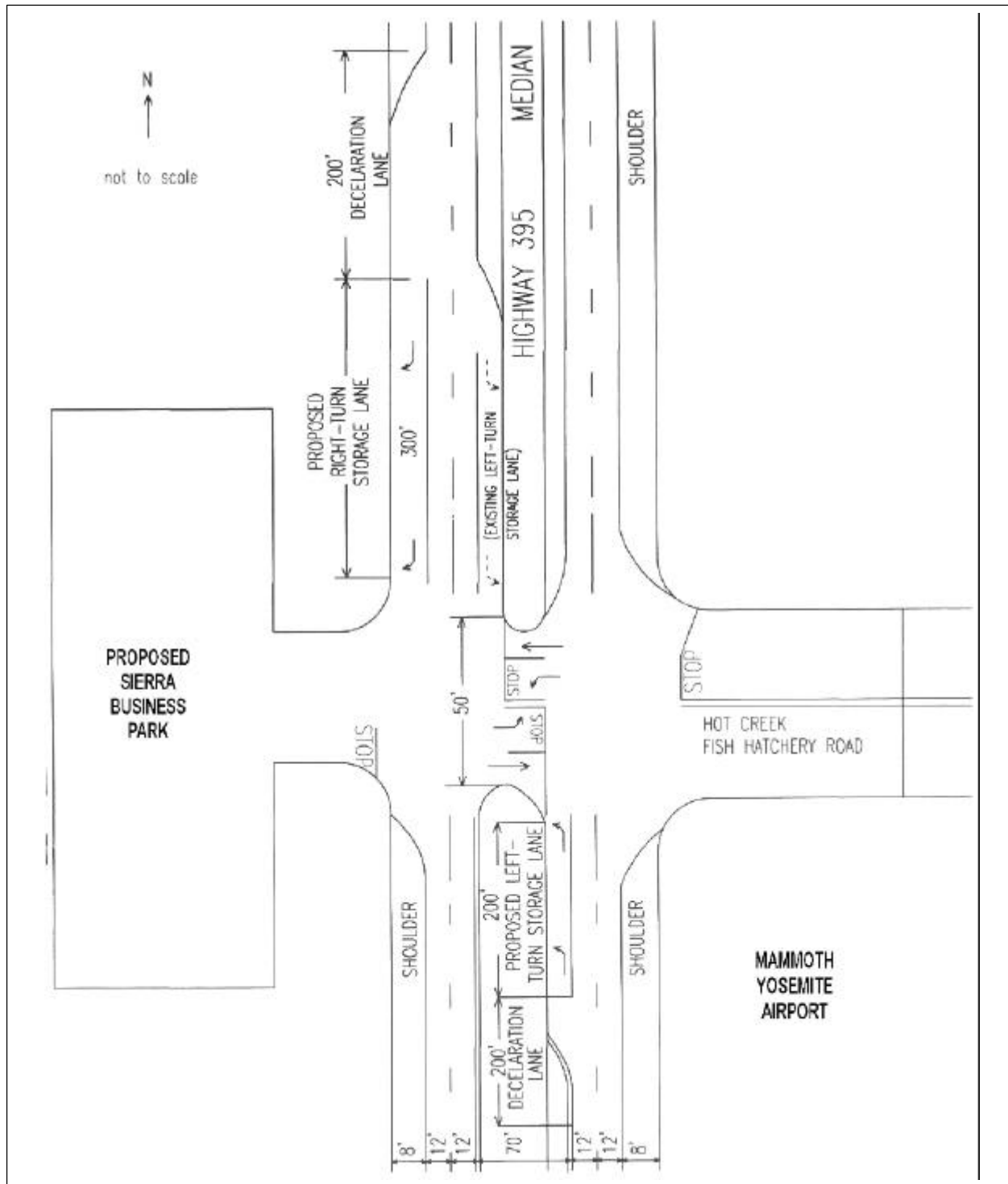
3.5.2 Significant Environmental Impacts

Based on CEQA Guidelines, Appendix G [3-1], a project is considered to have significant impact to Soils if the project;

- Results in substantial soil erosion or the loss of top soil.
- Causes soil to become unstable and results in an on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

The proposed project would 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 would consist of disturbed and exposed soil surfaces, which are subject to erosion during a storm.

All grading and earthwork activities for the proposed plan would require the approval of grading plans and 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 watershed.



Source: LSA Traffic Study
Prepared by: Ricondo & Associates, Inc.

Exhibit III-13

not to scale



Proposed Intersection Traffic Turn Lane Configurations

ExhibitIII-13.dwg

The changes to the proposed project from the previously certified documents include a decrease in the proposed length of the runway from 9,000 feet to 8,200 feet, and an increase in the runway width from 100 feet to 150 feet. The total site grading required for the project would be accordingly reduced by 7 acres (from 44 to 37 acres) from what was previously evaluated and certified in the 1986 EIR/EA and 1997 SEIR/EA as not having significant impacts on soils. **Exhibit III-14** and **III-15** show the difference in the grading plans for the proposed project in 1997 and 2001.

Potential 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 materials would be difficult to control. Other adverse effects include visual impacts if disturbed soils are not properly stabilized and revegetated and reduction in wildlife populations due to loss of habitat.

A revised special use permit would be required from the USFS for the additional 25 feet of land south of the runway required under the changes to the proposed project.

With the incorporation of all the mitigation measures required by Mono County Department of Public Works and Lahontan RWQCB listed below, the proposed project would not result in substantial soil erosion or the loss of top soil, nor would it cause soil to become unstable and result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Consequently the project would not have a significant impact on soils/land transformation.

3.5.3 Mitigation Measures

The following specific mitigation measures are required for all developments within the planning area to make sure that there are no significant adverse effects on the soils.

- 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 prior to approval of a grading permit.
 - 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.
 - Existing drainage patterns shall not be significantly modified and drainage concentrations shall be avoided.
 - All loose piles of earthwork materials shall be protected to avoid discharges of silt-laden runoff.
 - 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.
 - Dust control measures (watering trucks or pumped systems) shall be continuously implemented throughout the construction period.
 - 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.
 - 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 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 and approved by the Lahontan RWQCB. The plan shall include the following provisions.
 - Interim erosions control measures shall be implemented during the construction period, including such facilities as dikes, filter fences, hay bales, and retention basins as necessary.
 - No discharge of silt, waste materials, toxic substances, or other deleterious matter to surface waters shall be permitted.
 - Permanent drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent waste discharges from the completed site.
 - All projects shall be designed to retain and infiltrate all runoff from a 20-year, one-hour design storm event.
 - 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.

3.5.4 Unavoidable Significant Impacts

The proposed project would have no new unavoidable significant impacts after all the mitigation measures mentioned above have been implemented.

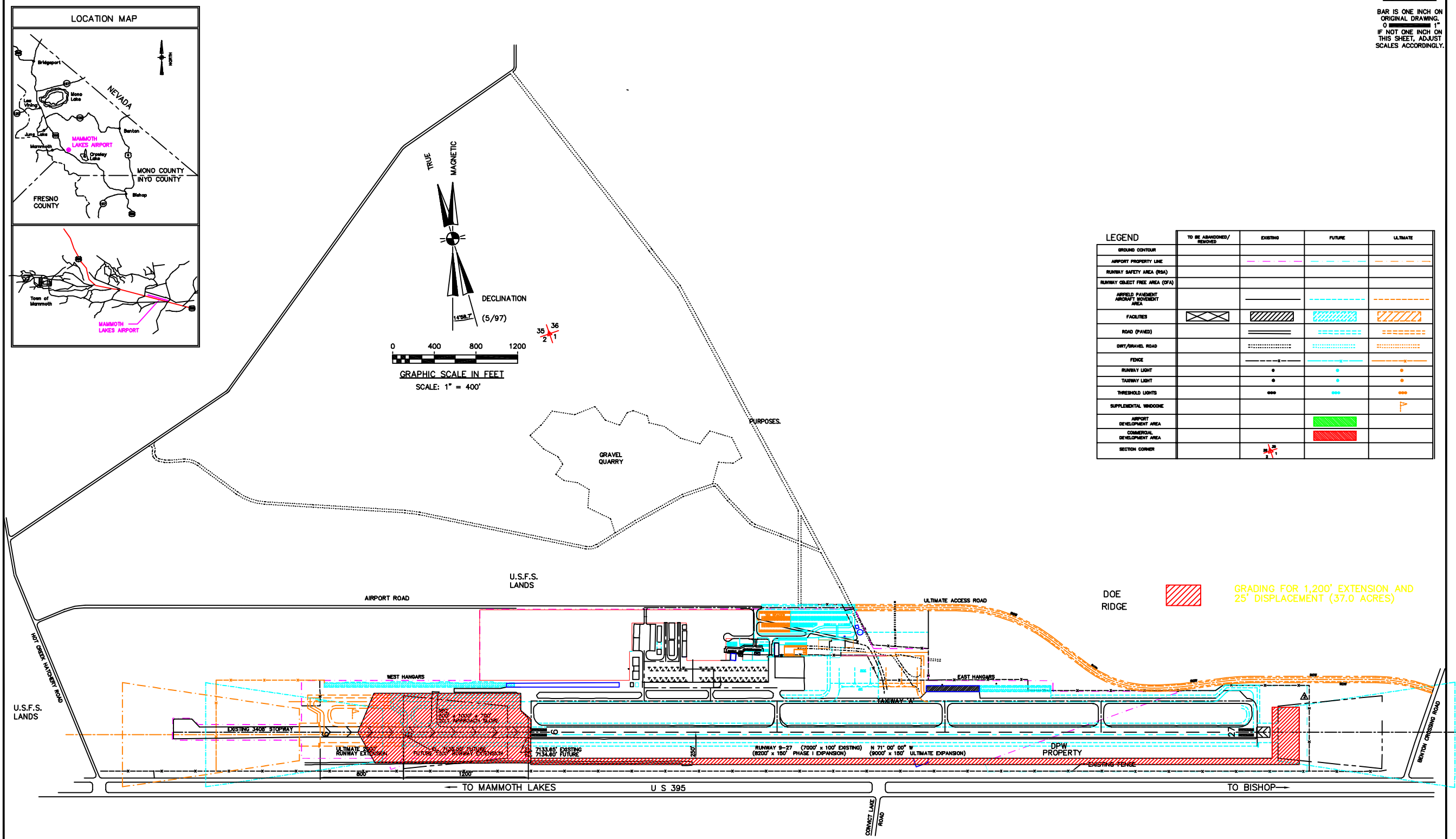
3.5.5 Cumulative Impacts

The cumulative environmental impacts of the proposed project and the Airport Commercial Development Plan were reviewed in the 1997 *Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment* [I-2]. No changes have been incorporated in the Airport Commercial Development Plan since the prior CEQ certification.

The Sierra Business Park is located on a previously disturbed 36-acre site. This property has been used for sand and gravel mining. The *Sierra Business Park Specific Plan and EIR* [3-2] termed the effect of the project on soils as less than significant with the implementation of mitigation measures that included a slope maintenance program to control erosion and maintain slope stability and recontouring and revegetating the project area in accordance with the grading plan and reclamation plan.

The Airport Commercial Development Area, and Sierra Business Park would have no cumulative environmental effect on the soils of the area because they would not result in substantial soil erosion or the loss of top soil and cause soil to become unstable and result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

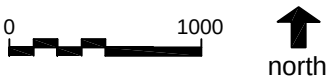
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LEGEND	TO BE ABANDONED/ REMOVED	EXISTING	FUTURE	ULTIMATE
GROUND CONTOUR				
AIRPORT PROPERTY LINE				
RUNWAY SAFETY AREA (RSA)				
RUNWAY OBSTACLE FREE AREA (OFA)				
AIRFIELD PAVEMENT AIRCRAFT MOVEMENT AREA				
FACILITIES				
ROAD (PAVED)				
DIRT/GRAVEL ROAD				
FENCE				
RUNWAY LIGHT				
TAXIWAY LIGHT				
THRESHOLD LIGHTS				
SUPPLEMENTAL WINDROSE				
AIRPORT DEVELOPMENT AREA				
COMMERCIAL DEVELOPMENT AREA				
SECTION CORNER				

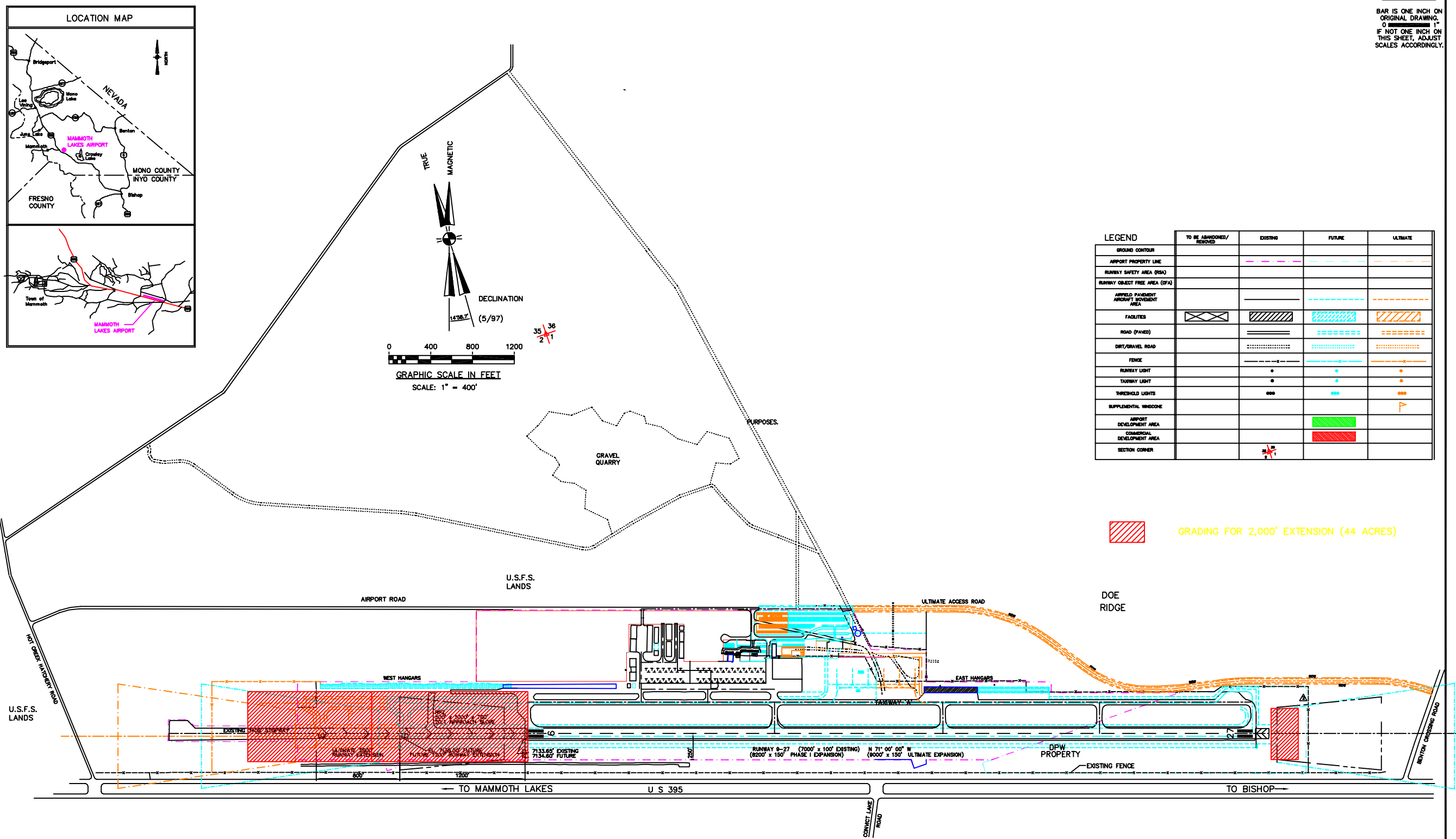
Source: Reinard W. Brandley, Consulting Airport Engineer
Prepared by: Ricondo & Associates, Inc.

Exhibit III-14



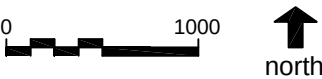
Grading Area for 2001 SSEIR Proposed Project
(1,200-ft Extension and 25-ft Displacement)

BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Source: Reinard W. Brandley, Consulting Airport Engineer
Prepared by: Ricondo & Associates, Inc.

Exhibit III-15



Grading Area for 1997 SEIR/EA Proposed Project
(2,000-ft Extension)

3.6 Hydrology, Water Supply, and Water Quality

The hydrology, water supply, and water quality effects of the Airport have been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of hydrology, water supply, and water quality impacts, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

This section discusses potential environmental impacts with respect to hydrology, water supply, and water quality as a result of the proposed modifications to the Airport that were not previously evaluated. The changes in the current Airport proposal that may impact hydrology, water supply, and water quality include construction of a new package wastewater treatment plant (instead of a new leach field), use of an oil/water separator, extension of the runway by 1,200 feet (rather than 2,000 feet), increase in the runway width to 150 feet. The analyses also take into account the updated aviation demand forecast. No other changes are proposed to the Airport, which would result in hydrology and water quality effects, which have not already been evaluated. Moreover, all previously required mitigation measures would still apply to the proposed project.

This section discusses potential environmental impacts to water as a result of the proposed project. The following categories of Water impacts are discussed: (1) Water Quality, (2) Water Supply, and (3) Stormwater Control.

The *Federal Water Pollution Control Act of 1972* (also known as the Clean Water Act) [I-4] was instituted to protect the nation's water resources. A major component of the Clean Water Act involved the establishment of regulations designed to prohibit the discharge of pollutants into waters of the United States from any point source unless the discharge is in compliance with National Pollutant Discharge Elimination System (NPDES) standards. Initially, this legislation established a permitting program for industrial process and municipal sewage discharges. However, with the passage of the *Water Quality Act of 1987* [2-4], the Clean Water Act was revised to include permit requirements for storm water discharges as well.

In the State of California, the permitting of surface water discharges is administered by the California Environmental Agency through Regional Water Quality Control Boards (RWQCB). The RWQCBs have assumed the responsibility of implementing the Clean Waters Act in California the issuance of discharge permits and the establishment of water quality standards. Mammoth Yosemite Airport is in the RWQCB Lahontan region.

In 1975, the RWQCB prepared a comprehensive Water Quality Control Plan for the South Lahontan Basin Area, which includes the Airport. The plan outlines a coordinated program for water quality protection in accordance with the 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.

In general, environmental impacts to surface water quality are assessed in relation to the existing characteristics of the body of water that would receive the discharge (receiving water body), including its size, flows, designated beneficial uses, and present concentrations of pollutants. Increased concentrations of toxic metals, organic compounds, suspended solids, nutrients, pathogenic microorganisms and other pollutants, or changes in temperature may result in sedimentation, eutrophication, habitat degradation, and/or threats to public health.

3.6.1 Environmental Setting

There are no bodies of water on Airport property. There are, however, three surface drainage systems in the vicinity of the Airport. These drainage systems are depicted in **Exhibit III-16**. The area west of the Airport is within the western portion of the Mammoth Creek/Hot Creek watershed of the Mammoth Basin drainage system. The area south of the Airport is within the Convict Creek watershed. The drainage divide between the Mammoth Basin and Convict Creek watersheds passes through the westerly portion of the Airport. The third drainage divide lies east of Doe Ridge and flows into Crowley Lake.

The lower reaches of the Mammoth Basin drainage system are significantly affected by rising geothermal ground waters, which include mixed hot-cold spring discharges at the Hot Creek Fish Hatchery and numerous hot springs within the Hot Creek Gorge. The Convict Creek drainage system appears to contain only cold groundwater elements. Studies conducted by the California State Department of Water Resources and U.S. Geological Service (USGS) indicate that geological formations located north of the Airport confine a relatively extensive cold groundwater basin.

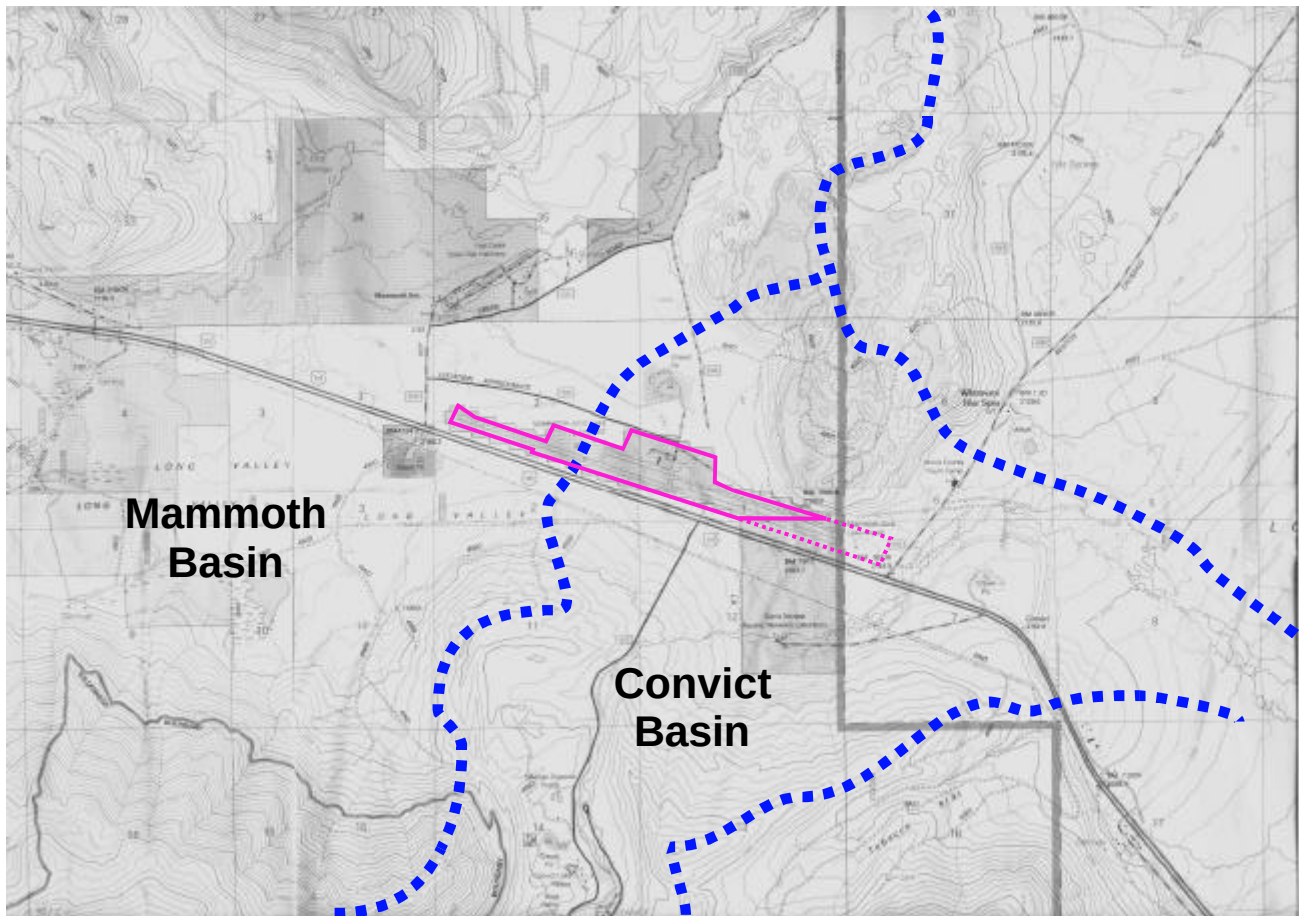
The wells supplying water to the Airport can produce approximately 500 gallons per minute. Based on a pump test performed on the wells in 1999 and monitoring data of several wells in the area conducted by the USGS, it was observed that there was a minimal drawdown trend, suggesting a relatively large source of recharge available to the aquifer.

The RWQCB Water Quality Control Plan generally encourages the consolidation of domestic and industrial wastewater treatment and disposal facilities. The entire basin in which Mammoth Yosemite Airport is located has been designated as an area in which septic tank and leaching fields cannot be used except with special approval of the RWQCB.

The Basin Plan emphasizes the need for control of sources of water pollution including, but not limited to, stormwater runoff. Rainfall is generally regarded as unpolluted relative to surface waters. It is contact with various surface materials that causes rainwater to become contaminated in its transition to runoff, which then discharges and can pollute surface waters.

The RWQCB has found that the proposed project would be located, designed, constructed, and operated in compliance with applicable State of California water quality standards and has issued an assurance letter which is found in Appendix D.

Rainfall exposure to raw materials, final products, byproducts, wastes, material handling equipment, and vehicles is the principal source of stormwater runoff contamination from activities conducted in the operation of an Airport. Stormwater becomes enriched by the dissolution, solubilization, and erosion from materials from exposed surface and moves via overland flow to drainage ways and ultimately is discharged to a receiving body of water. Contaminants may typically include solids, oxygen-demanding substances, plant nutrients, metals, pesticides, herbicides, and other various chemical constituents. Fuels, lubricants, solvents, deicing agents, antifreezes, sanitary waste paints, and detergents are often used and/or handled outdoors at airports and have the potential to contaminate stormwater.



Legend

- ■ ■ ■ ■ Drainage Divide
- Existing Airport Property Line
- Proposed Airport Property Line

Source: Mammoth Lakes Airport Expansion, Subsequent EIR and Updated EA, March, 1997.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-16

↑
north Scale 1" = 5,000'

Mammoth Yosemite Airport Area Drainage System

The existing drainage from the runways and taxiways begins with sheet flow from the pavement to the infield areas of the Airport and then infiltration into the ground. The drainage from the aircraft parking apron, access roads, and other paved areas begins as sheet flow to drainage inlet structures. The effluent is then piped to an infiltration trench located east of the current ground vehicle building where it infiltrates into the ground. No water has been observed flowing beyond the Airport boundary during heavy rain storms.

While it is not anticipated that a large quantity of deicing fluids will be used on aircraft, it will be necessary that facilities be available on site when needed. Commercial airline service will generally operate at the Airport during Visual Flight Rules (VFR) conditions when the weather is good. These aircraft will stay on the ground for periods of approximately two to three hours and the aircraft skin will remain cold soaked, thereby making the accumulation of ice or frost difficult. Interviews with Airport management indicate that there have been only three times in the past three years when aircraft have required deicing services. Deicing, when required, would generally be accomplished by the use of glycol diluted to a 50 percent solution by water.

3.6.2 Significant Environmental Impacts

To determine whether there are potentially significant impacts on water from the proposed project, this SSEIR considers water quality, water supply and stormwater. Specifically, based upon CEQA Guidelines, Appendix G [3-1], a project is considered to have a significant impact on water supply or quantity if the project:

- Creates or contributes runoff which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff;
- Violates applicable water quality standards or water discharge requirements;
- Substantially depletes groundwater resources or interferes with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level.
- Substantially alters the existing drainage network.
- Places structures within a 100-year flood hazard area, that would impede or redirect flood flows.
- Places housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

The passenger terminal facility and supporting employees would increase the demand on subsurface water resources. Fire protection requirements are the dominant factor in the design of the proposed water supply and transmission facilities. A 1997 study of water and sewer requirements for the Airport Development Plan, entitled *Mammoth Lakes Airport Water and Sewer Analysis* [3-29] was conducted by the engineering firm of Triad/Holmes and Associates. The estimated maximum daily demand for water generated by the Airport terminal complex was 16,000 gallons. An average daily demand for the sewage treatment of 8,000 gallons was also estimated. Aircraft flight operations generate wastes consisting of oils, grease, deicing fluid, and other complex hydrocarbon compounds. If these waste products are not properly disposed of, the operation of domestic wastewater treatment facilities could be disrupted.

The estimated maximum annual water demand for the Airport terminal complex has been calculated to be 17.92 acre-feet (1 acre-foot = 326,308 gallons). It was estimated in the 1986 EIR/EA that 7,500 acre-feet/year recharges the unconfined aquifer in the Airport area. The 1986 Airport pump test

provided data from which transmissivity values were calculated. Transmissivity of 73.92 acre-feet per year per foot was calculated for the Airport well. This transmissivity figure, along with the recharge available to the aquifer, indicates a supply of water that far exceeds the water demand of the project.

Potential reduction in stream flow could have an adverse effect on the fishery resources of the Hot Creek Fish Hatchery. The lowering of natural groundwater levels, subsequent reduction in downstream spring flows, and changes in the character of the geothermal mixture of the waters could have impacts on the operations of the fishery. Wildermuth Environmental, Inc. conducted a study of the Mammoth Creek/Hot Creek Basin in 1996. [3-30] The effects of several potential commercial development projects on the Hot Creek headsprings were assessed. The study showed that even under severe drought conditions, as had been experienced in the area during the recent past, groundwater extraction of up to 2,385 acre-feet per year did not impact flows in Hot Creek. In a study of increased consumption use, with water conservatively assumed to directly contribute to the headsprings, this was extrapolated to estimate the impact of future development. Consumptive use of up to 2,700 acre-feet per day would not significantly impact the flows from the headsprings. Maximum annual water demand for the terminal building facility is projected to be less than 18 acre-feet per year, well below the 2,700 acre-feet per day available.

The paved surfaces being proposed for the aircraft apron area and runway and taxiway extensions are impervious to water. Impervious surfaces increase the volume of stormwater runoff and may effect the relative quality of surface drainage. Runoff from impervious aeronautical surfaces may contain increased quantities of oils, grease, deicing fluid, and other complex hydrocarbon compounds. Construction of a new terminal building and automobile parking facilities would also result in an increase in runoff.

The proposed project would require the minimum addition of water impervious pavement as development would utilize portions of the 3,400-foot paved overrun, as needed. The overrun is already constructed of water impervious material.

A new package treatment plant would be installed to handle the sewage treatment. The design and maintenance of this package treatment plant would be in accordance with the requirements and regulations of the RWQCB and Mono County Health Department. The proper permits for the discharge of waste would be obtained from these agencies prior to the installation of these facilities. No wastewater disposal system would be within 100 feet of a stream or in areas where groundwater is believed to be less than five feet below the surface of the ground. The discharge of either treated or untreated wastewater to streams would be prohibited. Wells to sample groundwater would be provided to monitor both performance of the subterranean wastewater disposal and to access adverse water quality impacts. Sewage effluent would have to be treated by a package plant that would provide secondary treatment with supplemental nitrate reduction. A complete report of waste discharge for the package treatment plant would be filed with Regional Board staff at least 120 days prior to plant construction.

Groundwater would be extracted from the Convict Creek drainage system, which is down gradient from the Mammoth Creek/Hot Creek Basin. There should be no significant impact to the Hot Creek Fish Hatchery if wells are not drilled any closer than 6,000 feet to the Hatchery and are located on the Convict Creek Watershed. [I-2]

All existing pavement and the pavement for the future runway extension and taxiways would drain into the surrounding ground as they presently do. All new pavements for the commercial aircraft parking apron, automobile parking lot, and terminal roadway would be designed such that all the drain water from these areas would be collected in inlets and pipe structures. These drain waters would be carried through an oil/water separator to separate any oils from the stormwater. The resulting stormwater would then be discharged into leaching trenches or leaching fields. The discharge from the oil/water separator would be tested on a routine basis to determine the continuing effectiveness of this type of treatment. Should the discharge show any deleterious contamination, additional treatment would be provided. To address accidental spills of fluids, such as aviation fuel, the Town of Mammoth Lakes has adopted a Spill Prevention Plan for the Airport, which can be found in Appendix D.

All aircraft would be deiced at the same location on the commercial airline apron. The area on which the aircraft would park during the deicing operations would be graded such that all of the water from this area would be collected at one drop inlet. The pipes from this inlet would be constructed such that in normal operations, without any deicing fluid, the stormwater runoff would be discharged into the oil/water separator. When deicing operations are being performed, the valves would be set such that all of the deicing fluids would be diverted to a holding tank. The runoff would be collected in the holding tank and removed from the site and disposed of in a suitable manner. Best Management Practices (BMPs) such as not allowing oil changes and/or car maintenance on-site would be used to mitigate potential water quality impacts.

A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented for all construction activities in accordance with Regional Board regulations. Grading/drainage and erosion control plans would be submitted to the Regional Board as part of the SWPPP.

Exhibit III-17 shows the *Flood Insurance Rate Map*, published by the Federal Emergency Management Agency (FEMA). As depicted in Exhibit III-17, no part of the Airport or project site, in the proposed plan is located in a floodplain. As measured from the Airport's eastern boundary, the Airport is approximately 1.2 miles from a 100-year floodplain (Zone A) associated with Convict Creek.

The proposed project would have no significant environmental impacts on hydrology, water supply, or water quality because after meeting all the above mentioned design requirements, it would not create or contribute runoff which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff. There would be no violation of applicable water quality standards or water discharge requirements and it would not substantially deplete groundwater resources or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level. The project would not impede or redirect flood flows or place housing within a 100-year flood hazard area.

3.6.3 Mitigation Measures

As stated above, the proposed plan would not cause significant environmental impacts with respect to hydrology, water supply, or water quality during either the construction or operation of the proposed project. The proposed project would comply with all federal, State and local laws pertaining to storm water runoff and drainage systems. These steps would already occur with implementation of the proposed project, therefore no additional mitigation measures would be required. All water quality measures would be complied into a comprehensive water quality plan for the project area.

3.6.4 Unavoidable Significant Impacts

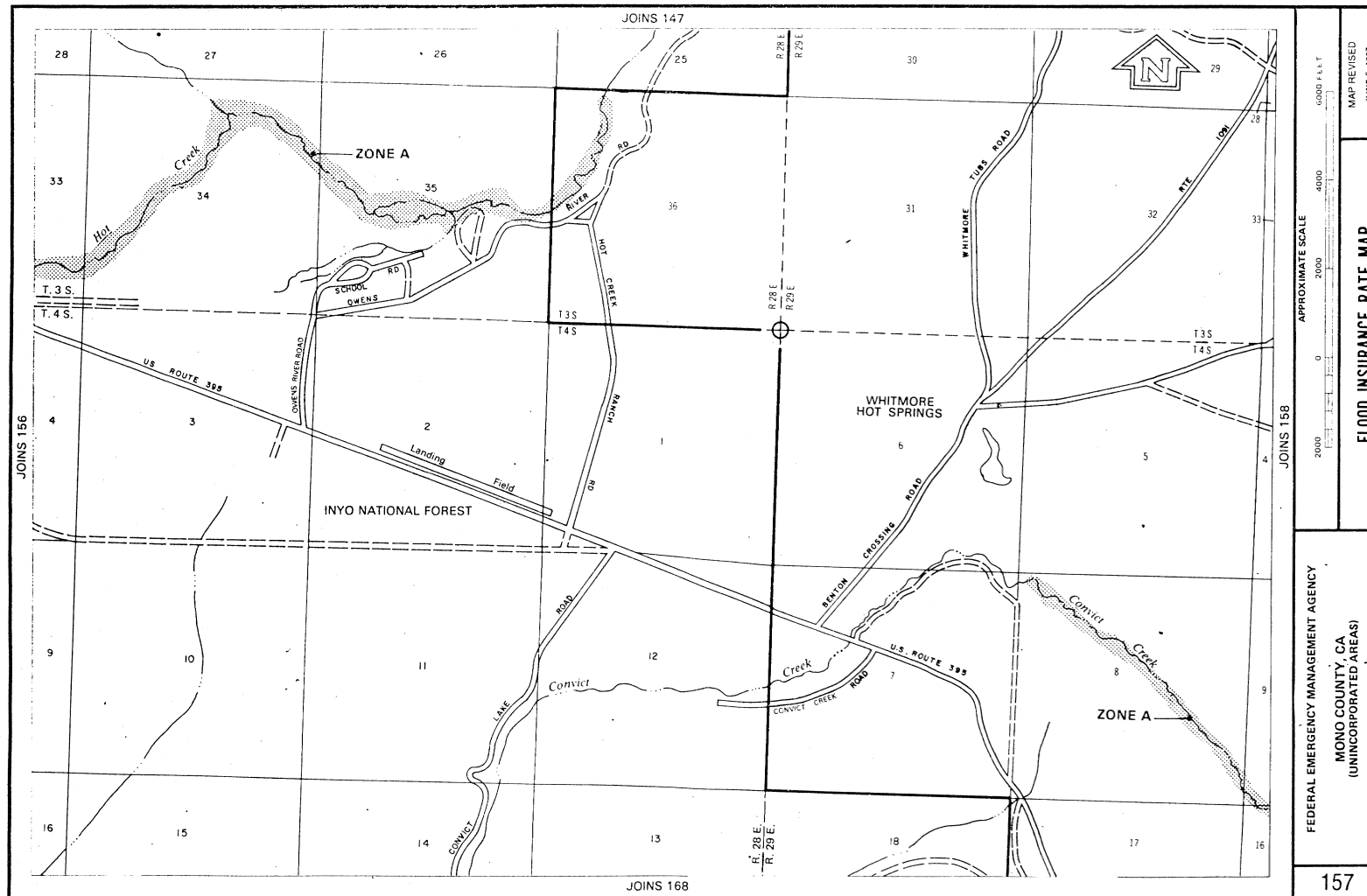
As discussed above, the proposed project is not anticipated to have any new unavoidable significant impacts on hydrology, water supply, or water quality.

3.6.5 Cumulative Impacts

The cumulative environmental impacts of the proposed project and the Airport Commercial Development Plan were reviewed in the 1997 *Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment* [I-2] and were certified as not significant.

The *Sierra Business Park Specific Plan and EIR* [3-2] found the hydrology and water quality impacts of the Sierra Business Park project less than significant. The project has specific measures like stormwater pollution prevention plan and monitoring wells as part of the proposed project to ensure against any impacts on water quality in the region.

The proposed project, Airport Commercial Development Plan and Sierra Business Park would have no significant cumulative environmental impacts on hydrology, water supply, or water quality because after meeting all the design requirements, they individually or cumulatively would not create or contribute runoff which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff. There would be no violation of applicable water quality standards or water discharge requirements and it would not substantially deplete groundwater resources or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level. None of these projects would impede or redirect flood flows or place housing within a 100-year flood hazard area, therefore no adverse cumulative impacts on the area's water quality would result.



Source: Federal Emergency Management Agency, Flood Insurance Rate Map, Community Number 060194 C, Panel 157.
 Prepared by: Ricondo & Associates, Inc.

Exhibit III-17

Mammoth Yosemite Airport Area Floodplains Map

3.7 Noise

The aircraft noise and construction noise effects of the proposed project have been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of aircraft noise and construction noise impacts, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

This section discusses potential environmental impacts with respect to noise as a result of the proposed modifications to the Airport, which were not previously evaluated. The changes associated with the Airport proposal, which may impact noise include a new updated aviation demand forecast. No other changes are proposed to the Airport, which would result in operational and construction noise effects, which have not already been evaluated.

FAA Order 5050.4A [3-31] prescribes the methodology for preparing aircraft noise exposure maps. In accordance with these guidelines, an aircraft noise exposure analysis was performed, which is discussed in greater detail in Appendix F. The noise analysis, prepared for 1999, 2003 (initial year of operation), and 2022, was used to assess the effects of noise from aircraft operations on the Airport environs associated with the proposed project. A discussion of noise analysis techniques and noise exposure metrics, as well as the assumptions used for the noise analysis, is included in Appendix F.

No analysis for construction noise was performed as the proposed project has already been certified in 1986 EIR/EA and 1997 SEIR/EA. The changes in the proposed project suggested in this SSEIR reduce the over all scope of construction. The proposed project would comply with Town of Mammoth Lakes Noise Element [3-32], which specifically addresses noise from construction activities.

As required by the California Airport Noise Regulation (CCR Title 21, Subchapter 6) [3-33], aircraft noise exposure has been quantified using the Community Noise Equivalent Level (CNEL). Paragraph 85.a of FAA Order 5050.4A [3-31] specifies the use of the FAA's average day-night noise level metric (DNL) when performing noise exposure analyses in order to be consistent with those used for environmental impact statements and environmental assessments as well as in FAR Part 150 Noise Compatibility Programs. [3-34] However, in the State of California, the FAA accepts the CNEL metric as a substitute for the DNL metric. Noise exposure criterion levels of CNEL 60, 65, 70, and 75 were selected, as required by the California Department of Transportation, Division of Aeronautics [3-35]. Because of the relatively small size of the CNEL 70 and 75 noise exposure areas, which do not extend beyond the airfield, only the CNEL 60 and 65 are presented on the noise exposure maps.

Typically, in noise exposure analyses, the population and numbers of dwelling units, schools, and religious facilities that could be affected are estimated within each of these noise exposure ranges. However, in this case, there are no noise sensitive land uses within the noise exposure areas.

Estimates of total noise exposure resulting from aircraft operations, as expressed in CNEL, can be interpreted in terms of their probable effect on land uses. Suggested guidelines for evaluating land use compatibility in aircraft noise exposure areas were originally developed by the FAA and are shown in **Table III-14**. The guidelines reflect the statistical variability of the responses of large

Table III-14

Suggested Land Use Compatibility Guidelines in Aircraft Noise Exposure Areas

The designations in this table do not constitute a federal determination that any use of land is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities.

Land use	CNEL 65 to 70	CNEL 70 to 75	CNEL 75+
Residential			
Residential other than mobile homes and transient lodgings	NLR required (a)	NLR required (a)	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required (a)	NLR required (a)	NLR required (b)
Public use			
Schools, hospitals, and nursing homes	NLR required (a)	NLR required (a)	Incompatible
Churches, auditoriums, and concert halls	NLR required (a)	NLR required (a)	Incompatible
Governmental services	Compatible	NLR required	NLR required (b)
Transportation	Compatible	Compatible (c)	Compatible (c)
Parking	Compatible	Compatible (c)	Compatible (c,d)
Commercial use			
Offices, business, and professional	NLR required	NLR required	NLR required (b)
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible (c)	Compatible (c,d)
Retail trade—general	NLR required	NLR required	NLR required (b)
Utilities	Compatible	Compatible (c)	Compatible (c,d)
Communication	NLR required	NLR required	NLR required (b)
Manufacturing and production			
Manufacturing—general	Compatible	Compatible (c)	Compatible (c, d)
Photographic and optical	Compatible	NLR required	NLR required (b)
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming and breeding	Compatible	Compatible	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible	Compatible	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible (b, c)

CNEL = Community Noise Equivalent Level average sound level, in A-weighted decibels.

Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.

NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

- (a) The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.
- (b) NLR required between DNL 75 and 80; incompatible for DNL 80 and above.
- (c) NLR required in offices or other areas with noise-sensitive activities.
- (d) Incompatible for DNL 85 and above.

Source: Ricondo & Associates, 2000, as derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, *Airport Noise Compatibility Planning*, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended

Prepared By: Ricondo & Associates, Inc.

groups of people to noise. Therefore, any particular level might not accurately reflect an individual's perception of an actual noise environment. Compatible or incompatible land use is determined by comparing the predicted or measured CNEL at a site with the levels given in the table.

Each generalized land use listed in Table III-14 includes a wide range of human activities that have various sensitivities to noise intrusions. CNELs in the table should be interpreted only as indications of potential aircraft noise effects on people living and working in areas surrounding an Airport. Although specific CNELs are obtained from a noise analysis, they do not dictate specific reactions that residents affected by those noise levels may have, nor do they require specific mitigation. The noise levels are intended only as guides for land use development.

3.7.1 Environmental Setting

The types of aircraft (fleet mix), the number of operations by time of day, and the number of departures by stage length for an average day at the Airport in 1999 are presented in Table F-3 in Appendix F. On an average day in 1999, a total of approximately 16 aircraft departures were performed at the Airport, the majority of which were by single or twin-engine propeller general aviation aircraft. The noise exposure associated with operations on an average day in 1999 is shown on **Exhibit III-18**.

As shown on Exhibit III-18, the area exposed to aircraft noise of CNEL 65 and higher remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Airport through leases (LADWP land at the east end of the Airport) or use permits (Forest Service lands south of the Airport property boundary). The CNEL 60 and higher noise exposure area remains largely on either Airport property, vacant land, or the U.S. Highway 395 right-of-way. Current land use plans show this area would remain compatible with noise from aircraft operations.

There is an engine runup area located at the eastern end of Runway 27. For reduction in existing noise levels, a new mid field runup area would be constructed in conjunction with the first phase of Airport improvements. This runup area would replace the current runup area and would reduce the noise reflection off of Doe Ridge towards the Sierra Nevada Aquatic Research Laboratory (SNARL) facility. Additionally, Mammoth Yosemite Airport has a policy, that restricts low level flights over both the Hot Creek Fish Hatchery and SNARL facility.

3.7.2 Significant Environmental Impacts

Based on CEQA Guidelines, Appendix G [3-1], a project is considered to have a significant impact in terms of noise if the project results in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other regulatory agencies.

Noise exposure maps were prepared for the proposed project for the years 2003 and 2022 to estimate and compare the potential effects of aircraft noise on existing land uses. Noise exposure maps were prepared for 2003 to demonstrate the changes in noise exposure that could occur with the Airport expansion in the earliest year that the development would be operational and for 2022 to evaluate the longer-range impacts of the Airport development. The projected annual distribution of runway use is presented in Table F-8 in Appendix F.

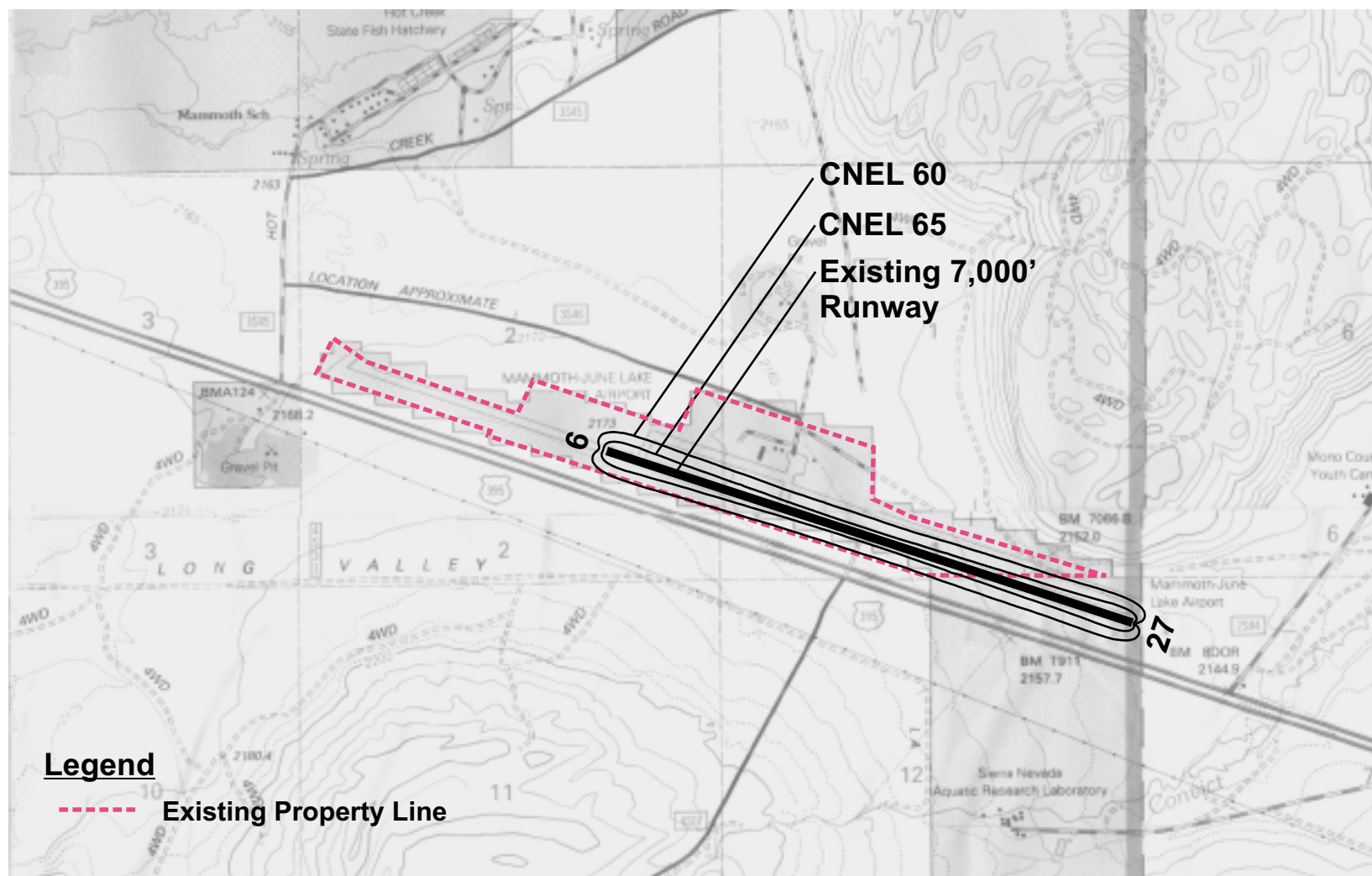
Moving the start-of-roll point for departures with the runway extensions results in existing aircraft operating at the Airport climbing for a longer distance, and subsequently at higher altitudes, over

Airport property when overflying areas in the vicinity of the Airport. In certain instances, this results in some reduction in aircraft noise exposure for the general aviation fleet of aircraft at the Airport.

However, because the runway development permits the use of the Airport by larger air carrier aircraft, the resulting increase in operations would cause an increase in the overall noise exposure area. It was assumed for the proposed project, that the fleet mix and number of aircraft operations at the Airport by time of day in 2003 and 2022 would increase over the existing conditions due to the introduction of air carrier aircraft operations.

Noise exposure maps showing the CNEL 60 and 65 noise exposure areas were developed for the proposed project for both 2003 and 2022 as shown on **Exhibit III-19** and **Exhibit III-20**. As shown on the exhibits, the area exposed to aircraft noise of CNEL 65 and higher for the proposed project remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Airport through leases or use permits. There are no noise sensitive land uses and no people living within the CNEL 65 noise exposure area. The CNEL 60 and higher noise exposure area remains largely on Airport property, vacant land, or the U.S. Highway 395 right-of-way. Current land use plans show this area as remaining as compatible land uses.

A hotel and residential condominium development is planned on Airport property, north of the airfield. This area would be outside the CNEL 60 noise exposure area for the proposed project. In addition to the noise exposure maps, a grid point analysis was conducted to evaluate potential changes in noise exposure at specific points in the vicinity of the Airport. These areas, as shown on **Exhibit III-21**, include the Hot Creek State Fish Hatchery, the Hot Creek Ranch, the planned hotel/condominium complex on Airport property and SNARL. **Table III-15** summarizes the CNEL values calculated by the INM for the proposed project at these locations. As described in Table III-17, Grid Points 1 and 2 refer to the location of the hatchery, Grid Point 3 refers to the location at the Hot Creek Ranch, Grid Points 4 and 5 refer to locations along Hot Creek, Grid Point 6 refers to the location at the on-Airport hotel/condominium complex, and Grid Point 7 refers to the location of SNARL facilities. None of these facilities are located within the existing or future CNEL 65 noise exposure area for the proposed project. Although each grid point would show some increase in noise exposure levels with the proposed project, the noise exposure levels remain low. It is anticipated that these areas would also not experience direct overflights of air carrier jet aircraft because the planned operating procedure is for air carrier jet aircraft to arrive on a straight-in arrival procedure from the east and depart using an initial turn to the south, away from these development areas for departures to the west.



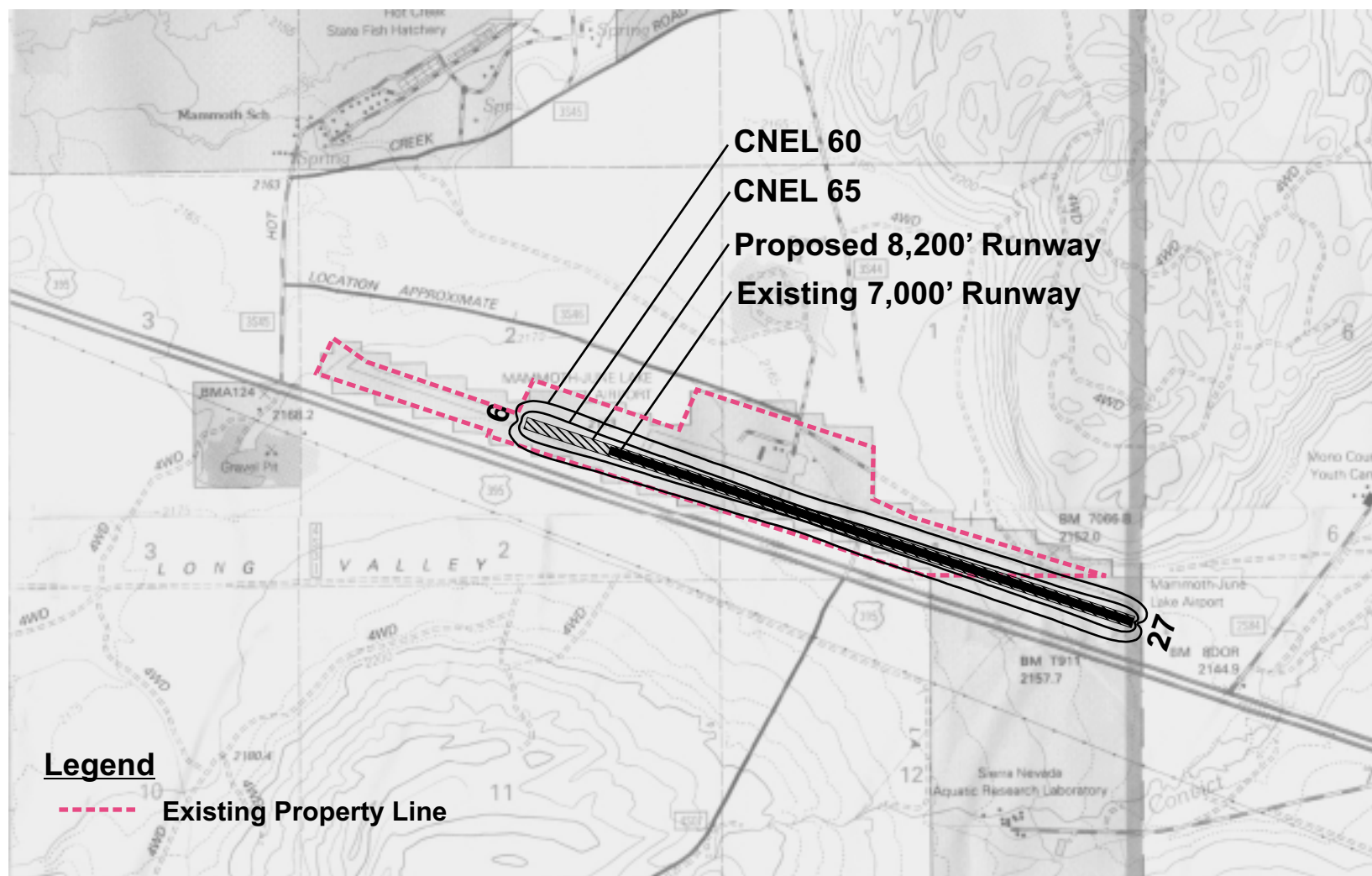
Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-18



north Scale 1" = 2000'

Existing 1999 Noise Contours

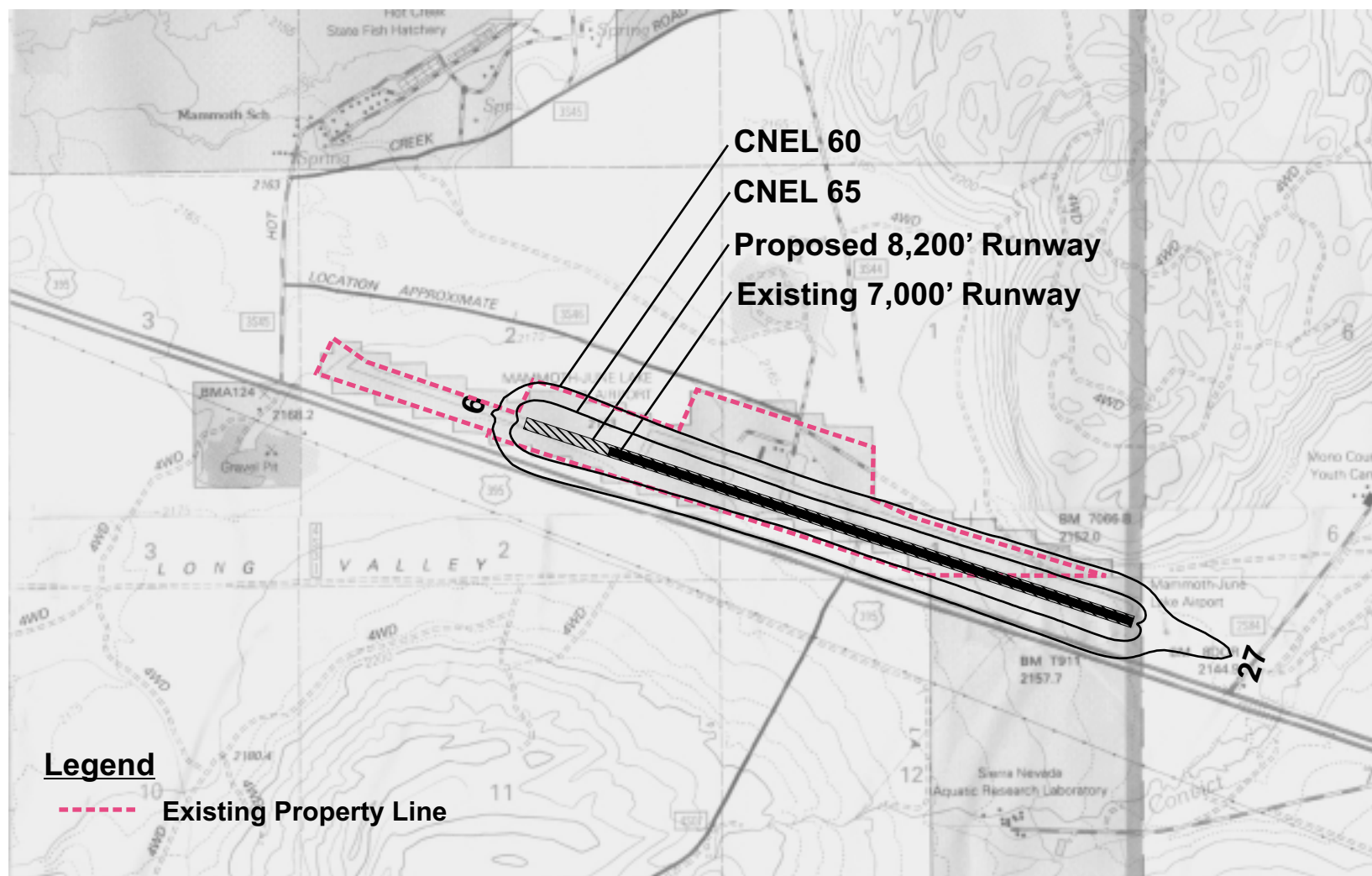


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-19

↑
north Scale 1" = 2000'

**Proposed Project - 8,200' Runway
2003 Noise Contours**

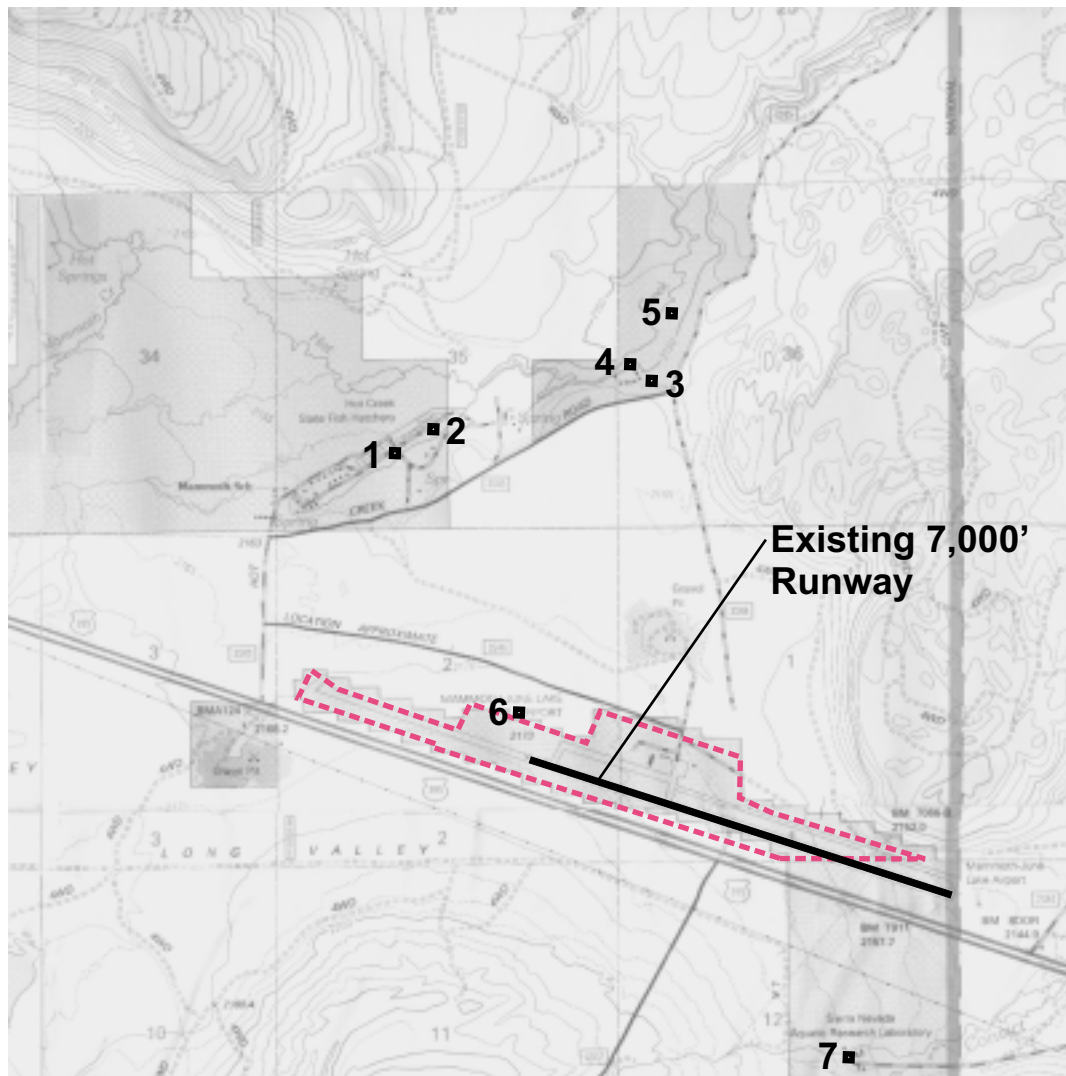


Source: Brown-Buntin Associates, Inc.
 Prepared by: Ricondo & Associates, Inc.

Exhibit III-20

↑
 north Scale 1" = 2000'

Proposed Project - 8,200' Runway
2022 Noise Contours



Legend

- 1 Hatchery-South
- 2 Hatchery-North
- 3 Hot Creek Ranch
- 4 Hot Creek Ranch-South
- 5 Hot Creek Ranch-North
- 6 Planned Hotel/Condominium Complex
- 7 Sierra Nevada Aquatic Research Laboratory
- Existing Property Line

Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-21

↑
north Scale 1" = 3000

Aircraft Noise Analysis Grid Points

Table III-15**CNEL Values at Grid Locations**

Grid Point	Existing	Proposed Project	
	1999	2003	2022
1 – Hatchery-south	38.3	39.1	42.3
2 – Hatchery-north	37.5	38.2	41.4
3 – Hot Creek Ranch	35.9	36.5	39.5
4 – Hot Creek-south	35.6	36.3	39.3
5 – Hot Creek-north	33.0	33.7	36.8
6 – On-Airport hotel/ condominium complex	49.3	53.6	58.8
7 - Sierra Nevada Aquatic Research Laboratory	30.5	35.2	41.0

Source: Brown-Buntin Associates, July 2000

Prepared by: Ricondo & Associates, Inc.

Exhibits III-6 and III-7 show the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the communities in the region. Also depicted are the portion of Hot Creek that is potentially eligible for the National Wild and Scenic Rivers System, the land fill site, Devils Postpile National Monument, and the BLM lek sites of concern. Aircraft altitudes in the vicinity of these areas are also depicted on the exhibits. Aircraft noise levels at the outlying areas would be well below the level of significance. Air Carrier aircraft would remain eight miles from Devils Postpile National Monument and on the opposite side of Mammoth Mountain. Air Carrier aircraft also turn away from this site to gain altitude before proceeding on course to their destinations.

The FAA has established instrument departure procedures (DP) which provide the pilot with a way to depart the Airport and transition to the en route airspace safely. The primary reason is to provide obstacle clearance protection to aircraft in instrument meteorological conditions (IMC) or operating under instrument flight rules (IFR). If an aircraft may turn in any direction from a runway, and be clear of obstacles, that runway meets what is called diverse departure criteria. No DP is required for airports that meet this criterion. At an airport where there is an obstacle penetration, a DP would be developed.

The high terrain in and around Mammoth Yosemite Airport causes numerous obstacle penetrations especially to the west of the Airport. Because of these obstructions DPs have been developed for aircraft departing from both Runway 9 and Runway 27. The DP for aircraft departing Runway 9 includes a climbing left turn to a northeast heading and fly that heading until intercepting the 307° radial of the radio navigation aid located in Bishop, California. The aircraft then proceed southeast bound towards Bishop. Similarly the DP for aircraft departing Runway 27 includes a climbing left turn to a northeast heading and maintaining that heading until intercepting the 307° radial and then proceeding southeast to Bishop. When the aircraft reaches Bishop it may proceed along the route filed with Air Traffic Control (ATC) unless otherwise instructed. Following these procedures when departing either Runway 9 or Runway 27 ensures proper obstacle clearance.

Departure control ATC services are provided by the Oakland Air Route Traffic Control Center (ARTCC) located in Fremont, CA. Oakland ARTCC provides separation from other instrument

aircraft, obstacle clearance, and navigational service through the use of radar vectors. A vector is a heading that provides an aircraft navigational guidance by radar. Any radar vector used by Oakland ARTCC must assure that the aircraft being vectored has proper clearance from obstacles. Each area under Oakland ARTCC's control has a minimum vectoring altitude (MVA) assigned to it. A MVA is the lowest altitude, mean sea level (MSL), that an aircraft operating under IFR will be vectored by Oakland ARTCC. The MVA for the area along the Mammoth-Yosemite DP is 16,000' MSL. This means that an aircraft can not be turned by ATC until it is above 16,000'.

In summary, procedures for aircraft operating under IFR currently exist to ensure separation from the high terrain in the area. These procedures route aircraft to the east, away from Yosemite, the Town of Mammoth Lakes and Devil's Postpile. Aircraft must stay on this easterly routing to ensure terrain clearance until the aircraft is either at Bishop, CA or above 16,000' MSL. These procedures would be used by air carrier aircraft forecasted to use the Airport because of the development project.

General aviation aircraft would be the primary source of aircraft noise in the vicinity of the lek sites north and east of the Airport because the downwind and base legs of the general aviation approach patterns and earlier turns on departure. The General Aviation flight patterns north of the Airport are depicted on Exhibit F-4 in Appendix F.

In summary, **Table III-16** shows the area exposed to CNEL 60 to 65 and CNEL 65 and higher for the 1999 operating conditions and the proposed project for the forecast 2003 and 2022 operation levels. In terms of environmental impact, the extent of impact is often indicated by the number of people exposed to CNEL 65 and higher. There are no populated areas or other incompatible land uses planned within the CNEL 65 or higher noise exposure areas for the proposed project for 2003 or 2022.

Table III-16

Estimated Noise Exposure Areas for the Proposed Project

Noise Impact Factor Area Exposed (acres)	Existing 1999	Proposed Project
2003		
CNEL 65+	39	48
CNEL 65-60	47	61
Total CNEL 60+	86	109
2022		
CNEL 65+		105
CNEL 65-60		105
Total CNEL 60+		210

CNEL = Community noise equivalent level, in A-weighted decibels

Source: Brown-Buntin Associates, July 2000

Prepared By: Ricondo & Associates, Inc.

The closest potential noise sensitive area is the proposed on-Airport hotel and residential condominium development, which is outside the CNEL 60 noise exposure area. The Mono County Noise Element [3-36] and the Town of Mammoth Lakes Noise Element [3-32], in conformance with State Standards, recommends that interior residential noise levels not exceed CNEL 45. Standard building practice in the cold weather mountainous regions will generally reduce noise levels inside the buildings within this area to less than CNEL 45.

All of the commercial development areas, including the on-Airport commercial development areas, SNARL and the planned Sierra Business Park development area, would be located outside the area exposed to CNEL 60 and higher for all the alternatives. As indicated in Table III-16, commercial uses in these areas would be compatible.

As the proposed project would not result in the exposure of persons to or generation of noise levels in excess of CNEL 60 or indoor noise level greater than CNEL 45 in areas or on facilities not compatible with that noise level. Therefore, the proposed plan does not significantly impact the environment in terms of operational noise.

3.7.3 Mitigation Measures

The proposed project would not result in a significant increase in aircraft noise exposure in populated or otherwise noise-sensitive areas.

3.7.4 Unavoidable Significant Impacts

The proposed project does not significantly impact the environment in terms of aircraft noise. Therefore, there are no unavoidable significant impacts.

3.7.5 Cumulative Impacts

As the proposed project would not results in the exposure of persons to or generation of noise levels in excess of CNEL 60 and indoor noise level greater than CNEL 45 in areas or on facilities not compatible with that noise level, therefore it will have no adverse effect on noise. The growth in aircraft operations at the Airport as a result of the Airport Commercial Development Plan was included in the noise analysis of Section 3.7 and the Sierra Business Park is not anticipated to incorporate sensitive receptor uses (e.g., homes, child care facilities, churches, hospitals), therefore, no adverse cumulative impacts on noise would be anticipated from these projects.

3.8 Public Services and Utilities

The effects of the Airport on public services and utilities has been evaluated in the previously certified 1986 EIR/EA and the 1997 SEIR/EA documents. Please refer to Appendix A for the summary of impacts on public services, their significance, and mitigation measures from the 1997 SEIR/EA (which incorporated the 1986 EIR/EA).

Public Services include fire protection, police protection, schools, snow removal/roadway maintenance, neighborhood and regional parks, and libraries. Utilities and service systems include water supply, power, and natural gas and sanitary sewage and solid waste disposal.

This section discusses potential environmental impacts with respect to public services and utilities as a result of the proposed modifications to the Airport, which were not previously evaluated. The current Airport proposal includes construction of a new package treatment plant (instead of a new leach field), and relocation or replacement of Green Church from its present location to Sierra Nevada Aquatic Research Laboratory (SNARL) facilities. No other changes are proposed to the Airport, which would result in impacts on public services which have not already been evaluated.

3.8.1 Environmental Setting

3.8.1.1 Public Services

The structure that formerly housed High Sierra Community Church is located east of the Airport and is known locally as the “Green Church” as shown on Exhibit II-1. The structure was built in 1954 by local Presbyterians and was used for religious purposes until the mid-1980s. By the mid-1980’s, the population of the area had shifted and was concentrated eight miles to the west, within the boundaries of the Town of Mammoth Lakes and the Presbyterian congregation relocated there. Green Church is presently owned by SNARL and the land on which it is located is owned by City of Los Angeles and is leased to SNARL.

3.8.1.2 Utilities

The RWQCB Water Quality Control Plan generally encourages the consolidation of domestic and industrial wastewater treatment and disposal facilities. The entire basin in which Mammoth Yosemite Airport is located has been designated as an area in which septic tank and leaching fields cannot be used except with special approval of the RWQCB.

The addition of certain facilities at an Airport like terminals and other related buildings may result in the generation of additional amounts of solid waste. Airfield improvements, however, do not normally have a direct effect on solid waste collection or disposal, other than that, which is associated with the construction itself.

In addition to the collection of solid waste, various observations support the conclusion that waste disposal sites are artificial attractants to birds. Accordingly, disposal sites in the vicinity of an Airport are incompatible with safe flight operations due to the potential for bird strikes. As outlined in FAA Order 5200.5A, this analysis ensures that there are no waste disposal sites located within:

- 5,000 feet of any runway end used only by piston powered aircraft;

- 10,000 feet of any runway end used or planned to be used by turbine powered (i.e., jet) aircraft; and
- a five mile radius of a runway end that attracts or sustains hazardous bird movement from feeding, water, or roosting areas into or across the runways and/or approach and departure pattern of aircraft.

The Mono County Department of Public Works is responsible for solid waste management in Mono County and for daily operation of the Benton Crossing Landfill, which is the destination for all municipal solid waste generated in the Mammoth Lakes area. Solid waste is transported to the Benton Crossing Landfill approximately five miles northeast of the Airport.

3.8.2 Significant Environmental Impacts

3.8.2.1 Public Services

A project is considered to have significant impact to public services if the proposed project results in the need for new or physically altered services, or the construction of which could cause significant environmental impact, to maintain acceptable service ratios, response times, or other performance objectives for the following public services:

The location of the “Green Church” is incompatible with FAA Airport design criteria for the proposed project. The “Green Church” lies in the Runway Protection Zone (RPZ). FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, sets forth the criteria for development in a RPZ. The function of the RPZ is to enhance the protection of people and property on the ground. Land uses prohibited from the RPZ are residences and places of public assembly such as churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of persons. The administrative use of the “Green Church” would constitute a place of public assembly. Therefore, the “Green Church” would not be available as a meeting location or otherwise used as a place of public assembly.

Under the proposed project Green Church would be relocated from its present location to SNARL facilities.

3.8.2.2 Utilities

A new package treatment plant would be installed to accommodate the sewage treatment. The design and maintenance of this package treatment plant would be in accordance with the requirements and regulations of the RWQCB and Mono County Health Department.

The 1997 study of water and sewer requirements for the Airport Commercial Development Plan, entitled *Mammoth Lakes Airport Water and Sewer Analysis* [3-29] conducted by the engineering firm of Triad/Holmes and Associates estimated an average daily demand of 8,000 gallons for the sewage treatment. Airport flight operations generate wastes consisting of oils, grease, deicing fluid, and other complex hydrocarbon compounds. If these waste products are not properly disposed of, the operation of domestic wastewater treatment facilities could be disrupted.

Given the projected estimate in the updated forecast of aviation demand in Section 1.2.2, the average daily enplanements would increase from 330 in 2003 to 910 in 2022, as indicated in **Table III-17**. Mono County Department of Public Works indicated in a letter dated June 6, 2000 (Appendix D), that a typical waste generation rate for commercial aircraft is one pound per passenger per trip. As a

result, by 2022, 910 pounds of waste per day may ultimately be generated by the increased air traffic. Further, based on the projection of Mono County Department of Public Works, depending upon the type of services provided in an expanded terminal, the waste generation rate would at least double, bringing the total waste generation at the facility to an estimated 1,820 pounds per day by 2022.

Table III-17

Projected Average Daily Base Case Enplanements– Mammoth Yosemite Airport

	2003*	2007	2012	2017	2022
Winter Enplanements	37,000	111,900	145,600	172,500	200,300
Summer Enplanements	0	48,000	97,100	115,000	133,500
Totals	37,700	159,900	242,700	287,500	333,800
Average Daily Enplanements	330	440	660	790	910

*there would only be winter service (16 weeks) in 2003.

Source: Ricondo & Associates, Inc., Kent Myers, and committed service information from American Airlines
 Prepared By: Ricondo & Associates, Inc., July 2000

According to information provided by the Department of Public Works in Mono County dated June 6, 2000 (Appendix D), the existing permitted landfill capacity will be able to accommodate an increase in the solid waste of 10 tons per day. Accordingly, the quantity of waste that may potentially be generated at an expanded Mammoth Yosemite Airport would not have a significant impact on County Landfills. There are no solid waste disposal facilities located within 5,000 feet of all the alternatives.

As discussed above, the proposed project would not have any significant adverse impacts on utilities as it does not substantially increase the demand such that existing or planned capacity or distribution systems or available supply would be exceeded.

3.8.3 Mitigation Measures

The Uniform Relocation Assistance and Real Acquisition Policies Act of 1970 requires that the owner of any business that must be relocated be offered assistance in finding a new location and reestablishing the business.

A letter of understanding in this regard was signed between Town of Mammoth Lakes, Regents of the University of California, Mammoth Mountain Ski Area, and Hot Creek Aviation and is included in Appendix D. Under this agreement the Town of Mammoth Lakes and Hot Creek Aviation, with the cooperation of The Regents of University of California, would locate an appropriate site and construct a class room and lecture hall facility consisting of approximately 1,300 square feet.

No significant impacts to utilities are anticipated as a result of the project. Therefore, no mitigation measures are required except for the regular precautions that are taken during any construction project to protect the existing infrastructure such as underground pipes.

3.8.4 Unavoidable Significant Impacts

The SNARL facilities at “Green Church” would be replaced with similar facilities at another location, most probably on the site of the main SNARL campus in accordance with the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970.

The proposed project is not expected to cause any significant impacts with respect to Utilities, and therefore no unavoidable significant impacts are anticipated.

3.8.5 Cumulative Impacts

3.8.5.1 Public Services

The cumulative environmental impacts of the proposed project and the Airport Commercial Development Plan were reviewed in the 1997 *Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment* [I-2]. The Airport Commercial Development Area, and Sierra Business Park projects are not anticipated to have an adverse impact on public services like fire service, police service, schools, parks, and roads. Therefore there will be no cumulative significant adverse impacts to public services and utilities.

The proposed project would result in the relocation or replacement of the SNARL classroom and lecture hall facilities located in the “Green Church.” The Airport Commercial Development Plan and Sierra Business Park could provide a location for the replacement facilities for the “Green Church”.

3.8.5.2 Utilities

The forecast quantity of sewage effluent from the proposed project and the Airport’s Commercial Development Plan is 50,000 gallons per day. Sewage effluent from the Sierra Business Park may vary considerably depending on the proposed industrial uses of the lots. However, the sewage quantity is not expected to exceed the maximum disposal quantity of 500 gallons per acre per day allowed by the Lahontan RWQCB. Maximum sewage output of the three projects, at their full build out, could approach 68,000 gallons per day. The Lahontan RWQCB would require all of the projects to use a package plant that would supply secondary treatment with supplemental nitrate reduction.

As the proposed project, Airport commercial development plan, and the Sierra Business Park cumulatively do not substantially increase the demand for utilities such that existing or planned capacity or distribution systems or available supply would be exceeded, there would be no significant adverse cumulative impacts on utilities.

IV. Project Alternatives

“An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.” CEQA § 15126.6(a).

The environmental evaluation of each alternative has been performed in less detail than that described in Section III, Environmental Impacts of the Proposed Project, but in sufficient detail to determine whether the alternative will reduce or eliminate corresponding impacts of the proposed project, and whether the alternative can obtain proposed project alternatives. CEQA § 15126.6(d).

4.1 Range of Alternatives

Following are the Project Objectives for the proposed Mammoth Yosemite Airport Expansion Project.

1. Amend the runway characteristics to enhance safety for narrow body air carrier aircraft up to the size of a Boeing 757-200 to operate at the Airport.
2. Provide transportation alternative to the private automobile for residents of and visitors to Mammoth Lakes.
3. Reduce adverse vehicular air emissions associated with visitors to Mammoth Lakes and vicinity by replacing some of the vehicle trips with air passenger trips.
4. Maintain eligibility for the Town of Mammoth Lakes to receive Airport Improvement Program (AIP) funds from the FAA or to impose Passenger Facility Charges to assist in funding some of the proposed improvements.

Keeping these project objectives in mind, the lead agency, the Town of Mammoth Lakes, identified a total of alternatives resulting in runway lengths ranging from 7,000 to greater than 9,000 feet and various airfield improvements including the No Project alternative (retain the 7,000-foot runway). An aircraft performance analysis was conducted to determine the potential for providing air service to various markets from Mammoth Yosemite Airport. This aircraft performance analysis can be found in Appendix E. On the basis of aircraft performance analysis and airport design criteria, four alternatives were retained for future consideration in addition to the no project alternative and four alternatives were excluded from further evaluation. The runway extensions, evaluated in the retained alternatives, could be accomplished both to the east and to the west.

The Town also considered, as an offsite alternative, use of Bishop Airport instead of the Mammoth Yosemite Airport for air carrier service. However, the Town recognized a number of environmental and feasibility issues associated with use of Bishop Airport as an alternative to the Mammoth Yosemite Airport, which ultimately eliminated Bishop as an infeasible alternative to the Mammoth Yosemite Airport. This is further discussed in Section 4.3.3.

4.2 Alternatives Retained for Further Consideration

The five alternatives retained for further consideration are listed below.

- Alternative 1 – 7,000-Foot Runway (No Project)
- Alternative 2 – 8,000-Foot Runway (Proposed Project)
- Alternative 3 – 9,000-Foot Runway
- Alternative 4 – Extend Runway beyond 9,000 feet
- Alternative 5 – Extend Runway to the East.

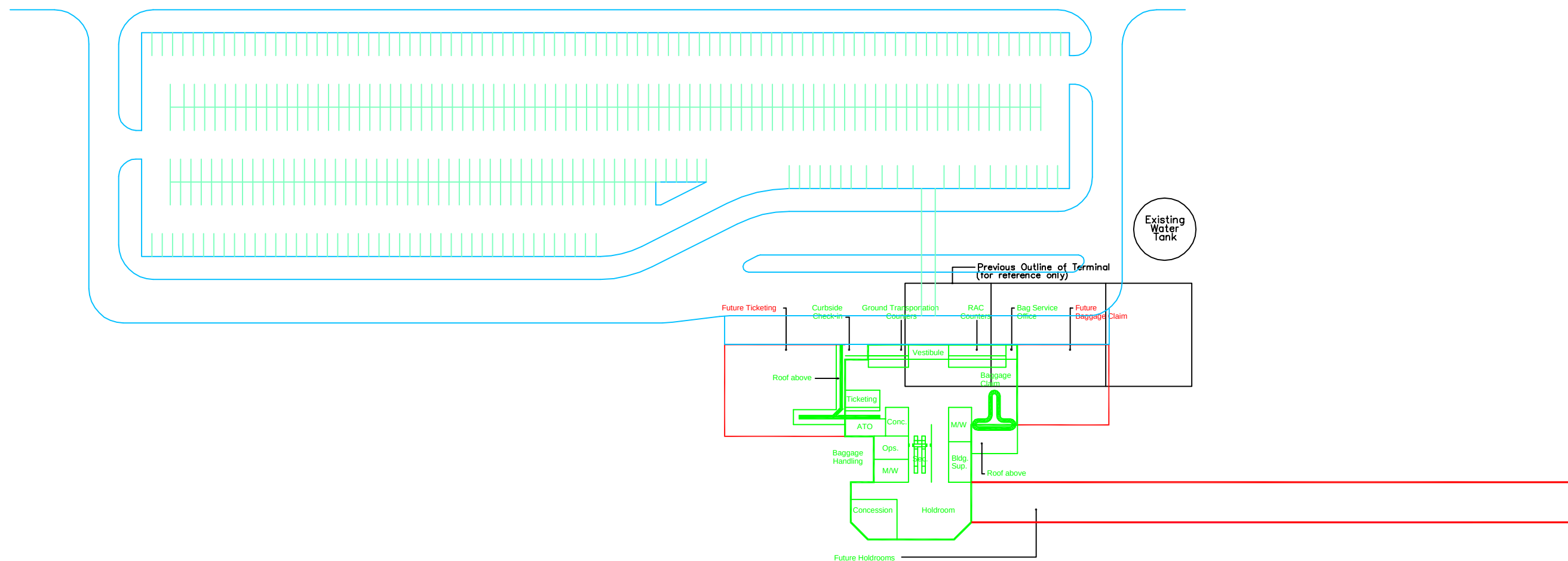
All of the retained alternatives, with the exception of Alternative 1 (No Project), have the following common airfield infrastructure and terminal developments:

- Strengthen the runway and taxiways to accommodate narrow-body air carrier aircraft up to the size of a B-757-200 aircraft
- Widen the runway from 100 to 150 feet on the south side of the runway, shifting the runway centerline 25 feet to the south
- Widen the parallel taxiway from 50 to 75 feet by 20 feet on the south side and five feet on the north side
- Widen selected connecting taxiways from 50 to 75 feet
- Extend the parallel taxiway to match the runway extension
- Add an air carrier apron for three air carrier aircraft with expansion capabilities to accommodate up to six air carrier aircraft
- Construct Airport access road improvements including connections to the new passenger terminal building.
- Expand the automobile surface parking facilities
- Acquire land to the east of the Airport that is currently leased for Airport use
- Improve security fencing to include a 8 foot high perimeter fence around the airfield
- Construction of a passenger terminal complex and related support areas as depicted in **Exhibit IV-1**.
- Construction of a new package wastewater treatment plant (instead of a new leach field).

These infrastructure improvements will occur in all alternatives. Most of these airfield improvements have already been reviewed for their environmental impacts either in the 1986 EIR/EA or in 1997 SEIR/EA. The only changes which are being reviewed in this document include the widening of the runway from 100 to 150 feet on the south side of the runway and shifting the runway centerline 25 feet to the south, and the construction of a new package treatment complex (instead of a leach field). Each of the five project alternatives is briefly described below and discussed in relation to potential environmental impacts as well as the attainment of project objectives.

4.2.1 Alternative 1 – 7,000-Foot Runway (No Project)

Alternative 1 is depicted in **Exhibit IV-2**. This alternative retains Runway 927 at its existing length of 7,000 feet. There are no further improvements to the existing airport infrastructure, except those required for maintenance or required by the FAA for safety reasons.

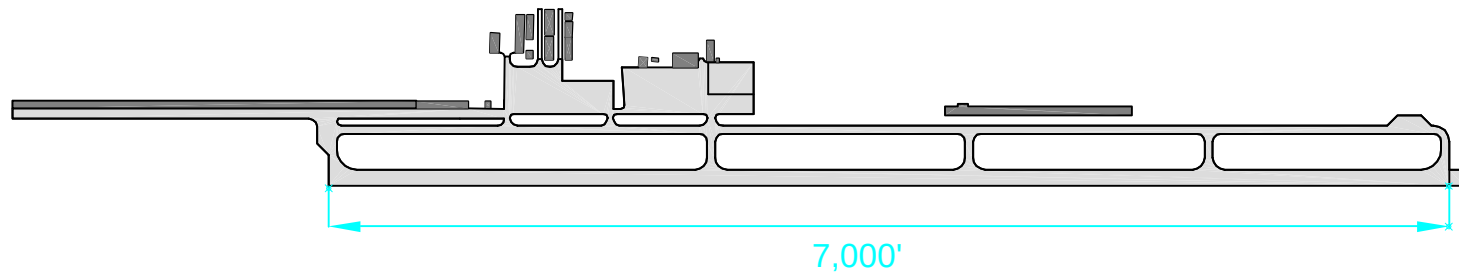


Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Assoicates, Inc.

Exhibit IV-1



Terminal Concept

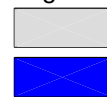


Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-2

0 1,200 ft.

Legend



Existing Airfield

Potential Airport Improvement

Alternative 1 - No Project

It is important to note that the Airport currently possesses a limited FAR Part 139 certificate for operations. A limited FAR Part 139 certificate allows air carrier aircraft to operate into the airfield on an unscheduled (i.e. charter) basis. The regulation governing the criteria for air carriers was changed in the mid 1990s to include aircraft whose seating capacities are 19 seats or greater. Many aircraft of this type have served Mammoth Yosemite Airport on a scheduled basis in the past under the old regulations and may do so in the future under the current regulations. Should operators of aircraft of these types elect to provide regularly scheduled service to the Airport in the future, Mammoth Yosemite Airport would have to have a full FAR Part 139 certification. An important part of meeting FAA safety regulations for scheduled operations is the required security fencing and a secure terminal building for the Airport. Before scheduled operations could start, the Airport would have to install improved security fencing and a terminal building that meets FAA security regulations.

Due to lack of any environmental impacts, Alternative 1 (No Project) would be environmentally superior to the proposed project. However, the No-Project Alternative is rejected from further consideration on the basis that it would not meet any of the proposed project objectives.

4.2.3 Alternative 2 – 8,200-Foot Runway (Proposed Project)

The proposed project, illustrated in **Exhibit IV-3**, extends Runway 9-27 1,200 feet to the west resulting in a runway length of 8,200 feet. The proposed project meets all the project objectives and was analyzed in Section III of this SSEIR. There are no new significant environmental impacts other than the relocation or replacement of “Green Church” from its present location to SNARL facilities.

Under this alternative, the entire aeronautical pavement area would be on Airport property, though, the required safety areas that meet specific FAA guidelines would be located on property owned by the United States government and administered by United States Forest Service (USFS). The Town of Mammoth Lakes would be required to obtain a special use permit for an additional 25 feet of land along the length of the runway to the south and 25 feet of land to the west of Airport property for the runway safety area.

4.2.3 Alternative 3 – 9,000-Foot Runway

Alternative 3, illustrated in **Exhibit IV-4** extends Runway 9-27 to the west to achieve a length of 9,000 feet. This alternative would retain all the other components of the proposed project (Alternative 2). Under this alternative, while the entire aeronautical pavement would be on Airport property, the required safety areas that must meet specific FAA guidelines would be located on property administered by the United States Forest Service (USFS). This would require the Town of Mammoth Lakes to purchase the property or obtain a special use permit from the USFS for the additional 25 feet of land along the length of the runway to the south and 825 feet of land to the west of Airport property for the runway safety area.

Alternative 3 would have environmental impacts that are greater than the proposed project in the Soil/Land transformation, Hydrology and Water Quality, and Biological Resources categories as more land would need to be cleared and graded and there would be greater storm water runoff due to increase in pavement area. The additional 825 feet of land required to the west of Airport property for the runway safety area would also potentially affect additional mule deer and sage grouse habitat. Environmental Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Traffic, Noise, Public Services, and Utilities. This length of the runway was approved in the 1986 EIR/EA and 1997 SEIR/EA, the only

changes to the previously approved project needed to meet the project objectives include the widening of the runway from 100 to 150 feet and relocation or replacement of ‘Green Church’.

4.2.4 Alternative 4 – Extend Runway Beyond 9,000 Feet

Alternative 4, illustrated in **Exhibit IV-5**, extends Runway 9-27 to the west to achieve a length greater than 9,000 feet. This alternative would meet all the project objectives but would entail a larger environmental impact due to an increase in previously approved length of 9,000 feet in 1986 EIR/EA and 1997 SEIR/EA. Depending on the ultimate runway length desired, some aeronautical pavement along with the required safety areas, would not be on Airport property. This would require the Town of Mammoth Lakes to purchase the property or obtain a special use permit from the USFS.

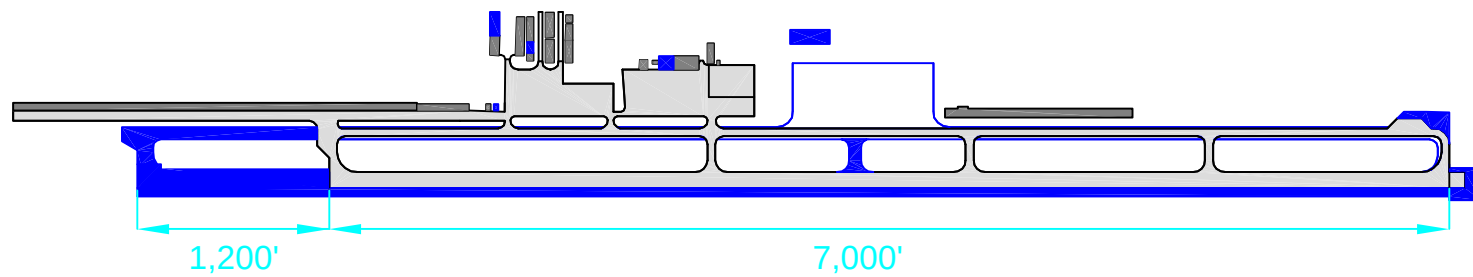
Alternative 4 would generate impacts that are greater than the proposed project and are likely to be significant in the categories of Soil/Land transformation, Hydrology and Water Quality, and Biological Resources. This alternative would meet all the project objectives but would entail a greater environmental impact due to an increase in land which would require to be cleared and graded along with greater storm water runoff due to increase in pavement area. The additional length of the runway would also potentially affect additional mule deer and sage grouse habitat. Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Traffic, Noise, Public Services, and Utilities. This alternative was rejected because Alternative 2 (proposed project) provides an environmentally superior alternative and meets all the project objectives at a lesser cost.

4.2.5 Alternative 5 – Extend Runway to the East

Alternative 5, illustrated in **Exhibit IV-6**, is the extension of Runway 9-27 to the east to achieve possible runway lengths of 8,200, 9,000, or greater than 9,000 feet. The City of Los Angeles owns the land east of the airfield and it is currently used for recreational purposes. Extensions of aeronautical facilities to the east would require the Town of Mammoth Lakes to acquire or lease the required land from the City of Los Angeles.

Alternative 5 would generate impacts that are greater than the proposed project and likely to be significant in the categories of Soil/Land transformation, Hydrology and Water Quality, Traffic, and Biological Resources depending on the runway length constructed. This alternative would meet all the project objectives but would entail a greater environmental impact due to an increase in land which would require to be cleared and graded along with greater storm water runoff due to increase in pavement area. The additional length of the runway would also potentially affect additional mule deer and sage grouse habitat and the dry meadow area located east of the Airport rather than the already disturbed land west of the Airport that is currently used as a paved stopway. Benton Crossing Road would have to be relocated, because it would conflict with associated safety areas or aeronautical pavement.

Environmental Impacts similar to the proposed project (i.e., no new significant impacts) would occur in the categories of Aesthetics/Light and Glare, Air Quality, Noise, Public Services, and Utilities. This alternative was rejected because Alternative 2 (proposed project) provides an environmentally superior alternative and meets all the project objectives at a lesser cost.

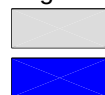


Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-3

0 1,200 ft.

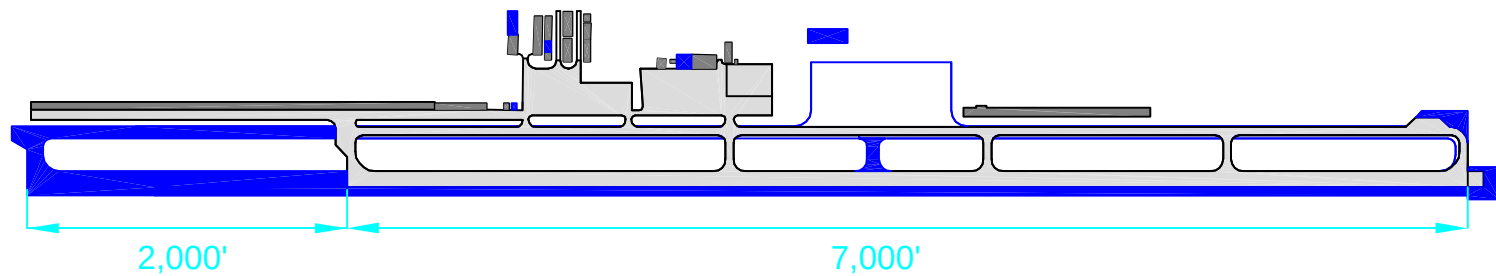
Legend



Existing Airfield

Potential Airport Improvement

Alternative 2 - Proposed Project
8,200 ft. Runway



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-4

0 1,200 ft.

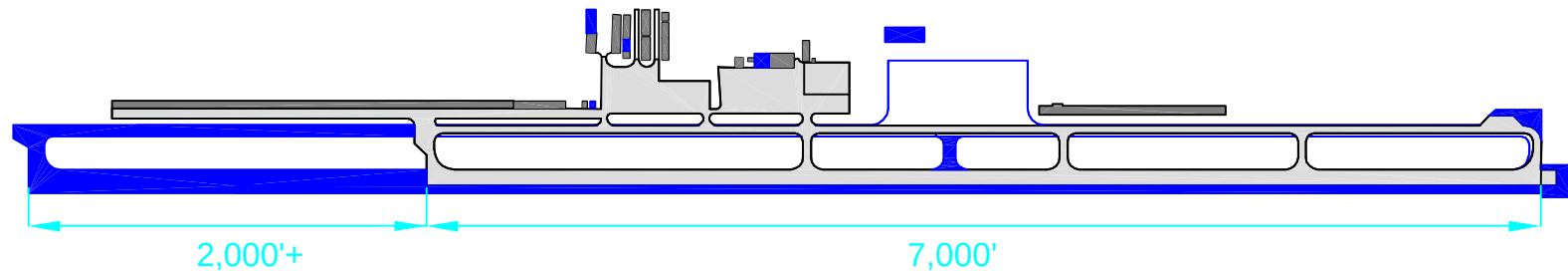
Legend



Existing Airfield

Potential Airport Improvement

**Alternative 3 -
9,000 ft. Runway**



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-5

0 1,200 ft.

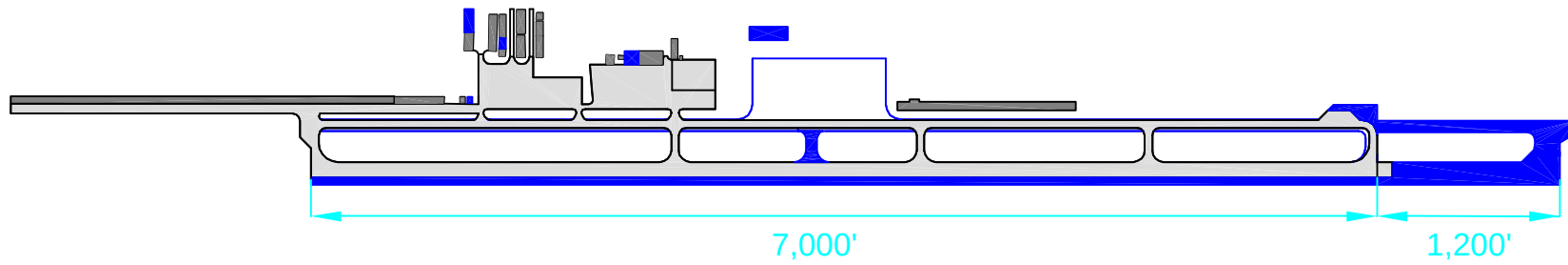
Legend



Existing Airfield

Potential Airport Improvement

**Alternative 4 - Extend Runway
Beyond 9,000 ft.**



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-6

0 1,200 ft.

Legend



Existing Airfield

Potential Airport Improvement

**Alternative 5 - Extend Runway
to the East**

4.3 Comparison of Environmental Impacts Of Project Alternatives

This section analyzes the difference in impact of the four build alternatives (Alternative 2, 3, 4, and 5). The environmental categories discussed in Section III, which are affected by the changes to the proposed project, are analyzed. These include Aesthetics/Light and Glare, Air Quality, Biological Resources, Traffic, Soils/Land Transformation, Hydrology and Water Quality, Noise, and Public Services and Utilities.

4.3.1 Aesthetics/Light and Glare

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on the environmental category of Aesthetics/Light and Glare. These impacts were analyzed for the proposed project in Section 3.1 of this SSEIR.

4.3.2 Air Quality

4.3.2.1 Operational Emissions

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on the environmental category of Air Quality as far as operational emissions are concerned. These impacts were analyzed for the proposed project in Section 3.2 of this SSEIR.

4.3.2.2 Construction Emissions

The methodology for calculating the construction emissions for all the alternatives would be the same as described in Section 3.2.2.2. **Table IV-1** gives a summary of the construction emissions for the different alternatives.

Table IV-1

2002 Construction Emissions and De Minimis Criteria (Tons per year)

	<u>PM-10</u>	<u>VOC</u>	<u>NO_x</u>
Alternative 1 (No Project)			
Non-road emissions	0	0	0
On-road emissions	0	0	0
Total	0	0	0
Alternative 2 (Proposed Project)			
Non-road emissions	2.0	1.5	21.8
On-road emissions	56.7	1.4	13.7
Total	58.7	2.9	35.5
Alternative 3			
Non-road emissions	2.5	1.9	27.1
On-road emissions	67.5	1.8	17.1
Total	70.0	3.6	44.2
Alternative 4			
Non-road emissions	2.5	1.9	27.1
On-road emissions	67.5	1.8	17.1
Total	70.0	3.6	44.2
Alternative 5			
Non-road emissions	2.0	1.5	21.8
On-road emissions	56.7	1.4	13.7
Total	58.7	2.9	35.5
<i>De minimis criteria</i>	100	50	100

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates Inc.

Total project related emissions (construction and operational) for the all five alternatives are summarized in **Table IV-2**.

Table IV-2

Total Project Emissions and De Minimis Criteria (Tons per year)

	<u>PM-10</u>	<u>VOC</u>	<u>NOx</u>
2002 Construction Impacts			
Alternative 1 (No Project)	0	0	0
Alternative 2 (Proposed Project)	58.7	2.9	35.5
Alternative 3	70.0	3.6	44.2
Alternative 4	70.0	3.6	44.2
Alternative 5	58.7	2.9	35.5
2003 Operational Impacts			
No Project	20.0	3.6	1.2
Proposed Project	8.6	3.7	10.6
Change in Emissions	(-11.5)	(+ 0.1)	(+ 9.4)
2007 Operational Impacts			
No Action	52.1	4.1	1.3
Proposed Project	25.9	10.6	28.4
Change in Emissions	(-26.1)	(+ 6.5)	(+ 27.0)
2022 Operational Impacts			
No Project	86.5	5.9	2.1
Proposed Project	52.0	17.5	55.9
Change in Emissions	(-34.5)	(+ 11.6)	(+ 53.8)
<i>De minimis criteria</i>	100	50	100
Total Annual Emissions Great Basin Valleys (a)	20,075	4,745 (b)	3,285
Total Annual Emissions Mono County (c)	9,950	2,256 (b)	843

(a) 1996 Estimated Value. Produced by the California Air Resources Board.

(b) Estimate is for Reactive Organic Compounds (ROC)

(c) 2000 Estimated Value. Produced by the California Air Resources Board

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

The proposed project and alternatives are presumed to conform with air quality standards promulgated in the Clean Air Act and the California Clean Air Act. As the preceding analysis demonstrates, the project will not result in emissions that would exceed the applicable de-minimis threshold rates, nor would the project be considered “regionally significant” with regard to air pollution emissions because project emissions would be a minute fraction of the total emissions in the region.

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on the environmental category of Air Quality as far as construction emissions are concerned. It is expected that *de minimis* thresholds for criteria pollutants being analyzed in this SSEIR will not be exceeded in any year if the proposed project is implemented.

4.3.3 Biological Resources

4.3.3.1 Vegetation

Under the proposed project, approximately 10.5 acres of sagebrush scrub habitat would be removed. For the other project alternatives, between 9.5 and 41.9 acres of sagebrush scrub habitat would be removed. Sagebrush scrub habitat is locally and regionally abundant. Therefore, the loss of this habitat type is not considered a significant adverse effect.

For the construction of Alternative 5, a portion of dry meadow east of the Airport would be required. This habitat could serve as potential lek site for sage grouse. Reduction in the meadow's size and location of the runway closer to the dry meadow habitat could reduce opportunities for lek formation in the vicinity of the Airport.

No Significant Natural Areas of Rare Natural Communities were located in the project area. Therefore, no impacts to these resources would occur from the proposed project.

4.3.3.2 Wildlife

Sage Grouse

Alternative 2 (proposed project), 3, and 4 would require the disturbance of a portion the sagebrush habitat west of the Airport, which is used by sage grouse along with mule deer. Alternative 5 would affect the dry meadow east of the approach end of Runway 27, which is a suitable habitat for sage grouse winter use and summer foraging (see Appendix I Figure 2). It could not be determined during the survey if sage grouse were using this area as a lek site. Alternative 5, the extension of the runway to the east, would eliminate important wintering habitat between the approach end of Runway 27 and Benton Crossing Road.

For all project alternatives, a six- to eight-foot high security fence would be constructed around the airfield. Although sage grouse could fly over the fence to use the enclosed sagebrush scrub habitat, the fence could inhibit their use of this habitat. The construction work proposed at the Airport, including construction of the security fence, is not expected to have an adverse effect on sage grouse given the current disturbed nature of the site.

There is no difference between the build alternatives as far as effects of aircraft flight path and noise effects on wildlife are concerned. These were both addressed in Section 3.3.2.2.

Mule Deer

There is no difference between the build alternatives as far as effects of perimeter fence, increased light, noise, airport and vehicle traffic, and human disturbance are concerned. These were all addressed in Section 3.3.2.2.

The location of the fence and the affected deer habitat for the proposed action and all alternatives is depicted in Exhibit III-8. **Table IV-3** summarizes the number of acres of high quality deer habitat that would be lost due to security fencing for each alternative. Proposed mitigation measures would reduce the potential impacts.

Table IV-3

Eliminated High Quality Deer Habitat Loss (acres)

<u>Alternative</u>	<u>Eliminated habitat loss (acres)</u>
1 – No Project	0.0
2 – Extend Runway 8,200 feet to the west	9.5
3 – Extend Runway 9,000 feet to the west	10.5
4 – Extend Runway beyond 9,000 feet to the west	21.9
5 - Extend Runway to the east	41.9

Source: Jones & Stokes, Inc., September 2000.

Prepared by: Ricondo & Associates, Inc.

The proposed project and project alternatives are not expected to directly impact mule deer migration as analyzed in Section 3.3.2.2.

Raptors

There would be no substantial impacts of Alternative 2 (proposed project), 3, 4, and 5 on Raptors.

4.3.3.3 Threatened and Endangered Species

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on threatened and endangered species. As analyzed in Section 3.4 the proposed project would have no adverse impacts on Owens Tui Chub, Lahontan Cutthroat Trout, Bald Eagle, and Sierra Nevada Big Horn Sheep.

4.3.3.4 Water Resources

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on water resources. As analyzed in Section 3.4 the proposed project would have no adverse impacts on water resources.

4.3.4 Transportation/Traffic

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, and 4 on the environmental category of Transportation/Traffic. These impacts were analyzed for the proposed project in Section 3.4 of this SSEIR. Alternative 5 would require the relocation of Benton Crossing Road.

4.3.5 Soil/Land Transformation

Alternative 3 would have environmental impacts that are greater than the proposed project in the Soil/Land transformation as more land would need to be cleared and graded and there would be greater storm water runoff due to increase in pavement area.

Alternative 4 extends Runway 9-27 to the west to achieve a length greater than 9,000 feet. Depending on the ultimate runway length desired, some aeronautical pavement along with the required safety areas, would not be on Airport property. This would require the Town of Mammoth Lakes to purchase the property or obtain a special use permit from the USFS. Alternative 4 would generate impacts that are greater than the proposed project in Soil/Land transformation due to an increase in land which would require to be cleared and graded along with greater storm water runoff due to increase in pavement area.

Alternative 5 is the extension of Runway 9-27 to the east to achieve possible runway lengths of 8,200, 9,000, or greater than 9,000 feet. The City of Los Angeles owns the land east of the airfield and it is currently used for recreational purposes. Extensions of aeronautical facilities to the east would require the Town of Mammoth Lakes to acquire or lease the required land from the City of Los Angeles.

Alternative 5 would generate impacts that are greater than the proposed project and likely to be significant in the Soil/Land transformation category.

4.3.6 Hydrology, Water Supply, and Water Quality

Alternatives 3,4, and 5 would have a greater impact on Hydrology, Water Supply, and Water Quality than Alternative 2 (proposed project) as all these alternatives have greater storm water runoff due to increase in pavement lengths.

4.3.7 Noise

Noise exposure maps were prepared for all of the alternatives for the years 2003 and 2022 to estimate and compare the potential effects of aircraft noise on existing land uses. Noise exposure maps were prepared for 2003 to demonstrate the changes in noise exposure that could occur with the Airport expansion in the earliest year that the development would be operational and for 2022 to evaluate the longer-range impacts of the Airport development alternatives.

In this analysis, the primary factor contributing to the changes in noise exposure between each alternative is the location of the proposed extension (east vs. west) and length of the extension. The projected annual distribution of runway use is presented in Table F-8 in Appendix F.

Moving the start-of-roll point for departures with the runway extensions results in existing aircraft operating at the Airport climbing for a longer distance, and subsequently at higher altitudes, over Airport property when overflying areas in the vicinity of the Airport. In certain instances, this results in some reduction in aircraft noise exposure for the general aviation fleet of aircraft at the Airport. However, because the runway development permits the use of the Airport by larger air carrier aircraft, the resulting increase in operations would cause an increase in the overall noise exposure area.

Noise exposure maps showing the CNEL 60 and 65 noise exposure areas were developed for each of the alternatives for both 2003 and 2022. The following indicates the exhibits associated with each alternative:

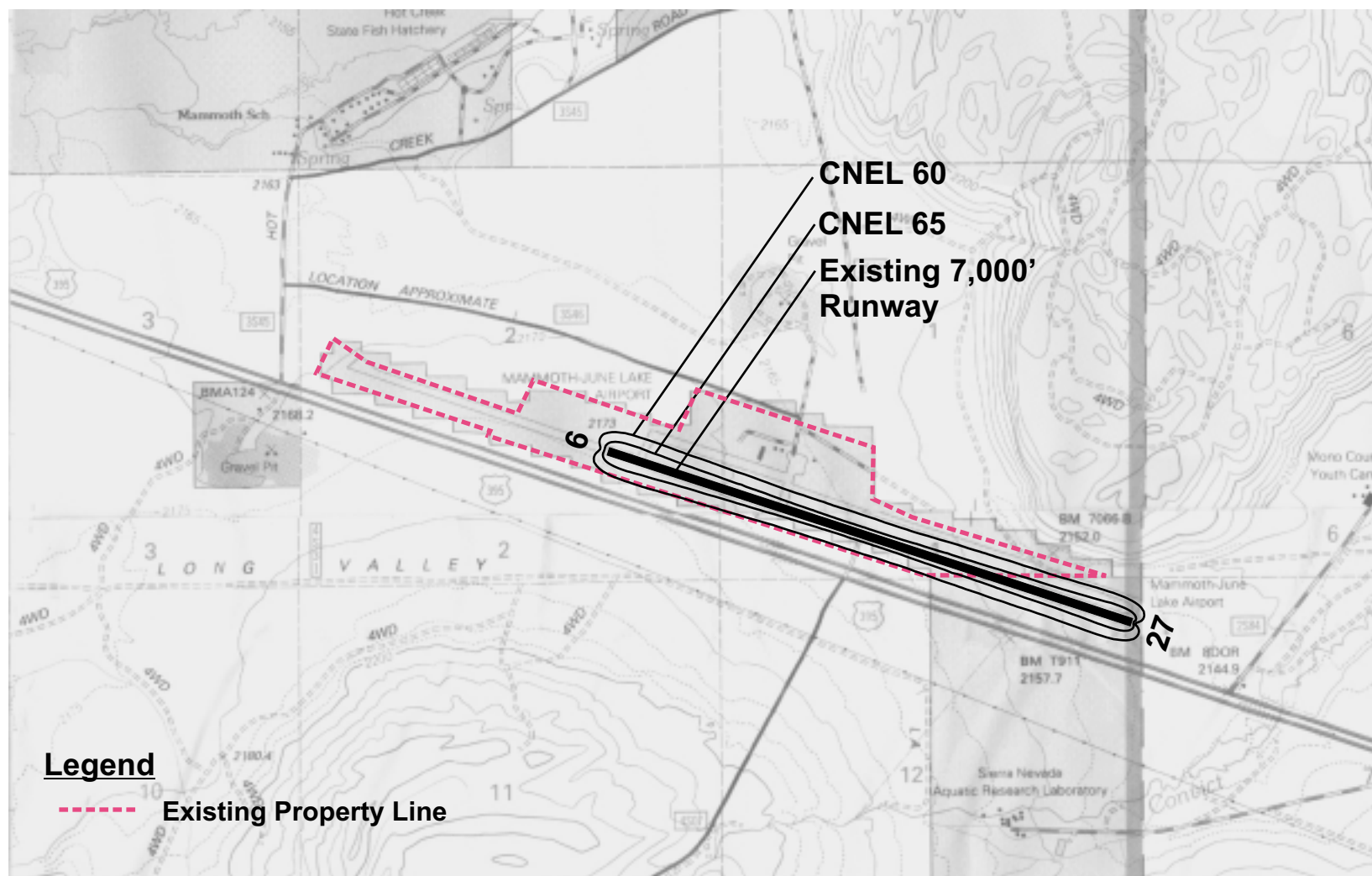
- **Alternative 1—Existing 7,000-Foot Runway (No Action).** Aircraft noise exposure in 2003 and 2022 for Alternative 1 is shown on **Exhibit IV-7** and **Exhibit IV-8**, respectively.
- **Alternative 2—8,200-Foot Runway (Proposed Action).** Aircraft noise exposure in 2003 and 2022 for Alternative 2 is shown on **Exhibit III-19** and **Exhibit III-20**, respectively.
- **Alternative 3—9,000-Foot Runway.** Aircraft noise exposure in 2003 and 2022 for Alternative 3 is shown on **Exhibit IV-9** and **Exhibit IV-10**, respectively.
- **Alternative 4—Greater than 9,000-Foot Runway.** Aircraft noise exposure for this alternative would be dependent on the exact length of the runway. It is anticipated to be similar to Alternative 3 but shifted to the end of the proposed runway.

- **Alternative 5—8,200-Foot Runway, Extension to the East.** Aircraft noise exposure in 2002 and 2022 for Alternative 5 is shown on **Exhibit IV-11** and **Exhibit IV-12**, respectively.

As shown on the exhibits for the alternatives, the area exposed to aircraft noise of CNEL 65 and higher for each of the alternatives remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Airport through leases or use permits. There are no noise sensitive land uses and no people living within the CNEL 65 noise exposure area for any of the alternatives. The CNEL 60 and higher noise exposure area remains largely on Airport property, vacant land, or the U.S. Highway 395 right-of-way. Current land use plans show this area as remaining as compatible land uses. Areas west of the Airport are compatible land uses and therefore, it is anticipated that noise impacts for Alternative 4 would not be significantly different than Alternative 3.

A hotel and residential condominium development is planned on Airport property, north of the airfield. This area would be outside the CNEL 60 noise exposure area for each of the alternative

In addition to the noise exposure maps, a grid point analysis was conducted to evaluate potential changes in noise exposure at specific points in the vicinity of the Airport. These areas, as shown on Exhibit III-24, include the Hot Creek State Fish Hatchery, the Hot Creek Ranch, the planned hotel/condominium complex on Airport property and the Sierra Nevada Aquatic Research Laboratory (SNARL). **Table IV-4** summarizes the CNEL values calculated by the INM for Alternatives 1, 2, 3, and 5 at these locations. As described in Table IV-4, Grid Points 1 and 2 refer to the location of the hatchery, Grid Point 3 refers to the location at the Hot Creek Ranch, Grid Points 4 and 5 refer to locations along Hot Creek, Grid Point 6 refers to the location at the on-Airport hotel/condominium complex, and Grid Point 7 refers to the location of SNARL facilities. None of these facilities are located within the existing or future CNEL 65 noise exposure area for any of the alternatives. Although each grid point would show some increase in noise exposure levels with the development alternatives, the noise exposure levels remain low. It is anticipated that these areas would also not experience direct overflights of air carrier jet aircraft because the planned operating procedure is for air carrier jet aircraft to arrive on a straight-in arrival procedure from the east and depart using an initial turn to the south, away from these development areas for departures to the west.

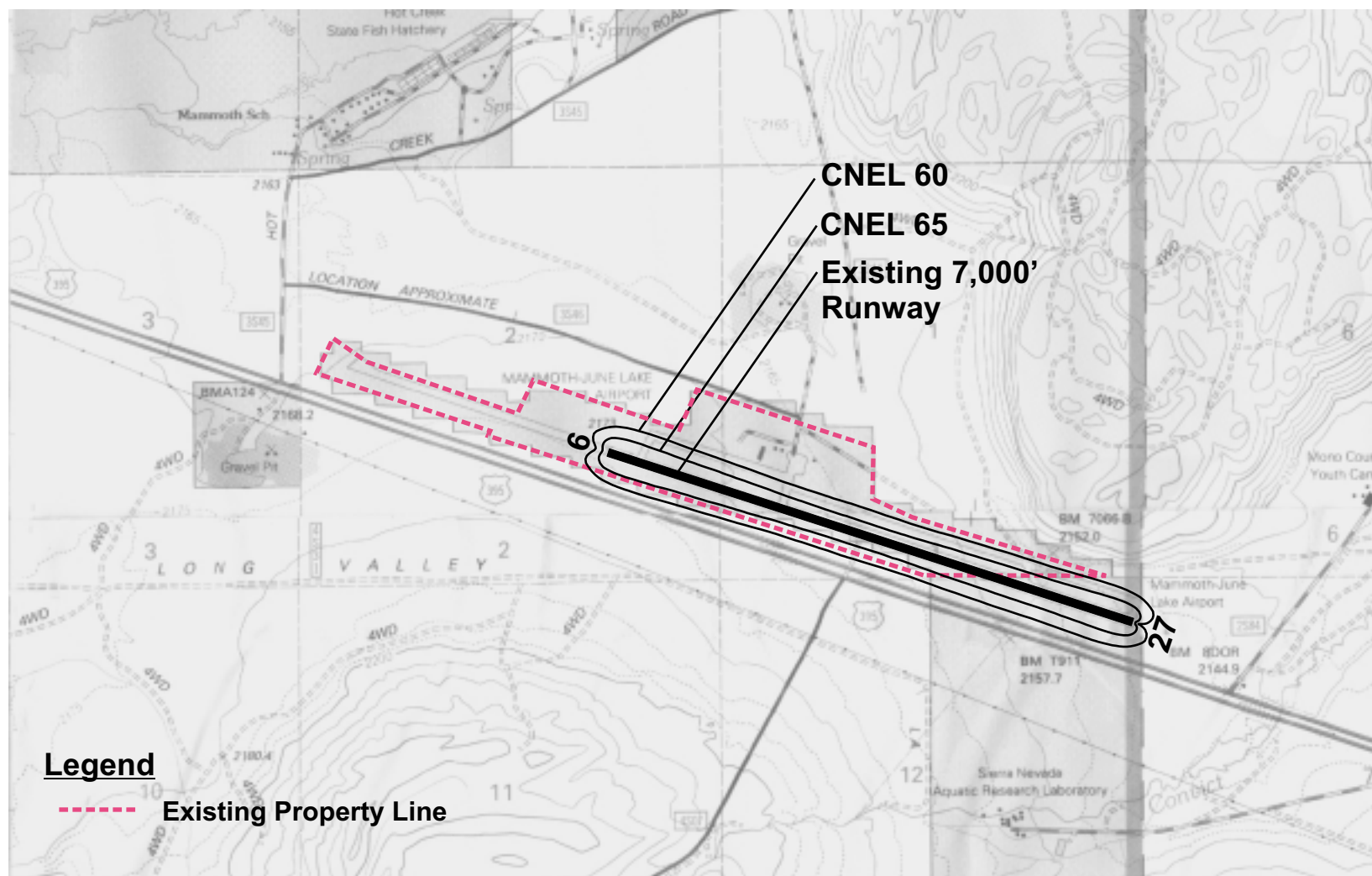


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-7

↑
north Scale 1" = 2000'

Alternative 1 (No Project) 2003 Noise Contours

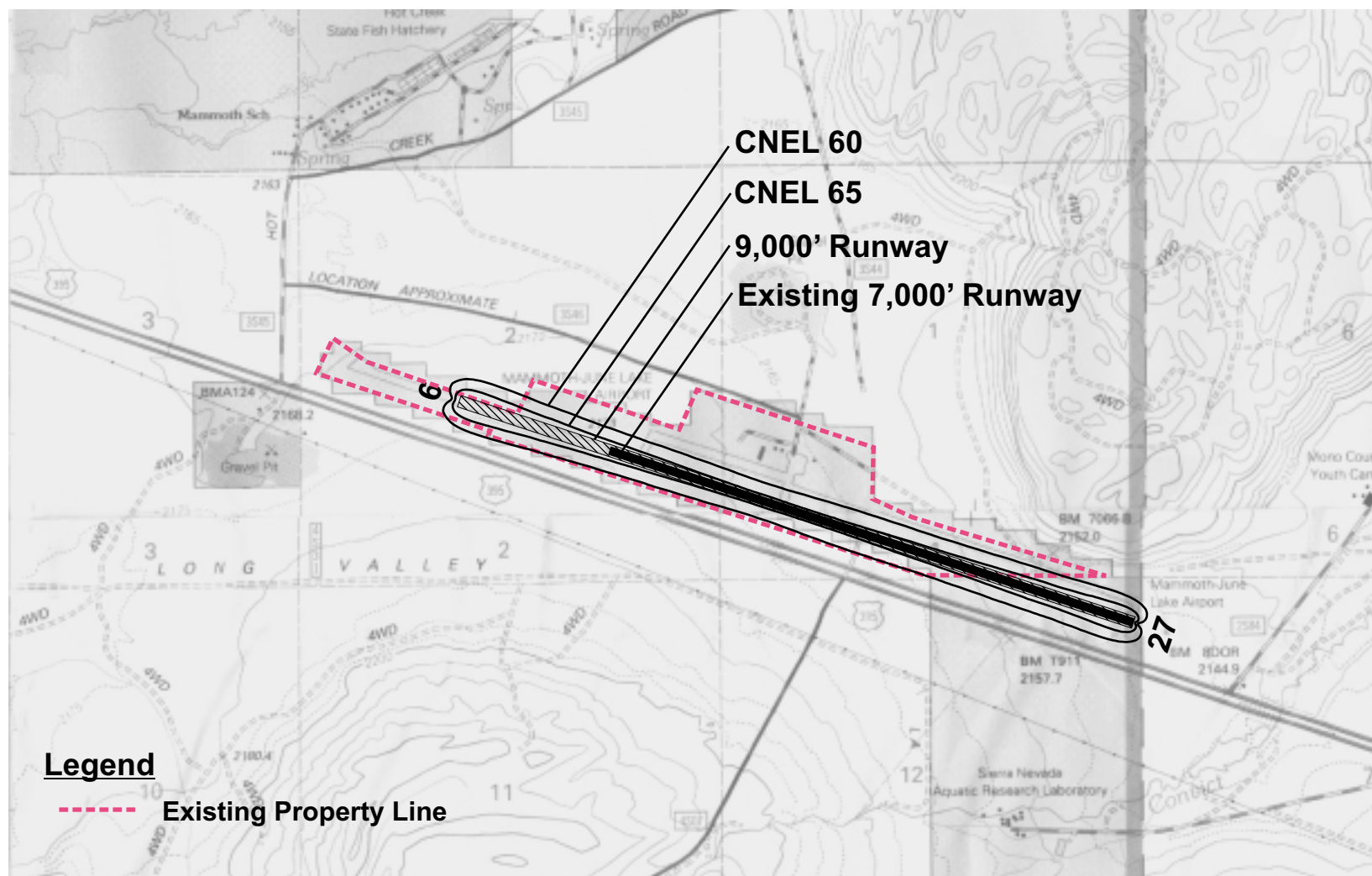


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-8

↑
north Scale 1" = 2000'

Alternative 1 (No Project)
2022 Noise Contours

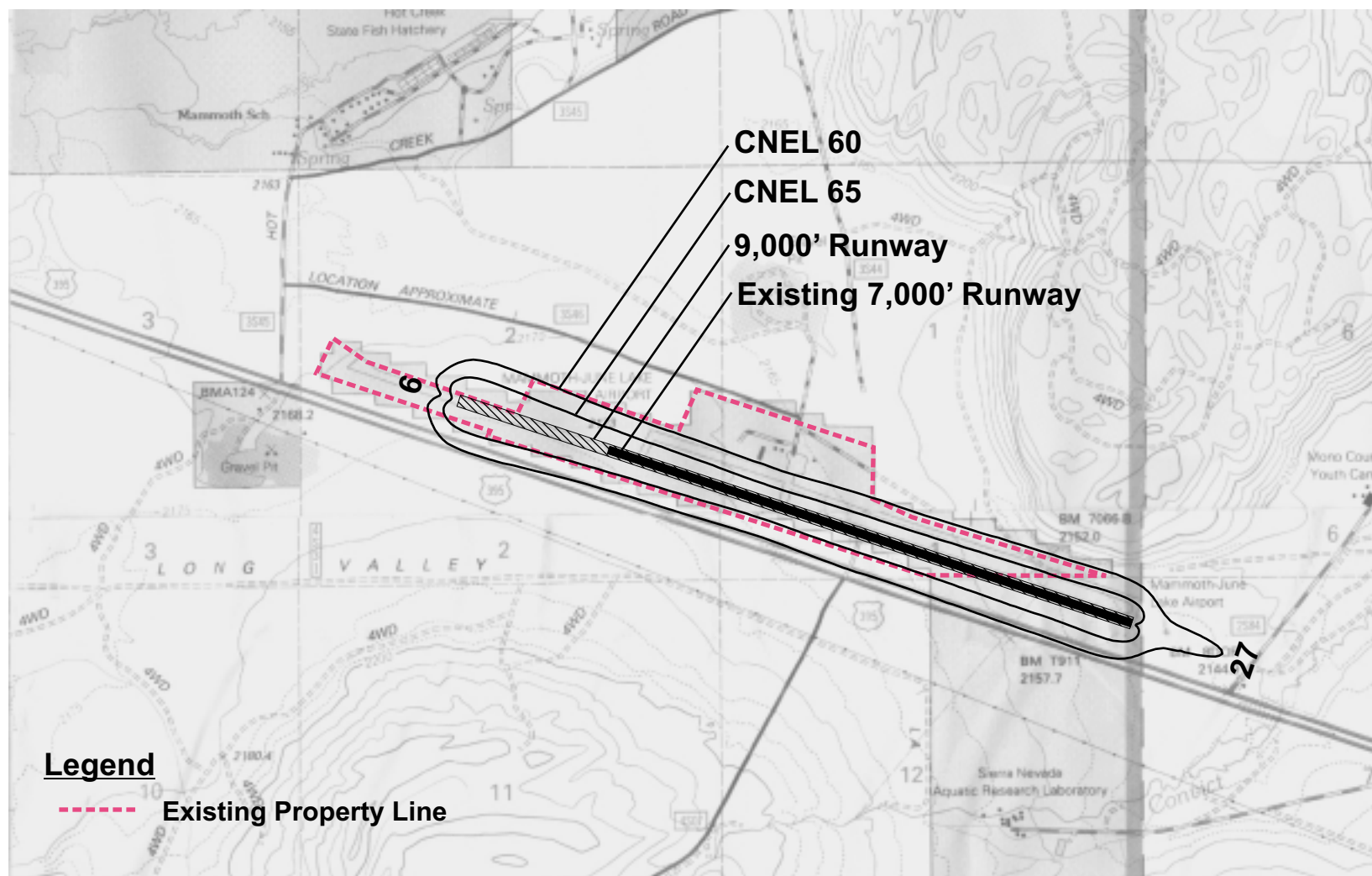


Source: Brown-Buntin Associates, Inc.
 Prepared by: Ricondo & Associates, Inc.

Exhibit IV-9

↑
 north Scale 1" = 2000'

Alternative 3 (9,000' Runway) 2003 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-10

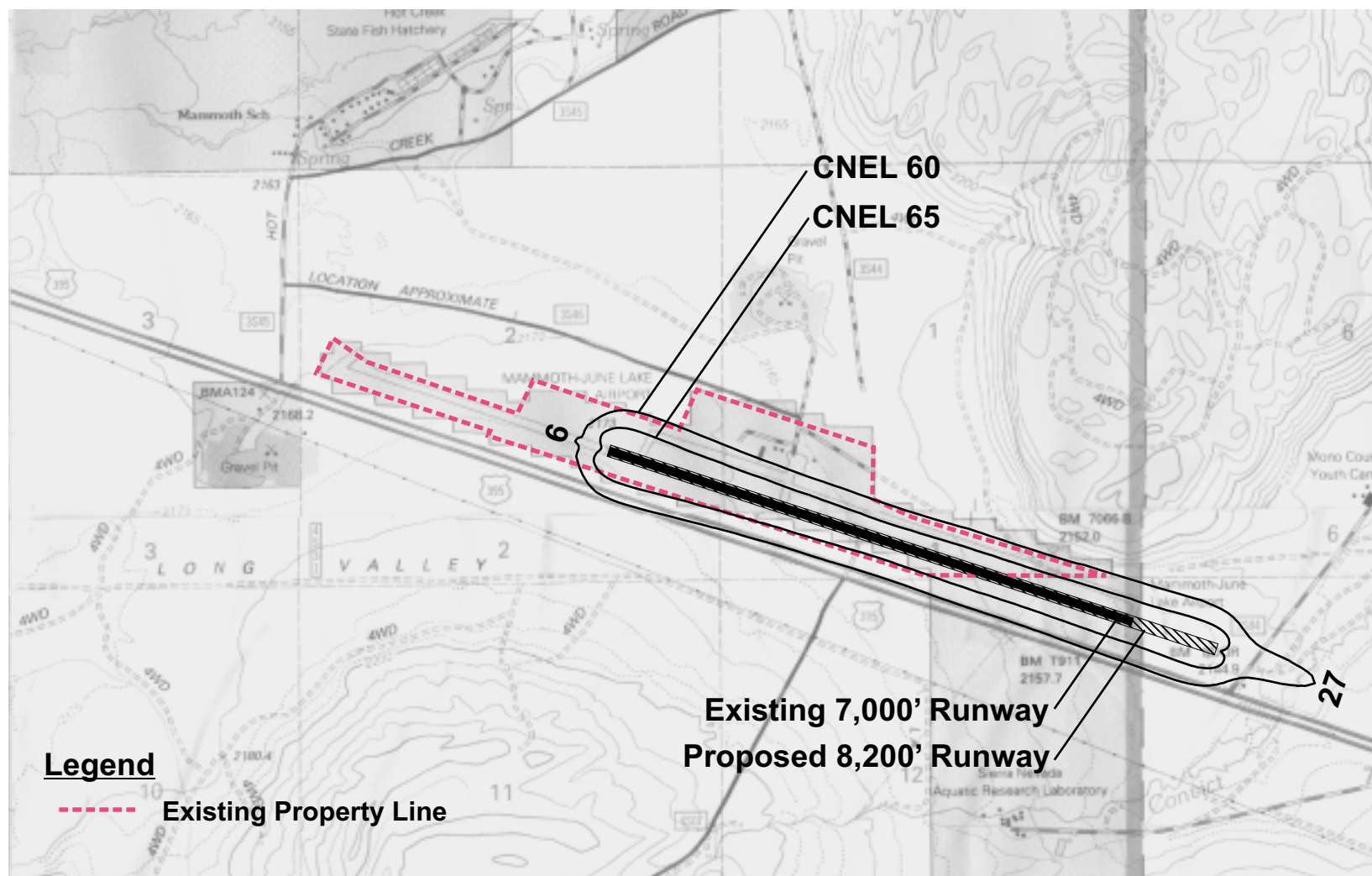
 north Scale 1" = 2000'

Alternative 3 (9,000' Runway) 2022 Noise Contours

Exhibit IV-11



Alternative 5 (8,200' Runway - Eastward Extension) 2003 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-12

↑
north Scale 1" = 2000'

Alternative 5 (8,200' Runway - Eastward Extension) 2022 Noise Contours

Table IV-4

CNEL Values at Grid Locations

Grid Point	Existing	Alternative (a)			
	1999	1	2	3	5
2003					
1 – Hatchery-south	38.3	38.8	39.1	39.1	39.1
2 – Hatchery-north	37.5	37.9	38.2	38.3	38.6
3 – Hot Creek Ranch	35.9	36.3	36.5	36.5	36.7
4 – Hot Creek-south	35.6	36.0	36.3	36.2	36.4
5 – Hot Creek-north	33.0	33.4	33.7	33.6	33.7
6 – On-Airport hotel/	49.3	49.7	53.6	52.4	50.9
7 - Sierra Nevada	30.5	30.9	35.2	35.3	35.1
Aquatic Research					
2022					
1 – Hatchery-south		41.4	42.3	42.3	42.3
2 – Hatchery-north		40.5	41.4	41.5	41.7
3 – Hot Creek Ranch		38.9	39.5	39.5	39.8
4 – Hot Creek-south		38.6	39.3	39.2	39.4
5 – Hot Creek-north		36.0	36.8	36.7	36.9
6 – On-Airport hotel/		52.4	58.8	57.3	55.8
7 - Sierra Nevada		33.5	41.0	41.0	40.7
Aquatic Research					

CNEL = Community noise equivalent level, in A-weighted decibels.

- (a) Alternative 1—7,000-foot runway (no action)
 Alternative 2—8,200-foot runway (proposed action)
 Alternative 3—9,000-foot runway
 Alternative 5—8,200-foot runway, extension to the east

Source: Brown-Buntin Associates, July 2000
 Prepared by: Ricondo & Associates, Inc.

In summary, **Table IV-5** shows the area exposed to CNEL 60 to 65 and CNEL 65 and higher for the 1999 operating conditions and each of the alternatives for the forecast 2003 and 2022 operation levels. In terms of environmental impact, the extent of impact is often indicated by the number of people exposed to CNEL 65 and higher. There are no populated areas or other incompatible land uses planned within the areas that would be exposed to CNEL 65 or higher noise exposure areas for any of the alternatives for 2003 or 2022.

The closest potential noise sensitive area is the proposed on-Airport hotel and residential condominium development, which is outside the area exposed to CNEL 60 and higher. The Mono County Noise Element [3-33] and the Town of Mammoth Lakes Noise Element [3-34], in conformance with State Standards, recommends that interior residential noise levels not exceed CNEL 45. Standard building practice in the cold weather mountainous regions will generally reduce noise levels inside the buildings within this area to less than CNEL 45.

Table IV-5

Comparison of Estimated Noise Exposure Areas by Alternative

Noise impact factor <u>Area exposed (acres)</u>	Existing 1999	Alternative (a)			
		1	2	3	5
2002					
CNEL 65+	39	39	48	48	48
CNEL 65-60	47	47	61	66	61
Total CNEL 60+		86	109	114	109
2022					
CNEL 65+		62	105	110	105
CNEL 65-60		56	105	112	105
Total CNEL 60+		118	210	222	210

CNEL = Community noise equivalent level, in A-weighted decibels.

(a) Alternative 1—7,000-foot runway (no project)

Alternative 2—8,200-foot runway (proposed project)

Alternative 3—9,000-foot runway

Alternative 5—8,200-foot runway, extension to the east

Source: Brown-Buntin Associates, July 2000

Prepared By: Ricondo & Associates, Inc.

All of the commercial development areas, including the on-Airport commercial development areas, SNARL and the planned Sierra Business Park development area, would be located outside the CNEL 65 (and CNEL 60) noise exposure area for all the alternatives. As indicated in Table III-16, commercial uses in these areas would be compatible.

As the proposed project would not result in the exposure of persons to or generation of noise levels in excess of CNEL 60 and indoor noise level greater than CNEL 45. Therefore, the proposed plan does not significantly impact the environment in terms of operational noise.

4.3.8 Public Services and Utilities

There would be no substantial difference between impacts of Alternative 2 (proposed project), 3, 4, and 5 on the environmental category of Public Services and Utilities. These impacts were analyzed for the proposed project in Section 3.8 of this SSEIR.

4.4 Alternatives Previously Considered and Eliminated from Further Consideration

4.4.1 Reasons for Eliminating Alternative 6 - Widen 7,000 Foot Runway

This alternative's runway length, 7,000 feet is not sufficient to meet the project objectives. It is less than the length required by the air carrier that is scheduled to begin operations from Mammoth Lakes to Dallas/Fort Worth and Chicago during the winter season of 2002/2003. Additionally, other major airline hubs (such as Denver, Los Angeles, Houston, and Salt Lake City) have previously been identified as feasible origin and destination points for Mammoth Lakes. Results of the aircraft performance analysis (Appendix E) showed that only very short-range destination cities, such as Denver, Los Angeles, and Salt Lake City, could be effectively served year-round from a 7,000-foot runway. Significant weight penalties for air carrier aircraft serving longer distance destinations could be imposed, making air carrier service unfeasible. As a result of this alternative's failure to provide service to the targeted markets, it would not meet project objectives and was eliminated from further consideration.

4.4.2 Reasons for Eliminating Alternative 7 - Widen the Runway Without Shifting the Runway 25 Feet to the South

Based on the Airport elevation, type of passenger service anticipated, and current airline scheduling plans, the design aircraft selected for Mammoth Yosemite Airport is a narrow body aircraft up to and including Boeing 757-200. The current runway centerline to taxiway centerline separation is 300 feet. The Boeing 757 requires runway centerline to taxiway centerline separation of 312.5 feet. By widening the runway 50 feet on the south side of the runway, thereby shifting the runway centerline 25 feet south, the required runway centerline to taxiway centerline separation would be provided. Widening the taxiway to the north would place the taxiway too close to the east hangars.

Taxiway centerline to a fixed or movable object separation for a Boeing 757 is 97.5 feet. The current taxiway centerline to a fixed or movable object is 90.5 feet. By widening the parallel taxiway 20 feet on the south side and five feet on the north side, the taxiway centerline would be shifted 7.5 feet to the south. This provides a runway to taxiway separation of 317.5 feet and a taxiway centerline to a fixed or movable object (east hangars) of 98 feet. The 317.5-foot runway to taxiway separation protects for both the RSA and Taxiway Safety Area and provides an additional five feet for the airfield drainage system.

This runway location in Alternative 7 would not allow the parallel taxiway to have adequate clearance from the east general aviation hangars, thus precluding the use of the taxiway by Boeing 757 aircraft. Boeing 757 aircraft would have to back taxi on the runway for departure. Air carrier aircraft at other non-hub air carrier airports in the United States perform back taxiing operations on runways, although it is not preferred operating practice and should only be used when other design options are not possible. Because of the inability of this alternative to normally serve the design aircraft, it does not meet the project objectives and was eliminated from further consideration.

4.4.3 Reasons for Eliminating Alternative 8-Develop Another Airport in the Region

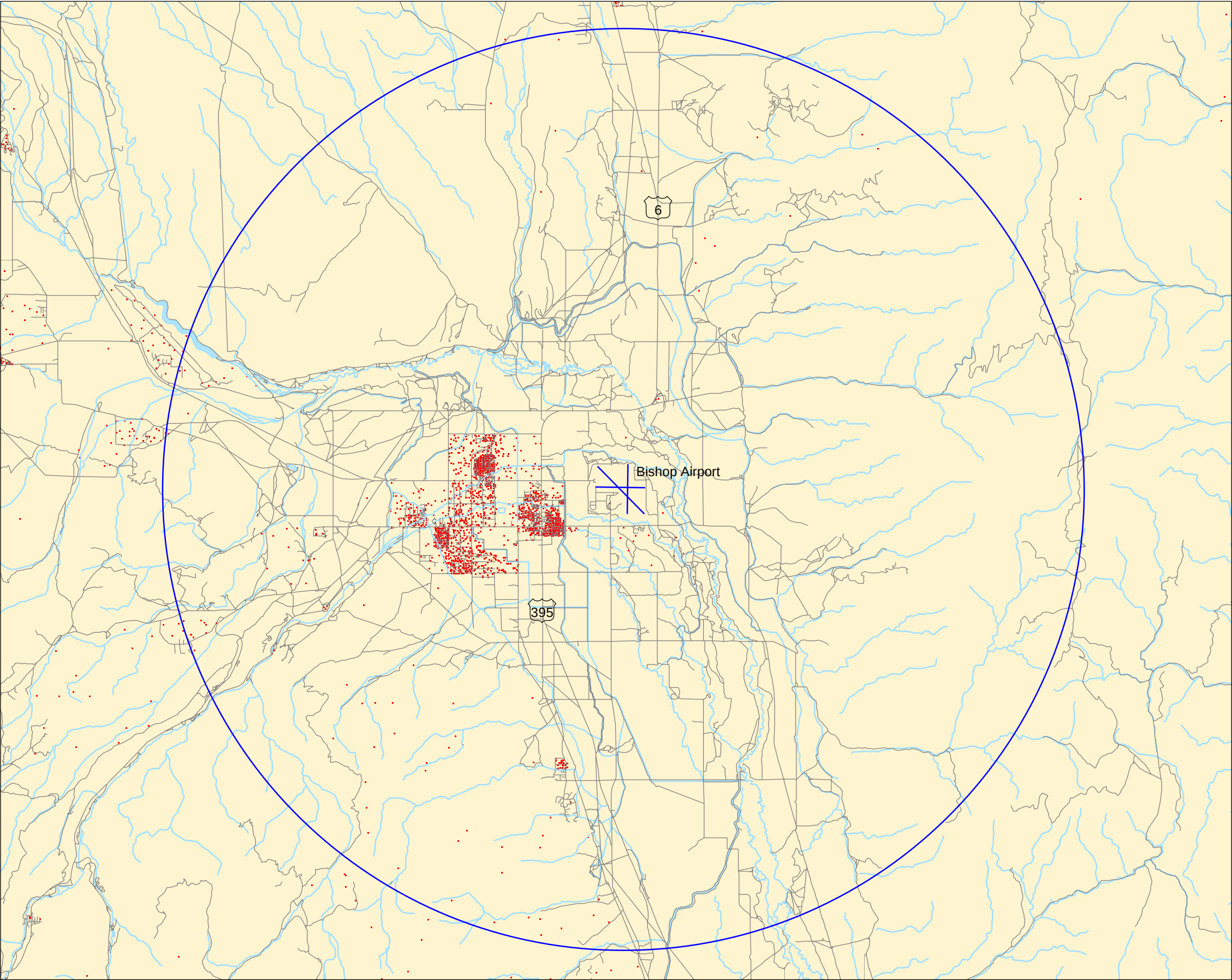
The next closest airfield to Mammoth Lakes is a general aviation airport located at Bishop, California. The distance from Bishop to Mammoth Mountain is about 50 miles, and while the distance from the Mammoth Yosemite Airport to Mammoth Mountain is less than 10 miles. Access from Bishop Airport to regional recreational areas (e.g., Mammoth Mountain) would require drivers to pass through downtown Bishop along a two-lane residential street and through a major downtown intersection. This would generate neighborhood compatibility, traffic and air quality issues in Bishop, which would not result with use of the Mammoth Yosemite Airport. This would be further exacerbated by the fact that skiers (peak season airport users) would be required to travel approximately 50 miles from Bishop to Mammoth Mountain ski areas, versus less than 10 miles with use of the Mammoth Yosemite Airport. the use of Bishop Airport would not only result in downtown vehicular traffic and air quality impacts, but would also contribution to regional vehicular and air quality impacts.

The primary population of Bishop, California is located within one to five miles of the Bishop Airport and much of the population resides directly under the flight path for the east-west runway at the Airport. The primary population of the Town of Mammoth Lakes, Sunny Slopes, and Lake Crowley are all located significantly further away from Mammoth Yosemite Airport and south of the flight path of the Airport's runway. **Exhibits IV-13** and **IV-14** show the general proximity of the populated areas in the vicinities of Bishop Airport and Mammoth Yosemite Airport, respectively. Based on a visual review, there is the potential for greater aircraft noise impacts at Bishop Airport.

Moreover, U.S. Highway 395 between Bishop and Mammoth Lakes has a steep grade making for difficult driving during periods of inclement winter weather, and resulting in occasional additional traffic congestion along the highway.

The airfield at Bishop Airport is currently not certified for FAR Part 139 and there are currently no plans to obtain FAR Part 139 certification in the immediate future. Mammoth Yosemite Airport is already operating under a limited FAR Part 139 certification. The runway length on the longest runway at Bishop would be sufficient to accommodate the aircraft types and markets identified. However, the existing runways and taxiways would have to be widened and strengthened and taxiway and terminal improvements similar to those proposed for Mammoth Lakes would have to be undertaken. Given the time required for planning, engineering, and construction of the required facilities, it is highly doubtful that all of the needed improvements could be accomplished at significantly less cost than the proposed project at Mammoth Yosemite Airport. Without Part 139 certification, the FAA would not allow Bishop Airport to be operated as an air carrier passenger airport. Moreover, the Town of Mammoth Lakes has no control over the development of the Bishop Airport and is uncertain as to whether the air carriers would opt to serve the Mammoth Lakes market from the Bishop Airport.

An early coordination meeting was held with representatives of Bishop on January 31, 2000, and a copy of a letter to the FAA Airports District Office documenting the discussions at that meeting is provided in Appendix D of this SSEIR. Representatives from Bishop indicated their potential plans to attract commuter service to Bishop Airport. The use of Mammoth Yosemite Airport and Bishop Airport would be complementary in nature rather than competitive.



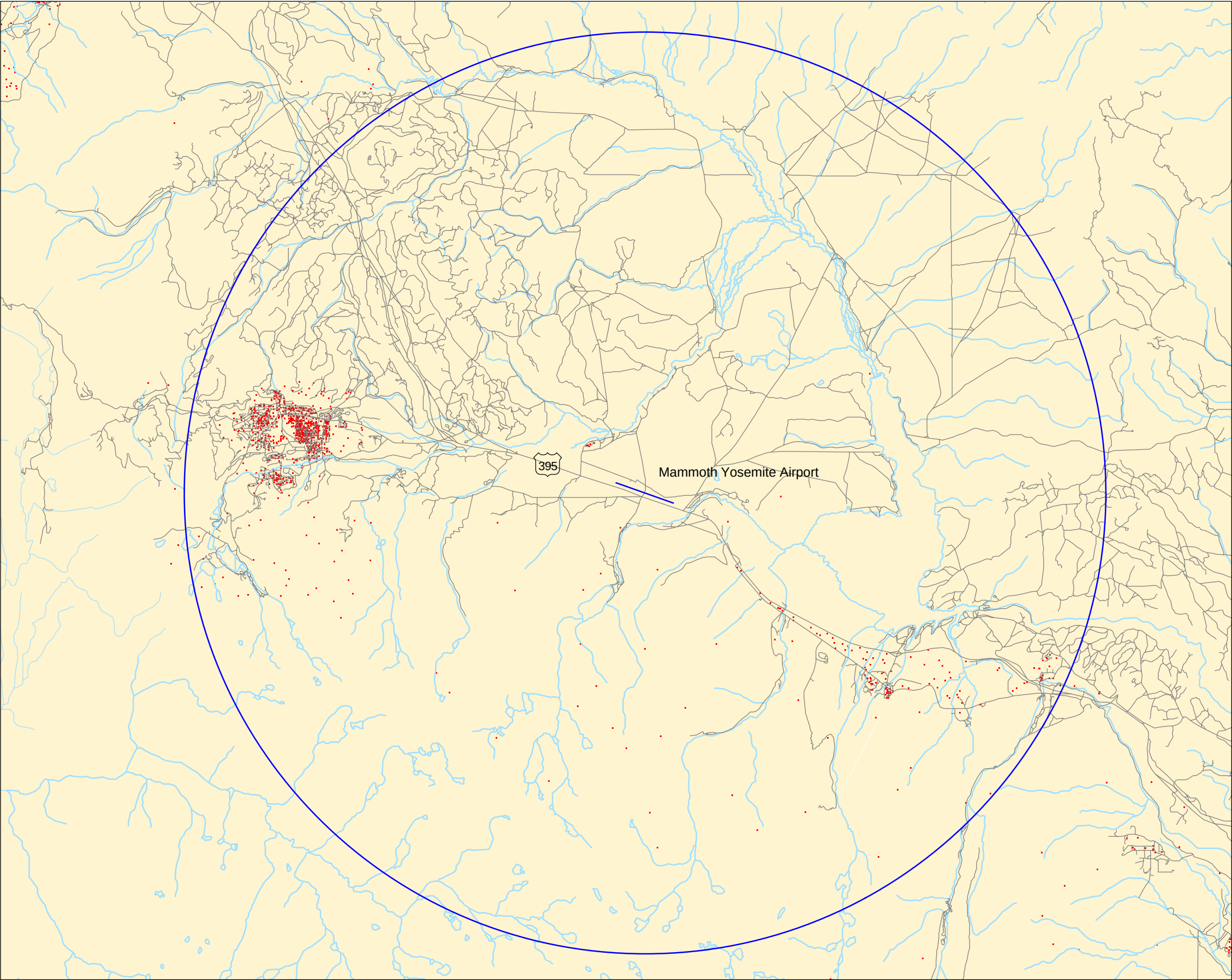
LEGEND

- 10-Mile Radius
- 1 Dot = 5 persons

Source: U.S. Census Bureau, 1990 Census
Prepared by: Ricondo & Associates, Inc.



Exhibit IV-13
Bishop Area Population Density Map



LEGEND

- 10-Mile Radius
- 1 Dot = 5 persons

Source: U.S. Census Bureau, 1990 Census
Prepared by: Ricondo & Associates, Inc.



Exhibit IV-14
Mammoth Lakes Area Population Density Map

A further discussion with the Airport Manager at Bishop Airport was held on November 30, 2000. Bishop is planning several airfield maintenance projects and the construction of a 4,900 square foot general aviation terminal. However, the County was not planning on obtaining an FAR Part 139 certification at that time because of the high costs of upgrading the facilities to meet the requirements for commuter operations.

Based upon all of the above reasons, use of Bishop Airport as an alternative was considered to be infeasible and would not meet the project objectives and was eliminated from further consideration.

4.4.4 Reasons for Eliminating Alternative 9 - Use Alternate Modes of Transportation

Visitors would have to fly to either Reno or Los Angeles and drive to the Mammoth Lakes area. This itinerary would not reduce visitor travel time to the region, which the Town of Mammoth Lakes has identified as a problem in attracting new visitors to the region. There are currently no imminent plans to provide high-speed rail from existing airports, such as Reno or Los Angeles, to the Mammoth Lakes area. Based upon the unavailability of certain modes of alternative transportation (high-speed rail) and the inability of other alternative modes (private car and bus) to reduce visitor travel time, this alternative does not meet the project objectives. It was considered the same as the no-project Alternative 1 and was eliminated from further consideration.

4.4.5 Reasons for Eliminating Alternative 10-Develop a New Airport in the Region at a Different Site

The construction of a new airport at a different site in the region to replace or augment Mammoth Yosemite Airport has been considered by Mono County. The reports *Mammoth Lakes/June Lake Airport, Site Selection & Master Plan*, 1978, Wadell Engineering Corporation [4-1], and *Final Environmental Impact Report, Mammoth Lakes Area Airport, Site Selection and Master Plan*, 1975, Wadell Engineering Corporation [4-2], document the evaluations and findings conducted for Mono County. Public workshops were conducted as part of the studies.

Eight potential airport sites were evaluated of which most were eliminated due to excessive earthwork, inaccessibility, rugged terrain, distance from users, and airspace obstructions. Several sites in Long Valley, between Benton Crossing Road and Lake Crowley, were considered potential options with few airspace obstructions and relatively open development areas. However, environmental impacts associated with the development of a new airport within a recreational area, disruption of sage grouse strutting grounds, disruption of wetlands, and other impacts within a natural area were considered “overwhelming.” [4-1] It was recommended, and adopted by Mono County, that the existing Airport site be continued to be developed rather than the development of a new airport. As stated in the Final Environmental Impact Report:

”The existing airport site has been developed in airport use for more than 30 years and is adjacent to State Highway 395 and other improved roads, such that the adverse impacts of airport expansion and development on the natural environment would be significantly less than within the essentially natural setting of the Lake Crowley site.” [4-2]

The County adopted plans to continue the development of Mammoth Yosemite Airport and, since then, significant public and private development has occurred at the Airport.

The physical and environmental conditions that existed at the sites evaluated in the previous site selection studies have not changed significantly since the completion of the previous studies. New environmental regulations, however, have been adopted that would make such development of a new airport even more onerous today than at the time of previous studies.

Construction costs would also likely be several times the cost associated with continued development at Mammoth Yosemite Airport. General construction costs for new airport facilities of this size are conservatively estimated to be at least \$100 million and could be significantly greater. The U.S. Forest Service, Bureau of Land Management, and Los Angeles Department of Public Works own most of the land at the potential sites. The Town of Mammoth Lakes and Mono County do not have control over the land at the potential new airport sites and significant land acquisition costs could be incurred. Given the time required for the environmental, planning, financial, land acquisition, and construction process, it is likely that a new airport would not be operational for at least five years or more.

Based upon the evaluations previously conducted regarding the development of a new airport in the region and local adopted plans, this alternative was eliminated from further consideration due to the major environmental impacts it will have on any undisturbed site in the region. These impacts would be much larger than any other alternative that would modify the existing Airport facilities to meet the project objectives.

V. Long Term Implications of Proposed Project

The following section describes the long-term effects of the Mammoth Yosemite Airport Expansion Project. These effects are discussed in terms of (1) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, (2) irreversible environmental changes which would be involved in the proposed project, if it were implemented, and (3) the growth-inducing impact of the proposed project.

5.1 Relationship Between Local Short-Term Uses and the Maintenance and Enhancement of Long-Term Productivity

This section (1) identifies impacts that narrow the range of beneficial uses of the environment, or pose long-term risks to health or safety, and (2) discusses the justification of implementing the proposed project now, rather than reserving an option for alternatives which may not now be feasible but which may be in the future.

5.1.1 Impacts That Restrict Beneficial Uses of the Environment

As discussed in Section III, environmental impacts of the proposed project are not expected to significantly impact any environmental category. Therefore, no impacts that would restrict beneficial uses of the environment are anticipated to occur.

5.1.2 Justification for Project Implementation

As discussed in Section 1.2, Purpose and Need of the Proposed Project, the current physical and operational condition of Mammoth Yosemite Airport do not meet the project objectives, including airfield and terminal facilities that allow air carrier operations.

5.2 Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented

State CEQA Guidelines § 15126.2 (c) requires discussion of the irreversible changes in the environment should the project be implemented. As stated in the Guidelines, "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely." Both primary and secondary impacts should be discussed particularly changes that would commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. This section (1) describes the irretrievable commitment of resources, both in the construction and operation of the proposed project, and (2) discusses irreversible environmental damage that could result from negligent operation or failure of the proposed project's safeguards.

5.2.1 Irretrievable Commitment of Resources

Certain irreversible consequences would result from proposed project activities. These include the following:

- Resources consumed during construction of the proposed project including labor and construction materials such as sheet metal, paints, aluminum, metal insulation, concrete and fossil fuels.

- Resources, materials and labor consumed during the operation of the proposed project's principal uses including fossil fuels; electricity and natural gas; and water.

Implementation of the project will not create a new use of land for Airport purposes, as this use has long been planned at this site. The project will, however, support continued use of the Airport at this location and serve future generations with air passenger service into the region. Primary access to the Airport is via U.S. Highway 395, which is an existing highway and has been committed to this use before the Airport was developed. The project would not alter the purposes or function of the highway in the region.

5.2.2 Potential Irreversible Environmental Damage

As evaluated throughout Section III, environmental impacts of the proposed project, no significant unavoidable adverse environmental damage is anticipated as a result of the Mammoth Yosemite Airport Expansion Project. While extension of the runway by 1,200 feet and widening the runway from 100 feet to 150 feet will pave currently unpaved areas, the unpaved land is already committed to airport use and is not a biologically or otherwise unique or environmentally sensitive area. The site for the package wastewater treatment plant will not be a sensitive habitat for any endangered or threatened wildlife species, for which the loss of this land would reduce the population or availability of flora or fauna in the region. Installation of the package treatment plant is also designed to serve the Airport, thereby avoiding new service demands in the project area associated with the proposed project. Any negligent operation, or failure of industry safeguards that may occur, would do so with or without the proposed project since the Airport is in operation at the project site. Further, any accident or failure in implementation of industry standards are protected from resulting in offsite deleterious effects by the spill prevention plan and the creation of an emergency response plan. Therefore, no irreversible environmental damage as a result of negligent operation or failure of industry safeguards that may occur, can be isolated to the proposed project.

5.3 Growth-Inducing Impact of the Proposed Project

The following section (1) identifies ways in which the proposed project could foster economic or population growth, either directly or indirectly in the surrounding environment, and (2) discusses the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The State CEQA Guidelines § 15126.2 (d) indicate that growth in and of itself is not necessarily assumed to be beneficial, detrimental or of little significance to the environment. CEQA requires that the EIR discuss ways in which the proposed project could foster economic or population growth, or directly or indirectly lead to the construction of new housing (CEQA Guidelines § 15126.2 (d)).

The Town of Mammoth Lakes is a resort town located in the Eastern Sierra Nevada Mountain Range of California. The region has two major national and international distinct seasonal attractions consisting of skiing in the winter and numerous outdoor recreational activities in the summer.

Since 1995, the Airport has not been served by scheduled commercial air service. By and large, the visitors come to the area either by using other airports such as Reno one of the Los Angeles area airports and then renting an automobile, or by driving to the area from their home.

During the 1980s, Mammoth Mountain Ski Area was one of the leading ski areas in North America. Skier visits during 1985/86 winter season, Mammoth Mountain's peak season, were

just over 1.6 million, which was the highest total in North America for that year. Subsequent years have seen an erosion of Mammoth's market position and a general decline in skier visits. The ski area has generally experienced between 500,000 to 700,000 fewer paid day skier visits compared with its peak 1985/86-year. The decline in the ski area's market position and performance has been based on a number of factors, which include the following:

- In 1986, a change in tax laws with respect to vacation homes largely removed the benefit of renting vacation homes, and Mammoth was not adding public beds.
- In the 1980s, Southern California entered into a recession that particularly affected the defense industry, a very important part of the region's economy. The Southern California region makes up approximately 85 percent of Mammoth Mountain's winter market.
- Drought conditions in the early 1990s and lack of sufficient snow making equipment adversely affected the Resort's image.
- A series of earthquakes in the region also adversely affected the Resort's image.
- Most importantly, the ski area and Town did not change to a destination mountain resort, while many other Colorado and Utah resorts, as well as the Whistler Resort in British Columbia, were undergoing major expansions on their mountains and in their resort villages.

With the arrival of Intrawest, one of the largest resort developers in the North America, as a major shareholder in Mammoth Mountain, the Town of Mammoth Lakes is experiencing substantial changes to both the ski area and to the Town's private and public accommodation base in order to increase tourism to the Region.

In the summer, aside from the domestic tourists, the Region attracts a number of Japanese and European tourists who fly to Los Angeles and drive to Yosemite and other national parks. Tourism to Yosemite, other national parks in the region, and other major recreational and scenic attractions is expected to increase in future years, regardless of whether Mammoth Yosemite Airport provides air carrier jet service or not. Based on statistics provided by Caltrans, approximately 1.5 million summer visitors are attracted to the Mammoth Lakes region yearly. Nearly 6.0 million tourists visited nearby Yosemite and other national parks in the area in 1998.

The growth in tourism of the Mammoth Lakes region is a fact recognized in the Town of Mammoth Lakes General Plan/Mono County General Plan [5-1]. Development is continuing in the Town of Mammoth Lakes with construction beginning on 2,403 new tourist units and 134,000 sq. ft. of new commercial development as well as just completed a new 18-hole golf course. In addition, plans are underway for a \$131 million upgrade and renovation to mountain lifts, trails, equipment, and facilities. Other developments, including the Dempsey Corporation's Snowcreek development, also have real estate plans, which add more rooms. Within the next 10 years, it is anticipated that approximately 6,000 units will be developed to accommodate the projected growth in tourism. The growth projections are based upon the Town's marketing program, not development of local air service.

5.3.1 Economic Growth

The introduction of air carrier jet service to Mammoth Yosemite supports the planned tourism and residential growth. The estimated number of passenger enplanements is forecast to increase from 37,000 in 2002 to 333,800 in 2022. It is unknown how much of this increase would still occur if visitors used other airports or modes of transportation.

According to the study done by David A. Hughes & Associates, Ltd., titled *Comparison of Projected Visitor Demand with Proposed Accommodation Buildout at Mammoth Lakes*, July 23, 1999 [5-2], there are sufficient hotel/motel and other facilities to accommodate the projected increase in tourism for at least the next eight years and plans are proposed to provide facilities to accommodate growth beyond these levels. There would also be greater employment opportunities and an increase in sales and property taxes.

5.3.2 Population Growth and Housing

As tourism continues to grow, it is anticipated that more passengers would use the air carrier service at Mammoth Yosemite Airport. Therefore, more employment opportunities would also be generated by the Airport and airlines. At the same time, the increase in tourism would stimulate secondary growth in services offered by the community, such as additional hotels and restaurants, through which more job opportunities would be provided. As a result, more people could eventually move to the Mammoth Lakes area. New housing would have to be built to accommodate the increase in workers in the area. Other than the direct and indirect jobs related to employment at the Airport, the increase in population and housing and expansion of the region's economy would be expected to occur with or without the improvement of the Airport.

Existing land use planning documents for the region include population projections. The projected future population levels with the Mammoth Yosemite Airport improvements are consistent with adopted land use documents, including the Inyo National Forest Land and Resource Management Plan [2-2], the Mono County General Plan [2-3] and the Town of Mammoth Lakes General Plan [5-1].

The Town of Mammoth Lakes has adopted an urban limits policy, designed to limit the expansion of commercial, industrial, and residential development to the immediate vicinity of the existing community. The private uses proposed at the Airport are consistent with the zoning that existed prior to the annexation of the Airport by the Town and constitute a concentrated high-density development.

5.3.3 Land Ownership

The ownership of the land around Mammoth Yosemite Airport is an important factor in determining the long term growth inducing impacts of the proposed project. Most of the area in and around the Town of Mammoth Lakes is already built out, which would not allow the area to grow unchecked. As shown on Exhibit II-2, most of the land surrounding the Airport is in public ownership. There are only three small privately owned parcels of land.

The area north and northwest of the Airport is administered by the USFS and includes the area occupied by the USFS gravel/borrow pit and a portion of the Mammoth Geothermal Project. Two of the three generations of the facility reside on privately held land. The City of Los Angeles owns the land northwest of the Airport, which occupies the abandoned Mammoth Lakes Elementary School and Hot Creek Fish Hatchery. The land on which Hot Creek Ranch lies is privately owned. A large area northeast of the Airport is administered by the BLM and is undeveloped.

The area immediately east and southeast of the Airport is owned by the City of Los Angeles. This land contains the "Green Church," the Whitmore Hot Springs Recreational Area, the Mono County Juvenile Probation Facility, and the Mono County Animal Shelter. The eastern portion of the

Airport, including portions of the runway, is on land owned by and leased from Los Angeles Department of Public Works (LADPW). This land is currently in the process of being acquired by the Town of Mammoth Lakes for Airport use.

The land southeast of the Airport, on which the Caltrans Maintenance Station and Gravel Pit are located, is owned by the BLM. The City of Los Angeles owns the land to the south where SNARL's facilities are located, while the USFS administers the land to the south, which contains the Convict Lake Recreational Area.

The Mono County Sheriff Substation and Mono County Government Center is on land owned by the City of Los Angeles. The second private land parcel just west of the Airport is occupied by the Sierra Quarry.

The vast majority of the land in the vicinity of the Airport is controlled by three public agencies; The Bureau of Land Management, the United States Forest Service, and the City of Los Angeles. In order for the Town of Mammoth Lakes to grow significantly as a result of the Airport expansion or any other factor, development would have to take place on lands now owned or managed by one of these agencies. This would require changes to the current policies of the subject agencies that control the land. This is not considered likely, because these agencies and the Town have been working to decrease existing fragmentation of public land.

5.3.4 Transportation Facilities

Because the project would not induce growth in the region beyond that already expected, and because the project may facilitate a shift from personal vehicles to passenger aircraft, the project has the potential to decrease the rate of increase in the number of trips on the regional roadway system.

The potential for traffic congestion will also be lessened through the provision of the planned bus service between the Airport and Town. At the same time, Mariposa County (Yosemite) and nearby towns have been conducting an extensive national advertising campaign in newspapers and radios emphasizing that the area is safe and a natural wonderland. The U.S. Park Service plans to limit the number of automobiles permitted into Yosemite Valley by providing parking outside the entrance to the Park and using shuttle buses to bring in tourists. To support the U.S. Park Service's efforts to reduce vehicle trips to Yosemite Valley and increase lodging options outside of the park, shuttle bus service from Mammoth Lakes to the valley floor has been initiated in coordination with the Yosemite Area Regional Transportation System.

5.3.5 Conclusion

Mammoth Yosemite Airport accommodates planned growth in and around the Town of Mammoth Lakes by providing a desired transportation alternative. The project would provide beneficial environmental effects by accommodating the forecast growth in accordance with the Town's general policy to improve air quality by reducing vehicular miles traveled through the provision of an alternative to the personal automobile. This forecast growth takes into account the constraints due to limited availability of developable land, which as discussed above, is mostly owned by USFS, BLM, and City of Los Angeles.

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Appendix A

Mammoth Lakes Airport Mitigation Measures and Mitigation Monitoring and Reporting Plan (1997 SEIR/EA)

This table provides a summary of the proposed mitigation measures. The column labeled Implementation provides the monitoring outline and identifies the entity responsible for assuring implementation and the development or approval stage at which the measure will be implemented.

Potential Impacts	Significance	Mitigation Measures	Implementation
<u>SOILS/LAND TRANSFORMATION</u> Construction Disturbances of local environment including earthwork, dust, noise, and creation of stockpiles and debris.	Not significant with mitigation	All grading and earthwork activities must be conducted in accordance with an approved grading plan and permit issued by the Town of Mammoth Lakes. In addition to the standard conditions required by Town grading regulations, the following measures must be included: a. All earthwork must be conducted in accordance with a detailed project schedule which provides for completion of all work under a given permit in a single season. b. Limits of construction work shall be clearly delineated and disturbances of adjacent soil and vegetation shall be strictly avoided.	Town - Grading Permit Building Permit RWQCB - Grading Permit Building Permit
Increased Erosion from exposed soil surfaces during earthwork operations and after completion of construction. Potential long term visual impacts.	Not significant with mitigation	A drainage and erosion control plan for all major projects shall be required by the Town of Mammoth Lakes. All grading and earthwork shall conform to the requirements of the Regional Water Control Board for erosion and runoff control. Reports of waste discharge shall be prepared as required by the RWQCB. All disturbed areas shall be revegetated and revegetated areas shall be maintained to insure adequate establishment and growth. All temporary and permanent drainage and erosion control facilities shall be periodically inspected and maintained as set forth in the drainage and erosion control plans.	Town - Grading Permit Building Permit RWQCB - Grading Permit Building Permit Town - Grading permit
<u>GEOLOGIC HAZARDS</u> Development of residential projects and public facilities in an area of known seismic and volcanic potential may expose residents and visitors to risk.	Not significant with mitigation	All structures must be designed to meet the requirements of the Town of Mammoth Lakes building regulations and the uniform building code. The Town shall revise its Emergency Management Plan to incorporate the Mammoth Lakes Airport.	Town - Building permit Town - Next plan update, currently in

Potential Impacts	Significance	Mitigation Measures	Implementation Progress
<u>HYDROLOGY/WATER SUPPLY</u> There will be an increased demand of up to 60 af/yr on the subsurface water resources. Lowering of groundwater levels may affect spring flows at the Hot Creek Fish Hatchery	Not significant with mitigation	Eliminate the golf course from the commercial development plan. A comprehensive water supply, distribution, and storage system shall be developed for the land uses within the A zone. Wells shall be pump tested prior to project development. No commercial development shall be developed until adequate potable water resources are available. No wells will be located closer than 6,000 feet from the fish hatchery springs.	Town - Plan approval Town - Development agreement Building permit Town - Well approval
<u>WATER QUALITY</u> Inadequate control of domestic and industrial (airport) waste may adversely affect the quality of groundwater. Erosion from exposed soil surfaces could result in discharges of sediment to adjacent surface waters. Runoff from asphalt roadways and other impervious surfaces contain pollutants which may have adverse water quality impacts on surface streams. Discharges of significant concentrations of nutrients and/or toxic chemicals from	Not significant with mitigation	All waste water treatment and disposal systems shall be designed and maintained in accordance with the requirements of the RWQCB and the Mono County Health Dept. Permits shall be obtained prior to installation of wastewater facilities as required by both agencies. Facilities shall be sized to accommodate maximum projected flows in each phase. A NPDES General Industrial Activities Storm Water Permit will be required for all aviation related facilities. Groundwater sampling wells shall be provided to monitor the performance of the centralized subsurface disposal systems and to assess potential adverse water quality impacts. Sampling shall be performed by the operator of the sewage disposal system with reports submitted to the RWQCB. The size, location and numbers of sampling wells shall conform to RWQCB requirements. See SOILS/LAND TRANSFORMATION Salt shall not be used for roadway deicing. All development shall conform to the RWQCB requirements for runoff control. The golf course shall be eliminated from the Commercial	Town - RWQCB - Building permit Town - RWQCB - Grading permit Town - On-going Town - RWQCB - Grading permit Building permit

Potential Impacts	Significance	Mitigation Measures	Implementation
large landscaped areas could have long term adverse water quality impacts.		Development Plan. Prior to issuance of any grading or building permits for any of the projects described in the Commercial Development Plan, a fertilizer/pesticide management plan shall be submitted to the Town and RWQCB and approved by both agencies.	Town - Project approval Town - RWQCB - Grading permit Building permit
<u>AIR QUALITY</u> Projected expansion of airport operations will result in increased aircraft related pollutant emissions. Construction activities will generate dust and exhaust emissions resulting in short-term localized air quality impacts. Development in the A zone may increase stationary air pollutant emissions associated with building heating. Long term mobile air pollutant emissions arising from automobile traffic and may adversely affect air quality.	Not significant Not significant with mitigation Not significant	 All grading and construction shall comply with the requirements of the Great Basin Unified Air Pollution Control District and the Town of Mammoth Lakes Grading regulations. All new construction shall comply with the provisions of Town of Mammoth Lakes Air Quality Management Plan. Streets shall be swept after storms where cinders or sand are applied as conditions permit.	 Town - GBUAPCD - Grading permit Town - Building permit Town - On-going
<u>VISUAL/AESTHETIC RESOURCES</u> Project developments may adversely affect the visual quality of state and local scenic highways. USFS Visual Quality Objective of Retention cannot be met. High winds may distribute trash and litter from airport trash bins.	Significant	All developments, including signs and grading , within the A zone shall comply with the Town of Mammoth Lakes design review regulations and policies and property maintenance regulations. Earthwork, grading, and vegetative removals shall be minimized. All site disturbances shall be revegetated with plants and landscaping which blend visually with the regional environment. The number and type of on-site signs shall be strictly regulated. Use permits are required for all freestanding signs. All utilities shall be placed underground. Exterior lighting shall be shielded and downward directed and shall be minimized to that necessary for security and safety. All developments within the A zone shall have trash receptacles and facilities which are covered. The private developer (lessee) shall conduct daily litter patrols in the vicinity of the gas station	Town - Grading permit Land use approvals Building permit Town - Land use approval conditions, on-

Potential Impacts	Significance	Mitigation Measures	Implementation
Mass grading and large scale earthwork projects may create long term visual scars.	Not significant with mitigation	and mini-market. Eliminate the cross wind runway and the golf course from the development proposal. All site grading shall be contoured to blend with the existing topography. Removal of vegetation shall be limited to those areas that are to be graded, constructed upon, or landscaped. All grading limits shall be clearly delineated and penalties shall be imposed for earth disturbance or equipment parking outside of identified grading limits in accordance with the Town of Mammoth Lakes grading and civil penalties regulations. All revegetation and landscaping shall be maintained for the life of the project.	going Town - Grading permit Land use approvals
<u>BIOLOGICAL RESOURCES</u> Proposed land uses in the Airport zone will result in the loss of less than 50 acres of sagebrush habitat.	Not significant	All of the existing old runway west of the proposed runway extension shall be restored to natural vegetation upon completion of the runway extension. Delete the crosswind runway and golf course from the commercial development proposal. Project grading and construction plans shall avoid disturbance of off site natural areas. (see grading limits above) Development shall take place only between the access road and the runway, except for aviation improvements and signs.	Town - Grading permit Use permit
<u>ARCHAEOLOGICAL/CULTURAL RESOURCES</u> Construction and development activities may disturb or destroy significant or unique archaeological resources.	Not significant with mitigation	Site specific archaeological surveys shall be conducted for all areas not previously surveyed. Sites shall be avoided. If avoidance is not feasible, excavation and testing shall be required.	Town - Grading permit Land use approval
<u>REGIONAL PLANNING AND POPULATION</u> Proposed land uses require modification to the Town of Mammoth Lakes general plan and zoning regulations.	Not significant with mitigation	Development proposal includes general plan and zoning amendments.	Town - Zoning approvals Land use approvals

Potential Impacts	Significance	Mitigation Measures	Implementation
Proposed development will increase existing regional population by providing up to 250 hotel suites or 250 (100 over existing plans) condominium units for new visitors or residents and 100 RV spaces. This represents less than 3.5% of currently available units in the vicinity. Population growth and development will result in increased human activity and possible disturbance of the natural environment.	Not significant Not significant with mitigation	None required Future development shall be limited to the zones designated for such use. See Town of Mammoth Lakes urban limit policy. Access outside of approved development areas shall be limited to existing improved roadways. Off road vehicle use shall be prohibited within the A zone. Zone land surrounding the airport to conform to new Caltrans airport land use planning recommendations contained in Caltrans Airport Land Use Planning Handbook and height limit zoning to conform to FAR part 77 of the F.A.A.	
<u>EMPLOYMENT/HOUSING</u> Airport development will create approximately 108 new jobs with 36 being moderate income or below.	Not significant with mitigation	A housing mitigation fee of \$2,000 per completed hotel or condo unit shall be set aside by the developer for construction of twelve 3-bedroom rental units to be affordable at median income rents.	Town - Development agreement
<u>TRAFFIC AND TRANSPORTATION</u> 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. Projected increases in automobile traffic may create safety hazards and congestion at existing intersections	Not significant with mitigation	Roads will be constructed to the standards of the Town of Mammoth Lakes and Mono County. Timing, design, and construction of required intersection improvements will be determined based upon a traffic analysis to be submitted in conjunction with the first phase of the commercial development plan. Facilities shall be incorporated into the project design to facilitate passenger pick-up and drop-off by buses and taxis.	Town - Mono County - Grading permit Town - Caltrans - Conditional use permit Town - CUP/project design

Potential Impacts	Significance	Mitigation Measures	Implementation
<u>NOISE</u> Expansion of aircraft operations at the Mammoth Lakes Airport will result in a significant increase in noise levels adjacent to the airport. Aircraft approach and departure patterns over fish hatchery produce significant single event noise exposure to fish hatchery and SNARL. Area of noise impact may increase with commercial jet traffic.	Significant	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. Aircraft hangars and storage areas do not require soundproofing. For the purposes of administering chapter 8.16 of the Municipal Code, the proposed project is determined to be Limited Commercial, Some Multiple Dwellings. All residential structures shall include soundproofing construction to limit interior noise levels according to Chapter 8.16 of the Municipal Code. Control departure traffic to avoid low level flights over the fish hatchery or the Sierra Nevada Aquatic Research Laboratory. Require Runway 27 departing aircraft to face east or west for engine runups to reduce noise reflection off Doe Ridge towards SNARL. Signing and pilot information shall be provided to discourage engine runup at the eastern 2000 feet of runway 27. Enforce policy restricting low-level flights over the fish hatchery and SNARL. Delete crosswind runway from the airport layout plan.	Town - CUP Building permit Town - Flight regulation adoption, During FY 1997/8 Town - Plan adoption
<u>SAFETY AND WELFARE</u> Development within the vicinity of the Mammoth Lakes Airport may adversely affect the safety of air navigation and represent hazards to residents and the general public. Existing emergency assistance and fire protection facilities at the airport are inadequate.	Not significant with mitigation	All development within the A zone shall comply with the adopted land use policies plan of the ALUC. The development of a complete water supply, storage, and distribution system capable of providing adequate fire suppression flows shall be implemented. The system may be phased with development and must meet the requirements of the Long Valley FPD.	Town - Land use approvals Building permit Town - LVEPD - First building permit

Potential Impacts	Significance	Mitigation Measures	Implementation
		The church structure located off the east end of the runway shall be relocated to a site designated by the owner of the building within the SNARL compound. The building shall be relocated within one year of receiving the certificate of occupancy for the 200 th unit of the condo or hotel.	Town - Runway extension
<u>ENERGY</u> The project will result in an increase in the consumption of energy for heating and lighting.	Not significant	All new construction shall conform to Title 24 of the California Administrative Code.	Town - Building permit
<u>CUMULATIVE IMPACTS</u> In conjunction with projected regional population growth, the proposed airport development will cumulatively contribute to the following environmental impacts:			
Direct loss of wildlife habitat as well as a gradual degradation of habitat value due to construction disturbances and increased levels of human activity.	Not significant with mitigation	Delete crosswind runway from airport layout plan and delete golf course from commercial development plan.	Town - Plan adoption
Increases in runoff from impervious surfaces with attendant waste discharges.	Not significant with mitigation	See Water Quality mitigations.	
Increased demands on groundwater resources within the planning area.	Not significant with mitigation	See Hydrology mitigations.	
A general increase in the emission of pollutants from stationary and mobile sources.	Significant	See Air Quality mitigations.	
Alterations of the foreground view along certain sections of Highway 395 and distant views from the Convict Lake Road.	Significant	See Aesthetic Resources mitigations	

Potential Impacts	Significance	Mitigation Measures	Implementation
General increases in noise and activity levels associated with airport development and additional automobile traffic.	Not significant	See Noise mitigations	
Increased energy consumption for heating and lighting.		See Energy mitigations	

Appendix B – Notice of Preparation

Town of Mammoth Lakes
Community Development Department
P. O. Box 1609, Mammoth Lakes, CA 93546
(760) 934-8983 ext. 225 934-8608 fax

Date: April 13, 2001

RECEIVED

To: Responsible and Trustee Agencies
Interested Parties

JUL 23 2001

From: Bill Taylor, Senior Planner

RICONDO & ASSOCIATES

Subject: Notice of Preparation, Mammoth Yosemite Airport Expansion Project

A Notice of Preparation for the Mammoth Yosemite Airport Expansion Project is attached. Please respond with the scope and content of the environmental information which is germane to your agencies statutory responsibilities in connection with the proposed project.

Post-It® Fax Note	7671	Date	# of pages 5
To Tom Cornell		From Bill Taylor	
Co./Dept.		Co.	
Phone #		Phone #	
Fax #		Fax #	

CEQA: California Environmental Quality Act

Appendix I
NOTICE OF PREPARATION

To: State Clearinghouse
Post Office Box 3044
(Address)
Sacramento, CA 95812-3044

From: Town of Mammoth Lakes
Post Office Box 1609
(Address)
Mammoth Lakes, CA 93546

Subject: Notice of Preparation of a Draft Environmental Impact Report

The Town of Mammoth Lakes will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☐ is ☒ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to William T. Taylor at the address shown above. We will need the name for a contact person in your agency.

Project Title: Mammoth Yosemite Airport Expansion Project

Project Applicant, if any: _____

Date April 13, 2001

Signature William T. Taylor

Title Senior Planner

Telephone (760) 934-8989, extension 225

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

**COMMUNITY DEVELOPMENT**

*P. O. Box 1609 Mammoth Lakes, CA 93546
(760) 934-8989 Ext. 225 Fax (760) 934-8608*

Notice Of Preparation

**Mammoth Yosemite Airport Expansion Project
Draft Subsequent Environmental Impact Report**

The Town of Mammoth Lakes is proposing to construct a series of improvements at Mammoth Yosemite Airport, primarily for the purpose of enabling commercial jet air carriers service to operate at the Airport. The current proposal modifies an earlier airport expansion plan approved by the Town. The principal changes from the project previously approved are a widening of the runway and a revision in the aviation demand forecast decreasing the total number of flight operations and increasing the number of passenger enplanements.

Prior to making many of these improvements, the Town must comply with the California Environmental Quality Act and the Town has determined that it will prepare a Subsequent Environmental Impact Report. The proposed subsequent EIR will be subsequent to the Final Subsequent EIR certified by the Town of Mammoth Lakes in 1997 (SCH 96112089). In addition, pursuant to the CEQA Guidelines governing environmental impact review when a federal agency has already prepared its own environmental review, the new subsequent EIR will rely, in part, on the Final Environmental Assessment for the Mammoth Yosemite Airport Expansion Project (SCH 200034005) prepared for the Federal Aviation Administration. The purpose of the new subsequent EIR, which will be circulated for public review as a draft subsequent EIR is to address changes to the project from the project approved in 1997 and to supplement the Final Environmental Assessment to address the requirements of CEQA.

Commercial airline service to the airport is scheduled to begin during the winter season in 2002/2003, to include air carrier service to and from Dallas/Fort Worth International Airport and other destinations using turbojet aircraft such as the Boeing 757 (B-757-200). Commuter and regional jet aircraft service is also anticipated to other regional markets.

The current airport facilities include a 7,000-foot long by 100 feet wide runway, a parallel taxiway system, general aviation hangars, tie-downs, and support facilities, and limited landside passenger processing facilities. It has been determined that modifications would be required to the airport facilities to comply with Airport Design Standards for current operations and to accommodate the projected air service.

PROPOSED AIRPORT IMPROVEMENTS

The following is a list of the proposed improvements to facilities at Mammoth Yosemite Airport to accommodate air carrier service:

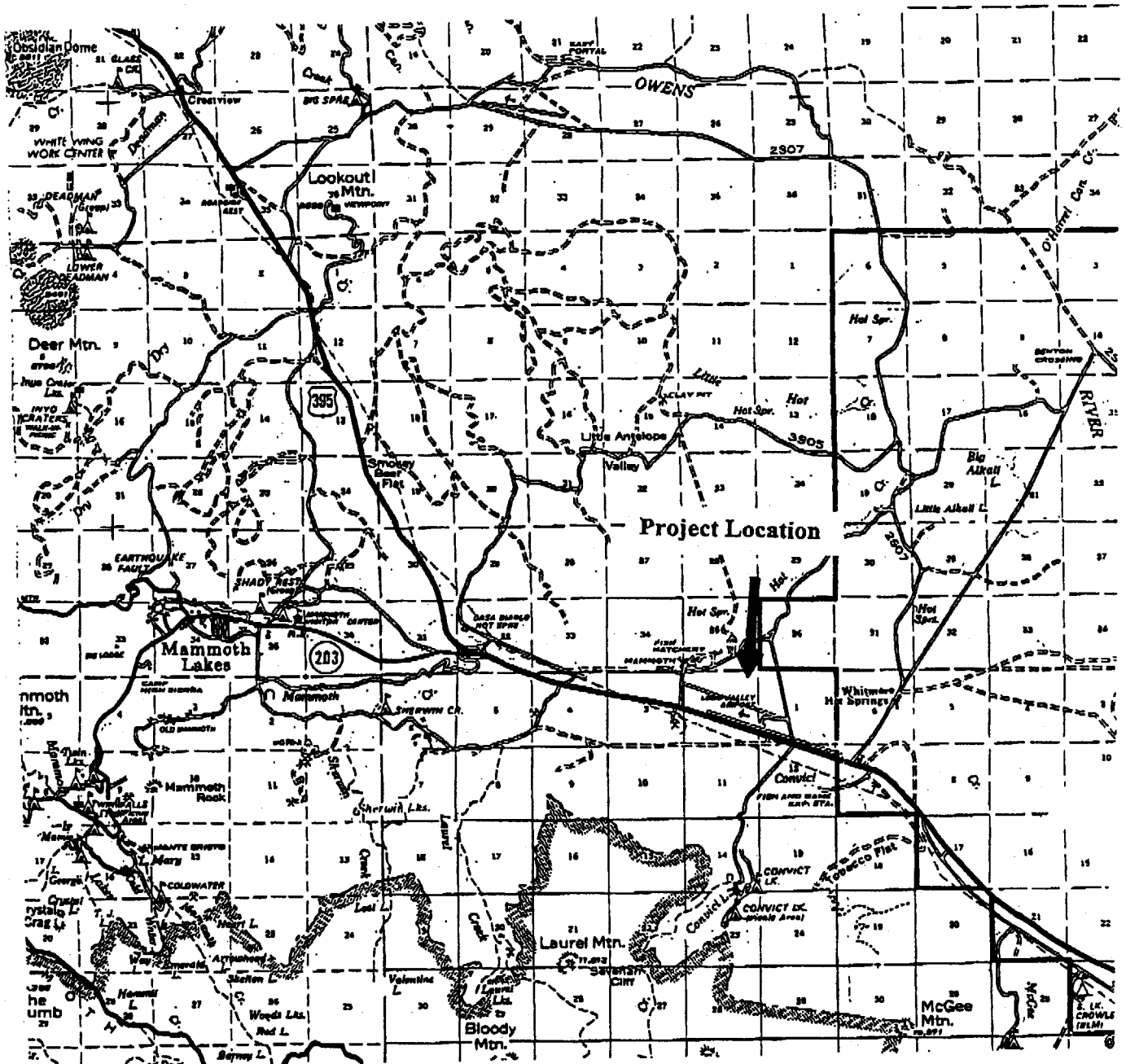
- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft
- Widen the runway from 100 feet to 150 feet on the south side of the runway, resulting in a shift of the runway centerline 25 feet to the south
- Widen the parallel taxiway from 50 feet to 75 feet—20 feet on the south side and 5 feet on the north side
- Extend the runway 1,200 feet to the west to provide the necessary runway length for air carrier aircraft operations, i.e., the B-757-200
- Extend the parallel taxiway to be consistent with the length of the runway extension
- Add an air carrier apron for three to six air carrier aircraft
- Add a 75-foot wide connecting taxiway to access the air carrier apron area
- Expand the Runway Safety Area (RSA) from 500 feet to 1,000 feet to the east of the runway (required to comply with FAA airport design standards for current operations)
- Improve the security fencing from the existing barbed wire to a 6 to 8 foot chain link fence to meet FAA standards
- Develop passenger terminal building facilities
- Construct Airport access road improvements
- Expand the automobile parking lot
- Acquire in fee simple and/or lease of lands owned by the Los Angeles Department of Public Works (LADPW) that currently occupy the future extension of the Runway Safety Area (required to comply with FAA airport design standards for current operations).

Environmental impacts proposed to be evaluated include possible effects to Threatened and Endangered Species, air quality, sage grouse and mule deer, visual quality, noise, cultural resources, water supply and water quality, traffic and transportation, land use, and cumulative and growth inducing effects.

The airport is located primarily in sections 1 and 2 of Township 4 south, Range 28 east, Mount Diablo Meridian, Mono County, California. It is located to the north of U.S. 395 four miles east of its junction with State Route 203 (see attached map).

MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT NOTICE OF PREPARATION

Project Location Map



Notice of Preparation Mailing List

State Clearinghouse
1400 10th Street, Room 108
Sacramento, CA 95814

Steve Addington, Field Office Mngr.
Bureau of Land Management
Bishop Field Office
N. Main Street, Suite E
Bishop, CA 93514

Dave Wood Ranches
William J. Thomas
25366 W. Dorris
Coalinga, CA 93210

Lahontan RWQCB
Doug Feay
15428 Civic Drive, Suite 100
Victorville, CA 92392-2494

Kathleen Morse
District Ranger
Mammoth Ranger Station
P. O. Box 148
Mammoth Lakes, CA 93546

Friend of Yosemite Valley
Gregory M. Adair
P. O. Box 702
Yosemite, CA 95389

Earth Justice
Bruce Nilles
180 Montgomery Street
San Francisco, CA 94104

Peggy Temple
City of Corona, Planning Dept.
815 W. 6th Street
Corona, CA 92882

Scott Burns
Community Devel. Director
County of Mono
P. O. Box 347
Mammoth Lakes, CA 93546

Duane Ono
Deputy Air Pollution Control Officer
Great Basin Unified APCD
157 Short Street
Bishop, CA 93514

Sandy Hesnard
Environmental Planner
Caltrans – Division of Aeronautics
1120 “N” Street; Room 3300
Sacramento, CA 94274

Gary Myers
Southern Mono Health Care District
P. O. Box 660
Mammoth Lakes, CA 93546

Ellen Hardebeck, PhD
Air Pollution Control Officer
Great Basin Unified APCD
157 Short Street, Suite 6
Bishop, CA 93514

Denyse Racine
Environmental Specialist III
Dept. of Fish & Game, Region 6
407 West Line Street
Bishop, CA 93514

Ed Tallyn
Soil Scientist
Natural Resource Conservation Service
136 Edward Street
Bishop, CA 93514

Dan Dawson, Director
Univ. of Calif., Santa Barbara
SNARL
Route 1, P. O. Box 198
Mammoth Lakes, CA 93546

Gene Coufal
City of Los Angeles
Dept. of Water & Power
P. O. Box 51111
Los Angeles, CA 90051

Reinard Bradley
Consulting Airport Engineer
6125 King Road, Suite 201
Loomis, CA 955650-8004

Mr. Terry Russi, Biologist
Bureau of Land Management
785 N. Main Street, Suite E
Bishop, CA 93514

Rich Boardman
Dept. of Public Works
County of Mono
P. O. Box 457
Bridgeport, CA 93517

Draft Supplement to Subsequent Environmental Impact Report Distribution list

State Clearinghouse

Room 108

1400 10th Street, Room 121

Sacramento, CA 95814

Steve Addington, Field Office Mngr.

Bureau of Land Management

Bishop Field Office

N. Main Street, Suite E

Bishop, CA 93514

Lahontan RWQCB

Doug Feay

15428 Civic Drive, Suite 100

Victorville, CA 92392-2494

Elisha Novak

Federal Aviation Administration

831 Mitten Rd.

Burlingame, CA 84010

Kathleen Morse

District Ranger

Mammoth Ranger Station

P. O. Box 148

Mammoth Lakes, CA 93546

Friend of Yosemite Valley

Gregory M. Adair

P. O. Box 702

Yosemite, CA 95389

Scott Burns

Community Devel. Director

County of Mono

P. O. Box 347

Mammoth Lakes, CA 93546

Duane Ono

Deputy Air Pollution Control Officer

Great Basin Unified APCD

157 Short Street

Bishop, CA 93514

Sandy Hesnard

Environmental Planner

Caltrans – Division of Aeronautics

1120 “N” Street; Room 3300

Sacramento, CA 94274

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Southern Mono Health Care District

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Soil Scientist

Natural Resource Conservation Service

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Bishop, CA 93514

Dan Dawson, Director

Univ. of Calif., Santa Barbara

SNARL

Route 1, P. O. Box 198

Mammoth Lakes, CA 93546

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City of Los Angeles

Dept. of Water & Power

P. O. Box 51111

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Consulting Airport Engineer

6125 King Road, Suite 201

Loomis, CA 955650-8004

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Bureau of Land Management
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Rich Boardman
Dept. of Public Works
County of Mono
P. O. Box 457
Bridgeport, CA 93517

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Caltrans District 9
500 South Main Street
Bishop, CA 93514

Diane K. Noda
Ventura Fish and Wildlife Service
2493 Portola Rd., Suite B

Deanna Dulen, Superintendent
Devils Postpile National Monument
P.O. Box 3999
Mammoth Lakes, CA 93546

Chip Jenkins
Yosemite National Park
P.O. Box 577
Yosemite, CA 95389

Trent Orr
Earthjustice
180 Montgomery Street, Suite 1725
San Francisco, CA 94104-4209

Janill Richards, Deputy Attorney General
1515 Clay Street, 20th Floor
Oakland, CA 94612-1413

**Responses to Comments on Draft Supplement to Subsequent Environmental Impact Report
Distribution list**

The Responses to Comments were distributed to the following State Agencies who commented on the Draft SSEIR. The responses to comments were sent on 22nd February, 2002, 10 days prior to the Lead Agency decision on certification of the SSEIR.

State Clearinghouse
Room 108
1400 10th Street, Room 121
Sacramento, CA 95814

Lahontan RWQCB
Doug Feay
15428 Civic Drive, Suite 100
Victorville, CA 92392-2494

Sandy Hesnard
Environmental Planner
Caltrans – Division of Aeronautics
1120 “N” Street; Room 3300
Sacramento, CA 94274

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Univ. of Calif., Santa Barbara
SNARL
Route 1, P. O. Box 198
Mammoth Lakes, CA 93546

Carolyn Yee
Caltrans District 9
500 South Main Street
Bishop, CA 93514

Janill Richards, Deputy Attorney General
1515 Clay Street, 20th Floor
Oakland, CA 94612-1413

Darrell Wong
Department of Fish & Game
Eastern Sierra-Inlands Desert Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514

Appendix C – Scoping Comments

The Town of Mammoth Lakes received nine comment letters in response to the Notice of Preparation (NOP).

Agency	Date	Contact Person
California Department of Transportation, District 9	May 16, 2001	Carolyn Yee
California Department of Transportation, Division of Aeronautics	May 8, 2001	Sandy Hesnard
Mono County, Department of Public Works	April 16, 2001	Rich Boardman
Native American Heritage Commission	April 26, 2001	Rob Wood
California Regional Water Quality Control, Lahontan Region	May 16, 2001	Douglas E. Feay
California Department of Fish and Game, Eastern Sierra-Inland Deserts Region	May 11, 2001	Steve Parmenter
United States Forest Service, Inyo National Forest	May 18, 2001	Kathleen S. Morse
United States Fish and Wildlife Service	May 21, 2001	Diane K. Noda
National Park Service, Devils Postpile National Monument	May 24, 2001	Deanna M. Dullen

STATE OF CALIFORNIA — BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 9
500 SOUTH MAIN STREET
BISHOP, CA 93514-3423
Phone (760) 872-1214
Fax (760) 872-0678
TTY (760) 872-9043



May 16, 2001

Mr. William T. Taylor, Senior Planner
Town of Mammoth Lakes
PO Box 1609
Mammoth Lakes, California 93546

File: 09-MONO
NOP DEIR
SCH #: 2000034005

REF: NOTICE OF PREPARATION (NOP) ON THE MAMMOTH YOSEMITE
AIRPORT EXPANSION PROJECT (AKA MAMMOTH LAKES AIRPORT
EXPANSION PROJECT) DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT
REPORT (DSUBSEQUENT EIR) FOR THE TOWN OF MAMMOTH LAKES
(APRIL 2001)

Dear Mr. Taylor:

The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Notice of Preparation concerning the Mammoth Yosemite Airport Expansion Project Draft Subsequent Environmental Impact Report for the Town of Mammoth Lakes (Town).

To date, we are still awaiting a complete response that will fully address all of our public safety and traffic concerns for this proposed project along and near U.S. Highway (Hwy) 395. These concerns were stated within our previous correspondence to you dated, November 13, 2000 for the Draft Environmental Assessment and May 21 & 26, 2000 for the Notice of Intent to Prepare an Environmental Assessment. Please incorporate the aforementioned concerns when you respond to this comment letter.

Caltrans recommends that the Town continues to coordinate and consult with the Federal Aviation Administration (FAA), U.S. Fish and Wildlife Services (FWS), Caltrans Division of Aeronautics, Caltrans District 9 in Bishop, and the California State Department of Fish and Game (DF&G). We need to continue to work cooperatively to address all issues that may impact our transportation corridors during all stages of planning, design, and construction on this proposed project to ensure that all traffic safety and quality standards are met on State facilities. After review of this NOP DSUBSEQUENT EIR and the Final Environmental Assessment (FEA) dated December 2000, the following additional concerns need to be addressed during the first construction phase for this proposed project.

Mr. William T. Taylor
Page 2
May 16, 2001

- Daily enplanements must be limited to a maximum of 702 passengers. This number must be actual and not based upon any average. If this number is exceeded at any time, a revisit concerning traffic impact remediation alternatives must be initiated immediately (i.e. interchange).
- The new Airport Road access must be constructed to connect both Hot Creek Hatchery Road and Benton Crossing Road from the east/back side of the airport facility for emergency and traffic mitigation measures.
- The Convict Lake access must be eliminated and a conforming/standard Caltrans perimeter fence installed. If the two (2) adjoining Mono County (County) roads are inaccessible during an emergency situation(s), the emergency vehicle(s) can run over State right-of-way property and complete replacement and/or repair work at the County's own cost within one week of the incident.
- The U.S. Hwy 395 south and Hot Creek Hatchery Road intersection must have its left turn pocket lengthened to meet the Highway Design Manual standards, Topic (See Enclosure A).
- A traffic and deer monitoring program needs to be developed and implemented. It should be coordinated, reviewed, and approved by Caltrans, DF&G, and FWS.
- Collection of Developer Fees Fund needs to be established, implemented and deposited into a revolving account for future, traffic impact mitigation alternatives (i.e. interchange, channelization devices, etc.).
- An interchange alternative must be implemented if there are any additional developments near or north of this vicinity or increased enplanement over the established maximum number of 702 passengers per day. This and any other future traffic mitigation measures must be paid for through the established Revolving Developer Fees Fund by the Town.

If any of the aforementioned remediation measures are unable to be implemented due to extenuating circumstances, the following traffic impact mitigation alternatives need to be initiated.

- The US Hwy 395 north and Hot Creek Hatchery Road intersection must have a left turn pocket installed to address traffic impacts going south.
- The US Hwy 395 north intersection at Hot Creek Hatchery Road must have a right deceleration lane and right acceleration lane installed entering and exiting into the airport facility grounds

Mr. William T. Taylor

Page 3

May 16, 2001

Please continue to forward copies of reports on this proposed project for our review, comments, and records. If you have any questions, please contact me at (760) 872-1492. We look forward in continuing to work with you in a cooperative manner.

Sincerely,



CAROLYN YEE
IGR/CEQA Coordinator

Attachment / Enclosure

c: Jerry Gabriel
Ralph Cones
Nancy Escallier
Brian Mc Elwain
Robert A. Wiswell
Bill Costa
Ron Helgeson
State Clearinghouse: Brian Grattidge
Janill L. Richards, California State Department of Justice
Darrell M. Wong, California State Department of Fish & Game
Diane K. Noda, U.S. Fish & Wildlife Service
Elisha Novak, Federal Aviation Administration
William Manning, Mammoth Lakes Airport

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS M.S. #40

1 N STREET - ROOM 3300

BOX 942874

SACRAMENTO, CA 94274-0001

(916) 654-4959

FAX (916) 653-9531



May 8, 2001

Mr. William Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Taylor:

Re: *Notice of Preparation (NOP) for Proposed Improvements at Mammoth Lakes Airport:*
SCH# 2000034005

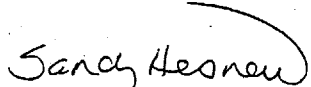
The California Department of Transportation (Caltrans) Division of Aeronautics has reviewed the above-referenced document with respect to CEQA. The current proposal modifies an earlier airport expansion plan that was approved by the Town of Mammoth Lakes.

According to the NOP, the proposed improvements at Mammoth Lakes Airport are needed to allow the airport to support air carrier service. Since the improvements will include a runway extension, the Division of Aeronautics will require an amended State Airport Permit. The airport will not be allowed to have commercial service until the Caltrans Division of Aeronautics has issued an amended permit. For assistance with the permit requirements, the applicant should contact the Acting Chief of the Division of Aeronautics, Austin Wiswell. The plans to lengthen, strengthen and widen the runway and extend the taxiways should also be submitted to Mr. Wiswell for review.

As part of the amended permit process, we must ensure that the proposal is in full compliance with CEQA. In addition to reviewing the NOP, we will also require copies of the Draft and Final EIRs and the Notice of Determination should the project be approved. The Draft EIR should address potential airport-related noise and safety impacts associated with the project. The proposal should also be submitted to the Mono County Airport Land Use Commission (ALUC).

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing the Draft EIR. If you have any questions regarding our comments, please call me at 916/654-5314.

Sincerely,


SANDY HESNARD
Environmental Planner

c : State Clearinghouse, Mono County ALUC

RICHARD BOARDMAN
Director of Public Works

EVAN NIKIRK
Assistant Director of Public Works
STEVE ANDERSON
Road Operations Manager
SUSAN ARELLANO
Administrative Assistant

County of Mono Department of Public Works

Post Office Box 457 • 74 North School Street • Bridgeport, California 93517

TELEPHONE
(760) 932-5252
(760) 932-5253

FACSIMILE
(760) 932-7607
monopw@qnet.c

April 16, 2001

Mr. Bill Taylor, Senior Planner
Town of Mammoth Lakes
Community Development Department
PO Box 1609
Mammoth Lakes, CA 93546

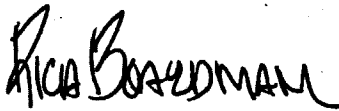
Re: NOP Mammoth Yosemite Airport Expansion Project

Dear Bill,

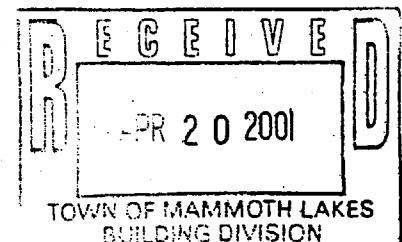
Mono County presently maintains the 2 primary access roads serving the Mammoth Yosemite airport. I would hope the Draft EIR would include a comprehensive traffic analysis concerning potential impacts to the existing road system. Should the project be proposing any additional road improvements that will impact other County roads, I would hope you would include those improvements in your analysis.

I would request that you include the County Public Works Department on your project mailing list. Thanks for the opportunity to identify my concerns. Should you have additional questions feel free to give me a call.

Sincerely,


Rich Boardman, Director

C: Scott Burns, Community Development Director





NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364

SACRAMENTO, CA 95814

(916) 653-4082

(916) 657-5390 - Fax

April 26, 2001

William T. Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

RE: SCH# 2000034005 - Mammoth Yosemite Airport Expansion Project

Dear Mr. Taylor:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess the project-related impact on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a records search. The record search will determine:
 - Whether a part or all of the project area has been previously surveyed for cultural resources.
 - Whether any known cultural resources have already been recorded on or adjacent to the project area.
 - Whether the probability is low, moderate, or high that cultural resources are located within the project area.
 - Whether a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The report containing site significance and mitigation measures should be submitted immediately to the planning department.
 - The site forms and final written report should be submitted within 3 months after work has been completed to the Information Center.
- ✓ Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check.
 - A list of appropriate Native American Contacts for consultation concerning the project site and assist in the mitigation measures.
- ✓ Provisions for accidental discovery of archeological resources:
 - Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA) §15064.5 (f).
- ✓ Provisions for discovery of Native American human remains
 - Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents.

If you have any questions, please contact me at (916) 653-4040.

Sincerely,

Rob Wood
Associate Governmental Program Analyst

CC: State Clearinghouse

APR 30 2001



California Regional Water Quality Control Board

Lahontan Region

Vinston H. Hickox
Secretary for
Environmental
Protection

Victorville Office

Internet Address: <http://www.swrcb.ca.gov/rwqcb6>
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Phone (760) 241-6583 • FAX (760) 241-7308



May 16, 2001

FILE No.: 6B26S003680

William T. Taylor
Town of Mammoth Lakes
Airport Manager
P.O. Box 1609
Mammoth Lakes, CA 93546

COMMENTS ON THE NOTICE OF PREPARATION (NOP) FOR MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT, STATE CLEARINGHOUSE (SCH) NO. 2000034005, MONO COUNTY

The California Regional Water Quality Control Board staff (Board staff) on April 16, 2001, received documentation detailing the Town of Mammoth Lakes intention to prepare a new draft Environmental Impact Report (DEIR) for the Mammoth Yosemite Airport Expansion Project. Board staff has the following comments.

1. Project Description

Previous DEIR documents addressed mitigation measures relating to different parts of the proposed airport expansion but did not evaluate those areas as one project or evaluate the cumulative impacts for all proposed changes (airport commercial development plan). The NOP documentation dated April 2001 states that the project description has changed, but as before does not list all the proposed changes. The new project description (April 2001) is stated as encompassing the runway expansion plus the total number of flights and increased number of passenger enplanements. As stated in our March 2000 comments, Board staff believes that the DEIR must address all aspects of the airport expansion. If it does not then there can be no accounting for cumulative impacts. Cumulative impacts on the site environment from the proposed restaurant, condominiums, and hotel need to be addressed in the DEIR.

2. Water Quality

Both surface and ground water quality issues in the airport expansion area are of paramount importance. Water in this region supports fish hatcheries, recreation, municipal water supply, agriculture and many other beneficial uses. The cumulative effect on water quality due to development can be significant. Potential impacts to water quality from daily operation of the restaurant, condominiums, hotel and airport along with pumping of ground water for daily uses and unforeseen events such as spills must be evaluated in the new DEIR on an individual basis as well as on an cumulative effect basis.

California Environmental Protection Agency

Mr. Taylor

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May 16, 2001

3. Previous Comments

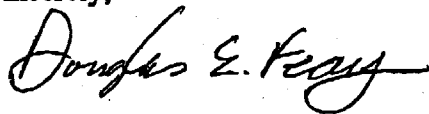
Board staff has written three letters of comment, March 6, 2001 (SCH. NO. 2001022028), March 23, 2000 (SCH. NO. 200034005), and November 8, 2000 (No SCH. NO.) regarding the Mammoth Airport expansion project. Issues discussed in the three letters are:

- environmental site assessment regarding past site contamination;
- wetlands site assessment;
- construction and industrial stormwater runoff system must be adequately designed to handle higher runoff during times of greater than 20-year storm;
- septic system impacts;
- hazardous material storage and spill issues;
- evaluation of potential overdraft and recharge (water balance), as it relates to protection of beneficial uses; and
- alteration of stream or drainage course(s).

We request the issues above be addressed in the new DEIR. We have enclosed a copy of the three letters for your reference.

We would be happy to discuss any of these issues further with you. If you have any questions, please contact me at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,



Douglas E. Feay
Associate Engineering Geologist

Enclosures: 1. Letter dated March 6, 2001
2. Letter dated March 23, 2000
3. Letter dated November 8, 2000

cc: Mailing List

DF/rc/Y:\Doug\Final\NOP2001 MamAirpt.doc

MAILING LIST
MAMMOTH LAKES AIRPORT EXPANSION PROJECT

J.S. Army Corp of Engineers
325 "J" Street
Sacramento, CA 95814-2922

Inyo National Forest
873 N. Main Street
Bishop, CA 93514

U.S. EPA - Region 9
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San Francisco, CA 94105

Darrell Wong
Department of Fish and Game
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Bishop, CA 93514

Dennis Lampson
Mono County Health Department
P.O. Box 476
Bridgeport, CA 93517

Mono County Planning
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Mammoth Lakes, CA 93546

United States Forest Service
Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592

State Clearinghouse
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Sacramento, CA 95812-3044

Jim Kuykendahl
SWRCB - CWP
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Tim Thomas
National Fish and Wildlife Service
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Barstow, CA 92311

Janill L. Richards
Deputy Attorney General
Department of Justice
1515 Clay Street, 20th Floor

Elish Novak
F.A.A.
831 Mitten road
Burlingame, CA 94818-1301

Great Basin
Air Pollution Control District
157 Short Street, Ste. 6
Bishop, CA 93514-3537



Winston H. Hickox
Secretary for
Environmental
Protection

California Regional Water Quality Control Board Lahontan Region



Gray Davis
Governor

Victorville Office

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March 6, 2001

FILE No.: 6A26S314760

State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

COMMENTS ON THE MITIGATED NEGATIVE DECLARATION, STATE CLEARINGHOUSE (SCH) NO. 2001022028, HOT CREEK CONDOMINIUMS, MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT, MONO COUNTY

The California Regional Water Quality Control Board (Regional Board) staff has reviewed the Mitigated Negative Declaration (Neg. Dec.) for the proposed construction of 188 condominiums at the Mammoth Yosemite Airport Expansion Project. The Town of Mammoth Lakes submitted the Neg. Dec. on February 7, 2001. Regional Board staff has the following comments.

General Comments

The proposed Airport Expansion Project includes 188 condominiums, a hotel, restaurant, and sewage treatment facility. The expansion-site consists of five lots for the proposed airport expansion. Lots one to three are designated for the proposed construction of the 188 condominiums in three phases of construction. Lot four is reserved for the future hotel and restaurant. Lot five is the location for the sewage treatment facility. This Neg. Dec. addresses only the environmental concerns associated with the 188 condominiums. Included in the proposed 188 condominiums will be a day care center, recreational areas, parking areas, and ten stormwater retention basins for infiltration of stormwater. The hotel, restaurant, and sewage treatment facility are not addressed in this Neg. Dec.

Specific Comments

The Neg. Dec. should include evaluation of the potential impacts associated with the proposed hotel, restaurant, and sewage treatment facility. Potential impacts of the development associated with the airport expansion should be evaluated for an analysis of cumulative impacts and for the proposed mitigation to be evaluated in the framework of the entire proposed airport expansion.

The following specific comments address only those questions in Section 8, on page 8 (a-f, below), that address areas regulated by the Regional Water Quality Control Board.

California Environmental Protection Agency

Sch No. 200102208

- 2 -

March 6, 2001

Section 8 (a) Violate any water quality standards or waste discharge requirements.

The lead agency (Town of Mammoth Lakes) responded with Less Than Significant Impact due to construction of a sewage treatment facility. The lead agency did not include what mitigation measure would be used at the sewage treatment facility to prevent water quality standards from being violated. The package treatment plant should provide secondary sewage treatment with supplemental nitrate reduction. Monitoring of ground water quality using permanent monitoring wells should also be provided. The proponent should be aware that a complete Report of Waste Discharge for the package treatment plant needs to be filed with Regional Board staff at least 120 days prior to plant construction.

Water quality standards related to stormwater runoff and infiltration need to be addressed. Stormwater from parking areas should be treated to make the stormwater of acceptable quality for infiltration. Treatment measures such as oil/water separators and hydrocarbon filters could be implemented. Some type of sampling devices should be installed that allows sampling of stormwater prior to infiltration and after treatment. Best Management Practices (BMPs) such as not allowing oil changes and/or car maintenance on-site could also be used to mitigate potential water quality impacts.

The issue of waste discharge related to construction activities has not been addressed. As part of the airport stormwater construction permit (6B26S310411), the project proponent is required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for all construction activities. The SWPPP is subject to review by Regional Board staff. The Regional Board will require submittal of grading/drainage and erosion control plans as part of the SWPPP. We request the project proponent contact Regional Board staff to discuss the proposed grading/drainage plans.

During construction, dewatering water cannot be discharged into any drainage, stream or wetlands area. Such discharges may require a discharge permit from the Regional Board, as the dewatering water has the potential to contain pollutants. We recommend dewatering water be discharged to land if a suitable land location exists, provided ground water samples do not indicate ground water has been impacted by pollutants. Dewatering water must be contained and not cause a nuisance.

Once mitigation measures related to above mentioned issues are incorporated into the proposed project in the Neg. Dec. then the finding of "Less than Significant with Mitigation Incorporated" would be appropriate.

Section 8 (b) Substantially degrade ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Sch No. 200102208

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March 6, 2001

The lead agency responded with the fact that two wells and a water storage tank are located on-site and that the usage of on-site wells will not impact the Convict Creek drainage area or Hot Creek hatchery. They also stated that the 1997 Environmental Impact Report (EIR) previously evaluated the impact to ground water and that the impact would be minimal.

Regional Board staff requests applicable data from the 1997 impact evaluation also put in the Neg. Dec. The 1997 EIR did not include the results of a water balance study or other study to support the above conclusion. The water balance study would take into account all imports and exports of surface and ground water and the effect on the ground water basin. In addition, the airport managers should keep careful records of volumes pumped from ground water and volumes recharged to ground water. A water balance calculation should be done annually and the results reported to Regional Board staff for evaluation. The water study should evaluate any potential impacts to wetlands or water quality of surface waters from the proposed use at the airport. If an overdraft should occur corrective measures can be implemented before sever damage is done to the ground water quality.

Section 8 (c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site?

The lead agency responded with a Less Than Significant Impact. The lead agency pointed out that the site is flat and there will be no streams or rivers impacted by the project. They stated that all stormwater would remain on-site. Regional Board staff agrees with this assessment.

Section 8 (d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on or off the site.

The lead agency referred to the comment in part (c) above. As long as all the stormwater remains on-site then statement (c) above would be accurate.

Section 8 (e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

The lead agency responded with Less Than Significant Impact. The stormwater system has been designed for a 20-year storm. However, plans should be in-place to manage stormwater above the design capacity of the system. Additionally, there will be an overflow swale constructed to accommodate any additional runoff, which would prevent stormwater from leaving the site. The stormwater runoff will be treated using BMPs. However, the project as proposed did not list BMPs that will be used to treat stormwater. The proposed project must include the mitigation measures that will be implemented for stormwater treatment and management.

Sch No. 200102208

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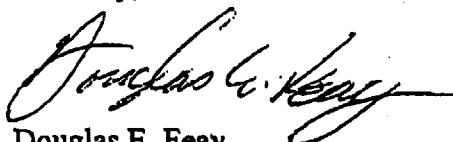
March 6, 2001

Section 8 (f) Otherwise substantially degrade water quality?

The lead agency referenced part (a) for the response to this question. Please refer to our comments under part (a) above.

If you have any questions, please contact me at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,



Douglas E. Feay
Associate Engineering Geologist

cc. David S. Hickson, Assoc. Planner
The Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

DF/rc/HolCkMthAiPiNEGDEC.doc



California Regional Water Quality Control Board

Lahontan Region



Winston H. Hickox
Secretary for
Environmental
Protection

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Phone (760) 241-6583 • FAX (760) 241-7308

Gray Davis
Governor

March 23, 2000

FILE: 6B26S003680

Mr. Bill Manning-Airport Manager
Town of Mammoth Lakes
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes CA. 93546

COMMENTS ON NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL ASSESSMENT (EA) FOR PROPOSED IMPROVEMENTS AT MAMMOTH LAKES AIRPORT, INYO COUNTY, SCH# 2000034005

California Regional Water Quality Control Board Lahontan Region Board staff (Board staff) has reviewed the Notice of Intent to Prepare an Environmental Assessment (EA) for Proposed Improvement at Mammoth Lakes Airport submitted by Mono County. The purpose of the Notice of Intent is to solicit any specific concerns or issues that should be addressed in the EA. Board staff has the following comments.

Project Summary

The Notice proposed the following airport improvements:

- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft.
- Widen the runway from 100 feet to 150 feet on the south side of the runway, resulting in a shift of the runway centerline 25 feet to the south.
- Widen the parallel taxiway from 50 feet to 75 feet—20 feet on the south side and 5 feet on the north side.
- Extend the runway 1,200 feet to the west to provide the necessary runway length for desired air carrier aircraft operations, i.e., the B-757-200.
- Extend the parallel taxiway to be consistent with the length of the runway extension.
- Add an air carrier apron for the three to six air carrier aircraft.
- Add a 75-foot wide connecting taxiway to access the air carrier apron area.
- Add turn buttons at the runway ends to permit back-taxiing on the runway during the initial phase of development.
- Expand the Runway Safety Area from 500 feet to 1000 feet to the east of the runway (required to comply with FAA airport design standards for current operations).
- Improve the security fencing from the existing 6 feet to 8 feet in height to meet FAA standards.

NEPA-Mammoth Airport

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March 23, 2000

- Develop passenger terminal building facilities.
- Construct Airport access road improvements.
- Expand the automobile parking lot.
- Acquire in fee simple and/or lease lands owned by Los Angeles Department of Water and Power (LADWP) that currently occupy the further extension of the Runway Safety Area (required to comply with FAA airport design standards for current operations)

Specific Comments

The Board staff has the following specific comments:

1. Environmental Site Assessment

Batchelor Environmental Services requested data from the Lahontan Water Board for the Mammoth Lakes Airport in a letter dated May 3, 1999. The data was for a Level 1 Site Investigation at the airport. Board staff would like a copy of that site investigation and requests that information from the site investigation be included in the EA.

2. Wetland Impacts

The Environmental Impact Report (EIR) dated March 1997, contained a Wetland Survey and Special-Status Species report by Jones and Stokes Associates dated March 16, 1995. Board staff requires notification by the Army Corps of Engineers that they have reviewed the study. If a permit is required (Construction Permit) by the Army Corps of Engineers, Board staff will need a copy of that permit. It should be noted that the 1995 Wetlands Survey might need to be updated to conform to current Army Corps of Engineer requirements for Wetlands.

If any portion of the project involves fill or disturbance of wetland areas, the project proponent must also file an application with the Regional Board.

The widening of the eastern end of the current runway may impact wetlands. In addition, the access road located at the eastern end of the airport may have been constructed in wetlands. If any work has already occurred in wetland areas, appropriate mitigation must be incorporated into the project.

Board Staff requests the Jones and Storkes report be submitted to the Department of Fish and Game for review. The Department of Fish and Game has a local office in Bishop California.

NEPA-Mammoth Airport

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March 23, 2000

3. Stormwater Runoff and Other

As stated in your Subsequent Environmental Impact Report (EIR) data March of 1997 under section E. Drainage, "soils throughout the Mammoth Lakes Airport consist of sands, gravel's, and boulders.....soils are very pervious and drainage water readily infiltrates into the ground". Also stated in the same section was "Future development will carry stormwater from the development area.....where it will be allowed to infiltrate and recharge the existing ground water". Given that ground water is very shallow (approximately 15 feet below ground surface), there is a potential for ground water contamination by stormwater runoff, which may contain hydrocarbons or other contaminants from daily airport operations, wash water and spills. In 1991 a gravel pit south of the current airport location was found to contain ground water that had been contaminated by hydrocarbons. Consideration must be given to methods that prevent contamination and/or remove contamination from stormwater runoff before the runoff is allowed to infiltrate into the soil. We request that such control measures be incorporated into the proposed project.

4. Septic System Impacts

The EIR (March 1997) proposed to mitigate the impact of domestic and industrial waste discharge by a centralized sewage collection, treatment and disposal system at the airport. Due to the proposed high volume of sewage flow (53,260 gpd for proposed condominiums, restaurant, and other facilities), highly permeable soils and shallow ground water, any disposal of sewage water would require the sewage to be treated to secondary level for ground water disposal via infiltration and tertiary level for surface water disposal.

5. Hazardous Materials and Under Ground Storage Tanks

Increased airport capacity will require increased fuel storage, hazardous materials usage and fire fighting materials. The impact of the additional hazardous materials to the site should be addressed in the EA. The proposed should include appropriate mitigation measures such as development and implementation of a spill prevention, contaminant and clean-up plan.

6 Project Description

It is unclear why the project description to be evaluated by the EA under the National Environmental Policy Act (NEPA) process is different than the project evaluated by the California Environmental Quality Act (CEQA) process. The EA should include a description of the entire project, and describe the relationship between the 1997 EIR and the proposed EA. The EA must evaluate cumulative impacts from all proposed activities associated with the project.

NEPA-Mammoth Airport

-4-

March 23, 2000

Thank you for the opportunity to review the Notice of Intent. We look forward to working with the town to develop Mammoth Lakes Airport.

If you have any questions, please contact me at (760) 241-7353, or Cindy Mitton at (760) 241-7413.

Sincerely,



Douglas E. Feay
Associate Engineering Geologist

Cc: U.S. Army Corp of Engineers
1325 J. St.
Sacramento, CA 95814-2922

EPA District #9
75 Hawthorne Street
San Francisco, CA 94105

Department of Fish and Game
ATTN: Darrell Wong
407 W. Line St.
Bishop, CA 93514

Mono County Health Department
PO Box 476
Bridgeport, CA 93517

Mono County Planning
PO Box 347
Mammoth Lakes, CA 93546

United States Forest Service
Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592



California Regional Water Quality Control Board

Lahontan Region



Anton H. Hickox
Secretary for
Environmental
Protection

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Gray Davis
Governor

November 8, 2000

FILE No.: 6B26S003680

William Manning
Town of Mammoth Lakes
Airport Manager
P.O. Box 1609
Mammoth Lakes, CA 93546

COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT, MONO COUNTY

The California Regional Water Quality Control Board staff (Regional Board staff) has reviewed the DEA for the Mammoth Yosemite Airport Expansion Project submitted by the Town of Mammoth Lakes on October 10, 2000. Regional Board staff has the following comments.

General Comments

Regional Board staff submitted comments on the Notice of Intent to prepare an Environmental Assessment to the Town of Mammoth Lakes on March 23, 2000. The specific comments below evaluate the DEA with respect to addressing our remarks contained in the March 23, 2000 letter. In addition, comments are provided regarding any new information contained in the DEA that was not part of the Notice of Intent.

Specific Comments

1. Environmental Site Assessment

Appendix H of the DEA contains a Level I Site Investigation prepared by Batchelor Environmental Services. The site investigation is dated May 17, 1999. Batchelor reported that several underground tanks were removed from the airport prior to construction of the new hangers. The report states that testing indicated hydrocarbon contamination of subsurface soil. Also stated is that there was no impact to ground water. However, Regional Board staff could not find any ground water data. Ground water must be sampled and analyzed to demonstrate that there is no impact. Before the ground water is sampled, Regional Board staff requests review and approval of the sampling plan. If it is found that ground water has been impacted by hydrocarbons, then a remedial plan will need to be submitted to Regional Board staff for review.

2. Wetland Impacts

Appendix G contains a report by Jones and Stokes entitled "Biological Study for the Mammoth Lakes Airport Expansion Project, Mono County." The report states that no

Mr. Manning

- 2 -

November 8, 2000

wetlands were identified in the project area. However, "the dry meadow in the eastern portion of the project study area supported a prevalence of hydrophilic species and exhibited a primary hydric soil indicator (a low chroma of 1), primary and secondary hydrological indicators were not observed." The conclusions made by Jones and Stokes were based on the March 16, 1995 wetland study. Regional Board staff previously requested that this study be provided to the Army Corps of Engineers for determination of jurisdictional wetlands. Regional Board staff could find no evidence that this report was reviewed by the Army Corp of Engineers. The area at the eastern end of the runway has ground water at six-feet below the ground during spring runoff. We request that the Town of Mammoth Lakes provide the previously requested determination, or a new wetlands study will be required before runway expansion can be undertaken.

3. Stormwater Runoff

Section 5.6.3, Mitigation Measures, contains proposed measures to reduce the impact of stormwater runoff on ground water and surface water. Mitigation measures propose collection of all surface runoff for the aircraft parking apron, automobile parking lot, and terminal roadway. The collected runoff will be piped to an oil/water separator for treatment. The oil/water separator should be equipped with a port for sampling the discharge. Once the oil is separated from the water the resultant water will then be allowed to infiltrate into the ground. The pavement for the runway and taxiways would be allowed to infiltrate without treatment by the oil/water separator. Regional Board staff has evaluated the potential for adverse impact of the proposed activities in the runway and taxiways and it does not appear that the potential impact would be significant provided that these areas are only used for taxi and takeoff. Any change in use, such as parking of aircraft or support equipment, would subject these areas to the same requirements for collection and treatment of runoff as discussed for other areas.

Regional Board staff requests to review the spill prevention, containment, and cleanup plan to insure adequate protection for all areas. There should be a description of the spill prevention, containment and cleanup plan included in the DEA.

4. Septic System Impacts

Section 5.6.3, Mitigation Measures, proposes the use of a package treatment plant to provide secondary sewage treatment with supplemental nitrate reduction. In addition, it is proposed to monitor ground water quality using monitor wells. Regional Board staff concurs with this proposed mitigation measure. A Report of Waste Discharge (RWD) needs to be filed with the Regional Board.

5. Hazardous Materials and Under Ground Storage Tanks

Section 5.19, Solid Waste/Hazardous Waste, states that there are no new hazardous materials storage areas proposed for the expansion project. Existing fuels are stored in above ground tanks. All underground tanks have been removed or abandoned in place. While there is no proposed increase of hazardous materials storage areas, there will be an increase in hazardous

Mr. Manning

- 3 -

November 8, 2000

materials usage at the site. Increased usage of hazardous materials (increased airport activity) increase the potential of contamination to surface waters and/or ground water. See comment three above regarding including a discussion of a spill prevention, containment, and cleanup plan in the DEA.

6. Project Description

The DEA document addresses mitigation measures relating to the runway expansion but does not, for the most part, evaluate cumulative impacts (Section 5.23) for all proposed changes (airport commercial development plan). The DEA states that the airport commercial development plan was evaluated in 1997 as part of the Environmental Impact Report (EIR) and that the DEA will only address issues related to the runway expansion. Regional Board staff recommends there be a summary included in the project description that lists the conclusion of the 1997 EIR.

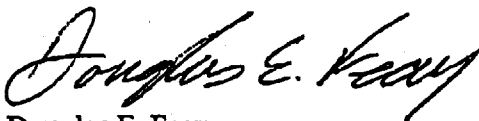
7. Construction Activities

As part of the airport NPDES construction permit (6B26S310411), the project proponent is required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the runway construction. The SWPPP is subject to review by the Regional Board staff. The Regional Board will require submittal of grading/drainage and erosion control plans as part of the SWPPP. We request the project proponent contact Regional Board staff to discuss the proposed grading/drainage plans.

During construction, dewatering water cannot be discharged into any drainage, stream or wetlands area. Such discharges may require a discharge permit from the Regional Board, as the dewatering water has the potential to contain pollutants. We recommend dewatering water be discharged to land if a suitable land location exists, provided ground water samples do not indicate ground water has been impacted by pollutants. Dewatering water must be contained and not cause a nuisance.

If you have any questions, please contact me at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,



Douglas E. Feay
Associate Engineering Geologist

cc: Mailing List

MAILING LIST

U.S. Army Corp of Engineers
1325 "J" Street
Sacramento, CA 95814-2922

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Dennis Lampson
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Mono County Planning
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Mammoth Lakes, CA 93546

United States Forest Service
Pacific Southwest Region
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State Clearinghouse
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Sacramento, CA 95812-3044

Jim Kuykendahl
SWRCB - CWP
1001 "I" Street, 17th floor
Sacramento, CA 95814-2828

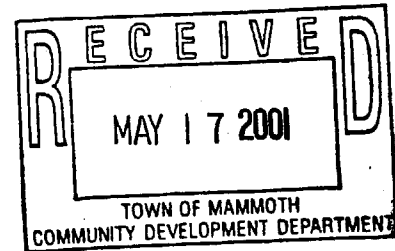
Inyo National Forest
873 N. Main Street
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DEPARTMENT OF FISH AND GAME

Eastern Sierra-Inland Deserts Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
(760) 872-1171



May 11, 2001



Mr. William T. Taylor
Senior Planner
Town of Mammoth Lakes
Community Development Department
P.O. Box 1609
Mammoth Lakes, CA 93546

**Notice of Preparation
Draft Subsequent Environmental Impact Report
Mammoth Yosemite Airport Expansion Project
Mono County**

Dear Mr. Taylor,

The Department of Fish and Game (Department) has reviewed the Notice of Preparation (NOP) to Prepare a Draft Environmental Impact Report (EIR) for proposed Improvements at Mammoth Yosemite Airport. The Town of Mammoth Lakes is proposing to construct a series of improvements at Mammoth Lakes Airport, primarily for the purpose of enabling commercial jet air carriers service to operate at the Airport. The current proposal modifies an earlier airport expansion plan approved by the Town. The principal changes from the project previously approved are a widening of the runway and a revision in the aviation demand forecast decreasing the total number of flight operations and increasing the number of passenger enplanements. Proposed improvements included strengthening the runway and taxiways to accommodate up to B-757-200 aircraft, widening the runway from 100 feet to 150 feet, widening the parallel taxiway from 50 feet to 75 feet, extending the runway 1,200 feet to the west, extending the parallel taxiway to be consistent with the runway extension, addition of an air carrier apron, addition of a 75-foot wide connecting taxiway, expansion of the Runway Safety Area (RSA) from 500 feet to 1,000 feet, improvement of security fencing from 6 feet to 8 feet, development of passenger terminal building facilities, construction of airport access road improvements, expansion of the automobile parking lot, and acquisition of lands owned by the Los Angeles Department of Public Works.

The Department is providing comments on this NOP as the state agency which has the statutory and common law responsibilities with regard to fish and wildlife

resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish & Game Code section 711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish & Game Code section 1802). The Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish & Game Code Section 702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. Sec. 15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

The Department has written comment letters addressing the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) prepared by the Federal Aviation Administration for this project dated March 16, 2000, November 14, 2000, January 8, 2001, and April 19, 2001. Our previous comments still apply, and these letters are hereby incorporated by reference into this letter.

Potential environmental impacts from the proposed project which could affect the quality of the human environment include, but are not necessarily limited to, increased noise and adjacent use impacts to Department hatchery operations and residences at the Hot Creek Fish Hatchery; direct loss of important wildlife habitat for mule deer, sage grouse, and mountain lion; indirect impacts to sage grouse foraging and nesting habitat and leks; increased mortality to sage grouse as a result of project fencing; disturbance to deer migration areas and increased road kills from project-related facilities and operation; disruption of seasonal foraging areas and patterns for raptors including bald and golden eagle, northern harrier, American peregrine falcon, Swainson's hawk, prairie falcon, American kestrel, red-tailed hawk, ferruginous hawk, rough-legged hawk, and other raptors; disturbance to nesting waterfowl and other aquatic and riparian birds; alteration in the quantity or quality of surface or ground water, including impacts to spring flow, habitat for Owens tui chub, and domestic water supply for Fish Hatchery residences.

To enable our staff to adequately review and comment on the proposed project, we recommend the following information be included in the Draft EIR:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats. All assessments must be completed using protocols and methodologies approved by the Department and U.S. Fish and Wildlife Service (USFWS). Assessments must be completed at appropriate times of the year and during appropriate survey hours.

a) A thorough assessment of rare plants and rare natural communities, following the Department's May 2000 Guidelines for Assessing Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (Attachment 1).

b) Biological surveys of the project site should be conducted during the appropriate seasons of the year to detect presence of species which occupy the site both year-round and seasonally. This should include surveys for mammals, amphibians, reptiles, resident and migratory raptors, waterfowl and songbirds which may utilize the area. Focused species-specific surveys, conducted at the appropriate time of year and time of day when sensitive species are active or otherwise identifiable are also required. A complete assessment of sensitive wildlife species winter, spring and summer use should be addressed. Species-specific survey protocols should be developed in consultation with the Department and the USFWS. Measures should be identified to provide protection of existing habitat, or mitigation proposed for project impacts to these species and their associated habitat areas.

c) Rare, threatened and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition. (See CEQA Sec. 15380.) Surveys for these species must be conducted using approved methodologies in coordination with the Department and the USFWS. All persons conducting the surveys must have the required permits from the resource agencies. In particular, those species listed in Tables 1 and 2 of the Owens Basin Wetland and Aquatic Species Recovery Plan should be discussed.

d) The Department's California Natural Diversity Data Base in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

e) The EIR should discuss the use of the airport and surrounding vicinity by wintering bald and golden eagles, and migratory raptors. The Hot Creek, Laurel Pond, and Crowley Lake areas support the highest concentrations of wintering eagles in the Eastern Sierra, based on data collected over the last 10 years.

2. A thorough discussion of direct, indirect and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

a) Project impacts should also be analyzed relative to their effect on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas should be fully evaluated and provided.

b) The proposed project has the potential to have a negative impact on the Round Valley Deer Herd and the Casa Diablo Deer Herd. The document should discuss the project's conformance with the Deer Herd Management Plans which have been prepared by the Department. The document should thoroughly discuss the potential disturbance to the deer herd resulting from increased noise, lights, airplane and vehicle traffic, and any other impacts associated with the project. This should further include an analysis of the potential for the project to force deer away from the area during migration periods and any resultant increase in deer highway fatalities. The document should offer proven and effective measures for reducing or eliminating impacts to the deer herd. We believe that the discussion of impacts to mule deer and absence of mitigation measures in the 1997 Subsequent EIR did not adequately address the impacts to this resource.

The deer fencing and mitigation plan should be developed by the responsible agencies and included in the EIR. The fence design and location should also be coordinated with Caltrans, as well as with the Department and the U.S. Forest Service. Analysis of deer migration corridors indicates that it may be necessary to construct one or more underpasses for migrating deer under Highway 395. Fencing along both sides of Highway 395 to funnel deer to the underpasses may also be necessary. A solution to the problem of deer crossing Highway 395 at Hot Creek Road must also be developed.

The EIR should contain a detailed and specific mitigation plan for loss of deer habitat. The revegetation plan should describe the size of the mitigation area, schedule for implementation and completion, responsible parties, sources of vegetative material, a monitoring plan, and success criteria. This mitigation site should also not be assumed to be adequate for impacts to sage grouse. As we have discussed, sage grouse may be impacted on leks, wintering areas, nesting areas or all. The deer mitigation site could potentially serve as mitigation for sage grouse wintering areas, but would not be suitable mitigation for impacts to sage grouse lekking areas and nesting habitat.

c) The Department believes that the proposed project also has the potential to have a negative impact on sage grouse. This species has undergone rapid population declines throughout its range, including Long Valley. Discussion of impacts to this species was inadequate in the 1997 SEIR. Guidelines for sage grouse management and development within sage grouse habitat were developed in January, 2000, by BLM, Idaho Department of Fish and Game, and Colorado Division of Wildlife and should be used to assist in the analysis of impacts to sage grouse. BLM biologists in Bishop are also presently conducting radio-telemetry research on the Long Valley sage grouse population, and results of this research should also be used in the EIR.

Populations of sage grouse have declined by up to 47% throughout much

of its range (Connelly 2000). The development of roads, powerlines, fences, reservoirs, ranches, farms and housing developments has resulted in sage grouse habitat loss and fragmentation. Structures such as powerlines and fences pose hazards to sage grouse because they provide additional perch sites for raptors, and sage grouse may be injured or killed when they fly into these structures (Connelly 2000).

Recent genetic investigations performed by Dr. Tom Quinn's lab at Denver University indicate that the Long Valley sage grouse population is one of a small number of populations in Mono County and Lyons County, Nevada, that are genetically differentiated from sage grouse populations elsewhere (Dr. Robert Gibson, pers comm). Maintaining genetic diversity is a key concept in maintaining viable populations of all species. These preliminary results argue for the careful analysis of any land use which could potentially impact the viability of the Long Valley sage grouse population. If the Long Valley sage grouse population drops below a viable level, there are no other genetically similar birds with which to simply repopulate the area. The Long Valley population appears to be isolated from the only other substantial population in Mono County (Bodie Hills). The Long Valley population's size seems to be very sensitive to increased mortality. This population has not rebounded from reduced hunting pressure over the last 5 years. The reason is unknown, but it highlights the vulnerability of this population. (R. Gibson, pers comm.)

The areas adjacent to the airport, and particularly within the proposed flight path, are of concern. The area to the east of the airport and north of US 395 includes critical areas of winter, breeding and summer habitat for sage grouse. Aircraft may disturb birds on leks. Grouse almost invariably leave when small planes fly over the leks in Long Valley (R. Gibson pers comm). Aircraft may also disturb flocks of sage grouse that use this area in winter and early spring. Radio-telemetry data show that this area is a key area during this time of year when areas further north and west are under deep snow. Under such conditions sage grouse are potentially more easily located by predators than at other times because snow cover restricts usable habitat. For birds that rely on inactivity and cryptic coloration to escape detection by raptors, the potential consequences of repeated disturbance under such circumstances should be apparent (R. Gibson, pers comm). That is, it is highly likely that repeated disturbance could result in significantly higher predation rates, and therefore, significant declines in the population. The irrigated meadows around Convict Creek between the airport and Crowley Lake are a major foraging area for sage grouse in summer. The birds spend the day in the adjacent sagebrush. These birds are also threatened with disturbance in association with the proposed flight path. The area north and west of the airport (across Hot Creek) includes important nesting and lekking areas (especially Lek #8 which has been one of 2 major leks in the valley in the last 2-3 years). These birds are also vulnerable to disturbance associated with aircraft noise.

Sage grouse often fly low when moving short distances. Cattle fences have been a problem around Lek #2 because they intercept birds moving between

feeding/roosting and lekking sites. Collisions presumably occur in the dark or at very low light levels at dusk and dawn which is when sage grouse mostly fly around. Data show that sage grouse will abandon leks found in close proximity to overhead transmission lines and power poles, which provide perches for raptors and ravens who prey on adult grouse, eggs and chicks.

The EIR should discuss impacts of peak noise on sage grouse. The noise discussion in the EA uses a method that evaluates average noise levels. It also uses a standard that is based on human tolerance for noise levels. The analysis in the EIR should focus on the peak noise associated with aircraft landings and takeoffs, and analyze how this noise will affect sage grouse on their wintering areas, nesting areas, and breeding areas (leks). The analysis should include projected air traffic levels in the year 2022. Based on our review of the submitted information, and current scientific knowledge regarding sage grouse in Long Valley, we continue to believe that the proposed change in operations at the airport could have significant impacts on sage grouse in Long Valley. Researchers have documented that overhead disturbances cause sage grouse to remain motionless for significantly longer periods than lateral disturbance (dogs, people). Ongoing research in Northern California has documented abandonment of leks by sage grouse due to the presence of overhead transmission lines. Sage grouse are sensitive to overhead disturbance, even without the noise factor, because they are preyed upon by avian predators such as golden eagle and bald eagle.

The Department had proposed earlier that an effective mitigation measure could be to restrict the use of the flight corridor during the display period (mid-March through mid-May) to between the hours of mid-morning to late afternoon. In a meeting on November 29, 2000, the Town of Mammoth Lakes indicated it would not restrict the air carriers' hours of operations. However, the Supplemental Information to the EA states that disturbance to grouse is not likely if flights are at mid-day when birds would be away from the leks. The Department continues to believe that disturbance to sage grouse resulting in significant impacts to the Long Valley population could occur without these seasonal restrictions on operating hours.

The Supplemental Information provided with the EA cites information collected from a sage grouse lek located at the Jackson Hole Airport. The two situations may not be comparable because the information provided does not indicate the level of use of the Jackson Hole Airport, the type of aircraft, the hours of operation, the effects on female sage grouse, or long-term effects on the population. The data collected at Jackson Hole did not include data on female sage grouse. Although male sage grouse continue to strut at the airport, no information has been collected on nest initiation rates by females, or on distances females move to establish nests. These factors could play a role in the long-term fate of the Long Valley sage grouse population.

d) The EIR should address potential impacts to bald eagle, a state and federal listed species. As we have stated in our earlier comments, the Hot Creek, Crowley, and Laurel Pond areas surrounding the airport support concentrations of wintering bald and golden eagles. At a meeting on January 19, 2001, consultants for the project discussed a study which investigated the effects of jet aircraft on bald eagles. Our understanding was that this study would be presented in the Supplemental Information. Although the Supplemental Information contains a fairly thorough discussion of the risk of bird strikes involving passerines, the use of the airport area by bald eagles is not mentioned. No studies investigating impacts of jet aircraft on bald eagles are mentioned in the Supplemental Information. We believe that this issue deserves a thorough analysis in the EIR.

e) A cumulative effects analysis should be developed, as directed by 40 CFR 1508.25 (a)(2) and (c). General Plans, Specific Plans, as well as past, present and anticipated future projects, including those projects outside the control of the agency, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

The Department believes the document should include an analysis of water supply availability not only for growth-inducing impacts which will follow and how this relates with the future water supply capacity of Mammoth Lakes, and any resultant impacts to adjacent surface and spring flows of influence within this watershed. In identifying future projects adding to the cumulative impacts of the proposed project, the Department is aware of the following projects which will impact, at a minimum, the Round Valley deer herd, the Casa Diablo deer herd, resident sage grouse and/or their habitats, and add to growth-inducing impacts and increased needs for water supply: 1) Sherwin/Snowcreek Ski Area; 2) Intrawest resort developments, including the reported requirement for an increased airport and aircraft size capability to secure development of the proposed 250 room hotel/lodge, and the increased need for well water for expansion of the snowmaking system; 3) Eastern Sierra College Center-Mammoth; 4) Lakeridge Ranch Estates; 5) Sierra Business Park; and 6) the proposed Pacifica residential development in Round Valley. Recent news broadcasts report that the Town of Mammoth Lakes Strategic Marketing Plan projects that one million additional skier visits per season are necessary in order to keep existing lodging profitable. The airport expansion project will undoubtedly play a key role in providing these additional visitor use days. Additional visitation will result in increased human presence and disturbance in backcountry and front country areas, and additional pressures to adjacent public lands and biological resources on those lands.

We continue to believe that the cumulative and growth-inducing impacts of the Airport Master Plan need to be revisited and updated. Recent changes in the habitat capability of sage grouse and resulting population declines have occurred throughout the range of the sage grouse, necessitating listing of one population, and increasing concern on the part of biologists and land managers for the remaining

populations. Additional information regarding the genetic isolation of the Long Valley population has also come to light within the last year. The analysis conducted in the Airport Master Plan EIR is out of date should be updated. We believe that a thorough analysis of the developments proposed for the Long Valley area, and their impacts to sage grouse, should be conducted. Direct, indirect, growth-inducing and cumulative impacts should be addressed. The analysis should include a long-term population survey and impact analysis of the Long Valley population as a whole, as well as impacts to individual leks. The analysis should include impacts at full build-out and maximum operational level of the airport. A comprehensive mitigation plan for these impacts should be prepared. This analysis and mitigation plan should include lands owned, managed, or administered by the Town, Mono County, USFS, BLM, DWP and private lands. Potential mitigation measures could include relocation of the county landfill, to reduce raven predation on sage grouse eggs and chicks, closing roads into sage grouse habitat, or purchase of grazing leases.

We believe the Cumulative Effects analysis should reflect that the proposed Rimrock Ranch Subdivision in Mono County, and the proposed Pacifica Development in Inyo County will, as proposed, have significant negative impacts on the Round Valley Deer Herd. Even projects which have a less than significant impact when analyzed alone, such as the Sierra Business Park, can have significant impacts when viewed as part of the bigger picture. Although the proposed deer mitigation site and the fence design should minimize impacts to the Round Valley and Casa Diablo deer herds, we continue to believe that increased noise, lights, human presence, and growth-inducing impacts of the proposed project will have cumulative impacts on mule deer when viewed as part of an overall trend along the migration route of these herds. The FEA and FONSI do not address this impact. This conclusion is supported by statements made in the biological report prepared for this project by Jones and Stokes Associates.

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project in this area are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity, where appropriate.

a) Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitats elsewhere should be required.

b) The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus these communities should be fully avoided and otherwise protected from project-related impacts.

4. If the project has the potential to adversely affect species of plants or animals listed under the California Endangered Species Act, either during construction or over the life of the project, a permit must be obtained under Section 2081 of the Fish and Game Code. Such permits are issued to conserve, protect, enhance and restore state-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a 2081 permit. If the project has the potential to impact species of plants or animals listed as threatened or endangered by the USFWS, a consultation under Section 7 of the Endangered Species Act will be required. A list of federal and state listed species found within the project area is found in Tables 1 and 2 of the Owens Basin Wetland and Aquatic Species Recovery Plan. In addition, recent legislation requires that all 2081 permits issued by the Department comply with CEQA.

5. Section 1603 of the Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the Department before beginning the project. Similarly, under section 1601 of the Fish and Game Code, before any State or local governmental agency or public utility begins a construction project that will: 1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the Department of the proposed project.

Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. If you are not certain that your proposed project will require a Lake or Streambed Alteration Agreement, the Department recommends that you submit a complete notification package.

Based on the notification materials you submit to the Department and, if necessary, an investigation of the project site by the Department, the Department will determine if your proposed project may impact fish or wildlife resources. *If the Department determines that your proposed project may substantially adversely affect existing fish or wildlife resources, you will need to obtain a Lake or Streambed Alteration Agreement from the Department and your proposed project, unless it is otherwise exempt, will have to be reviewed in accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) before you may begin any work.*

a) The EIR should contain a discussion of potential adverse impacts from any

Mr. William T. Taylor
Mammoth Yosemite Airport Expansion Project
May 11, 2001

increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts.

Thank you for the opportunity to comment on the proposed project. Questions regarding this letter and further coordination on these issues should be directed to Ms. Denyse Racine, Environmental Specialist III, at (760) 872-1158.

Sincerely,



Steve Parmenter,
Acting Habitat Conservation Supervisor

Attachment

cc: Mr. Brian Grattidge, State Clearinghouse
Mr. George Walker, USFWS
Mr. Steve Addington, BLM
Ms. Kathleen Morse, USFS
Mr. Jeff Bailey, USFS
Ms. Janill Richards, DAG, Environment Section, DOJ
Ms. Katy Walton, Caltrans
Mr. Jim Lerner, ARB



United States
Department of
Agriculture

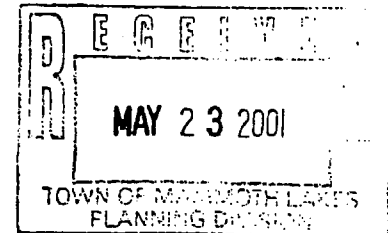
Forest
Service

Inyo National Forest

Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 1950

Date: May 18, 2001



William T. Taylor, Senior Planner
Town of Mammoth Lakes
Community Development Department
P.O. Box 1609
Mammoth Lakes, CA. 93546

Dear Mr. Taylor:

Enclosed are our comments on the Notice of Preparation for the Mammoth Yosemite Airport Expansion Project. An analysis of the proposed uses on National Forest land will be prepared after the EIR and CEQA process, with a separate decision issued by our agency for all improvements planned on federal property. This decision document will be completed prior to issuing a Special Use Permit for the proposed uses and will tier to any relevant information already compiled by the FAA and the Town. Thus, the actions proposed to occur on National Forest land should be adequately analyzed in the EIR to enable our agency to disclose any potential environmental effects in our decision documentation.

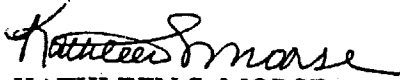
- The Subsequent Environmental Impact Report (EIR) should address any environmental effects associated with the widening of the runway from 100 feet to 150 feet on the south side of the runway.
- The placement of security fencing to meet FAA standards may affect visual quality objectives on National Forest lands. This should be disclosed in the Report and mitigated where possible.
- The Biological Evaluation (BE) for the expansion project should include any possible effects to sage grouse, mule deer or other local wildlife species with the goal of incorporating any existing information into the NEPA process. The formal consultation process with the U.S. Fish and Wildlife Service should be completed and documented as part of the EIR, including agency concurrence that the project may proceed.
- Off-site mitigation for wildlife enhancement purposes is tentatively planned for National Forest land in the vicinity of the gravel pit. Planting of vegetation for mule deer habitat, fencing and maintenance of this site are improvements that should be analyzed in the EIR for potential environmental effects. A revegetation plan for the gravel pit site was provided to other agency representatives by our Forest Botanist on February 21, 2001. This information should be incorporated into the mitigation requirements.



If have questions or need further information regarding our environmental documentation process, please contact Rick Murray, Lands Assistant, at the Lee Vining office at 647-3013.

Thank you for the opportunity to provide these additional comments.

Sincerely,

A handwritten signature in cursive script, reading "Kathleen S. Morse".

KATHLEEN S. MORSE
District Ranger

Cc: R.Murray, D51



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

May 21, 2001

Bill Taylor, Senior Planner
Town of Mammoth Lakes
Community Development Department
P.O. Box 1609
Mammoth Lakes, California 93546

Subject: Notice of Preparation of an Environmental Impact Report for the Mammoth Yosemite Airport Expansion Project, Mammoth Lakes, California (SCH#2000034005)

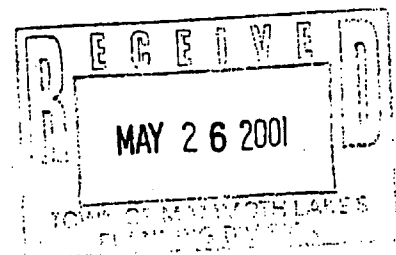
Dear Mr. Taylor:

The U.S. Fish and Wildlife Service (Service) has reviewed the notice of preparation of an environmental impact report (EIR) for the proposed expansion of the existing facilities located at the Mammoth Yosemite Airport. The project would consist of strengthening, widening from 100 to 150 feet, and extending by 1,200 feet the runways to accommodate up to B-757-200 aircraft. Additional actions include improvements to taxiways, adding an air-carrier apron for three air-carrier aircraft, developing passenger-terminal building facilities, and improving the airport access roads. The current proposal modifies an earlier airport expansion plan approved by the Town of Mammoth Lakes. Additional changes from the previously approved project are a widening of the runway and revision in the aviation demand forecast to decrease the total number of flight operations and increase the number of passenger enplanements.

We offer the following information and recommendations to aid you in planning for the conservation of sensitive wildlife habitats and federally listed species that could occur on the preferred or alternative sites and as a means to assist you in complying with pertinent federal statutes. The following comments are prepared in accordance with the Endangered Species Act of 1973, as amended (Act), and other authorities mandating Department of the Interior concern for environmental values.

The following issues should be thoroughly addressed in the draft EIR:

1. A complete discussion of the purpose and need for the project.



Bill Taylor, Senior Planner

2

2. A description of the proposed project, including all feasible alternatives and the no action alternative. This alternatives analysis is important to the Service's evaluation of the project as feasible alternatives often reduce effects to biological resources.
3. Specific acreages and detailed descriptions of the amount and types of habitat that may be affected by the proposed project or project alternatives. Of particular concern will be the acreage of wetland and riparian habitats to be affected. This number should be verified by the U.S. Army Corps of Engineers or U.S. Environmental Protection Agency. Maps and tables should be included to assist in evaluation of project-related effects.
4. Quantitative and qualitative information concerning fish and wildlife resources associated with each habitat type.
5. A list of federal candidate, proposed or listed threatened and endangered species, state listed species, and locally declining or sensitive species that are found at or near the project site. A detailed discussion of these species, focusing on their site-related distribution and abundance and the anticipated effects of the project on these species, should be included.

Three federally listed species are known to occur in the vicinity of the project, the federally threatened bald eagle (*Haliaeetus leucocephalus*), and the endangered Sierra Nevada bighorn sheep (*Ovis canadensis californiana*) and Owens tui chub (*Gila bicolor snyderi*) and its designated critical habitat.

We anticipate that the Federal Aviation Administration (FAA) will be required to consult with the Service, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act), regarding its proposed funding of the airport expansion. The information contained in your environmental impact report will be useful in completing our consultation with the FAA.

Only listed species are protected by the Act. However, we recommend that you consider sensitive species in your planning; this course of action can help reduce the need to list additional species as endangered or threatened. We also recommend that you review information in the California Department of Fish and Game's (CDFG) Natural Diversity Data Base and that you contact the CDFG at (916) 324-3812 for information on any species of concern that may occur in this area.

6. An assessment of the effects on biological resources, including those which are direct, indirect, and cumulative need to be reviewed. Increased visitor use may affect the Sierra Nevada bighorn sheep. Spills of hazardous materials may percolate through the soil and eventually enter the waters of Hot Creek and pose a risk to the Owens tui chub and its critical habitat. The effect of increased visitor use on water quality and quantity in relation to the habitat of listed species should also be analyzed. All aspects of the project should be included in this assessment.

Bill Taylor, Senior Planner

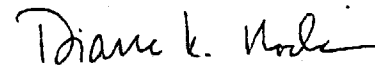
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7. An analysis of the effects of the project on the hydrology of associated drainages, and any other riparian or wetland communities within the sphere of influence of the project. The effects of alteration of natural flows within the affected creeks and rivers should be thoroughly examined. The draft EIR should thoroughly analyze the potential effects of all alternatives on Hot Creek.

8. Specific plans to offset project-related effects, including cumulative habitat loss, degradation, and modification resulting from the direct, indirect, and cumulative consequences of the action. If necessary, adverse project-related effects should be mitigated on-site through re-creation or revegetation of affected habitat types. The objective of the mitigation plan should be to offset qualitative and quantitative project-induced loss of wildlife habitat values. Avoidance of adverse effects through modification of the project is often the most effective means of conserving wildlife.

If you have any questions regarding this letter, please contact Tim Thomas of my staff at (760) 255-8890.

Sincerely,

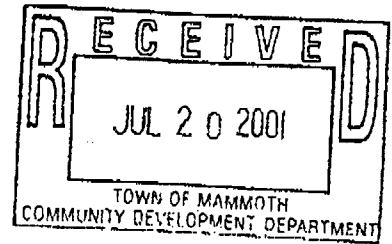


Diane K. Noda
Field Supervisor



United States Department of the Interior

NATIONAL PARK SERVICE
Devils Postpile National Monument
P.O. 3999
Mammoth Lakes, California 93546
(760-934-2289)



May 24, 2001

Federal Aviation Administration
831 Mitten Road
Room 210
Burlingame CA 94010

Attention: Elisha Novak

Subject: Comments on Mammoth Yosemite Airport Expansion Project and Flight Paths

Dear Elisha,

Thank you for our phone conversation of May 24, 2001 and for reviewing these comments concerning possible impacts to Devils Postpile National Monument. The National Park Service appreciates your verbal acknowledgement of the concerns expressed today about possible impacts of flight paths over the Sierra Nevada impacting natural soundscapes, the quality of the visitor experience and safety, and the possible effects of vibrations on the Devils Postpile formation.

The National Park Service responded to the EIS on the Mammoth Yosemite Airport Expansion Project last November, requesting co-operating agency status with the FAA. Thank you for acknowledging the appropriateness of this request in our phone conversation today. Thus far, we have received no written reply from the FAA to the NPS comments, and request a letter confirming our cooperative working relationship.

Devils Postpile National Monument is one of the major visitor destinations for summer visitors of the Mammoth area. While at the monument, visitors enjoy the natural sounds of the San Joaquin River, the wind in the trees, the calls of birds, the occasional coyote howl, and a mixture of natural quiet and sound. Thank you Mr. Novak for letting me know that the FAA is working with these issues of natural soundscape in other NPS areas, and updating Devils Postpile National Monument on any regulations that are applicable.

The majority of the Monument is in the Ansel Adams Wilderness. The National Park Service highly values and is entrusted to protect the natural soundscape and the quality of the visitors' experience. It is very important to preserve this quality visitor experience and natural soundscape. The National Park Service is concerned about possible impacts of noise vibrations on the geologic formation of the Devils Postpile that would possibly compromise this geologic wonder and/or affect visitor safety. Additionally, low flying aircraft over the Monument may

negatively impact some park wildlife by interfering with communication between members of a species during critical phases or crucial times of breeding, nesting, and/or rearing of the young. Since the proposed enlargement of the airport has the likelihood of increasing flights over the Monument, and the Ansel Adams Wilderness including Devils Postpile National Monument and Yosemite National Park, this is an impact that needs to be identified and analyzed in the compliance package for this project. I would appreciate the opportunity to assist your team in this task. In the planning and determination of flight paths over the Sierra Nevada that would impact the Devils Postpile National Monument, the National Park Service wants cooperating agency status.

Several statutes and legal precedents confirm this role including:

National Park Service Organic Act. NPS is charged with ensuring the preservation and long-term protection of all park resources, including ecological relationships and natural ecosystems of all species. National park protection statutes reach beyond park boundaries to restrict external threats to park values and resources. There is substantial legal precedent for the National Park Service to act in defense of park resources threatened by activities conducted outside of park boundaries. Case law affirms that the National Park Service Organic Act, as amended, 16 U.S.C. § 1 et seq., and various park enabling statutes, authorize the NPS to affirmatively prevent impairment of park resources from external threats. The threat of potential impacts from unnatural sounds on park values and resources must be evaluated within the context of the NPS mandate to affirmatively prevent park resource degradation.

In 1916, Congress created the National Park Service to manage the park's irreplaceable natural resources in accordance with a single, fundamental purpose -- to provide for the enjoyment of the national parks, monuments and reservations unimpaired for future generations. 16 U.S.C. § 1. The Organic Act's mandate was later reaffirmed and expanded by Congress under the Redwood Amendments of 1978:

The authorization of activities shall be construed and the protection, management, and administration of these [park] areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these areas have been established, except as may have been or shall be directly and specifically provided by Congress.

16 U.S.C. § 1a-1. Applicable judicial precedent incontestably hold that the Organic Act's charge to protect the national parks, together with the park enabling statutes, provide the legal basis for protection from externally-generated threats to basic park resources and values. In *Sierra Club v. Department of the Interior*, 398 F. Supp. 284 (N. D. Cal. 1975), the court held that a failure to take action to protect Redwood National Park resources from damage caused by activities conducted on lands adjacent to the park violated the duties imposed on the Park Service under the Organic Act and Redwood National Park's enabling statute. Later, another court affirmed that the NPS "has an absolute duty, which is not to be compromised, to fulfill the mandate of the 1916 Act to take whatever actions and seek whatever relief as will safeguard the units of the National Park System." *Sierra Club v. Andrus*, 487 F. Supp. 443 (D.D.C. 1980).

Accordingly, an appropriate assessment of impacts on the resources of Devils Postpile National Monument must be evaluated under a standard of significance reflective of the NPS mandate to prevent park resource degradation, including the long-term and possibly subtle ecological effects of unnatural sounds on the resources within Devils Postpile National Monument.

FAA is subject to an affirmative duty to protect the resources of Devils Postpile National Monument. FAA is subject to additional legal requirements of the National Environmental Policy Act, 42 U.S.C. § 4371 et seq. ("NEPA"), the implementing regulations of the Council on Environmental Quality, 40 C.F.R. § 1500.1 et seq., FAA Order 5050.4A, and the Airport and Airways Improvement Act, § 509(a)(5) which mandate a broad analysis of potential impacts on the resources of National Park Service areas.

NEPA. NEPA calls for an analysis of all environmental consequences of a proposed action, including a full evaluation of both direct and indirect effects on the environment. Impacts on natural systems, specifically ecosystems, are expressly defined as "effects" under NEPA. 40 C.F.R. § 1508.8. Whether defined as "marginal impacts" or "indirect impacts," all impacts of a proposed project must be evaluated under applicable standards of significance. And, where these standards are exceeded, NEPA calls for complete discussion of mitigation measures aimed at the elimination or reduction of these impacts. It is inappropriate under NEPA to limit an impacts analysis to whether special status species will be jeopardized.

Section 4(f). FAA and the Department of Transportation are further required to protect park resources under federal transportation laws. The Department of Transportation Act and the Airport and Airways Improvement Act prohibit approval of any federally supported transportation project which requires the "use" of any publicly owned land from a public park or which may have a significant impact on natural resources, unless there is no feasible and prudent alternative and all reasonable steps have been taken to minimize such adverse effect. Specifically, Section 4(f) of the Department of Transportation Act states:

The Secretary of Transportation shall cooperate and consult with the Secretaries of Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities.

(c) The Secretary may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreational area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, area, refuge or site) only if-

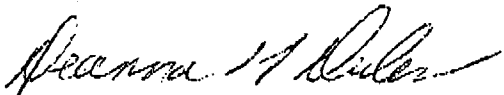
- (1) there is no prudent and feasible alternative to using that land, and
- (2) the program or project includes all possible planning to minimize harm to the park, recreational area, wildlife and waterfowl refuge, or historic site from the use.

49 U.S.C. § 303(c). Similarly, under section 509(b)(5) of the Airport Act, "the FAA shall authorize no project under the Airport Improvement Program involving airport location, a major runway extension, or runway location found to have a significant adverse effect unless the agency shall render a finding in writing, following a full and complete review, that no feasible and prudent alternative to the project exists and that all possible steps have been taken to minimize such adverse effect." FAA Order 5050.4A, ¶ 83.

Other the impacts on a particular park or refuge is considered a "use" under section 4(f), the Federal Ninth Circuit of Appeals has explained that distance is not a key factor. Alder v. Lewis, 675 F. 2d 1085 (9th Cir. 1982). The term "use" is to be construed broadly to include off-site areas significantly adversely affected by the project. Id., citing, D.C. Federation v. Volpe, 459 F.2d 1231, 1239 (D.C. Cir. 1975), cert. denied, 405 U.S. 1030 (1972). Thus, where a park's "utility or importance as a site would be impaired," Section 4(f) is triggered. Alder, supra, at 1091-92

Thank you again for your supportive phone conversation today and for your inclusion of the National Park Service in future planning.

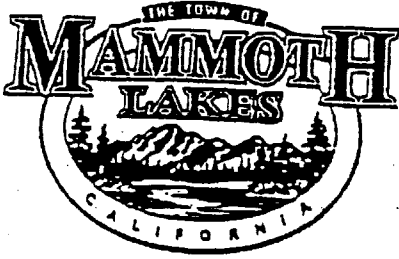
Sincerely,



DEANNA M. DULEN
SUPERINTENDENT

Appendix D – Coordination

Agency	Date	Contact Person
Community Development	May 25, 2000	Michael Vance
Mammoth Lakes Airport	June 28, 2000	Bill Manning
Spill Prevention Control and Countermeasure Plan	August 8, 2000	Bill Manning
United States Dept. of Agriculture, Forest Service	October 4, 2000	Ronald F. Keil
California Historical Resources Information System	May 23, 2000	Victoria Avalos
Turner Propane	May 26, 2000	Jim Miller
Edison	May 22, 2000	Robert A. Castaneda
County of Mono Department of Public Work	June 6, 2000	Evan Nikirk
Long Valley Fire Protection District	May 24, 2000	Fred Stump
Mammoth Lakes Airport	March 8, 2000	Bill Manning
California Regional Water Quality Control Board	December 11, 2000	Hisam A. Baqai
Office of Historic Preservation	December 11, 2000	Daniel Abeyta



COMMUNITY DEVELOPMENT

P. O. Box 1609 Mammoth Lakes, CA 93546

(760) 934-8989 Fax (760) 934-8608

May 25, 2000

Mr. John Pfeifer
Federal Aviation Administration
Manager, San Francisco Airport District Office
831 Mitten Road, Room 210
Burlingame, CA 94010-1303

Re: Land Use Assurance Letter

Dear Mr. Pfeifer:

The Town of Mammoth Lakes makes the following statement of compatible land use assurance as required by Section 511(a)(5) of the Airport and Airway Improvement Act of 1982.

"The Town of Mammoth Lakes provides assurance that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Mammoth Lakes Airport activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. This action includes the consideration of both existing and planned land uses. In addition, we will encourage and support other jurisdictions in the area in their efforts to do the same."

If you have any questions regarding this matter, please contact Bill Taylor at this office at 760 934-8989, x225.

Sincerely,

Michael Vance
Community Development Director

MV/tb

**MAMMOTH LAKES AIRPORT**

Rt. 1 Box 209, Mammoth Lakes, CA 93546
(760) 934-3813, fax (760) 934-3119

Date: June 28, 2000

To: Steven Julian, Town Manager

From: Bill Manning, Director of Transportation

Subject: New Transit Service to Mammoth Lakes Airport

We are very pleased with the progress made on developing scheduled air carrier service to Mammoth Lakes Airport. This service would clearly be a valuable asset to the local area, regional economy, and to our local residents. However, with the addition of scheduled air carrier service, there is a need for improved ground transportation options between the Airport and the primary destination points in Town.

This letter is to notify you that it is our intent to expand the existing bus services between the Town and the resort area to include service to the Airport. In doing so, the reliance on private vehicles, rental cars, and taxicabs by passengers and employees using the Airport would be reduced. This reduced reliance on automobiles by visitors and local residents would reduce traffic congestion on highways and local streets and assist the Airport in managing the terminal curbs and parking once scheduled air service begins.

The transit service would be designed to operate in coordination with the arrival and departure times of scheduled aircraft. We plan to work with the air carriers serving the airport, travel agents, and local business owners to offer ticket sales in conjunction with the purchase of air travel, local accommodations, ski passes, etc. We believe that this coordinated marketing program would assure that the expanded transit service is successful.

It is our goal to begin the service at the same time scheduled air service begins. Please advise my office if there are any actions that we should take with the Town related to the expansion of transit services to the Airport. I can be reached at 934-3813. I look forward to working with you on implementing this valuable service.

ATTACHMENT

SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN

PREDICTION OF POTENTIAL SPILLS

Name of Facility Mammoth Lakes Airport

Nearest Navigable Waters:

- (1) River Name 1: Hot Creek three miles north of Airport
- (2) River Name 2: Convict Creek one mile south of Airport

Possible Spill Sources

The possible sources of spills of oil or other hazardous substances are limited at the Mammoth Lakes Airport. The Fixed Base Operator maintains above ground aviation fuel on the field. There is a possibility of a fuel spill are aviation gasoline and automobile gasoline.

There is also mechanical work done to aircraft on the field which could result in the spillage of a small amount of engine motor oil.

No other use of fuel or other hazardous materials occurs on the airport.

Alert Procedures for Spills

Any personnel at the Mammoth Lakes Airport observing a spill of oil or gasoline will immediately notify the Airport Manager or his designee, who shall put into effect the following coordinated plan working with the State of California, the government of the United States, and local emergency agencies.

1. The United States Coast and the U.S. Environmental Protection Agency will be notified through the National Response Center (in accordance with federal law) if the hazardous material is likely to find its way into a navigable waterway or coastline.

The telephone number of the NRC (Coast Guard) in Washington DC is (800-424-8802). The EPA 24-hour emergency telephone number for oil spills/hazardous waste spills is (916) 262-1621.

2. The California State Emergency Service/Disaster Agency (O.E.S.), telephone number is (916) 464-3271. This agency will be contacted and given the following information:

- a. Time of observation of spill
- b. Location of spill
- c. Identity of material spilled
- d. Probable source of spill
- e. Estimate time of spill
- f. Volume and duration of spill
- g. Present and anticipated movement of spill

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MAMMOTH AIRPORT

PAGE 03

ATTACHMENT

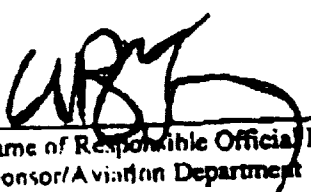
SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN

- h. Weather conditions
 - i. Personnel at the scene
 - j. Action initiated by personnel at scene
3. The appropriate Emergency Response Section/Division of the State Environmental Protection Agency, Lahontan Regional Water Control Board, at telephone number (761) 241-7365, will be contacted with the above information.
4. The local Long Valley Fire Department will be contacted for emergency assistance and provided the information listed in #2 above. Telephone of local response agency ____ (760) 935-4545.
5. The Airport Manager or his designee will immediately initiate responsive action by transmitting the above information to the agencies named above.

Any measure to mitigate the adverse effects of spills will be directed and coordinated by these national, state, and local emergency agencies.

When spills occur which could endanger human life and this becomes a primary concern, the discharge of the life saving protection will be carried out by Long Valley Fire Department and Mono County Paramedics.

In addition to the above, personnel at the Mammoth Lakes Airport who work in proximity to potential spills of hazardous materials and oils at the facility will be periodically trained in the techniques of prevention of spills and will be advised (or provided copies) of this spill prevention control/countermeasure plan.


Name of Responsible Official Representing
Sponsor/Airport Department

1 Aug 01
Date

MAMMOTH AIRPORT

ATTACHMENT

SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLANMammoth Lakes Airport
Mammoth Lakes, California

In order to comply with the Federal Water Pollution Control Act, which is intended to prevent discharges of oil and other flammable liquids into the navigable waterways of the United States, and to contain such discharges if they occur, the Mammoth Lakes Airports has developed the following plan to prevent such spills by establishing procedures, methods, and equipment requirements to achieve that goal.

GENERAL INFORMATION

1. Name and Location of Facility

Mammoth Lakes Airport
Highway 395 North Airport Road
Mammoth Lakes, California 93546

2. Name of Operator

Town of Mammoth Lakes

3. Name of Person in Charge of Facility

Bill Manning
Telephone (760) 934-3813 (daytime)
760 924-3326 (home)

4. Name and Telephone Number of Person for Oil Spill Prevention at facility:

Responsible Person: Bill Kerns
Telephone numbers: work, home (760) 934-3813 (daytime)
(760) 935-4950 (home)



United States
Department of
Agriculture

Forest
Service

Inyo National Forest

Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 1920

Date: October 4, 2000

John L. Pfeifer, P.E. Manager
San Francisco Airports District Office
Federal Aviation Administration
831 Mitten Road
Burlingame, CA. 94010-1303

Dear Mr. Pfeifer:

We have reviewed the Administrative Draft Environmental Assessment for the Mammoth Lakes Airport Expansion project and are providing the following preliminary comments prior to public release of the document. As discussed in the document, the U.S. Forest Service was consulted and provided issues for consideration affecting portions of National Forest System lands.

A new Special Use permit will be issued to the Town of Mammoth Lakes prior to any ground disturbing activities on National Forest land. A separate Decision Memo will be made for actions affecting the Federal lands, per National Environmental Policy Act (NEPA) provisions. All resource findings or other information disclosed in the Environmental Assessment will be tiered to our decision document and incorporated by reference in our final decision.

We found that all preliminary issues have been addressed within the current analysis prepared by Ricondo and Associates, Inc. We have no objection to the release of this document to the general public for comment at this time. We will provide additional information or comments on any new issues affecting National Forest resources identified by the public during this general review process.

Our concerns for removal of vegetation for additional runway cuts for safety areas (RSA) along the south side of the runway appears to have been adequately addressed. A native plant species list will be provided by the U.S. Forest Service for erosion control and replanting of the disturbed areas. Specific recommendations will be provided in the decision document for replanting and successful establishment of the new vegetation. Replacement of the existing 3-strand barbed wire fence with a taller chain link fence on National Forest land appears to be acceptable, based on the visual simulations of the fence provided to our agency for review. A natural tan color, or darker green shade, as proposed should adequately blend in with the foreground zones viewed by the public from U.S. Highway 395.

If a portion of the current runway is removed during the project, or if placement of the fence creates a net loss in available grazing area to the Forest Service permittee, off-site mitigation should be considered to compensate for any loss in forage use. Creation of an additional watering source, if requested, is an example of this mitigation. It is not clear to us yet if there would be a reduction in the amount of available forage created by the expansion of the airport facilities.



Caring for the Land and Serving People

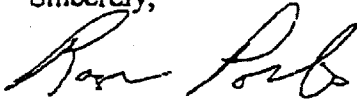
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There are no anticipated impacts to cultural resource values, native plant or animal species or other sensitive resources. The resource surveys conducted and referenced appear to adequately analyze the potential environmental consequences of this proposed action and will be incorporated into the NEPA process.

If you have any additional needs at this time, please feel to contact Rick Murray, Lands Assistant at the Lee Vining Office at (760) 647-3013. We look forward to corresponding with you in the near future following the 30 day public comment period.

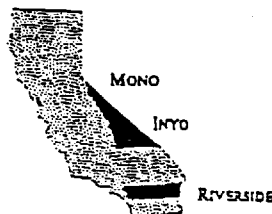
Sincerely,



for RONALD F. KEIL
Acting District Ranger

Cc: Elisha Novak, FFA

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



Eastern Information Center
Department of Anthropology
University of California
Riverside, CA 92521-0418

Phone (909) 787-5745
Fax (909) 787-5409

RECEIVED

MAY - 2 2000 May 23, 2000
RS #2232

LONDO & ASSOCIATES

Xin Wang
Ricondo & Associates
20 North Clark Street, Suite 1250
Chicago, Illinois 60602

Re: Cultural Resources Records Search for Mammoth Lakes Airport Environmental
Assessment

Dear Ms. Wang:

We received your request on May 9, 2000 for a cultural resources records search for the Mammoth Lakes Airport EA, located in Sections 1, 2, and 7, T.4S, R.28E, MDBM, in the town of Mammoth Lakes in Mono County. We have reviewed our site records, maps, and manuscripts against the location map you provided.

Our records indicate that three studies have been conducted on the majority of the project areas as part of larger projects. Two archaeological sites are recorded within the project boundaries.

In addition to the California Historical Resources Information System, the following were reviewed:

The National Register of Historic Places Index (10/20/98): None.

Office of Historic Preservation, Archaeological Determinations of Eligibility
(listed through 3/1/99): None.

Office of Historic Preservation, Directory of Properties in the Historic
Property Data File (dated 2/26/99): None.

A review of (1953) USGS Mt. Morrison 15' topographic map indicated no historic structures/features present. The General Land Office plat maps for Mono County are on file at UC Berkeley.

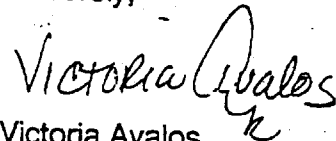
Ms. Wang
May 23, 2000
Page 2

Based on existing information, there is a probability of cultural resources being present on those portions of the project area that have not been surveyed for cultural resources; therefore, further archaeological study is recommended. The property should be surveyed systematically by a qualified archaeologist to identify all cultural remains and provide further recommendations for their study and treatment prior to any grading or construction. Enclosed is a list of archaeological consultants. When an archaeologist has been selected to perform the above-recommended work, please provide him/her with a copy of this letter, the records search may then be completed by this office to the level required by the archaeologist. If this finalization of the search is completed within three months of the initial search, we will not charge the consultant the minimum-per-project fee.

This statement does not constitute a negative declaration of impact. This statement reports only known archaeological materials on or in the vicinity of the property in question. The presence of additional archaeological resources on the property cannot be ruled out until a systematic survey is conducted.

State and federal law requires that if any cultural resources are found during construction, work is to stop and the lead agency and a qualified archaeologist be consulted to determine the importance of the find and its appropriate management.

Sincerely,



Victoria Avalos
Information Officer

Enclosure

TURNER PROPANE

Propane Sales

P.O. Box 87 • Mammoth Lakes, California 93546 • Telephone (760) 934-6811

May 24, 2000

Attention: Mr. Bill Manning
Mammoth Yosemite Airport
Route 1, Box 209
Mammoth Lakes, CA 93546

Re: Propane Supply - Terminal Building

Mr. Bill Manning,

This letter is to inform you of our ability to service and supply all improvements including the terminal building at the Mammoth-Yosemite Airport. We have the expertise and resources to provide a master distribution facility which would serve all gas load requirements from a single stationary facility. We also have a supply network which guarantees that ample supply of product will always be available. We at Turner have the largest bulk storage facility in the area at 150,000 gallons.

We look forward to the completion of this project, and welcome the opportunity to meet with you regarding site location for tanks and load requirements, please do not hesitate to call as we understand your accelerated schedule.

Respectfully,

Jim Miller



May 22, 2000

Mammoth Lakes Airport
Mammoth Lakes, Ca.

Subject: Mammoth Lakes Airport, County of Mono, State of California
To whom it may concern:

I have been requested to advise you that the Southern California Edison Company stands ready to install electrical distribution facilities within the subject area known as Airport Dr. Mammoth Lakes Airport, County of Mono, State of California. Installation to be in accordance with the then applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the California Public Utilities Commission and subject to the receipt of such permits or other authorizations from public agencies as may be required for such installation. Also, rules hereinafter referred to in this letter include such changes, modifications, and amendments which the Public Utilities Commission may from time to time direct in the exercise of its jurisdiction.

All requested and/or necessary installation of Southern California Edison Company electrical distribution facilities will be contingent upon our receiving the necessary easements.

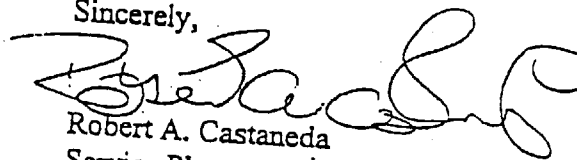
Should a shortage of energy and/or generating capacity ever occur, the utility will apportion its available supply of electricity among its customers as set forth in Rule No.14, Shortage of Supply and Interruption of Delivery.

When requested by the developer, underground and/or overhead facilities within the subdivision, tract or parcel require advances under provisions set forth in Rule No. 15. Requirements for advances from the developer for underground and/or overhead lines to reach the subdivision, tract or parcel are also set forth in Rule No. 15. An underground or overhead service lateral from the installed underground and/or overhead distribution system within the development to individual parcels will be in accordance with Rule No.16.

Should an individual applicant require service to his parcel prior to the installation of an underground and/or overhead distribution system to and within the development, as may be installed at the expense of a developer, or within a development for which the developer has undertaken no obligation for the installation of an underground and/or overhead distribution system, an advance will be required from the individual as set forth in Rule No. 15.

Should you have any questions, please do not hesitate to call me at (760) 934-8236

Sincerely,

A handwritten signature in dark ink, appearing to read 'Robert A. Castaneda', written in a cursive style.

Robert A. Castaneda
Service Planner
Bishop / Mammoth S/C

RICHARD BOARDMAN
Director of Public Works

JOHN K. RECK
Assistant Director of Public Works

EVAN NIKIRK
Assistant Director of Public Works

SUSAN ARELLANO
Administrative Assistant

County of Mono Department of Public Works

Post Office Box 457 • 74 North School Street • Bridgeport, California 93517

TELEPHONE:
(760) 932-5252;
(760) 932-5253

FACSIMILE
(760) 932-7607

June 6, 2000

Mr. Bill Kerns
Mammoth Lakes-Yosemite Airport
Route 1 Box 209
Mammoth Lakes, California 93546

Via Facsimile and 1st Class Mail
(760) 934-3119; No. Pages: 1

Re: *Projected Impact of Expanded Airport Waste Stream*

Dear Mr. Kerns:

Pursuant to your request, the Mono County Department of Public Works has evaluated the potential impact that expansion of services at the Mammoth Lakes-Yosemite Airport may have on the Benton Crossing Landfill. The Public Works Department is responsible for solid waste management in Mono County and for daily operation of the Benton Crossing Landfill, which is the destination for all municipal solid waste generated in the Mammoth Lakes area.

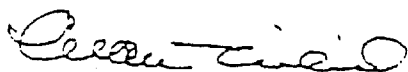
Industry literature indicates that a typical waste generation rate for commercial airplanes is one pound per passenger per trip. Given the projected estimate of four to five planes per day and approximately 250 passengers per airplane, we can assume that an additional 1,250 pounds per day may ultimately be generated by the increased air traffic. Further, depending upon the type of services provided in an expanded terminal, the waste generation rate would at least double, bringing the total waste generation at the facility to an estimated 2,500 pounds per day.

Therefore, the quantity of waste that may potentially be generated at an expanded Mammoth Lakes-Yosemite Airport would not have a significant impact on County landfills. The existing permitted landfill capacity will be able to accommodate such an increase in the waste stream.

Please contact me at 932-5252 should you have any additional comments or questions. Thank you for the opportunity to comment on this issue.

Sincerely,

Mono County Department of Public Works



Evan Nikirk, P.E.
Assistant Director



Long Valley Fire Protection District

Rt. 1, P.O. Box 1145 • Crowley Lake, CA 93546

(760) 935-4545

May 24, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, Ca. 93546

Re: Alternative emergency access to the Mammoth Lakes Airport

Dear Mr. Manning,

This letter is to support your proposal to use the current and only gate location between the runway and Highway 395 as alternative emergency access to the airport. This access will take the place of a secondary access road into the airport until that road is completed. As we discussed the dimensions for the gate as well as fire department lock access will be agreed to by us, and the service road controlled by the gate will be kept open year round. Having an access point in this location will be of benefit even when the secondary road is complete due to its proximity to the runway. If there are questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Fred Stump". The signature is written in a cursive, flowing style.

Fred Stump
Chief

**MAMMOTH LAKES AIRPORT**

Rt. 1 Box 209, Mammoth Lakes, CA 93546
(760) 934-3813, fax (760) 934-3119

March 8, 2000

Mr. John Pfeifer, Manager
Federal Aviation Administration
Airports District Office
831 Mitten Road
Burlingame, CA 94010

Dear Mr. Pfeifer:

This letter is to provide you and your staff an update on the coordination efforts between the Town of Mammoth Lakes, California, and the City of Bishop, California, regarding future airport development plans for the region.

On January 31 a meeting was held in Bishop with representatives of both communities in attendance. Representing the Town of Mammoth Lakes were Mayor John Eastman, Councilman Kathy Coge, Airport Manager Bill Manning, and Community Development Director Mike Vance. Representing the City of Bishop was Councilman Bob Kimble. Inyo County was represented by County Supervisor Julie Baer, County Supervisor Linda Arcularius, County Administrator Rene Méndez, and Public Works Director Jeff Jewett. At this time, the Mammoth Lakes Expansion Project, as currently conceptualized, was presented to Bishop and Inyo County representatives. The plan, designed to bring commercial air service to the Eastern Sierra region, was well received by representatives of the Bishop area.

The Bishop and County representatives presented their thoughts on the possible future of the Bishop Airport. Strategic planning for the future use of Bishop Airport is just beginning and can be described as broadly conceptual in nature. The production of an Airport Master Plan is being contemplated after discussions solidify the future vision for the Airport.

Currently, the City of Bishop desires some type of local commuter service to a major airline hub, at which the local population can take advantage. By the Mammoth Lakes Airport Expansion Project could provide this service, the City of Bishop would, understandably like this service to be as convenient as possible.

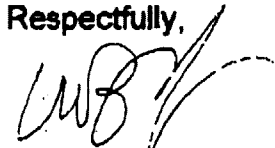
The improvement of Bishop Airport would benefit the entire region. If the Bishop Airport were improved to Federal Air Regulation (FAR) Part 139 standards, the airport could be

available for use as an alternate airport should Mammoth Lakes Airport be impacted by adverse weather conditions.

In conclusion, the airport development programs of Mammoth Lakes and Bishop agree to be complimentary in nature rather than competitive. Each jurisdiction is planning in areas that meet both the needs of their respective communities and the region as a whole.

Thank you for your time and attention in this matter. Should you have any questions or comments, please contact me at (760) 934-3813.

Respectfully,

A handwritten signature in dark ink, appearing to read 'WBM', with a stylized flourish extending from the end.

William B. Manning
Airport Manager



California Regional Water Quality Control Board

Lahontan Region



Winston H. Hickox
Secretary for
Environmental
Protection

Victorville Office
Internet Address: <http://www.swrcb.ca.gov/rwqcb6>
15428 Civic Drive, Suite 100, Victorville, California 92392
Phone (760) 241-6583 • FAX (760) 241-7308

Gray Davis
Governor

December 11, 2000

FILE No.: 6B26S003680

William Manning
Airport Manager
Mammoth Yosemite Airport
Rt. 1, Box 209
Mammoth Lakes, CA 93546

PROPOSED MAMMOTH YOSEMITE AIRPORT EXPANSION, MONO COUNTY

This letter is in response to Regional Water Quality Control Board staff (Regional Board staff) telephone conversation on Wednesday, December 6, 2000, with Mr. Reinard Brandley, consulting airport engineer. Mr. Brandley requested a "Water Quality Assurance Letter" which is required by Federal Aviation Administration (FAA) under Section 509(7)(A) of the Airport Airway Improvement Act. Information provided by the Town of Mammoth Lakes, Reinard Brandley, the Environmental Impact Report dated 1997, and the draft Environmental Assessment dated 2000, are sufficient for Regional Board staff to comply with Mr. Brandley's request.

Pursuant to Section 509(7)(A) of the Airport Airway Improvement Act, and based on the information provided to us by the Town and proponents, we certify there is reasonable assurance that the proposed Mammoth Yosemite Airport Expansion project will be located, designed, constructed, and operated so as to comply with water quality control standards as required by the Lahontan Regional Water Quality Control Board.

As we advised you, you must apply to this office for any proposed discharges of waste or wetlands disturbance.

If you have any questions, please contact Douglas E. Feay at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,

Hisam A. Baqai, P.E.
Supervising Engineer

cc: Mailing List

DF/rc/Final/MnthairWQ.doc

California Environmental Protection Agency



Recycled Paper

MAILING LIST

Reinard W. Brandley
Consulting Airport Engineer
6125 King Road, Suite 200
Loomis, CA 95650

Tom Cornell
Ricondo Associates
221 Main Street, Suite 1460
San Francisco, CA 94105

STATE OF CALIFORNIA - THE RESOURCES AGENCY

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION

P.O. BOX 942888
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-0824
calshpo@ohp.parks.ca.gov

GRAY DAVIS, Governor



December 11, 2000

REPLY TO: FAA000210A

Joseph R. Rodriguez, Supervisor, Planning and Programming Section
Federal Aviation Administration
San Francisco Airports District Office
831 Mitten Road
Burlingame, CA 94010-1303

Subject: Mammoth Yosemite Airport Improvement Project, Mammoth Lakes,
Mono County, California

Dear Mr. Rodriguez:

Thank you for consulting me concerning the undertaking cited above pursuant to 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. I understand that the project includes an extension of runway 9-27 1,200 feet to the west, widening the runway to 150 feet, extension of a taxiway of equal length and width of 50 feet, construction of a passenger terminal and other support facilities capable of supporting air carrier and charter operations. Your letter of November 16, 2000 transmitted a copy of a cultural resources report prepared by Jones & Stokes entitled "Mammoth Lakes Airport Improvement Project, Mono County, California" (July 2000) and requested my concurrence with the Federal Aviation Administration's (FAA) determination that no historic properties will be affected by implementation of the proposed project.

Review of the supporting documentation indicates that reasonable measures were taken to identify historic properties within the undertaking's area of potential effects (APE). These efforts to identify historic properties conform to applicable standards and the documentation provided is consistent with the requirements of § 800.11(d) for a finding of "no historic properties affected." Therefore, pursuant to § 800.4(d)(1), because I do not object to this adequately documented finding, your responsibilities under Section 106 are now fulfilled.

Your consideration of historic properties in the project planning process is appreciated. If you have any questions please contact staff Charles Whatford of my staff at (916) 653-2716 or cwhat@ohp.parks.ca.gov

Sincerely,

Daniel Abeyta, Deputy
State Historic Preservation Officer

RECEIVED
DEC 13 2000

FORM 99 (7-90)

TRANSMITTAL

of pages 1

Cornell	From E. Novak
Garcia & Assoc.	Phone #
547-1940	Fax #

317-7366

5009-101

GENERAL SERVICES ADMINISTRATION

Appendix E – Airfield Requirements Analysis

E.1 Airfield Requirements and Runway Length Analysis

The airport development alternatives are based on the design aircraft that is expected to operate at the Airport and the origin and destination (O&D) markets to be served. The alternative airfield designs for Mammoth Yosemite Airport were evaluated using airport design criteria set forth in FAA Advisory Circular (AC) 150/5300-13, *Airport Design*. The runway length required to support the O&D markets was assessed by analyzing the aircraft performance capabilities for several of the typical aircraft anticipated to operate at Mammoth Yosemite Airport.

E.2 Existing Airfield Conditions

The existing airfield geometry is depicted in **Exhibit E-1**. Mammoth Yosemite Airport is classified by FAA standards as an Airport Reference Code (ARC) C-III airport. The C designator of the ARC specifies the Aircraft Approach Category (AAC) that the Airport can accommodate. AAC C is designated for aircraft with approach speeds ranging from 121 knots to 140 knots. The ARC III designation specifies that the Airport can accommodate of Aircraft Design Group (ADG) III, aircraft with a wingspan up to 118 feet. The ARC indicates general capability of an airport to accommodate a specific size and performance of an aircraft. Airfield component separation standards are based on the ADG to be served. **Table E-1** summarizes the critical design dimensions for the existing airfield facilities.

The existing runway is designated as Runway 9-27 and has dimensions of 7000 feet by 100 feet. Additionally there is a 3,400-foot paved overrun extending west from the runway. Runway 9-27 is served by a full-length parallel taxiway located to the north.

Local and itinerant general aviation facilities are located north of the runway/taxiway complex. The airfield is served by a Common Traffic Advisory Frequency (CTAF) used for aircraft separation. A Global Positioning System (GPS) approach to Runway 27 is available with provisions for arriving aircraft to circle to land Runway 9.

E.3 Airfield Requirements

Based on the Airport elevation, type of passenger service anticipated, and current airline scheduling plans, the design aircraft selected for Mammoth Yosemite Airport is the Boeing 757-200. This is consistent with the March 1997 *Subsequent Environmental Impact Report and Updated Environmental Assessment, Mammoth Lakes Airport Expansion*. The FAA designates the Boeing 757-200 as an ARC C-IV aircraft. ADG IV specifies that the Airport can accommodate aircraft with a wingspan up to 170 feet. The wingspan of the B-757-200 is approximately 125 feet. Therefore, the existing airfield at Mammoth Yosemite Airport does not currently meet all of the FAA airfield design parameters for the operation of a B-757 aircraft as the ADG III designation specifies the ability to accommodate aircraft with wingspans up to, but no more than, 118 feet.

An initial review was conducted to determine the feasibility of designing the airfield to C-IV standards. It was determined that extensive modifications would be required to the airfield, landside and/or off-airport roadways for this to be accomplished.

Table E-1

Existing Airfield Conditions

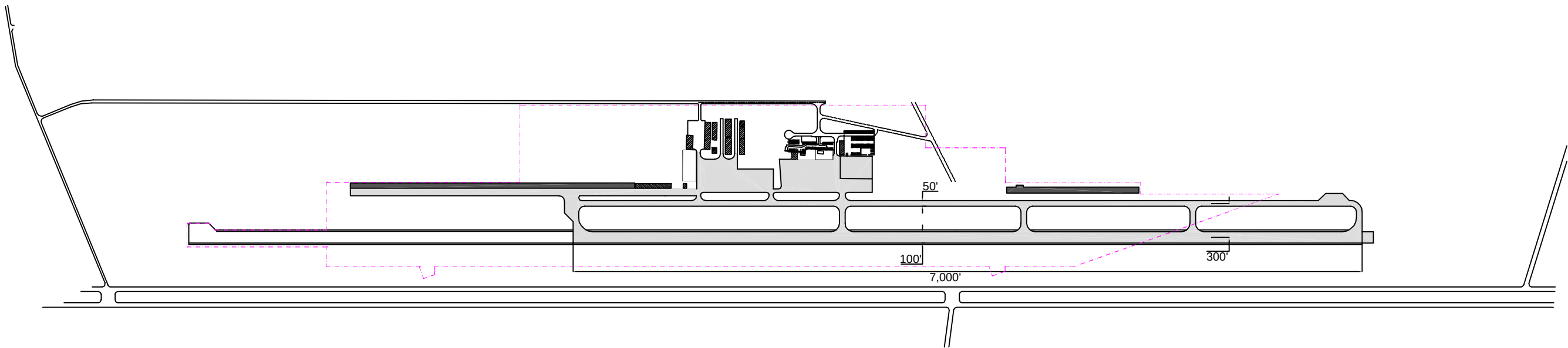
Airfield Component	Existing Conditions
Runway Length	7,000 feet
Runway Width	100 feet
Runway Shoulder Width	15 feet
Runway Blast Pad Width	100 feet
Runway Blast Pad Length	100 feet
Runway Safety Area (length beyond runway end)	500/1,000 feet
Runway Safety Area Width	500 feet
Obstacle Free Zone Width	400 feet
Runway Object Free Area Width	800 feet
Runway Object Free Area Length (beyond runway end)	500/1,000 feet
Runway Pavement Strength – Kips	120 D, 180 DT
Clearway width	500 feet
Clearway length (beyond runway end)	500/1,000 feet
Stopway width	100 feet
Stopway length (beyond runway end)	100/3,000 feet
Taxiway Width	50 feet
Taxiway Edge Safety Margin	15 feet
Taxiway Shoulder Width	0
Taxiway Safety Area Width	125 feet
Taxiway Object Free Area Width	181 feet
Taxiway Wingtip Clearance	32 feet
Runway Centerline to Taxiway Centerline	300 feet
Taxiway Centerline to Fixed or Movable Object	90.5 feet
Taxiway Edge Markings	None

Sources: Airport Layout Plan, 1988, Airport records, field observations, Advisory Circular 150/5300-13; *Airport Design*, and 14 CFR Part 139 1998 edition

Prepared by: Ricondo & Associates, Inc. and Reinard W. Brandley, Consulting Airport Engineer, November 1999

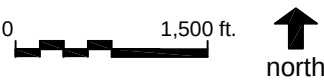
Based on a review of FAA AC 150/5300-13, *Airport Design* and discussions with Airport staff, FAA staff, and other Airport stakeholders, an alternative was developed that would design the airfield components to B-757 specific standards.

This reduces many of the airfield separation requirements based on the 170-foot maximum wingspan of an ADG IV aircraft by specifically designing the airfield to accommodate aircraft with a wingspan up to the B-757, 125 feet. The aircraft specific design parameters are established in *Airport Design*, Appendix 8, "Runway Design Rationale," and Appendix 9, "Taxiway and Taxilane Design Rationale." The airline stakeholders proposing service to Mammoth Lakes required a runway of dimensions at least 8,000 feet in length and 150 feet in width. The need for a specific runway width is a requirement of FAA design standards found in FAA AC 150/5300-13. Both the B-737 and B-757 are approach category C aircraft. A B-737 is an Airplane Design Group (ADG) III and a B-757 is an ADG IV thereby requiring a runway width of 150 feet. **Table E-2** compares and contrasts the



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit E-1



Existing Airport Development

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existing airfield facilities with design requirements for the B-757. Runway strengthening, widening, and lengthening would be required for the majority of air carrier narrow body jet aircraft fleet such as the B-737, A320, or MD-80.

Table E-2**Summary of Airfield Requirements**

Airfield Component	Existing Conditions	B-757 Specific Requirements
Runway Width	100 feet	150 feet
Runway Shoulder Width	15 feet	25 feet
Runway Blast Pad Width	100 feet	200 feet
Runway Blast Pad Length	100 feet	200 feet
Runway Safety Area (length beyond runway end)	500/1,000 feet	1,000 feet
Runway Safety Area Width	500 feet	500 feet
Obstacle Free Zone Width	400 feet*	400 feet*
Runway Object Free Area Width	800 feet	800 feet
Runway Object Free Area Length (beyond runway end)	500/1,000 feet	1,000 feet
Runway Pavement Strength – Kips	120 D, 180 DT	240 DT
Clearway width	500 feet	500 feet
Clearway length (beyond runway end)	500/1,000 feet	up to 1,000 feet
Stopway width	100 feet	150 feet
Stopway length (beyond runway end)	100/3,000 feet	up to 1,000 feet
Taxiway Width	50 feet	75 feet
Taxiway Edge Safety Margin	15 feet	15 feet
Taxiway Shoulder Width	0	25 feet
Taxiway Safety Area Width	125 feet	125 feet
Taxiway Object Free Area Width	181 feet	195 feet
Taxiway Wingtip Clearance	32 feet	35 feet
Runway Centerline to Taxiway Centerline	300 feet	312.5 feet
Taxiway Centerline to Fixed or Movable Object	90.5 feet	97.5 feet
Taxiway Edge Markings	None	Required

* Fence along highway is located 350 feet south of proposed runway centerline

Sources: Airport Layout Plan, 1988, Airport records, field observations, Advisory Circular 150/5300-13; *Airport Design*, and 14 CFR Part 139 1998 edition

Prepared by: Ricondo & Associates, Inc. and Reinard W. Brandley, Consulting Airport Engineer, November 1999

All of the runway widening would be conducted on the south side of the runway, thereby shifting the runway centerline 25 feet south. The parallel taxiway and several connecting taxiways would also be widened from 50 feet to 75 feet and strengthen to allow use by aircraft of weights up to a B-757 aircraft. The parallel taxiway would be widened 20 feet on the south side and 5 feet on the north side, shifting the taxiway centerline 7.5 feet to the south. This provides a runway to taxiway separation of 317.5 feet and a taxiway centerline to a fixed or movable object (east hangers) of 97.5 feet. The 317.5-foot runway to taxiway separation protects for both the Runway Safety Area and Taxiway Safety Area and provides an additional 5 feet for the airfield drainage system. The air carrier apron area would be designed to accommodate up to three narrow body aircraft for pushback operations or two narrow body aircraft for power out operations.

General aviation hanger facilities have been developed along the east and west ends of the parallel taxiway. The west hangers are setback approximately 140 feet from the widened and relocated parallel taxiway, providing sufficient separation for an aircraft with a wingspan up to 125 feet (the wingspan of a B-757) to taxi unobstructed, as long as other aircraft and objects remain within 42 feet of the front the hangers.

The east hangers would be setback 97.5 feet from the widened and relocated parallel taxiway. This would permit aircraft with a wingspan up to 125 feet to use the taxiway as long as there are no aircraft or other objects located beyond the face of the east hangers. Operational measures would be required to ensure that the taxiway and object free areas are clear during air carrier aircraft operations using this taxiway.

At the completion of the Airport improvements, the Airport would be classified as a C-IV airport with a restriction on the parallel taxiway to only those aircraft with a wingspan of 125 feet or less.

Runway Length Analysis

A runway length analysis was conducted to determine the potential for providing air service to various markets from Mammoth Yosemite Airport. Because of the distinct aviation demand patterns, as well as weather conditions, the analysis was conducted for both the winter ski season and the summer recreation season. The need for additional runway length was determined through the use Boeing 757, Boeing 737, and Embraer 145 aircraft performance and flight planning manuals. Once the Allowable Take Off Gross Weight (ATOGW) was calculated using the aircraft performance data the range of the aircraft was calculated using the aircraft flight planning manuals. Due to the rising terrain in the vicinity of the airport, airport elevation and possible airline specific procedures it was determined that, AC 150/5325-4A - Runway Length Requirements For Airport Design, would not be appropriate for the calculation of required runway length.

Runway Length Analysis Assumptions

A winter takeoff temperature of 49°, based on an estimated 95th percentile hottest temperature in the winter season, was assumed for aircraft performance calculations. Since Mammoth Lakes is not listed in the Boeing Aircraft Corporation's *Airport Temperatures* book, the mean temperature was derived from NOAA data from 1995 to 1998 and adjusted to the 95% reliability temperature using the same standard deviation supplied by Boeing for Bishop, CA. Similarly a summer takeoff temperature of 77° was computed using the same methodology.

Higher temperatures are used in runway length analyses, because transport category aircraft are adversely affected by such conditions. Generally, in hot weather, aircraft departures require a longer takeoff roll than operations in cooler weather. High temperature conditions also affect an aircraft's ability to climb after departure. Airport field elevation also negatively effects aircraft performance because of lower air density effecting an airfoil's lift capability. Mammoth Lake's field elevation of 7,128 feet, combined with warm temperatures, will require much longer take-off rolls and degraded climb performance after departure.

Air routings to and from Mammoth Lakes Airport were computed using either great circle routing or actual airline routing plus 2% for Air Traffic Control handling. Historical headwinds having an 85% probability of not being exceeded were used in fuel burn computations for these routes. The Boeing

Aircraft Corporation also supplied this headwind data. These computed route distances are shown in **Table E-3**.

Table E-3

Route Distances To/From Mammoth Lakes

City	Airport Code	Route distance from Mammoth Lakes (nautical miles)
Sacramento	SAC	160
San Francisco	SFO	170
Las Vegas	LAS	200
Los Angeles	LAX	230
Salt Lake City	SLC	380
Phoenix	PHX	430
Portland	PDX	520
Denver	DEN	670
Dallas/Fort Worth	DFW	1,120
Houston	IAH	1,280
St. Louis	STL	1,370
Chicago	ORD	1,470
Washington D.C.	IAD	1,970
New York	JFK	2,120

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc., December 1999

Average passenger and baggage weight was assumed to be 210 pounds in the summer and 230 pounds in the winter. The higher winter weight represents the additional weight of ski equipment. Full passenger and baggage loads were assumed with no additional cargo.

Runway length calculations assumed that the runway would operate under uncontaminated conditions with less than 0.125 inches of slush, 0.25 inches of wet snow, or 1 inch of dry snow.

Obstacles in the takeoff flight path were taken from the National Ocean Service Obstruction Chart 6841 (2nd Ed., published October 1991) and U.S. Geological Survey 7.5-minute Quadrangle maps. An obstacle off the southeast end of Runway 27, at an elevation of 7,079 feet mean sea level (MSL), was identified from the obstruction chart as a potential aircraft performance-limiting obstacle. For the purposes of aircraft performance calculations, this obstacle will assumed to have been removed and replaced with underground wiring.

Three airframe/powerplant combinations were considered in this analysis: the B-757-200, B-737-800, and EMB-145LR regional jet. These aircraft were considered to be representative of the type of aircraft that would operate at the Airport. The aircraft weight characteristics for these aircraft are shown in **Table E-4**.

Only runway extensions to the west were considered in this analysis since the Airport does not own the land east of the Airport. A conservative planning approach was used in determining the departure capabilities described in this section, and the results should be judged on a comparative basis. Some airline-specific operating procedures, such as the use of clearways and stopways, runway length calculations, airspace obstructions, and obstruction avoidance procedures, may affect the payload carrying capabilities of an aircraft in a specific market.

Table E-4

Aircraft Runway Length Parameters

Aircraft Weight Characteristics (a)	Aircraft Type		
	B-757-200	B-737-800	EMB-145
Maximum certificated takeoff weight (pounds)	240.0	174.2	48.5
Operating empty weight	132.6	95.8	26.7
Landing Fuel	8.3	7.8	3.0
Number of seats	188	156	50
Full payload - winter (230 pounds per passenger)	43.2	35.9	11.5
Full payload - summer (210 pounds per passenger)	39.5	32.8	10.5

(a) All weights are in thousands of pounds.

Source: Ricondo & Associates, Inc. and Flight Engineering, Inc., November 1999
 Prepared by: Ricondo & Associates, Inc., December 1999

5.5 Runway Length Analysis Preliminary Findings

The service ranges of typical aircraft types using the runway extension alternatives are shown in **Table E-5**. Each aircraft type and runway extension alternative calculated the approximate distance in nautical miles that the aircraft could travel, assuming a full load of passengers and baggage.

Actual allowable takeoff gross weights (ATOGW) for each aircraft and runway length alternative are also shown in Table E-5. Actual ATOGWs will vary depending on airline and pilot procedures and airframe/powerplant configurations. Calculated ATOGWs provided by specific airlines and manufacturers may differ from the estimates presented here. The ATOGWs for various types of airframes/powerplant from an airport can be limited by many factors, the two most common factors being the length of the runway and the ability of the aircraft to climb at an acceptable rate after lifting off from the runway.

The useable runway length may be shorter than the actual runway length due to obstacles in the aircraft's departure flight path. Acceptable climb rates are established for all airframe/powerplant combinations during their certification process in order to provide the required margins of safety for departures. The maximum weight at which an aircraft can achieve an acceptable rate of climb is referred to as the climb-limited weight.

In the case of full passenger and cargo loads, the aircraft weight can approach the ATOGW. If, after adding the passenger, cargo, and fuel loads, the overall takeoff weight of the aircraft would be greater than ATOGW, then the weight of the aircraft would have to be reduced. Common strategies of reducing take-off weights are removing passengers and/or cargo (i.e., weight penalties) or by reducing the fuel load (i.e., reduced aircraft range).

Taking into account the potential for weight penalties to serve specific markets from Mammoth Lakes, **Tables E-6, E-7 and E-8**, presents the achievable load factors (percentage of seats filled) for hot weather conditions to various markets for the B-757-200, B-737-800 and Embraer 145 LR, respectively.

Table E-5**Estimated Departure Capabilities Under High Temperature Conditions**

	Aircraft Type					
	B-757-200 (188 seats)		B-737-800 (156 seats)		EMB-145 (50 seats)	
Runway Length	Range	ATOGW	Range	ATOGW	Range	ATOGW
Winter ski season						
7,000 feet (existing)	1,520	209.0	@	134.9	490	43.2
8,000 feet	1,820	214.2	210	143.1	640	44.5
8,200 feet	1,860	214.9	290	144.7	720	44.9
9,000 feet	2,070	218.4	660	149.3	n.a.	n.a.
Summer season						
7,000 feet (existing)	1,010	196.7	@	130.6	100	40.8
8,000 feet	1,350	202.1	80	137.9	390	42.0
8,200 feet	1,400	202.9	150	138.9	480	42.4
9,000 feet	1,640	206.7	430	143.2	n.a.	n.a.

@/ Weight Restricted

ATOGW = Allowable takeoff gross weight in thousands of pounds.

Range refers to nonstop travel distance, in nautical miles, with adequate fuel reserves, assuming a full load of passengers and baggage and no additional cargo (210 pounds per passenger including baggage in the summer, 230 pounds per passenger including baggage and ski equipment in the winter).

Winter ski season runs from the Wednesday prior to Thanksgiving through the first week of April. The summer season is all dates outside of the winter ski season.

Source: Ricondo & Associates, Inc. and Flight Engineering, Inc., November 1999

Prepared by: Ricondo & Associates, Inc., December 1999

The 94% summer load factor for the Boeing 757 was calculated using Payload for Long Range Cruise Charts found in the Boeing 757 Airplane Characteristics for Airport Planning from the Boeing Aircraft Corporation. As shown in Table B-5 the ATOGW of the Boeing 757 under these conditions is 202,900 lbs. The total fuel load derived from the Payload Range chart is approximately 33,000 lbs. Subtracting this fuel load from the ATOGW leaves 169,500 lbs. for the operational empty weight of the aircraft and payload. The operation empty weight of the Boeing 757 is 132,900 as shown in Table E-4. Subtracting this weight from 169,900 allows a total payload of 37,000 lbs. Dividing the payload by the weight of an average summer passenger (210 lbs.) also found in Table E-4 shows that at this ATOGW the aircraft could hold 176 passengers. The seating configuration of the Boeing 757 found in Table E-4 188 seats. Dividing the 176 by the seating capacity of 188 produces a load factor of 94%.

Performance calculations for contaminated runway were also performed. The contaminated conditions of greater than 0.125 inches of slush, 0.25 inches of wet snow, or 1 inch of dry snow would reduce the payload and range capability of air carrier aircraft operating at Mammoth Lakes Airport. The extent of these payload/range reductions was such that it was assumed that air carriers would not operate until the runway was cleared of snow or otherwise runway conditions had improved.

Table E-6

B-757-200 Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	77%	74%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	86%	85%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	88%	85%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	94%	92%
Summer													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	100%	100%	100%	100%	100%	100%	100%	93%	87%	85%	78%	62%	59%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	99%	96%	93%	74%	71%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	99%	96%	94%	76%	72%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	82%	80%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

Table E-7

B-737-800 Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	84%	84%	84%	77%	77%	74%	69%	52%	49%	47%	42%	28%	26%
8,000 feet	100%	100%	100%	98%	98%	95%	88%	74%	69%	66%	63%	48%	45%
8,200 feet	100%	100%	100%	100%	100%	99%	94%	80%	74%	72%	66%	52%	49%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	89%	83%	81%	77%	63%	59%
Summer													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	82%	82%	82%	74%	74%	71%	60%	49%	43%	40%	37%	22%	19%
8,000 feet	100%	100%	100%	94%	91%	91%	85%	68%	62%	59%	56%	40%	37%
8,200 feet	100%	100%	100%	97%	97%	92%	86%	71%	65%	62%	57%	42%	39%
9,000 feet	100%	100%	100%	100%	100%	100%	98%	83%	75%	72%	69%	53%	51%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

Table E-8

EMB 145 LR Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter												
Destination	RNO	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD
Distance (nm)	123	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470
Runway Length												
7,000 feet	100%	100%	100%	100%	100%	99%	97%	88%	66%	58%	54%	49%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	78%	70%	65%	60%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	81%	73%	69%	63%
Summer												
Destination	RNO	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD
Distance (nm)	123	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470
Runway Length												
7,000 feet	100%	100%	99%	98%	89%	86%	84%	74%	50%	41%	36%	30%
8,000 feet	100%	100%	100%	100%	100%	97%	95%	85%	61%	52%	48%	42%
8,200 feet	100%	100%	100%	100%	100%	100%	99%	89%	65%	56%	51%	46%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

FAA Order 8400.9 *National Safety and Operational Criteria for Runway Use Programs* establishes the operational and safety criteria for runway use programs. The Airport will be served by the current GPS approach with air carrier circling minimums. Additionally air carrier specific approach procedures are currently under development. Both these procedures would allow arrival aircraft to land on the runway most aligned into the wind. Air carrier departure procedures are also under development that will also allow departures from both Runway 9 and Runway 27. Tailwind departures are not anticipated allowing the runway to be operated in accordance with FAA Order 8400.9.

Exhibits E-2, E-3 and E-4 show the potential markets that could be served nonstop from the Airport with minimal or no weight penalties, using the 8,200 foot runway with Boeing 757, Boeing 737 and Embraer 145 aircraft, respectively. The range capabilities, both during the winter and summer seasons, are shown. Because it is not known whether airlines would, in fact, serve some of these destinations from Mammoth Lakes, this data regarding potential markets are provided for information purposes only.



Source: Flight Engineering, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit E-2



B757-200 Range Capability With Full Payload, Length 8,200 ft.

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Source: Flight Engineering, Inc.
Prepared By: Ricondo & Associates, Inc.

Exhibit E-3



B737-800 Range Capability With Full Payload, Length 8,200 ft.

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Source: Flight Engineering, Inc.
Prepared By: Ricoondo & Associates, Inc.

Exhibit E-4



EMB-145LR Range Capability With Full Payload, Runway 9, Length 8,200 ft.

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Appendix F - Aircraft Noise Analysis

F.1 General Characteristics of Aircraft Noise

Aircraft noise originates from both the engines and the airframe of an aircraft, but the engines are by far the more significant source of noise. Loudness, measured in decibels (dB), is the most commonly used characteristic to describe noise. The A-weighted decibel (dBA) is used in aircraft noise studies because it employs a frequency-dependent rating scale that more closely associates sounds and sound frequencies with the sensitivity of the human ear. Some common sounds on the dBA scale, relative to ordinary conversation, are listed in **Table F-1**. As shown in the table, the relative perceived loudness of a sound doubles for each increase of 10 dBA, although a 10-dBA change corresponds to a factor of 10 in relative sound energy. Generally, sounds with differences of 2dBA or less are not perceived to be noticeably different by most listeners. A noise event produced by a jet aircraft flyover is usually characterized by a buildup to a peak noise level as the aircraft approaches and then a decrease in the noise level, through a series of lesser peaks or pulses, after the aircraft passes and the noise recedes.

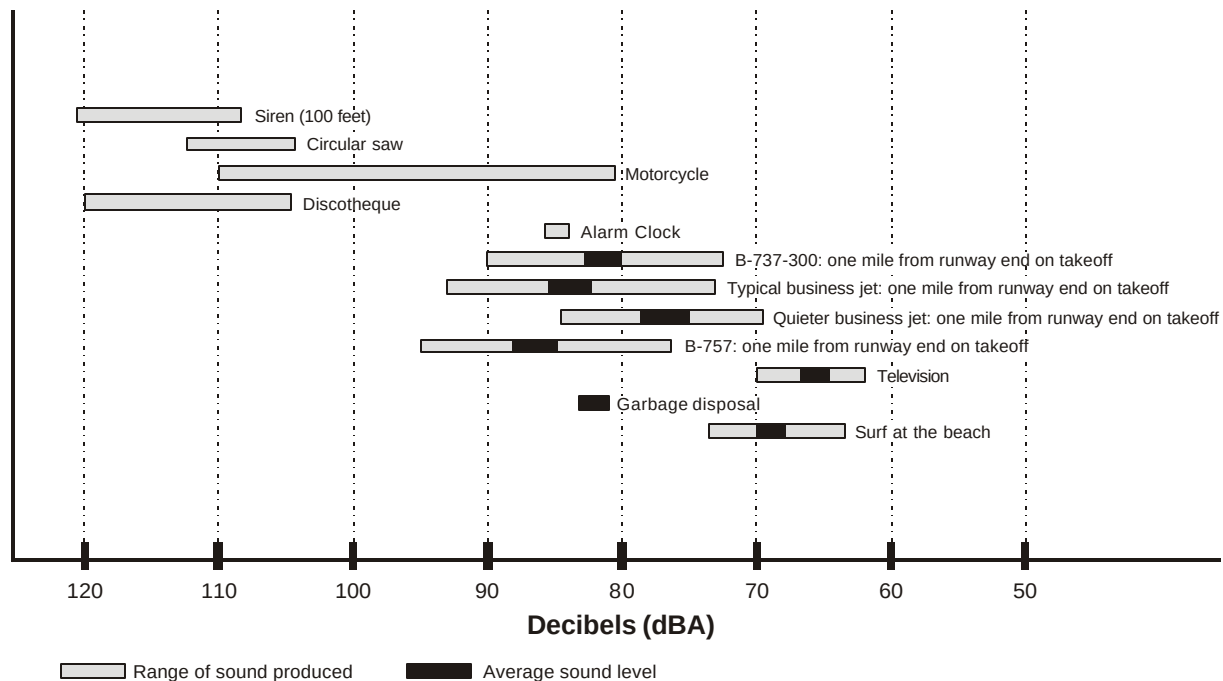
Exhibit F-1 illustrates the range of sound produced by, and the average sound level of, several aircraft types that operate at Mammoth Yosemite Airport compared with other sounds such as sirens, motorcycles, and garbage disposals.

Table F-1

Common Sounds On The A-Weighted Decibel Scale

Sound	Sound level (dBA)	Relative loudness (approximate)	Relative sound energy
Rock music, with amplifier	120	64	1,000,000
Thunder, snowmobile (operator)	110	32	100,000
Boiler shop, power mower	100	16	10,000
Orchestral crescendo at 25 feet, noisy kitchen	90	8	1,000
Busy street	80	4	100
Interior of department store	70	2	10
Ordinary conversation, 3 feet away	60	1	1
Quiet automobiles at low speed	50	$\frac{1}{2}$	.1
Average office	40	$\frac{1}{4}$	.01
City residence	30	$\frac{1}{8}$	.001
Quiet country residence	20	$\frac{1}{16}$	.0001
Rustle of leaves	10	$\frac{1}{32}$	.00001
Threshold of hearing	0	$\frac{1}{64}$	.000001

Source: U.S. Department of Housing and Urban Development, Aircraft Noise Impact—Planning Guidelines for Local Agencies, 1972.
Prepared by: Ricondo & Associates, Inc.

Exhibit F-1**Typical Sound Levels**

Source: Brown-Buntin Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

F.2 Noise Analysis Methodology

The methodology used for this aircraft noise analysis involved (1) the use of noise descriptors developed for airport noise analyses, (2) the application of a computer model that provides estimates of aircraft noise levels, and (3) the development of basic data and assumptions as input to the computer model.

F.3 Noise Descriptors

As a result of extensive research into the characteristics of aircraft noise and human response to that noise, a standard system of descriptors has been developed. These descriptors, as used for the EA for Mammoth-Yosemite Airport, are as follows:

F.3.1 A-Weighted Sound Pressure Level

The A-weighted sound pressure level (dBA) is a frequency-weighted sound level in decibels (dB) that correlates with the way sound is heard by the human ear.

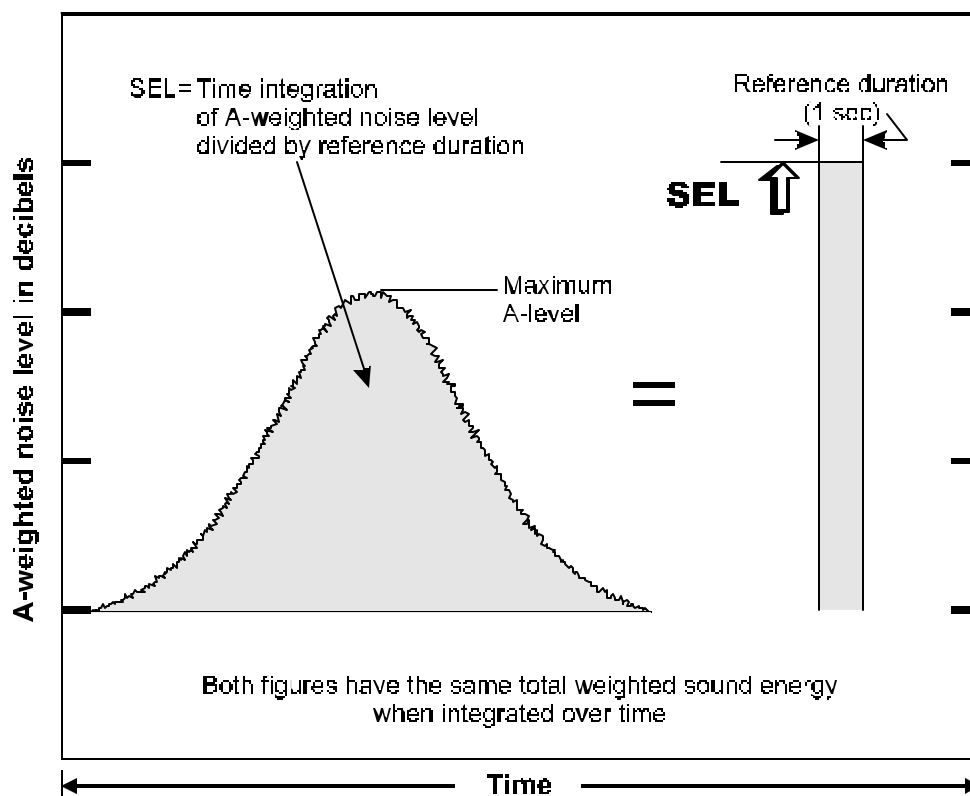
F.3.2 Sound Exposure Level

Sound exposure level (SEL) is a time-integrated measure, expressed in decibels, of the sound energy of a single noise event to a reference duration of one second. The sound level is integrated over the period that the level exceeds a threshold (normally 65 dBA for aircraft noise events). Therefore, SEL accounts for both the maximum sound level and the duration of the sound. SELs for aircraft noise events depend on the location of the aircraft relative to the noise receptor, the type of operation

(landing, takeoff, or overflight), and the type of aircraft. The SEL concept is depicted on **Exhibit F-2**.

Exhibit F-2

Sound Exposure Level Concept



Source: Brown-Buntin Associates, Inc.
 Prepared by: Ricondo & Associates, Inc.

F.3.3 Cumulative Sound Level

As required by the California Airport Noise Regulation (CCR Title 21, Subchapter 6), aircraft noise exposure has been quantified using the Community Noise Equivalent Level (CNEL). CNEL is a method used to describe the existing and predicted cumulative noise exposure from aircraft operations in an airport environ. CNEL values are expressed in dBA and represent the noise level over a 24-hour period. The CNEL values are used to estimate the effects of specific noise levels on land uses.

In the calculation of CNEL, for each hour during the nighttime period (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10-decibel weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. For each hour during the evening (7:00 p.m. to 10:00 p.m.), the sound levels are increased by a 5-decibel weighting penalty. The weighting penalty accounts for the more intrusive nature of noise during the evening and nighttime hours. CNEL is accepted in the State of California as the best method to describe aircraft noise exposure

and is the noise descriptor preferred by Caltrans (State Division of Aeronautics) for use in aircraft noise exposure analyses and land use compatibility planning in the State of California.

CNEL, as used in the EIR process, is expressed as an average noise level on the basis of annual aircraft operations for a calendar year, not on the average noise levels associated with different aircraft operations. To calculate the CNEL at a specific location, the SELs at that location associated with each individual aircraft operation (landing or takeoff) are determined. Using the SEL for each noise event and applying the 10-decibel penalty for nighttime operations and 5-decibel penalty for evening operations as appropriate, a partial CNEL value is then calculated for each aircraft operation. The partial CNEL values for each aircraft operation are added logarithmically to determine the total CNEL.

The logarithmic addition process, whereby the partial CNELs are combined, can be approximated by the following guidelines presented in **Table F-2**.

Table F-2

When two CNELs differ by:	Add the following amount to the higher value:
0 or 1 dBA	3 dBA
2 or 3 dBA	2 dBA
4 to 9 dBA	1 dBA
10 dBA or more	0 dBA

For example:

70 dBA + 70 dBA (difference: 0 dBA) = 73 dBA

60 dBA + 70 dBA (difference: 10 dBA) = 70 dBA

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Adding the noise from a relatively quiet event (60 dBA) to a relatively noisy event (70 dBA) results in a value of 70 dBA because the quieter event has only 1/10 of the sound energy of the noisier event. As a result, the quieter noise event is “drowned out” by the noisier one, and there is no increase in the overall noise level as perceived by the human ear.

CNEL is used to describe existing and predicted noise exposure in communities in an airport environs based in the average daily operations over the year and the average annual operational conditions at the Airport. Therefore, at a specific location near an airport, the noise exposure on a particular day is likely to be higher or lower than the annual average exposure depending on the specific operations at the airport on that day.

F.4 Integrated Noise Model

The Integrated Noise Model (INM) is a computer model developed by the FAA and required for use in developing noise exposure maps. The INM contains aircraft operational and noise data in an aircraft database, which reflect typical aircraft operating conditions.

Version 6.0 of the INM—the latest accepted, state-of-the-art tool for determining the total effect of aircraft noise at and around airports at the time the noise exposure maps were prepared—was used for the noise analysis. The INM Version 6.0 aircraft database contains a representation of

commercial, general aviation, and military aircraft powered by turbojet, turbofan, or propeller-driven engines.

For each aircraft in the database, the following information is provided: (1) a set of departure profiles for each applicable trip length, (2) a set of approach parameters, and (3) SEL versus distance curves for several thrust settings. This information is needed to develop the noise exposure maps based on the CNEL metric.

F.4.1 CNEL and Noise Exposure Ranges

Noise exposure values of CNEL 75, 70, 65, and 60 were used as the criterion levels for the noise analysis. Five specific ranges of noise exposure were estimated: (1) CNEL 75 and higher, (2) CNEL 70 to 75, (3) CNEL 65 to 70, and (4) CNEL 60 to 65. CNEL 75 and higher is considered to be “severe” noise exposure in airport environs and CNEL 65 to 75 is considered to be “significant.” CNEL 55 noise exposure values were also developed for information purposes.

F.4.2 Limitations of the CNEL Descriptor

The validity and accuracy of CNEL calculations depend on the basic information used in the calculations. For future airport activities, the reliability of CNEL calculations is affected by a number of uncertainties:

- Aviation activity levels—the forecast number of aircraft operations, the types of aircraft serving the airport, the times of operation (daytime, evening, and nighttime), and aircraft flight tracks—are estimates. Achievement of the estimated levels of activity cannot be assured.
- Aircraft acoustical and performance characteristics are also estimates. When new aircraft designs are involved, aircraft noise data and flight characteristics must be estimated.
- The noise descriptors used as the basis for calculating CNEL represent typical human response (and reaction) to aircraft noise. Because people vary in their responses to noise and because the physical measure of noise accounts for only a portion of an individual’s reaction to that noise, CNEL can be used only to obtain an average response to aircraft noise that might be expected from a community.
- Single flight tracks used in computer modeling represent a wider band of actual flight tracks.

These uncertainties aside, CNEL mapping was developed as a tool to assist in land use planning around airports. The mapping is best used for comparative purposes rather than for providing absolute values. That is, CNEL calculations provide valid comparisons between different projected conditions, as long as consistent assumptions and basic data are used for all calculations.

Thus, from a standpoint of noise exposure, sets of CNEL calculations can show anticipated changes in aircraft noise exposure over time, as well as which of a series of simulated situations is better and generally how much better, from the standpoint of noise exposure. However, a line drawn on a map does not imply that a particular noise condition exists on one side of that line and not on the other. CNEL calculations are merely a means for comparing noise effects, not for precisely defining them relative to specific parcels of land.

Nevertheless, CNEL contours can be used to (1) highlight an existing or potential aircraft noise problem that requires attention, (2) assist in the preparation of noise compatibility programs, and

(3) provide guidance in the development of land use controls such as zoning ordinances, subdivision regulations, and building codes. CNEL is considered to be the best methodology available for depicting aircraft noise exposure.

F.4.3 Graphic Representation

Contours are lines on a map that connect points of equal CNEL values. For example, a contour may be drawn to connect all points with a CNEL value of 65, another may be drawn to connect all points with a CNEL value of 60, and so forth. Generally, noise contours are plotted at 5-CNEL intervals.

Noise exposure contours were also reviewed for CNEL 70 and 75 and were found to remain within the airfield boundary. Therefore, for this analysis, the INM was used to produce noise exposure contours for CNEL 55, 60, and 65.

F.5 Basic Data and Assumptions for Developing Noise Exposure Maps

The primary data required to develop noise exposure maps using the INM Version 6.0 are:

- The existing and forecast number of aircraft operations by time of day, aircraft type, and stage length (nonstop departure trip length from the Airport)
- Operational information including use of the runways, location and use of flight tracks (the paths that pilots fly to arrive at and depart from the airport), departure profiles, existing noise abatement procedures, etc.

F.5.1 Aircraft Operations

To determine existing and forecast aircraft noise exposure, aircraft operations associated with the average day of the year are used in INM. The number of aircraft operations for the average day of a calendar year is typically used in the development of noise exposure maps. The number of aircraft operations by type of operation, aircraft type, and time of day, for the average day in 1999 is provided in **Table F-3**. The operations for the average day in 1999 were based on interviews with Airport staff and the fixed based operator. The forecasts of operations for the average day in 2003, 2007, and 2017 for the growth of operations with the existing runway, shown in **Table F-4**, were derived from the annual forecasts provided in Table F-1. The forecasts of operations for the average day in 2003, 2007, and 2017 for the growth of operations with the runway alternatives permitting air carrier operations, shown in **Table F-5**, were derived from the annual forecasts provided in Table F-1.

As shown in Table F-2, approximately 16 average daily aircraft operations (approximately eight departures and eight arrivals) occurred at the Airport in 1999. In accordance with the forecasts of operations, approximately 18 average daily operations with the existing runway configuration and 24 average daily operations with the runway expansion alternatives will occur at the Airport in 2003. Approximately 21 average daily operations are anticipated to occur at the Airport with the existing runway configuration and 39 average daily operations with the runway expansion alternatives.

F.5.1.1 Aircraft Fleet Mix

The generalized aircraft categories listed in Tables F-3, F-4, and F-5 provide general descriptions of the aircraft. The INM aircraft types listed in the tables are those from the INM database that were actually used for the analysis. The INM aircraft types provide representative noise characteristics of a large variety of aircraft types that have operated and are anticipated to operate at the Airport.

Table F-3**1999 INM Fleet Mix Assumptions**

Aircraft (a)	Average Day Operations				Annual operations	Percent
	Day	Evening	Night	Total		
Beech 1900	-	-	-	-	-	0.0%
Gulfstream/Challenger	0.164	0.001	-	0.164	60	1.0%
Lear 35	0.736	0.004	-	0.740	270	4.5%
Citation	0.736	0.004	-	0.740	270	4.5%
Twin turboprop	0.701	0.026	0.013	0.740	270	4.5%
Twin prop	2.932	0.108	0.056	3.096	1,130	18.8%
Large single engine prop	5.332	0.099	0.049	5.479	2,000	33.3%
Small single engine prop	5.332	0.099	0.049	5.479	2,000	33.3%
Total	16.009	0.292	0.137	16.438	6,000	100.0%

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates based on interviews with Airport and fixed based operator staff, March 2000

Table F-4**INM Fleet Mix - Base Case Without Air Carrier Operations**

2003

Average Day Operations

Aircraft (a)	Day	Evening	Night	Total	Annual Operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.180	0.001	-	0.181	70
Lear 35	0.810	0.004	-	0.814	300
Citation	0.810	0.004	-	0.814	300
Twin turboprop	0.771	0.028	0.015	0.814	300
Twin prop	3.225	0.119	0.061	3.405	1,240
Large single engine prop	5.865	0.108	0.054	6.027	2,200
Small single engine prop	5.865	0.108	0.054	6.027	2,200
Total	17.524	0.374	0.184	18.082	6,610

2007

Average Day Operations

Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.207	0.001	-	0.208	80
Lear 35	0.932	0.005	-	0.937	340
Citation	0.932	0.005	-	0.937	340
Twin turboprop	0.887	0.033	0.017	0.937	340
Twin prop	3.714	0.137	0.071	3.921	1,430
Large single engine prop	6.753	0.125	0.062	6.941	2,530
Small single engine prop	6.753	0.125	0.062	6.941	2,530
Total	20.179	0.430	0.212	20.822	7,590

2022

Average Day Operations

Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.328	0.002	-	0.330	120
Lear 35	1.478	0.007	-	1.486	540
Citation	1.478	0.007	-	1.486	540
Twin turboprop	1.407	0.052	0.027	1.486	540
Twin prop	5.888	0.218	0.112	6.218	2,270
Large single engine prop	10.707	0.198	0.099	11.005	4,020
Small single engine prop	10.707	0.198	0.099	11.005	4,020
Total	31.995	0.682	0.337	33.014	12,050

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates, Inc., March 2000

Prepared By: Ricondo & Associates, Inc.

Table C-5**INM FLEET MIX - Base Case With Air Carrier Operations**

2002	Average Day Operations				Annual Operations
Aircraft (a)	Day	Evening	Night	Total	
B-757-200	1.644	-	-	1.644	600
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	2.137	-	-	2.137	780
19 seat commuter	1.918	-	-	1.918	700
Gulfstream/Challenger	0.180	0.001	-	0.181	70
Lear 35	0.810	0.004	-	0.814	300
Citation	0.810	0.004	-	0.814	300
Twin turboprop	0.771	0.028	0.015	0.814	300
Twin prop	3.225	0.119	0.061	3.405	1,240
Large single engine prop	5.865	0.108	0.054	6.027	2,200
Small single engine prop	5.865	0.108	0.054	6.027	2,200
Total	23.223	0.374	0.184	23.781	8,690

2007	Average Day Operations				Annual Operations
Aircraft (a)	Day	Evening	Night	Total	
B-757-200	2.356	-	-	2.356	860
B-737-800/A-319	2.137	-	-	2.137	780
BAE-146	0.795	-	-	0.795	290
Regional jet	1.342	-	-	1.342	490
30 seat commuter	5.589	-	-	5.589	2,040
19 seat commuter	5.589	-	-	5.589	2,040
Gulfstream/Challenger	0.207	0.001	-	0.208	80
Lear 35	0.932	0.005	-	0.937	340
Citation	0.932	0.005	-	0.937	340
Twin turboprop	0.887	0.033	0.017	0.937	340
Twin prop	3.714	0.137	0.071	3.921	1,430
Large single engine prop	6.753	0.125	0.062	6.941	2,530
Small single engine prop	6.753	0.125	0.062	6.941	2,530
Total	37.987	0.430	0.212	38.630	14,090

2022	Average Day Operations				Annual Operations
Aircraft (a)	Day	Evening	Night	Total	
B-757-200	4.932	-	-	4.932	1,800
B-737-800/A-319	4.384	-	-	4.384	1,600
BAE-146	2.055	-	-	2.055	750
Regional jet	2.329	-	-	2.329	850
30 seat commuter	9.041	-	-	9.041	3,300
19 seat commuter	9.041	-	-	9.041	3,300
Gulfstream/Challenger	0.328	0.002	-	0.330	120
Lear 35	1.478	0.007	-	1.486	540
Citation	1.478	0.007	-	1.486	540
Twin turboprop	1.407	0.052	0.027	1.486	540
Twin prop	5.888	0.218	0.112	6.218	2,270
Large single engine prop	10.707	0.198	0.099	11.005	4,020
Small single engine prop	10.707	0.198	0.099	11.005	4,020
Total	63.775	0.682	0.337	64.795	23,650

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates, Inc., March 2000

Prepared By: Ricondo & Associates, Inc.

Under some circumstances, it is appropriate to combine aircraft with similar engine types, numbers of engines, weights, performance characteristics, and (most importantly) noise exposure characteristics for the purposes of noise modeling. Examples of such circumstances include the following:

- A particular aircraft type that may not be included in the INM database may be modeled using a similar aircraft type that is included in the database.
- Only a small number of operations of a particular aircraft may occur at an Airport while a large number of operations of a similar aircraft occur at the Airport. The few operations of the first type could be combined with the operations of the more predominant aircraft type without producing a measurable effect on the noise analysis.
- The FAA has provided some aircraft types that are representative of a wide variety of specific aircraft types and can, therefore, be used to represent the wide variety of aircraft types. The best examples of this are corporate and general aviation aircraft that can be modeled using a series of aircraft types that are representative of the overall fleet. For example, the INM aircraft type “GASEPV” is representative of a wide variety of general aviation single engine propeller aircraft.

The FAA has provided a list of pre-approved aircraft substitutions that can be used for noise modeling purposes using the INM. All aircraft substitutions used in this analysis were consistent with the pre-approved list.

Aircraft noise characteristics can be classified according to federal noise level standards specified in FAR Part 36, “Noise Standards, Aircraft Type, and Airworthiness Certification,” as meeting Stage 1 (noisiest), Stage 2 (quieter), or Stage 3 (quietest) standards. As of July 1, 1985, Stage 1 aircraft could no longer be operated in the United States. In accordance with the Airport Noise and Capacity Act of 1990, the FAA established a schedule for phasing out the use of FAR Part 36 Stage 2 aircraft weighing more than 75,000 pounds in favor of FAR Part 36 Stage 3 aircraft within the 48 contiguous states. FAR Part 91, “General Operating and Flight Rules,” specifies that after December 31, 1999, no person may operate an FAR Part 36 Stage 2 aircraft over 75,000 pounds in the contiguous United States.

Airlines and other operators of jet aircraft weighing more than 75,000 pounds were provided the option of (1) replacing Stage 2 aircraft with Stage 3 aircraft or (2) modifying Stage 2 aircraft through re-engineering, hushkitting, or modifying the operational procedures of the aircraft to meet Stage 3 noise standards. Most of the major airlines have used a combination of the two methods and have relied to a certain extent on modifying Stage 2 aircraft to meet Stage 3 noise standards. Given the high altitude of the Airport and performance requirements of air carrier aircraft planned to operate at the Airport, it is anticipated that newer, higher performance Stage 3 aircraft, such as the B-757, would be utilized.

F.5.1.2 Time of Day

Interviews with Airport staff and the fixed based operator at the Airport were used to determine the number of operations occurring during the daytime hours (7:00 a.m. to 7:00 p.m.), evening hours (7:00 p.m. to 10:00 p.m.), and nighttime hours (10:00 p.m. to 7:00 a.m.), which are listed by aircraft type in Tables F-3, F-4, and F-5. As stated in the aeronautical charts and information for the Airport, operations after dark are not recommended at the Airport, and therefore, the number of evening and nighttime operations are relatively small. It was assumed that the split between daytime, evening, and

nighttime operations for each aircraft type would be the same in forecast years as that presented for 1999. It is also assumed that air carrier operations would occur during daytime hours.

F.5.1.3 Departure Trip Length (Stage Length)

Departure trip length, also called stage length (unrelated to “Stage” classifications of aircraft for FAR Part 36 noise certification), refers to the non-stop distance an aircraft travels after departure. This information is needed to determine average gross takeoff weights for the different aircraft types. The noise generated by departures of a specific aircraft type will vary depending on the takeoff weights of the particular operations. For example, a fully loaded aircraft departing on a long flight will weigh more on departure than the same fully loaded aircraft departing on a shorter flight, because the longer flight requires more fuel on board. It usually takes the heavier aircraft longer to reach its take off velocity, thereby using more runway length, and it then climbs at a slower rate than a lighter aircraft, particularly on hot days. Therefore, more land area will be exposed to higher levels of aircraft noise by departures of heavier aircraft than departures of the same aircraft with lighter loads.

In the INM, up to seven different stage length categories have been established representing different departure trip length distances, as presented in **Table F-6**.

Table F-6

INM Departure Stage Length Categories

Stage Length Category	Range of Departure Trip Length (nautical miles)
1	0 – 500
2	500 – 1,000
3	1,000 – 1,500
4	1,500 – 2,500
5	2,500 – 3,500
6	3,500 – 4,500
7	4,500 +

Source: Federal Aviation Administration, *INM User's Guide*
 Prepared by: Ricondo & Associates, Inc.

Interviews with Airport staff, the fixed based operator, and American Airlines were used to determine the departure stage lengths as presented in **Table F-7**. The INM uses the stage length category for each operation to determine which profile to use for a specific aircraft departure. In most cases, using the published departure distances to determine the stage length, and therefore, the departure profile to be used, provides good correlation between noise levels estimated by the INM and measured noise levels.

F.5.2 Airport Operational Information

The existing and assumed future uses of the runways and flight tracks to and from the Airport are important in determining where aircraft are flying and, therefore, the noise levels generated in the Airport environs.

F.5.2.1 Runway Use

Runway use at an airport is typically a function of the prevailing wind and weather conditions, the lengths and widths of the runways, the instrumentation of the runways, the obstructions or terrain in the vicinity of the airport, and the effects of other airports or air facilities in the area. To a certain extent, runway use is also determined based on the destination of a departing aircraft or origination of an arriving aircraft and the location of the aircraft parking position on the ground. Of these factors,

Table F-7**INM Fleet Mix - Aircraft Stage Lengths**

Aircraft	Stage Length 1	Stage Length 2	Stage Length 3	Total
B-757-200	0%	0%	100%	100%
B-737-800/A-319	0%	100%	0%	100%
BAE-146	100%	0%	0%	100%
Regional jet	100%	0%	0%	100%
30 seat commuter	100%	0%	0%	100%
19 seat commuter	100%	0%	0%	100%
Gulfstream/Challenger	100%	0%	0%	100%
Lear 35	100%	0%	0%	100%
Citation	100%	0%	0%	100%
Twin turboprop	100%	0%	0%	100%
Twin prop	100%	0%	0%	100%
Large single engine prop	100%	0%	0%	100%
Small single engine prop	100%	0%	0%	100%

Note: Stage lengths are based on standard classifications. Stage 1 = 0 to 500 nautical miles; Stage 2 = 500 – 1,000 nautical miles; Stage 3 = 1,000 – 1,500 nautical miles. The use of the term “Stage” in this context has no reference to FAR Part 36 noise standards.

Source: Ricondo & Associates, Inc., March 2000

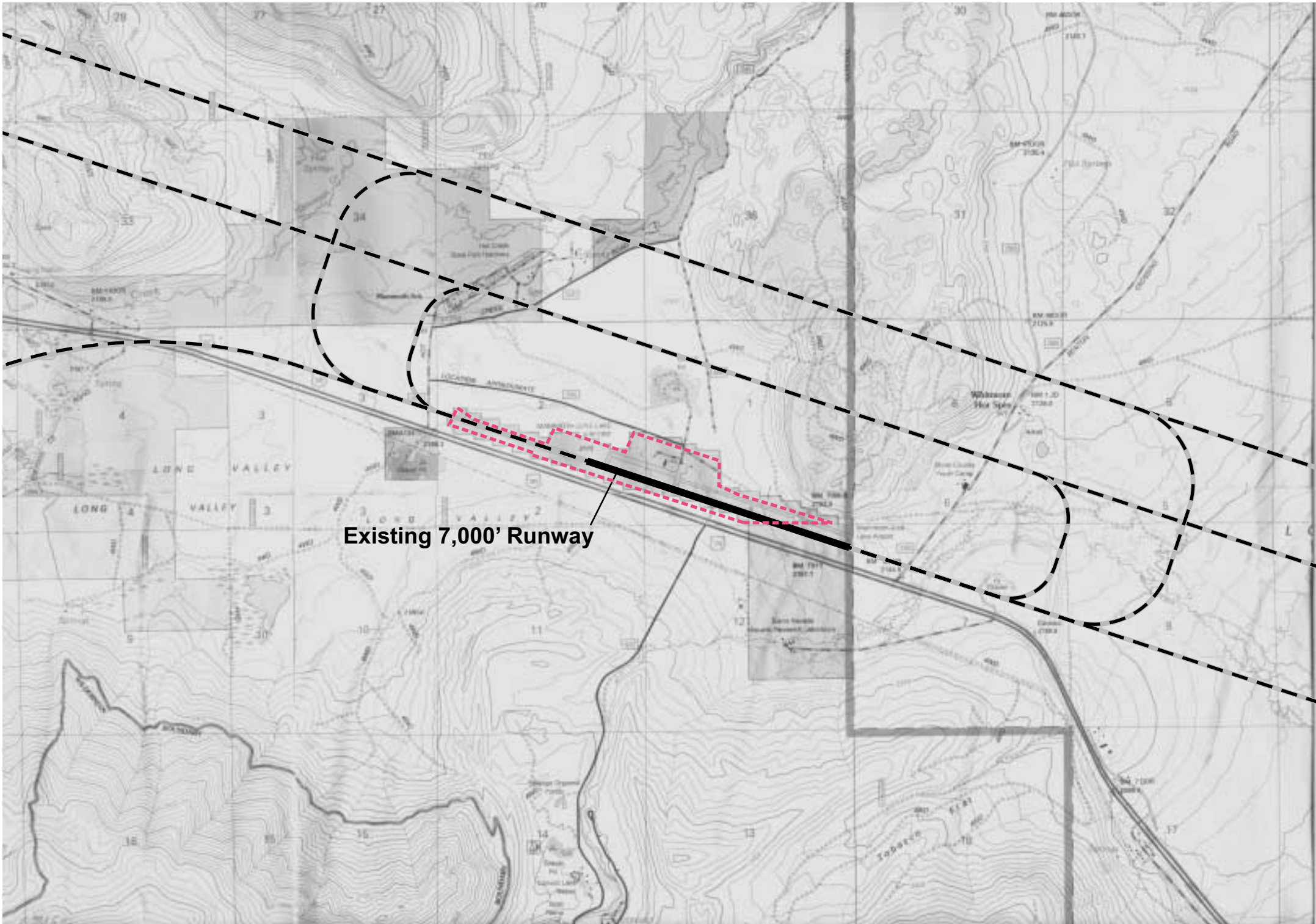
Prepared By: Ricondo & Associates, Inc.

wind and weather conditions and terrain in the vicinity of the Airport primarily affect runway use at Mammoth-Yosemite Airport. Typically, arrivals on Runway 27 are preferred due to prevailing winds and terrain. However, because of terrain northwest of the Airport that can affect the takeoff weight allowable for an aircraft, larger aircraft tend to prefer departing on Runway 9.

F.5.2.2 Aircraft Flight Tracks

Flight track information is another important input to the INM. However, inputting the individual tracks for each aircraft operation is not possible, and the FAA suggests that flight tracks be consolidated into a generalized set that is representative of all of the flight tracks into and out of the Airport. Deviations from the generalized flight tracks occur because of weather conditions, pilot technique, air traffic control procedures, and aircraft weight. However, the generalized flight tracks do provide representative tracks for arrivals and departures at the Airport. The generalized arrival and departure tracks assumed for the noise analysis for the existing airfield are shown in **Exhibit F-3**. The generalized flight tracks for the runway alternatives do not change significantly except that the start and end locations of the tracks change with the length/location of the runway. **Exhibit F-4** shows the generalized arrival and departure flight tracks for Alternative 2 as an example. The same flight tracks were used for the each year analyzed.

Because of terrain to the west of the Airport, air carrier jet aircraft departing Runway 27 were assumed to follow a departure procedure, track T04, in which aircraft make a slight left turn off of the runway and roughly follow U.S. Highway 395 to gain altitude before turning right. Air carrier aircraft are not expected to turn right immediately from Runway 27.



- Legend**
- Arrival Track
 - - - Departure Track
 - - - Existing Property Line

Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

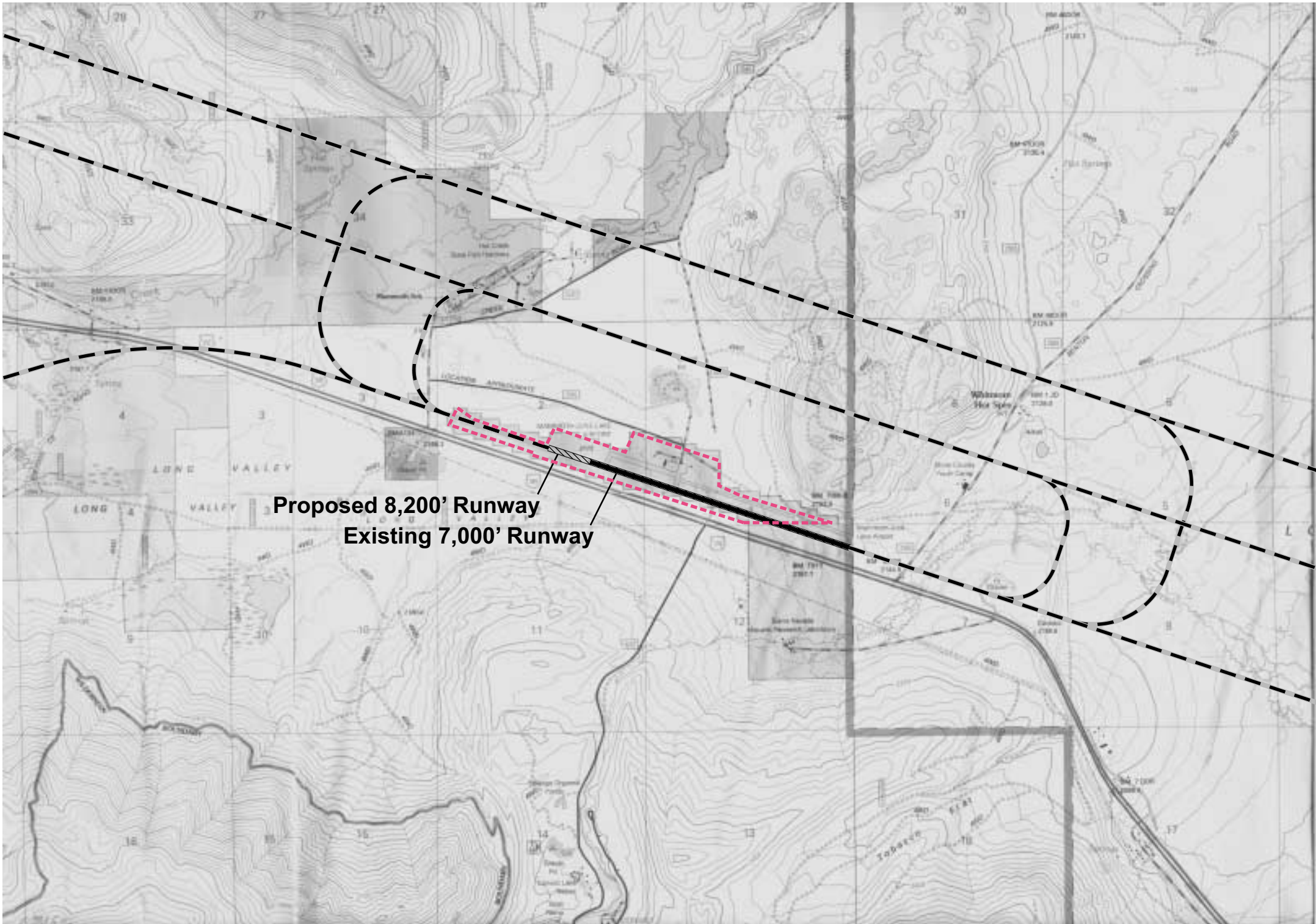
Exhibit F-3

↑
north

Scale 1" = 3000

Existing 1999 Flight Tracks

P:\Mmh\WP1.Draft\Exhibits\current_tracks.cdr



- Legend**
- Arrival Track
 - - - Departure Track
 - - - Existing Property Line

Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit F-4

↑
north
Scale 1" = 3000

P:\Mmh\WP1.Draft\Exhibits\alt2_tracks.cdr

**Proposed Project - 8,200' Runway
Flight Tracks**

The generalized flight tracks are used in differing percentages by different aircraft types. The estimated percentage use of the flight tracks and runway use is provided for each aircraft category in **Table F-8**.

Table F-8

INM Flight Track Distribution Assumptions

Departures	RW27	RW27	RW27	RW09	RW09	RW09	
	T01	T02	T03	T04	T05	T06	
ACJets	26.3%	0.0%	0.0%	73.7%	0.0%	0.0%	100.0% (a)
Business jets	32.9%	0.0%	0.0%	67.1%	0.0%	0.0%	100.0% (b)
Commuter/turboprop	32.9%	0.0%	0.0%	67.1%	0.0%	0.0%	100.0% (b)
Twin engine props	27.4%	41.0%	0.0%	23.7%	7.9%	0.0%	100.0% (c)
Single engine props	27.4%	13.7%	27.4%	19.0%	3.2%	9.5%	100.0% (c)
Arrivals	RW27	RW27	RW27	RW09	RW09	RW09	
	L01	L02	L03	L04	L05	L06	
ACJets	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Business jets	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Commuter/turboprop	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Twin engine props	47.9%	13.7%	6.8%	11.1%	17.4%	3.2%	100.0% (d)
Single engine props	41.0%	20.5%	6.8%	11.1%	17.4%	3.2%	100.0% (d)

(a) Assumes preference to depart Runway 9 with up to 5 knot tailwind based on daytime (7:00 a.m. through 7:00 p.m.) wind data

(b) Assumes preference to depart Runway 9 up to 3 knot tailwind (calm conditions) based on daytime wind data

(c) Assumes preference to depart Runway 27 up to 3 knot tailwind (calm conditions) based on daytime wind data

(d) Assumes preference to land Runway 27 up to 3 knot tailwind (calm conditions) based on daytime wind data

Source: Ricondo & Associates, Inc., March 2000

Prepared By: Ricondo & Associates, Inc.

F.5.2.3 Other Assumptions

In addition to the runway use and flight track information, the following conditions were assumed in developing noise exposure maps for the Airport:

- Departure profiles for air carrier jet aircraft, general aviation jet aircraft, general aviation and commuter turboprop aircraft, and general aviation single-engine propeller aircraft are those typical of aircraft in each of these classifications.
- All approaches flown by jet and turboprop aircraft follow a flight track descending along a three-degree glide-slope, with touchdown at a point 1,000 feet beyond the threshold of the runway.
- All approaches flown by multi-engine piston and single-engine aircraft follow a flight track descending at a five-degree glide-slope, with a touchdown point 575 feet beyond the threshold of the runway.

- Noise, thrust, and altitude information for each specific aircraft is as specified in the INM Version 6.0 aircraft database.

F.6 Land Use Compatibility Guidelines

Estimates of total noise exposure resulting from aircraft operations, as expressed in CNEL values, can be interpreted in terms of the probable effect on land uses. Suggested compatibility guidelines for evaluating land uses in aircraft noise exposure areas developed by the FAA are provided in **Table F-9**. Compatible or incompatible land use is determined by comparing the predicted or measured day-night average noise level (DNL) at a site with the values given in the table. The DNL metric is used by the FAA for noise analysis and differs from the CNEL metric in that 5 dBA is not added to evening operations. However, the land use compatibility guidelines for these DNL levels are consistent with CNEL. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular level might not accurately assess an individual's perception of or reaction to an actual noise environment.

Each generalized land use listed in Table F-8 includes a wide range of human activities having various sensitivities to noise intrusions. CNEL values and the associated listings of compatible and incompatible land uses in the table should be interpreted only as indications of the effect aircraft noise has on people living and working in areas surrounding an airport. Although specific CNEL values are obtained from a noise analysis, they do not dictate certain consequences. They are merely intended to guide a community in land use development.

Table F-9

Suggested Land Use Compatibility Guidelines In Aircraft Noise Exposure Areas

The designations in this table do not constitute a federal determination that any use of land is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities.

Land use	CNEL 65 to 70	CNEL 70 to 75	CNEL 75+
Residential			
Residential other than mobile homes and transient lodgings	NLR required (a)	NLR required (a)	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required (a)	NLR required (a)	NLR required (b)
Public use			
Schools, hospitals, and nursing homes	NLR required (a)	NLR required (a)	Incompatible
Churches, auditoriums, and concert halls	NLR required (a)	NLR required (a)	Incompatible
Governmental services	Compatible	NLR required	NLR required (b)
Transportation	Compatible	Compatible (c)	Compatible (c)
Parking	Compatible	Compatible (c)	Compatible (c, d)
Commercial use			
Offices, business, and professional	NLR required	NLR required	NLR required (b)
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible (c)	Compatible (c, d)
Retail trade—general	NLR required	NLR required	NLR required (b)
Utilities	Compatible	Compatible (c)	Compatible (c, d)
Communication	NLR required	NLR required	NLR required (b)
Manufacturing and production			
Manufacturing—general	Compatible	Compatible (c)	Compatible (c, d)
Photographic and optical	Compatible	NLR required	NLR required (b)
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming and breeding	Compatible	Compatible	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible	Compatible	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible (b, c)

CNEL = Community Noise Equivalent Level average sound level, in A-weighted decibels.

Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.

NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

- (a) The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.
- (b) NLR required between DNL 75 and 80; incompatible for DNL 80 and above.
- (c) NLR required in offices or other areas with noise-sensitive activities.
- (d) Incompatible for DNL 85 and above.

Source: Ricondo & Associates, 2000, as derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, *Airport Noise Compatibility Planning*, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended

Appendix G – Air Quality Construction Emissions Calculations

This appendix contains input data and assumptions for the construction emissions analysis conducted during the preparation of the environmental assessment for Mammoth Yosemite Airport.

Construction related emissions associated with the proposed action, the no build action, and other alternatives considered in the environmental assessment were estimated using standard emissions calculation/modeling techniques. Pollutant emissions from Non-Road construction equipment and On-Road construction equipment were evaluated separately.

Non-Road vehicles are defined as equipment that do not travel on highways (e.g., Dozers, Loaders, Cranes, etc.). Emissions factors for non-road vehicles equipped with gasoline-powered engines were derived from the EPA document *AP-42: Compilation of Air Pollutant Emissions Factors: Mobile Sources* (April, 1998). Emissions factors for diesel-powered engines were derived from Tier 1 standards regulated under *40 CFR, Part 89.112* (USEPA, September 1997). **Table G-1** summarizes all of the individual input data and assumptions used to determine pollutant emissions factors for nonroad equipment (Alternatives 2 and 5). **Table G-3** presents similar information for Alternatives 3 and 4.

On-road vehicles include equipment that can and would travel on highways (e.g., cars, light duty trucks, tractor trailers, etc.). On-road emissions factors were calculated using the California Air Resources Board's EMFAC7G pollutant emissions factor model. This model determines the emissions factors of 10 different types of vehicles (light duty automobiles, light heavy diesel trucks, etc.), vehicle technology type (non-catalyst and catalyst gasoline-powered vehicles and diesel powered vehicles), the season of year, average ambient temperature, and average speed. **Tables G-2** and **G-4** list all of the individual factors used in the determination of pollutant emissions factors for on-road equipment. **Table G-5** presents the raw data output of the EMFAC7G model.

Table G-1
Non-Road Construction Emissions -- Alternatives 2 and 5

Non-Road Construction Pollutant Emissions														
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	Emissions in lb/hp-hr				Emissions in tons/yr			
							HC	CO	NOx	PM10	VOC	CO	NOx	PM10
Clearing & Grubbing	Dozer	D	144	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.04	0.19	0.02
	Scraper	D	192	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.10	0.48	0.04
	Blade	D	96	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.24	0.02
Excavation	Blade	D	600	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.08	0.31	1.49	0.14
	Scraper	D	1600	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.23	0.81	3.98	0.37
	Compactor	D	800	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.08	0.35	0.03
	Dozer	D	800	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.06	0.21	1.03	0.10
Subgrade-Scarify&Recompact	Blade	D	192	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.10	0.48	0.04
	Compactor	D	384	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
Aggregate Subbase	Blade	D	1200	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.17	0.61	2.99	0.28
	Dozer	D	240	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.31	0.03
Aggregate Base	Compactor	D	160	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.02	0.07	0.01
	Blade	D	1800	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.25	0.92	4.48	0.42
	Dozer	D	360	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.09	0.46	0.04
Heater Remix	Compactor	D	240	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.10	0.01
	Heater Rig	G	96	68%	25	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.36	0.01	0.00
	Sweeper	D	96	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.05	0.00
	Tractor	D	48	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.02	0.00
Bituminous Surface Course	Roller	D	96	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.06	0.01
	Paver	D	200	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.13	0.01
	Roller	D	800	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.04	0.12	0.53	0.05
	F.E. Loader-Tractor	D	200	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
Portland Cement Concrete Pavement	Batch Plant	D	48	78%	127	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Paver	D	48	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.03	0.00
	Finish Machine	D	96	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Saw	D	96	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	Sweeper	D	48	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	F.E. Loader-Tractor	D	48	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.03	0.00

- Notes:
- 1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
 - 2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
 - 3. NO_x emissions factors determined using AP-42 and Tier 1 standards
 - 4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
 - 5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
 - 6. The conversion factor listed is used to translate lb/yr to tons/yr.
 - 7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-1 (Cont.)
Non-Road Construction Emissions Alternative 2

Non-Road Construction Pollutant Emissions														
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	Emissions in lb/hp-hr				Emissions in tons/yr			
							HC	CO	NOx	PM10	HC	CO	NOx	PM10
Saw & Seal Pavement	Saw	D	1280	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.05	0.13	0.44	0.04
	Sweeper	D	640	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.10	0.35	0.03
Groove Runway	Grinder	D	160	73%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.10	0.01
	Sweeper	D	160	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.09	0.01
Marking: Remove Marking	Sandblaster	D	96	38%	92	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	Sweeper	D	48	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
Marking: New Marking	Striper	D	96	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.24	0.02
	Trencher	D	480	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.05	0.18	0.02
Drainage	Backhoe	D	480	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.06	0.20	0.02
	F.E. Loader-Tractor	D	240	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
	Trencher	D	480	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.05	0.18	0.02
Lighting	Backhoe	D	480	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.06	0.20	0.02
	F.E. Loader-Tractor	D	240	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
	Backhoe	D	160	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.07	0.01
Structures-Manholes-Retaining Walls	Compactor	D	320	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
	F.E. Loader-Tractor	D	160	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.12	0.01
Terminal Construction	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Backhoe	D	37	55%	112	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Grader	D	24	61%	140	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Tandem Roller	D	24	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Crane (5 ton)	D	108	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.01	0.07	0.01
	Cement Finisher	D	729	53%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.09	0.32	0.03
	Gas Vibrator	G	729	43%	5	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.34	0.01	0.00
	Crane (90 ton)	D	248	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.01	0.03	0.17	0.01
	Gas Welder	G	830	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.08	1.55	0.04	0.00
	Torch, Gas & Air	G	100	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.01	0.19	0.00	0.00
	Mixer	D	208	56%	11	0.0005	0.00336	0.01136	0.01979	0.00207	0.00	0.01	0.01	0.00
Total											1.51	7.14	21.83	2.02

Notes:
1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
3. NO_x emissions factors determined using AP-42 and Tier 1 standards
4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
6. The conversion factor listed is used to translate lb/yr to tons/yr.
7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-2
On-Road Constructions Emissions Inventory – Alternatives 2 and 5

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions													
Phase	Equipment	Total Miles per Year	VOC	Emissions Factor in lb/mi					VOC	Emissions in Tons per Year			
				CO	NOx	Total Exhaust PM10	Entrained Road Dust	Conversion Factor lb to tons		CO	NOx	Total Exhaust PM10	Entrained Road Dust
Clearing & Grubbing	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Water Truck	1411	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.14
Excavation	Pick Up Truck	2940	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Water Truck	3920	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.16
	Employees	25500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.22	0.02	0.00	1.01
Subgrade-Scarify & Recompact	Pick Up Truck	706	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Water Truck	2822	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.04	0.01	0.00	0.11
	Employees	5400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.05	0.00	0.00	0.21
Aggregate Subbase	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck-HDDV	23520	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.05	0.33	0.26	0.02	0.93
	Truck-Roundtrip	329000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.32	2.21	3.82	0.23	13.06
	Water Truck	3136	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.05	0.01	0.00	0.12
	Employees	6000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.05	0.00	0.00	0.24
Aggregate Base	Pick Up Truck	882	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Truck-HDDV	35280	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.07	0.49	0.39	0.02	1.40
	Truck-Roundtrip	350000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.34	2.35	4.07	0.25	13.89
	Water Truck	4704	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.07	0.01	0.00	0.19
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.08	0.01	0.00	0.36
Heater Remix	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Employees	2160	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.09
Rejuvenating Agent	Pick Up Truck	147	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Truck-Roundtrip	2700	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.03	0.00	0.03
	Employees	600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
Bituminous Surface Course	Pick Up Truck	2205	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-HDDV	78400	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.16	1.09	0.87	0.06	3.11
	Truck-Roundtrip	224000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.22	1.50	2.60	0.16	8.89
	Asphalt Trucks	72000	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.06	0.41	0.61	0.03	2.86
	Employees	13500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.11	0.01	0.00	0.54
Prime Coat	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.12
Tack Coat	Truck-Roundtrip	3600	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.04	0.00	0.07

Notes:
On-Road emissions factors from the California Air Resources Board EMFAC7G model
Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-2 (Cont.)
On-Road Constructions Emissions Inventory

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions													
Phase	Equipment	Total Miles per Year	VOC	Emissions Factor in lb/mi			Entrained Road Dust	Conversion Factor lb to tons	Emissions in Tons per Year				
				CO	NOx	Total Exhaust PM10			VOC	CO	NOx	Total Exhaust PM10	Entrained Road Dust
Portland Cement Concrete Pavement	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Cement Truck	300	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Concrete Trucks	1400	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.01	0.01	0.00	0.06
	Water Truck	470	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.14
Saw & Seal Pavement	Pick Up Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.09
	Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.09
	Water Truck	6272	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.10	0.01	0.00	0.25
	Employees	14400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.12	0.01	0.00	0.57
Groove Runway	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	1568	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Employees	3000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.12
Marking: Remove Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Water Truck	941	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Employees	900	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
Marking: New Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Truck-Roundtrip	1200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.01	0.01	0.00	0.03
	Employees	540	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.00	0.00	0.00	0.02
Drainage	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.25
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.13	0.10	0.01	0.37
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Lighting	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Truck-Roundtrip	10000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.07	0.12	0.01	0.20
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.13	0.10	0.01	0.37
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.25
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Structures-Manholes-Retaining Walls	Pick Up Truck	1176	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.05
	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.12
	Truck-HDDV	6272	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.01	0.09	0.07	0.00	0.25
	Truck-Roundtrip	4200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.03	0.05	0.00	0.17
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.08	0.01	0.00	0.36
Terminal Construction	Employees	60000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.02	0.51	0.04	0.00	2.38
Total									1.41	11.39	13.66	0.83	55.88

- Notes:
1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
 2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
 3. Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-3
Non-Road Construction Emissions - Alternatives 3 and 4

Non-Road Construction Pollutant Emissions														
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	Emissions in lb/hp-hr				Emissions in tons/yr			
							HC	CO	NOx	PM10	VOC	CO	NOx	PM10
Clearing & Grubbing	Dozer	D	180	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.23	0.02
	Scraper	D	240	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.60	0.06
	Blade	D	120	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.30	0.03
Excavation	Blade	D	750	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.11	0.38	1.87	0.17
	Scraper	D	2000	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.28	1.02	4.98	0.46
	Compactor	D	1000	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.03	0.10	0.44	0.04
Subgrade-Scarify&Recompact	Dozer	D	1000	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.07	0.26	1.29	0.12
	Blade	D	240	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.60	0.06
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
Aggregate Subbase	Blade	D	1500	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.21	0.76	3.73	0.35
	Dozer	D	300	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.08	0.39	0.04
	Compactor	D	200	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.09	0.01
Aggregate Base	Blade	D	2250	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.32	1.15	5.60	0.52
	Dozer	D	450	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.58	0.05
	Compactor	D	300	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.13	0.01
Heater Remix	Heater Rig	G	120	68%	25	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.45	0.01	0.00
	Sweeper	D	120	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.07	0.01
	Tractor	D	60	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.02	0.00
Bituminous Surface Course	Roller	D	120	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.08	0.01
	Paver	D	250	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.01
	Roller	D	1000	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.05	0.15	0.67	0.06
Portland Cement Concrete Pavement	F.E. Loader-Tractor	D	250	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.18	0.02
	Batch Plant	D	60	78%	127	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.05	0.00
	Paver	D	60	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Finish Machine	D	120	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.05	0.00
	Saw	D	120	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.04	0.00
	Sweeper	D	60	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	F.E. Loader-Tractor	D	60	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00

- Notes:
- 1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
 - 2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
 - 3. NO_x emissions factors determined using AP-42 and Tier 1 standards
 - 4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
 - 5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
 - 6. The conversion factor listed is used to translate lb/yr to tons/yr
 - 7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-3 (Cont.)

Non-Road Construction Emissions Alternative 3

Non-Road Construction Pollutant Emissions														
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	Emissions in lb/hp-hr				Emissions in tons/yr			
							HC	CO	NOx	PM10	HC	CO	NOx	PM10
Saw & Seal Pavement	Saw	D	1600	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.06	0.16	0.55	0.05
	Sweeper	D	800	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.05	0.13	0.44	0.04
Groove Runway	Grinder	D	200	73%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.04	0.12	0.01
	Sweeper	D	200	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.11	0.01
Marking: Remove Marking	Sandblaster	D	120	38%	92	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.04	0.00
	Sweeper	D	60	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
Marking: New Marking	Striper	D	120	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.30	0.03
	Trencher	D	600	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.23	0.02
Drainage	Backhoe	D	600	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.25	0.02
	F.E. Loader-Tractor	D	300	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.22	0.02
	Compactor	D	600	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.06	0.26	0.02
	Trencher	D	600	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.23	0.02
Lighting	Backhoe	D	600	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.25	0.02
	F.E. Loader-Tractor	D	300	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.22	0.02
	Compactor	D	600	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.06	0.26	0.02
	Backhoe	D	200	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.08	0.01
Structures-Manholes-Retaining Walls	Compactor	D	400	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	F.E. Loader-Tractor	D	200	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
Terminal Construction	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Backhoe	D	37.125	55%	112	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Grader	D	24	61%	140	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Tandem Roller	D	24	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Crane (5 ton)	D	108	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.01	0.07	0.01
	Cement Finisher	D	729	53%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.09	0.32	0.03
	Gas Vibrator	G	729	43%	5	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.34	0.01	0.00
	Crane (90 ton)	D	248	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.01	0.03	0.17	0.01
	Gas Welder	G	830	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.08	1.55	0.04	0.00
	Torch, Gas & Air	G	100	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.01	0.19	0.00	0.00
	Mixer	D	208	56%	11	0.0005	0.00336	0.01136	0.01979	0.00207	0.00	0.01	0.01	0.00
Total											1.85	8.36	27.10	2.51

- Notes:
- 1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
 - 2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
 - 3. NO_x emissions factors determined using AP-42 and Tier 1 standards
 - 4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
 - 5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
 - 6. The conversion factor listed is used to translate lb/yr to tons/yr
 - 7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-4
On-Road Constructions Emissions Inventory -- Alternatives 3 and 4

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions													
Phase	Equipment	Total Miles per Year	VOC	Emissions Factor in lbs/mi			Entrained Road Dust	Conversion Factor lbs to tons	VOC	Emissions in Tons per Year			
				CO	NOX	Total Exhaust PM10				CO	NOX	Total Exhaust PM10	Entrained Road Dust
Clearing & Grubbing	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	1411	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.04	0.00	0.00	0.18
Excavation	Pick Up Truck	2940	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.06	0.01	0.00	0.15
	Water Truck	3920	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.08	0.01	0.00	0.19
	Employees	25500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.27	0.02	0.00	1.26
Subgrade-Scarify & Recompact	Pick Up Truck	706	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Water Truck	2822	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.14
	Employees	5400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.06	0.00	0.00	0.27
Aggregate Subbase	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Truck-HDDV	23520	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.06	0.41	0.32	0.02	1.17
	Truck-Roundtrip	329000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.40	2.76	4.78	0.29	16.32
Aggregate Base	Water Truck	3136	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.16
	Employees	6000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.06	0.00	0.00	0.30
	Pick Up Truck	882	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.04
Heater Remix	Truck-HDDV	35280	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.09	0.61	0.49	0.03	1.75
	Truck-Roundtrip	350000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.42	2.94	5.09	0.31	17.36
	Water Truck	4704	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.09	0.01	0.00	0.23
Rejuvenating Agent	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.09	0.01	0.00	0.45
	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	2160	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.11
Bituminous Surface Course	Pick Up Truck	147	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Truck-Roundtrip	2700	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.04	0.00	0.07
	Employees	600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
Prime Coat	Pick Up Truck	2205	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.11
	Truck-HDDV	78400	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.19	1.36	1.08	0.07	3.89
	Truck-Roundtrip	224000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.27	1.88	3.26	0.20	11.11
Tack Coat	Asphalt Trucks	72000	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.07	0.51	0.76	0.04	1.79
	Employees	13500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.14	0.01	0.00	0.67
	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.15
	Truck-Roundtrip	3600	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.03	0.05	0.00	0.09

*Some truck-roundtrips had travel outside of the air basin and values for entrained road dust were based on only 50% of roundtrip miles being within the air basin limits

Notes:

1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
3. Entrained road dust emissions factors are from the Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-4 (Cont.)
On-Road Constructions Emissions Inventory Alternative 3

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions													
Phase	Equipment	Total Miles per Year	VOC	Emissions Factor in lbs/mi			Entrained Road Dust	Conversion Factor lbs to tons	VOC	Emissions in Tons per Year			
				CO	NOX	Total Exhaust PM10				CO	NOX	Total Exhaust PM10	Entrained Road Dust
Portland Cement Concrete Pavement	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Cement Truck	300	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Concrete Trucks	1400	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.01	0.01	0.00	0.07
	Water Truck	470	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.04	0.00	0.00	0.18
Saw & Seal Pavement	Pick Up Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Water Truck	6272	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.12	0.02	0.00	0.31
	Employees	14400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Groove Runway	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Water Truck	1568	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.08
	Employees	3000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.15
Marking: Remove Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	941	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.05
	Employees	900	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
Marking: New Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck-Roundtrip	1200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.01	0.02	0.00	0.03
	Employees	540	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
Drainage	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.31
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.16	0.13	0.01	0.47
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.19	0.01	0.00	0.89
Lighting	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-Roundtrip	10000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.08	0.15	0.01	0.25
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.16	0.13	0.01	0.47
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.31
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.19	0.01	0.00	0.89
Structures-Manholes-Retaining Walls	Pick Up Truck	1176	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.15
	Truck-HDDV	6272	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.11	0.09	0.01	0.31
	Truck-Roundtrip	4200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.06	0.00	0.21
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.09	0.01	0.00	0.45
Terminal Construction	Employees	60000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.02	0.51	0.04	0.00	2.38
Total									1.76	14.11	17.06	1.04	67.51

- Notes:
- 1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
 - 2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
 - 3. Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table G-5
EMFAC7G On-Road Emissions Factors

On-Road Emissions Factors From The California Air Resources Board EMFAC7G Software Model																					
ABN	CY	MYA	MYB	PROCESS	CLASS	TECH	I/M	SEASON	DP	TEMP	SPD	VOC	CO	NOX	CO2	PMEX10	PMTW10	PMBW10	FUEL	EVAP	TIMES
GBV	2001	1967	2001	R	1	2	N	S	56	76	20	0.362	7.6545	0.5921	339.5391	0.0042	0.008	0.0127	27.0637	0.2102	0
GBV	2001	1967	2001	R	2	2	N	S	56	76	10	0.6863	14.1283	1.3598	697.6967	0.0043	0.008	0.0127	20.7598	0.7445	0
GBV	2001	1967	2001	R	3	2	N	S	56	76	10	0.9641	14.3589	1.8808	1038.9091	0.004	0.008	0.0127	11.6975	0.6406	0
GBV	2001	1967	2001	R	7	3	N	S	56	76	50	0.7001	5.1141	7.6535	0	0.4068	0.012	0.0127	6.3099	0	0
GBV	2001	1967	2001	R	8	3	N	S	56	76	50	0.8717	6.0915	10.5471	0	0.594	0.036	0.0127	6.1819	0	0
Notes:																					
1.	CY is the year the emissions factors are applicable.																				
2.	Class is a number scale of 1 through 0 (10) where each number represents a type of vehicle:																				
			1	Light duty automobiles																	
			2	Light duty trucks																	
			3	Medium duty trucks																	
			4	Light heavy gas trucks																	
			5	Light heavy diesel trucks																	
			6	Medium heavy gas trucks																	
			7	Medium heavy diesel trucks																	
			8	Heavy heavy diesel trucks																	
			9	Buses																	
			10	Motorcycles																	
3.	Tech is the vehicle technology type as defined with a value of 1 to 3 where:																				
			0	Non-catalyst gasoline powered vehicles																	
			1	Catalyst powered vehicle																	
			2	Diesel powered vehicle																	
4.	Season is defined as S or W for Summer and Winter.																				
5.	Temperature is the average temperature over the course of the study period.																				
6.	PMEX10 is PM10 emissions from exhaust.																				
7.	PMTW10 is PM10 emissions from tire wear.																				
8.	PMBW10 is PM10 emissions from break wear.																				
9.	All emissions factors are provided in grams per mile.																				
	EMFAC7G is a product of the California Air Resources Board (www.arb.ca.gov/).																				

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Appendix H - Historical and Forecast of Aviation Demand Background Information

H.1 Mammoth Lakes Market Area

The Mammoth Lakes region is abundant with mountains, lakes, streams, and forests. Based on statistics provided by the California Department of Transportation (Caltrans), approximately 1.5 million summer visitors are attracted to the Mammoth Lakes region yearly. As a result, the tourism industry is a major contributor to the region's economic health.

Historical and projected population for the California counties of Inyo and Mono (the Two-County Area that surrounds Mammoth Lake), the State of California (California), and the United States is presented in **Table H-1**. As shown, population in the Two-County Area increased at an annual compounded growth rate of 0.4 percent between 1980 and 2000, which was less than the 1.8 percent increase for California and the 1.0 percent increase for the nation during this same period. Between the 1999 through 2025 period, however, population in the Two-County Area is projected to increase at an annual compounded growth rate that is comparable to that for California and the nation.

Table H-1

Historical and Projected Population

Area					Annual Compounded Growth			
	Historical		Projected		Historical		Projected	
	1980	1990			1980-1990	1990-1999	1980-1999	1999-2025
Mono County	8,650	10,080	10,690	16,260	1.5%	0.7%	1.1%	1.6%
Inyo County	17,910	18,270	18,020	21,420	0.2%	-0.2%	0.0%	0.7%
Two-County Area	26,560	28,350	28,710	37,680	0.7%	0.1%	0.4%	1.1%
California	23,792,840	29,925,530	33,125,060	45,243,640	2.3%	1.1%	1.8%	1.2%
United States	227,225,620	249,438,710	272,890,020	345,950,400	0.9%	1.0%	1.0%	0.9%

Source: NPA Data Services, Inc., June 2000.

Prepared By: Ricondo & Associates, Inc., October 2000

Table H-2, H-3 and **H-4** present historical and projected per capita personal income (PCPI), nonagricultural employment, and service industry employment respectively, for the Two-County Area, California, and the nation between 1989 and 2025. As shown, historical and projected trends for these economic indicators are similar to those for population. Growth in PCPI and nonagricultural employment (total and services-oriented) for the Two-County Area was below that for California and the nation between 1989 and 1999. However, their projected growth rates for the Two-County Area are more in line with (actually exceeds) those for California and the nation between 1999 and 2025.

Table H-2

Per Capital Personal Income

Year	Two-County Area	California	United States
<u>Historical</u>			
1989	\$19,678	\$22,870	\$20,526
1990	\$19,162	\$22,993	\$20,618
1991	\$18,405	\$22,197	\$20,268
1992	\$18,617	\$22,191	\$20,547
1993	\$18,640	\$21,849	\$20,671
1994	\$17,921	\$21,332	\$20,499
1995	\$18,102	\$21,842	\$21,001
1996	\$18,909	\$22,760	\$21,874
1997	\$19,581	\$23,537	\$22,619
1998	\$20,309	\$24,819	\$23,394
1999	\$21,137	\$25,458	\$24,035
<u>Projected</u>			
2025	\$33,191	\$37,117	\$35,426
<u>Annual Compounded Growth</u>			
1989-1999	0.7%	1.1%	1.7%
1999-2025	1.8%	1.5%	1.5%

Source: NPA Data Services, Inc. June2000.

Prepared By: Ricondo & Associates, Inc. October 2000.

Table H-3

Total Nonagricultural Employment

Year	Two-County Area	California (000)	United States (000)
<u>Historical</u>			
1989	16,660	16,303	134,118
1990	16,850	16,692	136,034
1991	16,110	16,634	135,682
1992	16,360	16,302	136,362
1993	16,810	16,267	138,993
1994	16,850	16,477	142,693
1995	17,240	16,821	146,378
1996	17,410	17,297	149,709
1997	17,670	17,743	153,453
1998	17,790	18,205	156,125
1999	18,150	18,700	158,912
<u>Projected</u>			
2025	30,760	28,422	224,844
<u>Annual Compounded Growth</u>			
1989-1999	0.9%	1.4%	1.7%
1999-2025	2.0%	1.6%	1.3%

Source: NPA Data Services, Inc. June2000.

Prepared By: Ricondo & Associates, Inc. October 2000.

Table H-4**Services Industry Employment**

Year	Two-County Area	California (000)	United States (000)
<u>Historical</u>			
1989	5,450	4,885	37,235
1990	5,500	5,132	38,662
1991	5,250	5,298	38,572
1992	5,460	5,280	40,476
1993	5,640	5,384	41,903
1994	5,600	5,476	43,117
1995	5,660	5,691	44,905
1996	5,820	5,939	46,588
1997	5,830	6,079	48,227
1998	5,860	6,282	49,636
1999	5,970	6,519	50,943
<u>Projected</u>			
2025	10,660	11,189	80,198
<u>Annual Compounded Growth</u>			
1989-1999	0.9%	2.9%	3.2%
1999-2025	2.3%	2.1%	1.8%

Source: NPA Data Services, Inc. June 2000.

Prepared By: Ricondo & Associates, Inc. October 2000.

Currently, there are approximately 14,730 rental beds/pillows in Mammoth Lakes, of which 28 percent are hotel rooms and 72 percent are rentable condominiums. Mammoth Lake's bed base is projected to increase dramatically in the next few years with the development of three new Intrawest projects: Juniper Springs, Sierra Star, and Gondola Village. These three developments are anticipated to add approximately 2,100 units to the existing bed base. In addition, Mammoth Mountain is in the midst of a five-year, \$132 million improvement program.

Between 1985 and 1995, the Airport was provided with commercial service by Trans World Express, via Beech 1900 aircraft, with up to five daily roundtrips from Los Angeles and San Francisco combined. This service was discontinued due to the financial difficulties and restructuring of Trans World Airlines. In addition, United Express also served the Airport during the winter seasons in 1993 and 1994, with daily flights to Fresno. Discontinued service by United Express was largely due to several business and market factors, including frequent overbookings out of the Fresno market that resulted in poor passenger loyalty and low repeat business. Since 1995, the Airport has not been provided with a scheduled commercial air service.

Currently, the nearest commercial service airport to the Mammoth Lakes area is Reno, located approximately 170 miles north of Mammoth Lakes. The next closest commercial service airports are Fresno (190 miles), Sacramento (220 miles) the three Bay-area airports (San Francisco/Oakland/San Jose - roughly 250 miles), Las Vegas (310 miles) and Los Angeles (320 miles). The driving times from these areas to Mammoth Lakes range from three to eight hours. The majority of visitors to Mammoth Lakes arrive via car from the Los Angeles area, either originating travel in the Los Angeles area or flying to a Los Angeles area airport and renting a car to drive to Mammoth Lakes. With the exception of the drive from Los Angeles and Reno via U.S. 395, the drive from each of

these airports is via winding mountainous roads through the Sierra Nevada Mountain range, some of which are not open during the winter season. Another airport in the region is Bishop Airport, approximately 45 miles south of Mammoth Lakes, but Bishop Airport is a general aviation facility and does not provide commercial service.

The region has two distinct seasonal attractions, consisting of skiing in the winter and numerous outdoor recreational activities in the summer. **Table H-5** presents historical skier day statistics for the Mammoth Mountain Ski Resort since 1960. As shown, through the early 1980's skier days increased dramatically to over 1.5 million skier days in 1986. During the early 1980's, Mammoth Mountain was the number one ski resort in the country, based on skier visits. The massive influx of skiers was reportedly taken for granted, as very little was done to maintain the success of the region. While new ski facilities were built to meet demand, very little was done to improve guest service at the resort as well as the region. Other resorts such as Vail and Aspen began to emphasize guest service, which attracted skiers from Mammoth. Since the mid-1980's, skier days have decreased from their peak levels, to approximately one million skier day visits in the 1998/99 winter season. Since the mid-1980's, with the exception of the 1986/87 and 1990/91 seasons, the number of skier days has remained relatively constant averaging around one million skier days. During the 1986/87 and 1990/91 seasons, a drought and the nationwide economic recession resulted in unusually low skier day visits, for each of these seasons respectively. Since then, improvements in snow making capabilities, lodging, and ski facilities have increased the number of winter visitors.

During the summer, major attractions include Yosemite National Park, Death Valley National Park, Kings Canyon National Park, Mono Lake, June Lake, and Devils Postpile National Monument, among many others. Popular summer activities in the Mammoth Lakes area include mountain biking, golfing, hiking in the Ansel Adams and John Muir Wilderness Areas, fishing, horseback riding, and rock climbing. Concerts and weekend festivals occur during the summer season. **Table H-6** presents historical national park visitors for Yosemite, Death Valley, Kings Canyon, and the total U.S. since 1980. As shown, nearly 5.3 million tourists visited nearby Yosemite, Kings Canyon and Death Valley National Parks in 1999. Overall, national park visitors to the region's four national parks increased at an annual compounded growth rate of 1.6 percent as compared to 1.9 percent for the nation. The U.S. Park Service plans to anticipate decreasing automobile use in Yosemite National Park with increased use of buses from accommodations and staging areas outside of the park. Mammoth Lakes, Mariposa, and Merced are three communities from which the Yosemite Area Regional Transportation System (YARTS) has started bus service. A letter from YARTS discussing this service is provided in Appendix D.

Over the last several years, interests within the Mammoth Lakes area have explored the opportunity of providing air carrier service to the Mammoth Lakes region. Discussions have been conducted with American Airlines to provide air carrier and commuter service to Mammoth Lakes during both winter and summer seasons. Agreements between the airline and local business interests have been negotiated with air carrier service scheduled to initiate in the 2002/2003 winter season from both Chicago and Dallas/Fort Worth. A copy of the Air Service Agreement is provided in Appendix M. It is the intent of American Airlines and local business interests to increase the air service over the term of the agreement, as outlined in the attached Table 1 from the Air Service Agreement. From 2003 to 2006, the American Airlines service is based on the recently negotiated agreement with American, and results in an estimated 256 annual flights and approximately 22,500 enplanements in the 2002/2003 winter season growing to an estimated 576 annual flights and nearly 66,000 enplanements for the 2005/2006 winter season. As discussed below, additional service, including summer service and additional markets, to Mammoth Yosemite Airport is anticipated to develop over time.

Table H-5**Historical Mammoth Mountain Skier Day Statistics**

Season Year	Paid Skier Visits	Total Skier Visits ¹	Annual Increase/ Decrease
1960-61	151,554	178,834	--
1961-62	143,717	169,586	-5.2%
1962-63	147,221	173,721	2.4%
1963-64	212,075	250,249	44.1%
1964-65	221,064	260,856	4.2%
1965-66	262,938	310,267	18.9%
1966-67	301,690	355,994	14.7%
1967-68	312,394	368,625	3.5%
1968-69	324,425	382,822	3.9%
1969-70	401,524	473,798	23.8%
1970-71	362,169	427,359	-9.8%
1971-72	443,289	523,081	22.4%
1972-73	560,915	661,880	26.5%
1973-74	693,402	818,214	23.6%
1974-75	819,316	966,793	18.2%
1975-76	595,688	702,912	-27.3%
1976-77	300,672	354,793	-49.5%
1977-78	1,050,990	1,240,168	249.5%
1978-79	932,430	1,100,267	-11.3%
1979-80	1,131,855	1,335,589	21.4%
1980-81	894,526	1,055,541	-21.0%
1981-82	1,235,796	1,458,239	38.2%
1982-83	1,144,691	1,350,735	-7.4%
1983-84	1,164,362	1,373,947	1.7%
1984-85	1,118,864	1,320,260	-3.9%
1985-86	1,299,053	1,532,883	16.1%
1986-87	711,757	839,873	-45.2%
1987-88	1,112,980	1,313,316	56.4%
1988-89	1,053,908	1,243,611	-5.3%
1989-90	981,935	1,158,683	-6.8%
1990-91	463,987	547,505	-52.7%
1991-92	889,387	1,049,477	91.7%
1992-93	905,236	1,068,178	1.8%
1993-94	700,617	826,728	-22.6%
1994-95	964,561	1,138,182	37.7%
1995-96	799,838	943,809	-17.1%
1996-97	786,934	928,582	-1.6%
1997-98	879,853	1,038,227	11.8%
1998-99	829,569	959,738	-7.6%
1999-00 (est.)	790,000	930,000	-3.1%
Annual Compounded			
<u>Growth Rate</u>			
1960 - 1970	9.1%	9.1%	
1970 - 1980	9.5%	9.5%	
1980 - 1990	-6.4%	-6.4%	
1990 - 1999	6.1%	6.1%	
1960 - 1999	4.3%	4.3%	

¹Skier visits from 1960-61 through 1997-98 are calculated by taking actual paid skier visits and adding an additional 18 % (8% for complimentary tickets and 10 % for season passes), which are standard industry figures.

Skier visit data for the 1998-99 season are based on actual records.

Source: Mammoth Mountain Ski Resort, June 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table H-6

Historical National Park Visitor Statistics

Season Year	Yosemite National Park Visitors	Death Valley National Park Visitors	Kings Canyon National Park Visitors	Total National Park Visitors	Annual Increase/ Decrease	Total U.S. National Park Visitors	Annual Increase/ Decrease
1980	2,490,282	618,140	819,065	3,927,487	--	62,068,871	--
1981	2,516,893	630,402	776,850	3,924,145	-0.1%	65,109,868	4.9%
1982	2,415,587	679,992	831,044	3,926,623	0.1%	66,260,713	1.8%
1983	2,457,464	635,582	765,755	3,858,801	-1.7%	66,820,348	0.8%
1984	2,738,467	621,197	937,262	4,296,926	11.4%	67,442,783	0.9%
1985	2,831,952	576,679	874,456	4,283,087	-0.3%	68,093,505	1.0%
1986	2,363,756	586,668	1,028,785	3,979,209	-7.1%	73,047,438	7.3%
1987	2,573,194	665,345	1,081,172	4,319,711	8.6%	78,087,260	6.9%
1988	2,182,113	692,267	1,007,695	3,882,075	-10.1%	80,371,507	2.9%
1989	2,644,442	664,449	1,037,349	4,346,240	12.0%	82,518,266	2.7%
1990	2,823,572	690,965	1,062,867	4,577,404	5.3%	79,653,630	-3.5%
1991	3,423,101	743,608	1,071,022	5,237,731	14.4%	82,798,847	3.9%
1992	3,819,518	869,183	637,446	5,326,147	1.7%	82,926,372	0.2%
1993	3,839,645	998,474	636,515	5,474,634	2.8%	85,171,601	2.7%
1994	3,962,117	971,487	725,930	5,659,534	3.4%	87,205,340	2.4%
1995	3,958,406	1,109,421	832,794	5,900,621	4.3%	89,012,480	2.1%
1996	4,046,207	1,189,215	502,749	5,738,171	-2.8%	86,569,839	-2.7%
1997	3,669,970	1,188,212	484,718	5,342,900	-6.9%	89,662,333	3.6%
1998	3,657,132	1,177,746	540,212	5,375,090	0.6%	88,922,796	-0.8%
1999	3,493,607	1,227,583	559,534	5,280,724	-1.8%	88,350,924	-0.6%
<u>Projected</u>							
2000	3,369,463	1,245,892	559,534	5,174,889	-2.0%	87,467,415	-1.0%
2001	3,237,595	1,268,377	559,534	5,065,506	-2.1%	86,592,741	-1.0%
Annual Compounded Growth Rate							
1980 - 1990	1.3%	1.1%	2.6%		1.5%		2.5%
1990 - 1999	2.4%	6.6%	-6.9%		1.6%		1.2%
1980 - 1999	1.8%	3.7%	-2.0%		1.6%		1.9%
1999 - 2001	-3.7%	1.6%	0.0%		-2.1%		-1.0%

Source: National Park Service, 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table 1**Mammoth/Yosemite Airport City Pair Growth Scenario - American Airlines Winter Season Only**

		<u>Aircraft</u>	<u>Seats</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
City Pair	Airline--AA							
	DFW-MMH			W	W	W	W	W
	Annual Departures	757-200	176	128	144	288	288	288
	Load Factor			50%	55%	80%	85%	85%
	Enplanements			11,264	13,939	30,413	32,947	32,947
	ORD-MMH			W	W	W	W	W
	Annual Departures	757-200	176	128	144	144	288	288
	Load Factor			50%	55%	80%	85%	85%
	Enplanements			11,264	13,939	15,208	32,947	32,947
	Total Departures			256	288	432	576	576
				Total Operations	512	576	864	1,152
				Total Seats	45,056	50,688	78,032	101,376
				Total Enplanements	22,528	27,878	45,619	65,894
W--Winter Service 112 Days		16 weeks of 8 flights per week=128						
		16 weeks of 9 flights per week=144						

Operations are for 112 days from mid-December to early April.

Air Service from DFW and ORD with American Airlines for years beyond 2006 will grow at a level above the national average.

Mammoth Mountain and American Airlines are currently investigating 737-800 air service from two additional markets that are not included in this forecast.

Airline operations in the national airspace system largely operate using a "hub and spoke" system. Major air carriers establish central hub airports where passengers can arrive from outlying or spoke airports, transfer or connect with another flight, and continue to their destination airport. In the case of the proposed service from American Airlines to and from Mammoth Yosemite Airport, initial service would be provided from two of American Airlines' hubs: Chicago and Dallas/Fort Worth. Service from these two airports could carry passengers that connect from locations throughout the Eastern, Southern, and Midwest U.S. in addition to international passengers such as from Europe, South America, Canada, and Mexico. Many of the visitors traveling from these locations to or from the Mammoth Lakes area currently use Los Angeles or Reno airports and drive between the Mammoth Lakes area and these airports.

Based on the comparisons with the case study airports (See Section H.2), future service is anticipated from other hub airports such as Los Angeles, San Francisco and/or Denver by American Airlines and/or other air carrier/commuter operators. However, as may be the case with air service from Denver or some of the other hub airports, only a small percentage of the passengers may originate from those locations with the majority of passengers being connecting passengers from other originating points.

H.2 Case Study Airports

In order to provide a basis for potential air carrier service at Mammoth Yosemite Airport, historical activity, local demographics, and tourism-related visitor statistics were reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:

- Yampa Valley Regional Airport (Steamboat Springs, CO)
- Vail/Eagle County Airport (Vail, CO)
- Aspen-Pitkin County Airport (Aspen, CO)
- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MO)

In order to compare each airport's market characteristics, the following factors were examined and summarized in **Table H-7**:

- Number of annual ski visitors (represented as skier days)
- Number of ski lifts, trails and skiable acreage
- Number of area beds/pillows
- Number of annual national park visitors
- Driving distances from competing commercial service airports
- Historical enplanement levels

These factors, along with each case airport's commercial activity levels, serve to give an overall idea of the level of service that might be expected at Mammoth Lakes.

Table H-8 presents each case study airport's historical growth in aviation activity from 1990 through 1998. In addition, historical ski visitor statistics for Steamboat Springs, Vail, and Aspen, as well as historical visitors for the national parks surrounding Jackson Hole and Glacier Park International, are presented in Table H-8. As shown, the estimated number of 1998 winter enplanements per ski visitor ranges from a low of approximately 0.026 enplanements per skier at Vail/Eagle County Airport to a high of 0.104 enplanements per ski visitor at Yampa Valley Regional Airport. Enplanements to

national park visitors range from approximately 0.02 enplanements per national park visitor at Jackson Hole Airport, to nearly 0.06 enplanements per national park visitor at Glacier Park International Airport.

As also shown in Table H-8, with the exception of Vail/Eagle County and Aspen-Pitkin County airports, average aircraft load factors have generally increased at each case study airport from the 35-45 percent range to the 60-70 percent range. At Vail/Eagle County and Aspen-Pitkin County airports, the average aircraft load factors have decreased in recent years after peaking at 73 and 64 percent, respectively. These decreases in load factors at Vail/Eagle County and Aspen-Pitkin County airports are due to the following:

- Load factors at Vail/Eagle County Airport have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and/or expansion of new nonstop hub service by United to LaGuardia, Chicago, and Dulles; American to Chicago, Los Angeles, and Newark; and Continental to Houston and Newark.
- Load factors at Aspen-Pitkin County Airport have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and expansion of new nonstop hub service by Aspen Mountain Air to Denver; Mesaba Aviation to Minneapolis; and Mesa Airlines to Phoenix.

Table H-9 presents a summary of each case study airport's air service, including the airlines serving each airport, nonstop markets, number of daily flights, and aircraft types.

A detailed discussion of the specific factors contributing to the commercial air service levels at each of the case study airports is provided in the following sections.

Table H-7

Comparison of Case Study Airport Market Characteristics

	Mammoth Lakes	Steamboat Springs	Vail	Aspen	Jackson Hole	Kalispell/ Whitefish
<u>General Statistics</u>						
Skier Days	956,573 ³	1,027,729 ¹	5,736,902 ²	1,510,144 ⁸	541,000 ⁵	556,000 ⁹
Number of Lifts	30	25 ¹	115 ²	45 ⁸	18	10
Number of Trails	150	155 ¹	780 ²	383 ⁸	173	67
Skiable Acreage	3,500 +	2,964 ¹	13,481 ²	5,242 ⁸	5,900	3,000
Beds/Pillows	14,730	N/A	44,000 ⁴	N/A	7,822 ⁵	N/A
Number of National Park Visitors	5,375,090 ⁶	--	--	--	5,877,890 ⁷	2,234,456 ¹⁰
<u>Driving Distance to Nearest Commerical Service Airport (miles)</u>						
Reno		170				
Las Vegas		310				
Fresno		190				
San Francisco / Oakland / San Jose		250				
Los Angeles		320				
Denver International Airport			210	120	170	
Yampa Valley Regional Airport			--	85	130	
Vail/Eagle County Airport			85	--	75	
Aspen			130	100	--	
Idaho Falls					100	
Jackson Hole					--	
Yellowstone Regional					70	
Riverton Regional					130	
Salt Lake City					270	
Casper					280	
Missoula						125
Great Falls						230
Helena						200
<u>1998 Activity Statistics</u>						
Annual Enplanements		--	110,621	169,740	248,510	184,903
Annual Scheduled Aircraft Seats		--	165,817	301,324	541,496	334,364
Load Factor		--	66.7%	56.3%	45.9%	55.3%

1. Colorado Ski Country USA. Includes the ski resorts located in the Front Range Destination including, Arapahoe Basin, Beaver Creek, Breckenridge, Copper Mountain, Keystone, Vail, and Ski Cooper.
2. Colorado Ski Country USA. Includes Howelsen Hill and Steamboat resorts.
3. California Department of Transportation (CalTrans).
4. Vail Chamber of Commerce.
5. National Park Service. Includes Yellowstone National Park and Grand Teton National Park.
6. National Park Service. Includes Yellowstone National Park, Kings Canyon National Park, and Death Valley National Park.
7. Jackson Chamber of Commerce.
8. Colorado Ski Country USA. Includes the Aspen Highlands, Aspen Mountain, Buttermilk, Snowmass, and Sunlight ski resorts.
9. Big Mountain Ski Resort.
10. National Park Service. Includes Yellowstone National Park, Kings Canyon National Park, and Death Valley National Park.

Source: Ricondo & Associates, Inc., October 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table H-8**Historical Activity at Case Study Airports**

YAMPA VALLEY REGIONAL AIRPORT							
Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (100%)	Skier Days 1	EPs per Ski Visitor
1990	46,075	--	94,335	48.8%	46,075	N/A	N/A
1991	60,309	30.89%	125,416	48.1%	60,309	N/A	N/A
1992	58,643	-2.76%	91,981	63.8%	58,643	N/A	N/A
1993	66,317	13.09%	90,233	73.5%	66,317	N/A	N/A
1994	69,299	4.50%	106,945	64.8%	69,299	1,037,320	0.0668
1995	93,173	34.45%	154,790	60.2%	93,173	1,027,701	0.0907
1996	97,975	5.15%	150,310	65.2%	97,975	1,035,110	0.0947
1997	110,170	12.45%	168,662	65.3%	110,170	1,121,487	0.0982
1998	110,621	0.41%	165,817	66.7%	110,621	1,068,091	0.1036
(1990-1998) Annual Compounded Growth Rate		11.6%	7.3%			0.7%	
VAIL/EAGLE COUNTY AIRPORT							
Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (90%)	Skier Days 1	EPs per Ski Visitor
1990	5,956	--	16,302	36.5%	5,360	N/A	N/A
1991	28,341	375.84%	58,608	48.4%	25,507	N/A	N/A
1992	35,317	24.61%	56,513	62.5%	31,785	N/A	N/A
1993	55,490	57.12%	102,541	54.1%	49,941	N/A	N/A
1994	57,821	4.20%	86,495	66.8%	52,039	4,667,635	0.0111
1995	77,882	34.70%	115,514	67.4%	70,094	5,476,402	0.0128
1996	110,063	41.32%	149,519	73.6%	99,057	5,896,743	0.0168
1997	159,874	45.26%	263,144	60.8%	143,887	6,136,048	0.0234
1998	169,740	6.17%	301,324	56.3%	152,766	5,935,018	0.0257
(1990-1998) Annual Compounded Growth Rate		52.0%	44.0%			6.2%	
ASPEN-PITKIN COUNTY AIRPORT							
Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (60%)	Skier Days 1	EPs per Ski Visitor
1990	214,725	--	448,770	47.8%	128,835	N/A	N/A
1991	206,041	-4.04%	435,057	47.4%	123,625	N/A	N/A
1992	238,097	15.56%	472,268	50.4%	142,858	N/A	N/A
1993	251,914	5.80%	460,037	54.8%	151,148	N/A	N/A
1994	239,050	-5.11%	438,874	54.5%	143,430	1,542,094	0.0930
1995	200,685	-16.05%	312,216	64.3%	120,411	1,518,723	0.0793
1996	210,672	4.98%	345,494	61.0%	126,403	1,433,187	0.0882
1997	224,815	6.71%	431,884	52.1%	134,889	1,536,309	0.0878
1998	248,510	10.54%	541,496	45.9%	149,106	1,661,775	0.0897
(1990-1998) Annual Compounded Growth Rate		1.8%	2.4%			1.9%	

Table H-8

Historical Activity at Case Study Airports

JACKSON HOLE AIRPORT							
Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (35%)	National Park Visitors ²	EPs per NP Visitor
1990	148,144	--	299,613	49.4%	51,850	4,411,825	0.0118
1991	170,458	15.06%	335,281	50.8%	59,660	4,546,289	0.0131
1992	192,283	12.80%	390,526	49.2%	67,299	4,889,041	0.0138
1993	192,982	0.36%	391,856	49.2%	67,544	5,480,882	0.0123
1994	181,080	-6.17%	328,837	55.1%	63,378	5,586,844	0.0113
1995	169,062	-6.64%	289,470	58.4%	59,172	5,856,300	0.0101
1996	180,120	6.54%	327,931	54.9%	63,042	5,745,610	0.0110
1997	191,057	6.07%	334,045	57.2%	66,870	5,548,275	0.0121
1998	199,693	4.52%	334,364	59.7%	69,893	5,877,890	0.0119
(1990 – 1998) Annual Compound Growth Rate		3.8 %	1.4 %			3.7 %	
GLACIER PARK INTERNATIONAL AIRPORT							
Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (50%)	National Park Visitors ³	EPs per NP Visitor
1990	70,883	--	198,591	35.7%	35,442	2,173,164	0.0326
1991	76,652	8.14%	206,852	37.1%	38,326	2,300,619	0.0333
1992	85,953	12.13%	205,748	41.8%	42,977	2,411,191	0.0356
1993	89,553	4.19%	220,138	40.7%	44,777	2,383,980	0.0376
1994	101,715	13.58%	226,570	44.9%	50,858	2,403,603	0.0423
1995	114,971	13.03%	252,711	45.5%	57,486	2,091,783	0.0550
1996	121,341	5.54%	223,545	54.3%	60,671	2,025,179	0.0599
1997	130,620	7.65%	253,713	51.5%	65,310	2,055,902	0.0635
1998	133,515	2.22%	231,389	57.7%	66,758	2,234,456	0.0598
(1990 – 1998) Annual Compound Growth Rate		8.2 %	1.9%			0.3%	

¹ Colorado Ski County USA.² National Park Service. Includes Yellowstone National Park and the Grand Teton National Park.³ National Park Service. Includes Glacier National Park and Glacier Bay National Park.

Source: Individual Airport Records.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table H-9

Existing Air Service at Case Study Airports

Airport	Airlines	Nonstop Markets	Number of Daily Flights	Aircraft Types
Yampa Valley Regional Airport (Winter Schedule)	American, Continental, Trans World, United Express	Denver, Dallas/Ft. Worth, Newark, Houston, St. Louis	11	B-737-300, B-737-500, B-757, BAE 146, Dornier 328, MD-80
Vail/Eagle County Airport (Winter Schedule)	American, Continental, Delta, Mesa, Northwest, United, United Express	Atlanta, Denver, Dallas/Ft. Worth, Detroit, Newark, Houston, Los Angeles, LaGuardia, Miami, Minneapolis, Chicago O'Hare, Phoenix, San Francisco	16	B-757, BAE 146, Dash-8
Aspen-Pitkin County Airport (Winter Schedule)	America West, Mesa, Mesaba, Northwest, United, United Express	Denver, Los Angeles, Minneapolis, Phoenix	17	BAE 146, Dash-8, Dornier 328
Jackson Hole Airport (Summer Schedule)	American, Skywest, Delta, United, United Express	Dallas/Ft. Worth, Denver, Salt Lake City	17	A-319, B-757, BAE 146, Emb 120
Glacier Park International Airport (Summer Schedule)	Alaska, Continental, Delta, Big Sky, Northwest, Horizon	Spokane, Great Falls, Helena, Missoula, Minneapolis, Seattle, Salt Lake City	14	Dash-8, DC-9-30/40/50, F28, Metro, B-727-200, B-737-300

Source: Official Airline Guide, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000

H.2.1 Yampa Valley Regional Airport (Steamboat Springs, Colorado)

The Yampa Valley Regional Airport is situated in the Rocky Mountains in Northwestern Colorado. Yampa Valley predominately serves winter ski visitors to the area. In terms of skiing characteristics, Steamboat Springs is the most comparative in size to Mammoth Lakes. The Yampa Valley Regional Airport essentially serves two area ski resorts: the Steamboat and Howelsen ski resorts. Combined, these two ski resorts accommodated 1,028,000 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. Similarly, these ski resorts provide similar size ski facilities, in terms of number of lifts (25 lifts versus 30 lifts at Mammoth Lakes), number of ski trails (155 trails versus 150 trails at Mammoth Lakes), and skiable acreage (2,964 acres versus 3,500 plus acres at Mammoth Lakes).

In addition to the Yampa Valley Regional In addition to the Yampa Valley Regional Airport, three other commercial service airports are located nearby including Denver International (210 miles), Vail/Eagle County Airport (85 miles), and Aspen (130 miles). Given the proximity and the level of service provided at Denver, these airports likely serve some ski visitors traveling to the Steamboat Springs area. Due to the indirect two lane access from these airports to Steamboat Springs, however, approximately 75 to 85 percent of the ski visitors traveling by air are estimated to arrive via the Yampa Valley Regional Airport. Due to the indirect two lane access from these airports to Steamboat

Springs, however, approximately 75 to 85 percent of the ski visitors traveling by air are estimated to arrive via the Yampa Valley Regional Airport.

Until as recently as this summer, Yampa Valley Regional Airport did not have any scheduled commercial service during the summer months. During the 1999 winter season, Yampa Valley Regional was provided with 11 daily flights by four commercial air carriers (American, Continental, Trans World and United) and one regional/commuter airline (United Express). United Express also provides service to Yampa Valley in the summer. As shown in Table H-8, Yampa Valley's enplanements have increased from 46,100 in 1990 to 110,600 in 1998, representing an annual compounded growth rate of 11.6 percent. Overall, average aircraft load factors have increased as well, averaging approximately 66.7 percent in 1998.

Table H-10 presents the top 30 origin and destination (O&D) markets for Yampa Valley Regional Airport. As shown, Chicago O'Hare is Yampa Valley's top O&D market, with over 7 percent of the Airport's traffic originating from the Chicago O'Hare Airport. The states of New York and Texas also constitute major O&D markets for Yampa Valley.

Table H-10

Yampa Valley Regional Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	O'Hare Intl	IL	7,210	7.3%
2	George Bush Int	TX	5,340	5.4%
3	Newark Intl	NY	5,320	5.4%
4	Dallas/Ft Worth	TX	4,800	4.9%
5	Atlanta	GA	3,680	3.7%
6	Denver Intl	CO	3,520	3.6%
7	La Guardia	NY	3,300	3.3%
8	St Paul Intl	MN	2,810	2.8%
9	Los Angeles Intl	CA	2,700	2.7%
10	Philadelphia Intl	PA	2,470	2.5%
11	Lambert-St Louis	MO	2,400	2.4%
12	Tampa Intl	FL	2,110	2.1%
13	Boston Logan	MA	2,070	2.1%
14	Orlando Intl	FL	2,040	2.1%
15	Miami Intl	FL	2,000	2.0%
16	Detroit	MI	1,870	1.9%
17	Dulles Intl	DC	1,840	1.9%
18	Moisant Intl	LA	1,770	1.8%
19	San Francisco Intl	CA	1,580	1.6%
20	Baltimore/Wash Intl	MD	1,560	1.6%
21	Sky Harbor Intl	AZ	1,440	1.5%
22	Austin	TX	1,270	1.3%
23	Memphis Intl	TN	1,270	1.3%
24	Hopkins Intl	OH	1,220	1.2%
25	Lindberg Field	CA	1,170	1.2%
26	Indianapolis	IN	1,160	1.2%
27	Fort Laud Intl	FL	1,150	1.2%
28	Nashville	TN	1,120	1.1%
29	Charlotte	NC	1,040	1.1%
30	Birmingham	AL	980	1.0%
Total – Top 30 Markets			72,210	73.2 %
Total – All Markets			98,700	100.0 %

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Ski visitors to Steamboat Springs resorts have remained relatively constant since 1994, averaging approximately 1.06 million visitors from 1994 to 1998 (see Table H-8). Based on conversations with staff, historical scheduled seats at the Airport and winter enplanements are estimated to be approximately 90 percent of the Airport's total annual enplanements. When compared to ski visitor statistics for Steamboat Springs, the number of estimated winter enplanements per ski visitor has increased since 1994 from 0.067 enplanements per ski visitor to approximately 0.104 enplanements per ski visitor in 1998.

H.2.2 Vail/Eagle County Airport (Vail, Colorado)

Vail/Eagle County Airport is situated in the Rocky Mountains in Northwestern Colorado. Similar to the Yampa Valley Regional Airport, Vail/Eagle County Airport also predominately serves winter ski visitors to the area. Skiing activity in Vail is nearly six times greater than that of Mammoth Lakes or Steamboat Springs. There are seven ski resorts located in the Vail area: Arapahoe Basin, Beaver Creek, Breckenridge, Copper Mountain, Keystone, Vail and Ski Cooper. Combined, these ski resorts accommodated 5,737,000 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. These seven ski resorts provide 115 ski lifts, 780 ski trails, and 13,481 skiable acres.

In addition to the Vail/Eagle County Airport, three other commercial service airports are located nearby: Yampa Valley Regional Airport (85 miles), Aspen (100 miles) and Denver International (120 miles). Given their proximity, particularly Denver International Airport, these airports serve some ski visitors traveling to the Vail area. Direct interstate access via I-70 is provided from Denver to Vail, thereby likely resulting in some diversion of air traffic destined for the Vail area.

Commercial service was initiated at Vail/Eagle County Airport in late 1990. Since that time, the level of commercial service and airport enplanements has grown considerably. As shown in Table H-8, enplanements have increased from 6,000 in 1990 to 170,000 in 1998, representing an annual compounded growth rate of 52.0 percent. Similarly, the number of scheduled aircraft seats at the Vail/Eagle County Airport has increased at an annual compounded rate of 44.0 percent from 1990 to 1998. Overall, average aircraft load factors have increased as well, averaging approximately 56.3 percent in 1998. As mentioned previously, the airport's average aircraft load factors have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and/or expansion of new nonstop hub service by United to LaGuardia, Chicago, and Dulles; American to Chicago, Los Angeles, and Newark; and Continental to Houston and Newark. While the Airport is still in a growth mode, the market is considered to be maturing and is likely to level off in terms of overall air service and enplanement growth in the near-term.

During the 1999 winter season, Vail/Eagle County Airport was provided with 16 daily flights on weekdays and 30 flights on weekends, by five commercial air carriers (American, Continental, Delta, Northwest and United) and two regional/commuter airline (United Express and Mesa). United Express also provides service to the Airport in the summer.

Table H-11 presents the top 30 origin and destination (O&D) markets for Vail/Eagle County Airport. Similar to Yampa Valley, the states of New York and Texas constitute major O&D markets for the Airport. In particular, when combined, the New York markets account for 17.3 percent of the Airport's demand. Chicago O'Hare and Los Angeles are also major markets for Vail, accounting for 6.0 percent and 5.3 percent of Vail/Eagle County Airport's O&D traffic, respectively.

Table H-11

Vail/Eagle County Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	Newark Intl	NY	16,100	10.2%
2	La Guardia	NY	11,160	7.1%
3	O'Hare Intl	IL	9,430	6.0%
4	Dallas/Ft Worth	TX	8,350	5.3%
5	Los Angeles Intl	CA	8,340	5.3%
6	Miami Intl	FL	6,950	4.4%
7	George Bush Int	TX	5,700	3.6%
8	Atlanta	GA	5,270	3.4%
9	St Paul Intl	MN	4,720	3.0%
10	Detroit	MI	4,200	2.7%
11	Boston Logan	MA	4,000	2.5%
12	Philadelphia Intl	PA	3,860	2.5%
13	Tampa Intl	FL	2,810	1.8%
14	San Francisco Intl	CA	2,440	1.6%
15	Dulles Intl	DC	2,390	1.5%
16	Fort Lauderdale Intl	FL	2,300	1.5%
17	Baltimore/Wash Intl	MD	2,080	1.3%
18	Nashville	TN	2,020	1.3%
19	Raleigh/Durham	NC	1,900	1.2%
20	Orlando Intl	FL	1,890	1.2%
21	West Palm Beach	FL	1,770	1.1%
22	Bradley Intl	CT	1,680	1.1%
23	Birmingham	AL	1,650	1.0%
24	Memphis Intl	TN	1,630	1.0%
25	Hopkins Intl	OH	1,590	1.0%
26	Charlotte	NC	1,560	1.0%
27	Indianapolis	IN	1,550	1.0%
28	Ronald Regan National	DC	1,520	1.0%
29	Moisant Intl	LA	1,500	1.0%
30	Pittsburgh Intl	PA	1,420	0.9%
Total – Top 30 Markets			121,780	77.4 %
Total – All Markets			157,310	100.0 %

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.
 Prepared by: Ricondo & Associates, Inc., October 2000.

Ski visitors to the Vail ski resorts have increased since 1994 from 47 million skiers in 1994 to nearly 6.0 million skiers in 1998 (see Table H-8). Based on conversations with staff, historical scheduled seats at the Airport and winter enplanements are estimated to be approximately 90 percent of the Airport's total annual enplanements. The number of estimated winter enplanements per ski visitor has increased in the last five years from approximately 0.011 in 1994 to approximately 0.026 in 1998. The lower ratio of enplanements to ski visitor ratio for Vail/Eagle County Airport can be directly attributed to the competition for commercial service with other nearby commercial service airports, primarily Denver International Airport.

H.2.3 Aspen-Pitkin County Airport (Aspen, Colorado)

Aspen-Pitkin County Airport is situated in the Rocky Mountains in Northwestern Colorado. Similar to the Yampa Valley Regional and Vail/Eagle County airports, the Airport predominately serves winter ski visitors. There are five ski resorts located in the Aspen area: Aspen Highlands, Aspen Mountain, Buttermilk, Snowmass, and Sunlight ski resorts. Combined, these ski resorts accommodated 1,510,144 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. Combined, these five ski resorts provide 45 ski lifts, 383 ski trails, and 5,242 skiable acres.

In addition to the Aspen-Pitkin County Airport, three other commercial service airports are located nearby: Vail/Eagle County (75 miles), Yampa Valley Regional Airport (130 miles), and Denver International (170 miles). Given their proximity, particularly Denver International Airport, these airports serve some ski visitors traveling to the Aspen area.

During the 1999 winter season, Aspen-Pitkin County Airport was provided with 17 daily flights by three commercial air carriers (America West, Northwest, and United) and three regional/commuter airlines (Mesa, Mesaba, and United Express). As shown in Table H-8, the Airport's enplanements have increased from 214,725 in 1990 to 248,510 in 1998, representing an annual compounded growth rate of 1.8 percent. Overall, average aircraft load factors have decreased in recent years, averaging approximately 45.9 percent in 1998. This decrease in average aircraft load factors is due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and expansion of new nonstop hub service by Aspen Mountain Air to Denver; Mesaba Aviation to Minneapolis; and Mesa Airlines to Phoenix.

Table H-12 presents the top 30 origin and destination (O&D) markets for Aspen-Pitkin County Airport. As shown, Denver constitutes the Airport's top O&D market with nearly 13 percent of the Airport's passengers traveling to and from Denver. Similar to Yampa Valley and Vail/Eagle County airports, the states of California, New York, and Texas also constitute major O&D markets for the Aspen-Pitkin County Airport. When combined, California markets account for 14.0 percent of the Airport's demand, while the New York markets account for 10.4 percent of the Airport's demand.

Chicago O'Hare is also a major market from Aspen, accounting for 6.9 percent of the Airport's O&D traffic. Visitors to Aspen ski resorts have increased since 1994 from 1.5 million skiers in 1994 to nearly 1.7 million skiers in 1998 (see Table H-8). Based on conversations with staff, historical scheduled seats at the Aspen-Pitkin County Airport, winter enplanements are estimated to be approximately 60 percent of the Airport's total annual enplanements. The number of estimated winter enplanements per ski visitor has remained relatively constant in the last five years, averaging approximately 0.088 winter enplanements per skier.

H.2.4 Jackson Hole Airport (Jackson, Wyoming)

Jackson Hole Airport is located in the Rocky Mountain range in Northwestern Wyoming. Similar to Mammoth Lakes, Jackson Hole serves two distinct seasonal attractions, skiing in the winter and numerous outdoors recreational activities in the summer. Skiing is provided at the Snow King, Jackson Hole and Grand Targhee resorts. Combined, these ski resorts attracted approximately 541,000 skiers to the region in 1998. During the summer, major attractions are the Grand Teton National Park, Yellowstone National Park and numerous national forest parks in the region. Based on statistics provided by the National Park Service, nearly 6.0 million tourists visited nearby Yellowstone and Grand Teton national parks in 1998.

Table H-12

Aspen-Pitkin County Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	Denver Intl	CO	29,980	12.8%
2	O'Hare Intl	IL	16,130	6.9%
3	Los Angeles Intl	CA	15,410	6.6%
4	La Guardia	NY	15,150	6.5%
5	Dallas/Ft Worth	TX	10,210	4.4%
6	San Francisco Intl	CA	9,170	3.9%
7	Newark Intl	NY	9,160	3.9%
8	Miami Intl	FL	8,770	3.7%
9	Dulles Intl	DC	6,650	2.8%
10	George Bush Intl	TX	5,900	2.5%
11	Phoenix	AZ	5,660	2.4%
12	Logan Intl	MA	5,320	2.3%
13	Detroit	MI	5,050	2.2%
14	Philadelphia Intl	PA	4,590	2.0%
15	Atlanta	GA	4,530	1.9%
16	Minneapolis	MN	4,470	1.9%
17	San Diego	CA	3,820	1.6%
18	John Wayne Intl	CA	3,100	1.3%
19	Seattle	WA	2,890	1.2%
20	Baltimore/Wash Intl	MD	2,610	1.1%
21	Orlando Intl	FL	2,610	1.1%
22	St Louis	MO	2,610	1.1%
23	Tampa Intl	FL	2,410	1.0%
24	Hopkins Intl	OH	2,300	1.0%
25	New Orleans	LA	2,130	0.9%
26	Kansas City Intl	MO	1,840	0.8%
27	Indianapolis	IN	1,740	0.7%
28	San Jose	CA	1,500	0.6%
29	Las Vegas	NV	1,460	0.6%
30	Oakland	CA	1,430	0.6%
Total – Top 30 Markets			188,600	80.5 %
Total – All Markets			234,270	100.0 %

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Five other commercial service airports are located in the region: Yellowstone Regional Airport (70 miles), Idaho Falls Airport (100 miles), Riverton Regional Airport (130 miles), Salt Lake City (270 miles), and Natrona County International Airport (280 miles). The close proximity of Yellowstone Regional and Idaho Falls in particular, result in competition for commercial air service visitors to the region.

Commercial service at Jackson Hole Airport also revolves around its winter and summer seasons. Commercial service during the winter and summer increases, while it decreases during the spring and fall. In 1999, during the winter and summer an average of 17 daily flights were provided via three air

carrier airlines (American, Delta and United) and two regional/commuter airlines (Delta Connection and

United Express). Of the Airport's annual enplanements, however, winter enplanements represent a larger percentage of total enplanements than summer enplanements. Based on discussions with airport staff, it is estimated that between 60 and 70 percent of total enplanements occur in the winter, while the remaining 30 to 40 percent of enplanements occur in the summer. This is based on a number of factors including:

- Change in traveler types (i.e., singles/couples in the winter, who are more likely to fly, versus families in the summer, who are more likely to drive)
- Adverse weather for driving conditions during the winter
- More affluent ski travelers in the winter

As shown in Table H-8, Jackson Hole Airport's enplanements have increased from 148,000 in 1990 to 185,000 in 1998, representing an annual compounded growth rate of 2.8 percent. Overall, average aircraft load factors have increased as well, averaging approximately 55.3 percent in 1998.

Table H-13 presents the top 30 origin and destination (O&D) markets for Jackson Hole Airport. As shown, Chicago is the Airport's top O&D market, with nearly 6 percent of the Airport's traffic originating from the Chicago O'Hare Airport. Denver represents the Airport's second highest O&D market, with 5.5 percent of the Airport's traffic originating from Denver. The states of New York (8.5 percent), California (9.6 percent), and Texas (5.3 percent) also constitute major O&D markets for the Jackson Hole Airport.

National park visitors to Yellowstone and Grand Teton National parks have increased from 4.4 million visitors in 1990 to nearly 5.9 million visitors in 1998 (see Table H-8). Based on conversations with staff, historical scheduled seats at the Airport, summer enplanements are estimated to be approximately 35 percent of total annual enplanements. When compared to national park visitor statistics provided by the National Park Service, the number of estimated summer enplanements per national park visitor has remained relatively constant since 1990, averaging approximately 0.0119 summer enplanements per visitor.

H.2.5 Glacier Park International Airport (Kalispel, Montana)

Glacier Park International Airport is located in the Rocky Mountain range in Northwestern Montana. Similar to Mammoth Lakes and Jackson Hole, Glacier Park serves two distinct seasonal attractions, skiing in the Winter and numerous outdoor recreational activities in the summer. Skiing is provided at the Big Mountain ski resort. This ski resort served approximately 556,000 skiers in 1999. During the summer, major attractions include the Glacier National Park, Flathead Lake, Flathead National Forest, and numerous other national parks in the region. Based on statistics provided by the National Park Service, nearly 2.2 million tourists visited nearby Glacier National Park in 1998.

Compared to the other case study airports, Glacier Park International Airport is considered to have less competition for air travelers to the region due to its distance from other airports in the region. The other commercial service airports located in proximity to the region are Missoula (125 miles), Helena (200 miles) and Great Falls International (230 miles).

Table H-13**Jackson Hole Airport - Top O&D Markets**

Rank	Airport	State	Passengers	Percent
1	O'Hare Intl	IL	10,620	5.9%
2	Denver Intl	CO	9,940	5.5%
3	Los Angeles Intl	CA	6,930	3.8%
4	La Guardia	NY	6,770	3.8%
5	Atlanta	GA	6,740	3.7%
6	Boston Logan	MA	6,500	3.6%
7	Dallas/Ft Worth	TX	6,410	3.6%
8	Newark Intl	NY	5,940	3.3%
9	San Francisco Intl	CA	5,920	3.3%
10	Dulles Intl	DC	5,700	3.2%
11	Salt Lake Intl	UT	5,330	3.0%
12	Philadelphia Intl	PA	4,460	2.5%
13	George Bush Intl	TX	3,070	1.7%
14	St Paul Intl	MN	3,030	1.7%
15	Sky Harbor Intl	AZ	2,810	1.6%
16	Detroit	MI	2,790	1.5%
17	San Diego	CA	2,640	1.5%
18	John F Kennedy	NY	2,530	1.4%
19	Seattle/Tacoma	WA	2,530	1.4%
20	Orlando Intl	FL	2,360	1.3%
21	Baltimore/Wash Intl	MD	2,120	1.2%
22	Nashville	TN	2,060	1.1%
23	Cincinnati/N KY Intl	OH	2,030	1.1%
24	Raleigh/Durham	NC	2,030	1.1%
25	John Wayne Intl	CA	2,030	1.1%
26	Bradley Intl	CT	1,940	1.1%
27	San Jose	CA	1,750	1.0%
28	Charlotte	NC	1,710	0.9%
29	Miami Intl	FL	1,690	0.9%
30	Tampa Intl	FL	1,680	0.9%
Total – Top 30 markets			122,060	67.7%
Total – All Markets			180,310	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table H-14**Glacier Park International Airport - Top O&D Markets**

Rank	Airport	State	Passengers	Percent
1	Seattle	WA	11,350	8.8%
2	Los Angeles Intl	CA	6,160	4.8%
3	Phoenix	AZ	5,550	4.3%
4	Salt Lake Intl	UT	5,350	4.1%
5	San Francisco Intl	CA	4,350	3.4%
6	Portland	OR	4,230	3.3%
7	Denver Intl	CO	3,890	3.0%
8	Las Vegas	NV	3,490	2.7%
9	Minneapolis	MN	3,300	2.6%
10	Dallas/Ft Worth	TX	3,240	2.5%
11	San Diego	CA	2,840	2.2%
12	O'Hare Intl	IL	2,750	2.1%
13	Sacramento Metro	CA	2,630	2.0%
14	Atlanta	GA	2,510	1.9%
15	San Jose Mun	CA	2,390	1.9%
16	John Wayne Intl	CA	2,080	1.6%
17	Orlando Intl	FL	1,820	1.4%
18	Billings	MT	1,810	1.4%
19	Ontario Intl	CA	1,810	1.4%
20	Dulles Intl	DC	1,720	1.3%
21	John F Kennedy	NY	1,720	1.3%
22	Kansas City Intl	MO	1,590	1.2%
23	Boston	MA	1,580	1.2%
24	Oakland	CA	1,510	1.2%
25	Newark Intl	NY	1,430	1.1%
26	Elko	NV	1,320	1.0%
27	George Bush Intl	TX	1,310	1.0%
28	Philadelphia Intl	PA	1,310	1.0%
29	Anchorage Intl	AK	1,300	1.0%
30	Reno	NV	1,240	1.0%
Total – Top 30 Markets			87,580	67.8%
Total – All Markets			129,150	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.
 Prepared by: Ricondo & Associates, Inc., October 2000.

Commercial service at Glacier Park International Airport also revolves around its winter and summer seasons. During the winter and summer, commercial service increases, while it decreases during the spring and fall months. During the 1999 summer season, 14 daily flights are provided via four air carrier airlines (Alaska, Continental, Delta, and Northwest) and two regional/commuter airlines (Big Sky and Horizon). Historically, summer activity has accounted for a majority of annual enplanements, however recently, winter skiing at Big Mountain has increased. Based on discussions with airport staff, it is estimated that approximately 50 percent of total enplanements now occur in the winter.

As shown in Table H-8, Glacier Park International Airport's enplanements have increased from 70,883 in 1990 to 133,515 in 1998, representing an annual compounded growth rate of 8.2 percent. Overall, average aircraft load factors have increased as well, averaging approximately 57.7 percent in 1998.

Table H-14 presents the top 30 origin and destination (O&D) markets for Glacier Park International Airport. As shown, the Airport's O&D patterns are more heavily weighted towards West Coast markets than the other case study airports. With the exception of Minneapolis and Dallas/Ft. Worth, eight of the Airport's top ten O&D markets are western markets. Seattle and Los Angeles represent the first and second highest O&D markets, accounting for 8.8 percent and 4.8 percent of the O&D traffic, respectively.

Visitors to Glacier National Park have remained relatively constant, averaging 2.2 million visitors in 1998 (see Table H-8). As mentioned previously, based on conversations with staff, historical scheduled seats at the Airport, summer enplanements are estimated to be approximately 50 percent of total annual enplanements. When compared to national park visitor statistics provided by the National Park Service, the number of estimated summer enplanements per national park visitor has increased since 1990, from 0.033 enplanements per national park visitor to 0.060 enplanements per national park visitor in 1998.

H.3 Basis for Enplanement Projections

For the purposes of case study methodology in this analysis, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. As such, actual statistics for skier-days at each of the comparable airports were obtained. Skier-days represent the number of days (i.e., duration) multiplied by the number of skiers visiting each of the ski resorts. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport. Skier-day statistics also represent a reliable source of data since this data is collected by the ski resorts through lift ticket sales, and is used by the ski resorts to track historical skier activity at each respective resort. This historical data is also used by the ski resorts to provide estimates of future skier activity for the ski resorts, which can be used as a basis for estimating future winter enplanements at the Airport.

Summer season enplanements at the Airport are assumed to be a function of the number of national park visitors to the region's national parks. As a result, the number of annual national park visitors at the respective national parks served by each of the comparable airports was gathered. This data served to provide an estimate of the level of summer enplanements that might be expected to occur at the Airport. Summer season enplanements were then determined based on an estimate of a percentage of the Airport's annual enplanements anticipated to occur during the summer season.

Enplanements at the Airport by regional residents are anticipated to be a small percentage of the summer and winter traffic at the Airport. Local passengers were included as part of the overall statistics for the case study airports and forecasts for Mammoth Yosemite Airport.

The following sections provide a discussion of the assumptions used to project passenger enplanements at the Airport.

H.4 Estimated Base Year Demand

The Airport's base year demand for 1999 was developed through a review of each case study airport's activity levels and visitor statistics. The goal of estimating the Airport's base year demand is to define a current "potential" demand level that might occur at Mammoth Yosemite Airport based on the level of tourists and visitors attracted to the region, and without other significant influences from other sources (i.e., competing commercial service at other airports capture of area visitors that would otherwise drive, etc.). Under this scenario, some demand is assumed to continue to occur at other airports (i.e., primarily Los Angeles), with those visitors driving to the Mammoth Lakes region.

Table H-15 presents the estimated base year demand enplanements for 1999 based on a ratio of enplanements to skier visits, and percentage of summer enplanements to total airport enplanements. As shown, there is a total of approximately 135,500 potential enplanements, or unmet demand, for the Airport in 1999. It is important to note that this level of enplanements is considered to be the total demand potential for the Airport today, and is not representative of the level of enplanements that would occur in the first year of operation at Mammoth Lakes. As experienced in the Vail/Eagle County market, it would likely take the Mammoth Yosemite Airport up to five years to reach its total demand potential.

Table H-15

Estimated Base Year (1999) Enplanements

Winter Season Enplanements (60% of Total)	
1999 Mammoth Skier Visits	956,573
Ratio of Enplanements to Skier Visits	0.085
<i>Estimated Potential Winter Enplanements (1999)</i>	81,300
Summer Season Enplanements (40% of Total)	
<i>Estimated Potential Summer Enplanements (1999)</i>	54,200
ESTIMATED TOTAL POTENTIAL AIRPORT ENPLANEMENTS	135,500

Source: Ricondo & Associates, Inc., July 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

Of the Airport's total estimated potential demand for 1999, approximately 81,300 enplanements were estimated to occur during the winter season from late November through early April. This estimate was derived based on an assumed ratio of 0.085 enplanements per skier. As shown previously in

Table H-8, enplanements per skier at Yampa Valley Regional, Vail/Eagle County, and Aspen-Pitkin County airports were 0.104, 0.026, and 0.090 in 1998, respectively. The ratio for Mammoth Lakes would be considered conservative when compared with Yampa Valley and Aspen-Pitkin. The somewhat higher enplanement per skier ratio for Mammoth Lakes when compared with Vail/Eagle is based on the fact that the Mammoth Lakes region is further from other competing commercial service airports.

Similar to the visitor characteristics occurring at each of the other case study airports, it is assumed that a majority of the enplanements at Mammoth Lakes would be derived from the winter skiing activities. This is primarily due to the change in tourism demographics, from more affluent individual visitors in the winter to more discretionary family-oriented visitors in the summer. In addition, many visitors choose to make their trips via automobile in the summer months. As exhibited by each of the case study airports, anywhere from between 50 percent and 100 percent of each airport's annual enplanements occur during the winter season. Excluding Yampa Valley Regional and Vail/Eagle County airports, which serve predominately winter skiers, the percentage of winter enplanements ranges from 50 percent to 65 percent of total annual enplanements. Based on an assumption of 60 percent of the Airport's annual enplanements occurring in the winter season and the previous estimate of 81,300 winter enplanements, a total of approximately 54,200 enplanements were estimated to occur in the summer months from April through November. Because of the potential restrictions currently being proposed by the National Park Service on private vehicles in Yosemite National Park, there is the potential of an even greater percentage of summer visitors in the future given the Mammoth Lakes higher quality and larger bed base and expansion of the recently initiated day trips to Yosemite via the bus system.

H.5 Projection of Passenger Enplanements

Projections of passenger enplanements were prepared on the basis of local skier statistics, national park visitors, and anticipated trends in activity at the Airport. This section discusses the factors and assumptions made in projecting passenger enplanements at the Airport.

Summer season enplanements at the Airport are assumed to be a function of the number of national park visitors to the region's national parks. As a result, the number of annual national park visitors at the respective national parks served by each of the comparable airports was gathered. This data served to provide an estimate of the level of summer enplanements that might be expected to occur at the Airport. Summer season enplanements were then determined based on an estimate of a percentage of the Airport's annual enplanements anticipated to occur during the summer season.

Enplanements at the Airport by regional residents are anticipated to be a small percentage of the summer and winter traffic at the Airport. Local passengers were included as part of the overall statistics for the case study airports and forecasts for Mammoth Yosemite Airport.

Three enplanement scenarios were examined for the Airport to give an estimate of the range of enplanement activity that might occur at the Airport: Base Case scenario, Low Case scenario, and High Case scenario. The Base Case scenario was selected as the most reasonable forecast level to use for planning, design, engineering, and environmental analyses. Each of these scenarios are discussed in greater detail in the following sections.

H.5.1 Base Case Scenario

The Base Case scenario, which is modeled after the ratio of enplanements to skier days experienced at Aspen-Pitkin County Airport, is presented in **Table H-16**. As presented earlier in Table H-8, Aspen-Pitkin County Airport experiences more of an average enplanement to skier ratio - higher than those experienced at Vail/Eagle County Airport, but lower than those experienced at Yampa Valley Regional Airport. As shown under this scenario, the Airport's enplanements are projected to increase from approximately 37,000 in 2003 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent.

Table H-16

Projected Base Case Enplanements

Year	Projected Mammoth Lakes Area Skier Days ¹	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2003	1,058,000	0.035	37,000	100.0%	0	0.0%	37,000
2007	1,473,000	0.076	111,900	70.0%	48,000	30.0%	159,900
2012	1,775,000	0.082	145,600	60.0%	97,100	40.0%	242,700
2017	2,053,000	0.084	172,500	60.0%	115,000	40.0%	287,500
2022	2,356,000	0.085	200,300	60.0%	133,500	40.0%	333,800
Annual Compounded Growth Rate							
2003-2022	4.1%		8.8%		--		11.6%
2007-2022	3.2%		4.0%		7.1%		5.0%
2012-2022	2.9%		3.2%		3.2%		3.2%
2017-2022	2.8%		3.0%		3.0%		3.0%

¹Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.
Prepared By: Ricondo & Associates, Inc., October 2000.

As mentioned previously, it is anticipated that the Airport would not immediately realize its full demand potential. As such, a ratio of only 0.035 winter enplanements per skier was assumed for the Airport's first full year of operation in 2003. Beyond 2002, estimated winter enplanements per ski visitor for the Airport are assumed to increase from a ratio of approximately 0.035 winter enplanements per skier to approximately 0.085 winter enplanements per skier by 2022. This level of winter enplanements per skier approximates those experienced at Aspen-Pitkin County Airport.

Initially, the Airport is anticipated to provide commercial service only during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 37,000 in 2003 to 200,300 by 2022. Summer enplanements are projected to increase from approximately 48,000 in 2007 to 133,500 in 2022.

H.4.2 Low Case Scenario

Table H-17 presents projected activity for the Airport under the Low Case scenario. As shown, under this scenario, the Airport's enplanements are projected to increase from approximately 27,500 in 2003 to approximately 217,500 enplanements in 2022, representing an annual compounded growth rate of 10.9 percent. Under this scenario, the Airport would experience a winter enplanement to skier ratio less than both Yampa Valley Regional and Aspen-Pitkin County airports, but higher than that of Vail/Eagle County Airport (due to the high competition that Vail/Eagle County Airport experiences from Denver International).

As mentioned previously, it is anticipated that the Airport would not immediately realize its full demand potential. As such, a ratio of only 0.026 winter enplanements per skier was assumed for the Airport's first full year of operation in 2003. Beyond 2003, estimated winter enplanements per ski visitor for the Airport are projected to increase from a ratio of approximately 0.026 winter enplanements per skier to approximately 0.060 winter enplanements per skier by 2022.

Similar to the Base Case scenario, it is assumed that initially the Airport would only provide commercial service during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 65 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 27,500 in 2003 to 141,400 by 2022. Summer enplanements are projected to increase from approximately 22,600 in 2007 to 76,100 in 2022.

H.4.3 High Case Scenario

Table H-18 presents projected activity for the Airport under the High Case scenario. As shown, under this scenario, the Airport's enplanements are projected to increase from approximately 79,400 in 2003 to approximately 449,800 enplanements in 2022, representing an annual compounded growth rate of 9.1 percent. Under this scenario, the Airport would experience a winter enplanement to skier ratio which is higher than all of the case study airports. In addition, winter enplanements are estimated to account for approximately 55 percent of the Airport's annual enplanements. This level of enplanements might be experienced if the Airport were to secure a high level of nonstop service during both the winter and summer seasons, particularly from the Los Angeles market, thereby capturing a large number of visitors currently driving to the region.

As shown, the estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.075 winter enplanements per skier in 2003 to approximately 0.105 winter enplanements per skier by 2022. During the initial year of operation, it is assumed that the Airport would only provide commercial service during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 55 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 79,400 in 2003 to 247,400 by 2022. Summer enplanements are projected to increase from approximately 74,600 in 2007 to 202,400 in 2022.

Table H-17**Projected Low Case Enplanements**

Year	Projected Mammoth Lakes Area Skier Days ¹	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2003	1,058,000	0.026	27,500	100.0%	0	0.0%	27,500
2007	1,473,000	0.046	67,800	75.0%	22,600	25.0%	90,400
2012	1,775,000	0.056	99,400	65.0%	53,500	35.0%	152,900
2017	2,053,000	0.058	119,100	65.0%	64,100	35.0%	183,200
2022	2,356,000	0.060	141,400	65.0%	76,100	35.0%	217,500

Annual
Compounded
Growth Rate

2003-2022	4.1%	8.5%	--	10.9%
2007-2022	3.2%	5.0%	8.4%	6.0%
2012-2022	2.9%	3.6%	3.6%	3.6%
2017-2022	2.8%	3.5%	3.5%	3.5%

¹Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Table H-18**Projected High Case Enplanements**

Year	Projected Mammoth Lakes Area Skier Days ¹	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2003	1,058,000	0.075	79,400	100.0%	0	0.0%	79,400
2007	1,473,000	0.094	138,500	65.0%	74,600	35.0%	213,100
2012	1,775,000	0.097	172,200	55.0%	140,900	45.0%	313,100
2017	2,053,000	0.101	207,400	55.0%	169,700	45.0%	377,100
2022	2,356,000	0.105	247,400	55.0%	202,400	45.0%	449,800

Annual
Compounded
Growth Rate

2003-2022	4.1%	5.8%	--	9.1%
2007-2022	3.2%	3.9%	6.9%	5.1%
2012-2022	2.9%	3.7%	3.7%	3.7%
2017-2022	2.8%	3.6%	3.6%	3.6%

¹Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

H.6 Potential Nonstop Markets

This section provides an estimate of the Airport's top origin and destination (O&D) passenger markets. Utilizing the estimated top O&D markets for the Airport, an assessment can be made as to the feasibility of providing nonstop air service between Mammoth Lakes and various hub airports.

The Airport's estimated top O&D markets were determined based on survey efforts undertaken at the Mammoth Mountain ski resort, as well as the top O&D markets for the five case study airports. **Table H-19** presents the top 10 geographic markets, on a state-by-state basis, for the Mammoth Mountain ski resort. As shown, California represents the largest source of business by far, for the Mammoth Mountain ski resort, with approximately 87 percent of the lift ticket revenue for the resort. Of the California ski visitors, it is estimated that approximately 70 percent reside in the Los Angeles region. San Diego and the San Francisco Bay Area are the next largest markets in California. The United Kingdom represents the second largest market for the resort accounting for approximately 2.4 percent of the lift ticket revenue for the resort.

Table H-19

Mammoth Mountain Top Markets¹

Rank	State	Percentage
1	California	87.1%
2	United Kingdom	2.4%
3	Nevada	0.7%
4	Illinois	0.4%
5	Texas	0.4%
6	Arizona	0.3%
7	Florida	0.3%
8	New York	0.3%
9	Washington	0.2%
10	Hawaii	0.2%
	All Other Markets	<u>7.7%</u>
		100.0%

¹ Mammoth Mountain Source of Business Report, May 12, 1999.

Source: Ricondo & Associates, Inc., July 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table H-20 presents the Airport's estimated top O&D markets. As shown, the top O&D market for Mammoth Lakes is assumed to be Los Angeles (7 percent). In addition to serving domestic travelers, Los Angeles would also likely serve as the gateway for international air travelers. While some visitors that are currently driving from Los Angeles to the Mammoth Lakes region will change their mode of transportation from automobile to airplane, the vast majority of the region's visitors originating from Los Angeles are anticipated to continue to make the six hour drive northeast from Los Angeles by automobile. It is estimated that between 5 and 10 percent of the visitors now traveling to Mammoth Lakes from Los Angeles will choose to travel by air. San Francisco would likely serve as a gateway for international travelers as well, however, these travelers would likely

drive to Mammoth Lakes or connect through Los Angeles until such time as nonstop air service is provided. Similar to the other case study airports, Chicago O'Hare, New York (LaGuardia, John H. Kennedy, and Newark), and Dallas/Ft. Worth are also anticipated to be top O&D markets for the Airport.

Based on the estimated top O&D markets for the Airport, several hub airports were reviewed for their potential to provide nonstop service to Mammoth Lakes, and are briefly discussed below:

- Dallas/Ft. Worth (DFW) – American Airlines has currently committed to providing service to the Mammoth Yosemite Airport starting the 2002/2003 winter season with nonstop flights to and from DFW on B-757 aircraft. DFW provides excellent connecting service to key markets in Texas, Florida, Washington D.C, other southern U.S. cities, and the United Kingdom.
- Chicago O'Hare (ORD) – American Airlines has currently committed to providing service to the Mammoth Yosemite Airport starting the 2001/2002 winter season with nonstop flights to and from ORD on B-757 aircraft. Chicago O'Hare would provide excellent nonstop service between the Chicago market, as well as good connections between major East Coast, Midwest, and European markets.
- Los Angeles (LAX and other region airports) – Given the strong market demand from the Los Angeles area, Los Angeles is considered to be an excellent potential nonstop market for Mammoth Lakes. LAX would serve as a good connecting point for many domestic travelers from both the east coast (New York, Chicago, Washington D.C., Philadelphia, etc.), as well as the west coast (Seattle, Portland, Phoenix, etc.). In addition, as mentioned previously, LAX has served, and would continue to serve, as a good connecting point for international travelers traveling to the Mammoth Lakes region. Given the stage length of roughly 230 miles between Mammoth Lakes and LAX, as well as the strong O&D demand, the LAX market could be a good market for commuter, regional jet and narrow-body jet service.
- Denver (DEN) – Denver would serve as a strong connecting hub airport primarily for travelers from major East Coast markets, north-central U.S. markets and Midwest markets. In particular, due to United Airline's hubbing activities at both Denver and Chicago O'Hare, Denver would provide excellent connecting service for travelers from the Chicago market area. At a stage length of approximately 750 miles, Denver could also be a good potential market for nonstop service.
- Other Hub Airports – In addition to the above airports, a number of other hub airports could also potentially provide potential nonstop service to the Airport, including:
 - *Short-Range Hub Airports* – Phoenix and Seattle
 - *Mid-Range Hub Airports* – Minneapolis, Houston (Intercontinental), and St. Louis
 - *Long-Range Hub Airports* – Pittsburgh, Detroit, New York, and Atlanta

Potential service from these hubs would likely be dependent on the airlines electing to provide service, as well as the location of the airline's hub, and potential aircraft they would use to service the Mammoth Lakes market. However, in order to provide an idea of how the Airport's nonstop air service to various hub airports might evolve over time, a review of the evolution of hub service at each case study airport was undertaken. **Table H-21** presents the historical growth of nonstop service to major hub airports from each of the case study airports since 1985. As shown, each airport began nonstop service to either one or two major hub airports. As each airport's nonstop hub service matured, service to other major hub airports was added. In each case, the airport's hub service fully

matured within a five to ten year period. While this type of maturity may not necessary occur for Mammoth Lakes, it is reasonable to assume that given time and the proper marketing by the region, the Airport could provide nonstop service to at least three or four major hub airports within a five to ten year period after the initiation of commercial service.

Table H-20

Mammoth Yosemite Airport – Estimated Top O&D Markets

Rank	Airport	Percent
1	Los Angeles Intl	7.0%
2	O'Hare Intl	6.1%
3	Newark Intl	5.0%
4	La Guardia	4.8%
5	Dallas/Ft Worth	4.4%
6	Denver Intl	3.0%
7	San Francisco Intl	3.1%
8	Atlanta	3.0%
9	George Bush Intl	2.7%
10	Boston	2.6%
11	Miami Intl	2.6%
12	Dulles Intl	2.4%
13	Seattle	2.2%
14	Philadelphia Intl	2.2%
15	Detroit	1.8%
16	Phoenix	1.5%
17	Orlando Intl	1.4%
18	Salt Lake Intl	1.4%
19	St Paul Intl	1.4%
20	San Diego	1.4%
21	Tampa Intl	1.2%
22	Baltimore/Wash Intl	1.1%
23	Minneapolis	1.0%
24	John Wayne Intl	1.0%
25	San Jose	0.7%
26	New Orleans	0.7%
27	Nashville	0.7%
28	Hopkins Intl	0.7%
29	St Louis	0.7%
30	Las Vegas	0.7%
Total – Top 30 Markets		67.3%
Total – All Markets		100.0%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Table H-21

Evolution of Major Hub Service at Case Study Airports

Case Study Airport	1985-1989	1990-1994	1995-1999	2000
Yampa Valley Regional Airport	Chicago, Dallas, Los Angeles	Chicago, Dallas, Los Angeles, Denver, Minneapolis	Chicago, Dallas, Los Angeles, Denver, Minneapolis, Houston, St. Louis	Chicago, Dallas, Los Angeles, Denver, Minneapolis, Houston, St. Louis
Vail/Eagle County Airport	-	Chicago, Dallas Los Angeles, Denver	Chicago, Dallas Los Angeles, Denver, Atlanta, Minneapolis, Houston, Newark	Chicago, Dallas Los Angeles, Denver, Atlanta, Minneapolis, Houston, Newark
Aspen-Pitkin County Airport	Denver, Los Angeles	Denver, Dallas Los Angeles,	Denver, Dallas, Los Angeles, Phoenix, Minneapolis	Denver, Minneapolis, Los Angeles, Phoenix
Jackson Hole Airport	Denver, Salt Lake City	Denver, Salt Lake City, Dallas, Chicago	Denver, Salt Lake City, Dallas, Chicago	Denver, Salt Lake City, Dallas, Chicago
Glacier Park International Airport	Salt Lake City	Salt Lake City	Salt Lake City, Minneapolis, Seattle	Salt Lake City, Minneapolis, Seattle

Source: Official Airline Guides, Inc. (OAG), June 2000.
Prepared By: Ricondo & Associates, Inc., October 2000.

H.7 Projection of Airline Departures

Operations projections were developed for the commercial air carrier and regional/commuter carriers anticipated to serve the Airport. Enplaned passenger projections presented in the previous section were used in conjunction with historical and expected trends in load factors and average seats per departure in order to develop projected passenger airline operations. Assumptions were also made in regards to which markets would be provided with nonstop service from the Airport in the future. Projected nonstop service to future markets is purely hypothetical, however, and would be based on the Airport's actual passenger demand and individual airline decisions.

As mentioned previously, it is anticipated that it would take the Airport roughly five years to reach its full demand potential. As such, during the first full year of operation (2003), it is assumed that the Airport would have service only during the winter season from two to four hub airports, via B-757 and commuter aircraft.

In general, aircraft load factors during the winter season are estimated to increase from approximately 50 percent in 2003 to approximately 65% percent by 2022. The predominate increase in load factors is anticipated to occur between 2003 and 2007, as the Airport's market matures. Aircraft load factors during the summer season are projected to be slightly less than those during the winter season, increasing from approximately 50 percent in 2002 to approximately 60 percent in 2022. This lower load factor during the summer season is based on changing visitor demographics discussed previously.

Details concerning the airline departure projections for each projection scenario are described below.

H.7.1 Base Case Airline Departures

Under the Base Case scenario, it is assumed that the Airport would initially (the first few years) be provided with nonstop service to Dallas/Ft. Worth, Chicago O'Hare, Los Angeles, and San Francisco and/or San Jose. In later years, regular nonstop service may be provided to short-range hubs (such as Denver and Phoenix), and longer-range hub (such as St. Louis, Houston, and Atlanta). Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table H-22 presents projected airline departures for the Base Case scenario. As shown, total annual aircraft departures are projected to increase from 1,040 in 2003 to 5,800 in 2022, representing an annual compounded growth rate of approximately 9.0 percent. By 2022, the winter season is projected to account for 3,410 annual airline departures, while the remaining 2,390 annual airline departures are anticipated to occur in the summer season. Similarly, of the 5,800 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 2,500 annual departures (43 percent), while regional/commuter aircraft are projected to account for the remaining 3,300 annual departures (57 percent).

Table H-22

Summary of Projected Aircraft Departures - Base Case

Year	WINTER SEASON DEPARTURES			SUMMER SEASON DEPARTURES			TOTAL ANNUAL DEPARTURES		
	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total
2003	300	740	1,040	0	0	0	300	740	1,040
2007	840	1,420	2,260	370	620	990	1,210	2,040	3,250
2012	1,130	1,500	2,630	770	1,020	1,790	1,900	2,520	4,420
2017	1,290	1,720	3,010	890	1,180	2,070	2,180	2,900	5,080
2021	1,470	1,940	3,410	1,030	1,360	2,390	2,500	3,300	5,800
Annual Compounded									
<u>Growth Rate</u>									
2003-2022	8.3%	4.9%	6.1%	--	--	--	11.2%	7.8%	9.0%
2007-2022	3.8%	2.1%	2.8%	7.1%	5.4%	6.1%	5.0%	3.3%	3.9%

Source: Ricondo & Associates, Inc., July 2000.
Prepared By: Ricondo & Associates, Inc., October 2000.

H.7.2 Low Case Airline Departures

Under the Low Case scenario, it is assumed that the Airport would initially be provided with nonstop service to only Dallas/Ft. Worth, Los Angeles, and San Francisco and/or San Jose. In later years, nonstop service to a short-range hub such as Denver, Phoenix, or Seattle may also be provided at the Airport. Of these potential nonstop markets, Los Angeles is assumed to be provided with service via

both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table H-23 presents projected airline departures for the Low Case scenario. As shown, total annual aircraft departures are projected to increase from 470 in 2003 to 2,770 in 2022, representing an annual compounded growth rate of approximately 9.3 percent. By 2022, the winter season is Table H-23 projected to account for 1,760 annual airline departures, while the remaining 1,010 annual airline departures are anticipated to occur in the summer season. Similarly, of the 2,770 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 1,480 annual departures (53 percent), while regional/commuter aircraft are projected to account for the remaining 1,290 annual departures (47 percent).

Table H-23**Summary of Projected Aircraft Departures - Low Case**

Year	WINTER SEASON DEPARTURES			SUMMER SEASON DEPARTURES			TOTAL ANNUAL DEPARTURES		
	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total
2003	240	230	470	0	0	0	240	230	470
2007	490	430	920	170	150	320	660	580	1,240
2012	700	610	1,310	400	340	740	1,100	950	2,050
2017	820	710	1,530	450	400	850	1,270	1,110	2,380
2022	940	820	1,760	540	470	1,010	1,480	1,290	2,770
Annual Compounded									
<u>Growth Rate</u>									
2002-2022	7.1%	6.6%	6.8%	--	--	--	9.5%	9.0%	9.3%
2007-2022	4.4%	4.4%	4.4%	8.0%	7.9%	8.0%	5.5%	5.5%	5.5%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

H.7.3 High Case Airline Operations

Under the High Case scenario, it is assumed that the Airport would initially be provided with regular nonstop service to a number of markets, including Dallas/Ft. Worth, Los Angeles, Chicago O'Hare, and San Francisco and/or San Jose. In later years, nonstop service to one or more short-range hubs (such as Denver, Phoenix, or Seattle) and one or more longer-range hubs (such as Atlanta, St. Louis, or Minneapolis) may also be provided at the Airport. Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table H-24 presents projected airline operations for the High Case scenario. As shown, total annual aircraft departures are projected to increase from 2,320 in 2003 to 7,670 in 2022, representing an annual compounded growth rate of approximately 6.2 percent. By 2022, the winter season is projected to account for 4,110 annual airline departures, while the remaining 3,560 annual airline departures are anticipated to occur in the summer season. Similarly, of the 7,670 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 3,200 annual departures (42 percent), while regional/commuter aircraft are projected to account for the remaining 4,470 annual departures (58 percent).

Table H-24

Summary of Projected Aircraft Departures - High Case

Year	WINTER SEASON DEPARTURES			SUMMER SEASON DEPARTURES			TOTAL ANNUAL DEPARTURES		
	Air Carrier	Regional/		Air Carrier	Regional/		Air Carrier	Regional/	
		Commuter	Total		Commuter	Total		Commuter	Total
2003	600	1,720	2,320	0	0	0	600	1,720	2,320
2007	980	1,750	2,730	540	970	1,510	1,520	2,720	4,240
2012	1,260	1,770	3,030	1,070	1,480	2,550	2,330	3,250	5,580
2017	1,470	2,060	3,530	1,260	1,730	2,990	2,730	3,790	6,520
2022	1,720	2,390	4,110	1,480	2,080	3,560	3,200	4,470	7,670
Annual Compounded									
<u>Growth Rate</u>									
2002-2022	5.4%	1.7%	2.9%	--	--	--	8.7%	4.9%	6.2%
2007-2022	3.8%	2.1%	2.8%	7.0%	5.2%	5.9%	5.1%	3.4%	4.0%

Source: Ricondo & Associates, Inc., July 2000.
 Prepared By: Ricondo & Associates, Inc., October 2000.

H.8 Summary of Projected Airline Activity Based on Skier-Day Enplanement Projections and Case Study Airports

Table H-25 summarizes projected airline activity, in terms of passenger enplanements and aircraft departures, for the Airport for the skier-day enplanement projects and case study projects described above. The following points summarize key findings with regard to this projected airline activity:

- Initially, a number of enplanement scenarios were examined for the Airport to give an idea of the range of enplanement activity that might occur at the Airport. These enplanement projections were based on a relationship of skier-days to annual enplanements at several comparable airports.
- In order to provide a basis for the potential for air carrier service at Mammoth Yosemite Airport, historical activity, local demographics and tourism-related visitor statistics were reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:
 - Yampa Valley Regional Airport (Steamboat Springs, CO)
 - Vail/Eagle County Airport (Vail, CO)
 - Aspen-Pitkin County Airport (Aspen, CO)

- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MT)
- For the purpose of the initial enplanement projections, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. Skier-days represent the number of days multiplied by the number of skiers visiting the ski resort. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport.
- It is anticipated that the Airport would not immediately realize its full demand potential. As a result, the Airport's growth during the first five years of operation is expected to be strong until the market's full potential is realized. Once the market matures, the Airport's growth is expected to slow to more typical growth levels as experienced at airports throughout the U.S. This high initial growth is best illustrated by examining the enplanement growth that occurred at Vail/Eagle County Airport. During the first five years of operations from 1990 to 1995, enplanements at Vail/Eagle County Airport increased at an annual compounded growth rate of over 67 percent. From 1995 to 1998, however, enplanement growth at the airport has increased at an annual compounded growth rate of 27 percent. While this growth is still much higher than that of the U.S. overall, it is lower than exhibited during the initial startup of service at the Airport.

Table H-25**Summary of Projected Airline Activity**

ENPLANEMENT PROJECTIONS					
	<u>2003</u>	<u>2007</u>	<u>2012</u>	<u>2017</u>	<u>2022</u>
Base Case	37,000	159,900	242,700	287,500	333,800
Low Case	27,500	90,400	152,900	183,200	217,500
High Case	79,400	213,100	313,100	377,100	449,800
AIRLINE DEPARTURES					
<u>Base Case</u>					
Regional/Commuter Departures	740	2,040	2,520	2,900	3,300
Air Carrier Departures	<u>300</u>	<u>1,210</u>	<u>1,900</u>	<u>2,180</u>	<u>2,500</u>
Total Base Case Departures	1,040	3,250	4,420	5,080	5,800
<u>Low Case</u>					
Regional/Commuter Departures	230	580	950	1,110	1,290
Air Carrier Departures	<u>240</u>	<u>660</u>	<u>1,100</u>	<u>1,270</u>	<u>1,480</u>
Total Low Case Departures	470	1,240	2,050	2,380	2,770
<u>High Case</u>					
Regional/Commuter Departures	1,720	2,720	3,250	3,790	4,470
Air Carrier Departures	<u>600</u>	<u>1,520</u>	<u>2,330</u>	<u>2,730</u>	<u>3,200</u>
Total High Case Departures	2,320	4,240	5,580	6,520	7,670

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

- In general, three enplanement scenarios were examined: a Base Case scenario, Low Case scenario, and a High Case scenario.
- Under the Base Case Scenario, the Airport's enplanements were projected to increase from approximately 37,000 in 2003 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent overall (34.0 percent ACG from 2003-2007 and 5.0 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.035 winter enplanements per skier in 2003 to approximately 0.085 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022.
- Under the Low Case Scenario, the Airport's enplanements were projected to increase from approximately 27,500 in 2003 (the anticipated first full year of operation), to approximately 217,500 enplanements in 2022, representing an annual compounded growth rate of 10.9 percent overall (26.9 percent ACG from 2003-2007 and 6.0 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.026 winter enplanements per skier in 2002 to approximately 0.060 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 65 percent of total airport enplanements by 2022.
- Under the High Case Scenario, the Airport's enplanements were projected to increase from approximately 79,400 in 2003 (the anticipated first full year of operation), to approximately 449,800 enplanements in 2022, representing an annual compounded growth rate of 9.1 percent overall (21.8 percent ACG from 2003-2007 and 5.1 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.075 winter enplanements per skier in 2003 to approximately 0.105 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2003, and decreasing thereafter to approximately 55 percent of total airport enplanements by 2022.

H.9 Projected Airline Activity Based on City Pair Market Analysis

Based on comments from the FAA, an additional forecasting methodology based on city pair market analyses was used to estimate future passenger enplanements and aircraft operations. This analysis used information from the existing agreement being developed between American Airlines and Mammoth Mountain (see attached Air Service Agreement), development of markets at the case study airports, and professional judgement and experience from Ricondo & Associates staff and Mr. Kent Myers, air service consultant to Mammoth Mountain. **Table H-26** presents enplanement and operations projects from the City Pair market analysis. The following points summarize key findings of this market analysis:

Table H-26
City Pair Market Analysis - Mammoth Lakes Airport

			Avg.	2002			2007			2012			2017			2022		
	Season	Aircraft	Seats	Annual Departure s	Load Factor	Enplanemen ts	Annual Departure s	Load Factor	Enplaneme nts	Annual Departure s	Load Factor	Enplaneme nts	Annual Departure s	Load Factor	Enplaneme nts	Annual Departure s	Load Factor	Enplaneme nts
<u>American Airlines Committed Service</u>																		
Dallas/Ft. Worth	Winter	B-757	176	128	50.0%	11,300	300	65.0%	34,100	360	65.0%	40,700	420	65.0%	48,600	510	65.0%	58,000
Chicago O'Hare	Winter	B-757	176	128	50.0%	11,300	300	65.0%	34,100	360	65.0%	40,700	420	65.0%	48,600	510	65.0%	58,000
Subtotal				256		22,600	600		68,200	720		81,400	840		97,200	1,020		116,000
<u>Regional Service</u>																		
Southern California Region	Winter	RJ/Comm .	40	336	60.0%	8,100	368	65.0%	9,600	440	65.0%	11,500	530	65.0%	13,700	630	65.0%	16,400
Northern California Region	Winter	RJ/Comm .	40	224	60.0%	5,400	288	65.0%	7,500	350	65.0%	9,000	410	65.0%	10,700	490	65.0%	12,800
Subtotal				560		13,500	656		17,100	790		20,500	940		24,400	1,120		29,200
<u>Non-Winter Airline Service</u>																		
RJ / Commuter Aircraft	Rest of Year		40	0	--	0	516 ¹	65.0%	13,400	620	65.0%	16,000	730	65.0%	19,100	880	65.0%	22,800
Jet Aircraft	Rest of Year		130	0	--	0	224 ²	65.0%	18,900	270	65.0%	22,600	320	65.0%	27,000	380	65.0%	32,200
Subtotal				0		0	740		32,300	890		38,600	1,050		46,100	1,260		55,000
<u>Additional Hub Service</u>																		
Additional Hub #1	Winter		130	0	--	0	224	55.0%	16,000	230	65.0%	19,100	270	65.0%	22,800	320	65.0%	27,200
Additional Hub #2	Winter		130	0	--	0	144	55.0%	10,300	150	65.0%	12,300	170	65.0%	14,700	210	65.0%	17,500
Subtotal				0		0	368		26,300	380		31,400	440		37,500	530		44,700
TOTALS				816		36,100	2,364		143,900	2,780		171,900	3,270		205,200	3,930		244,900
Winter Service =									16Weeks									
Non-Winter Service =									36Weeks									

16 weeks of 7 flights per week =	112Flights	16 weeks of 14 flights per week =	224 Flights
16 weeks of 8 flights per week =	128Flights	16 weeks of 16 flights per week =	256 Flights
16 weeks of 9 flights per week =	144Flights	16 weeks of 18 flights per week =	288 Flights

¹ Equals 16 weeks with 21 flights per week and 20 weeks with 9 flights per week, for a total of 516 flights.

² Equals 16 weeks with 14 flights per week.

Source: Ricondo & Associates, Inc., Kent Myers, and committed service information from American Airlines.
Prepared by: Ricondo & Associates, Inc., October 2000.

- In order to provide another estimate of the level of activity that might be realized at the Airport, a City Pair Market Analysis was conducted. This analysis was based on the recently negotiated agreement with American Airlines, as well as other assumptions regarding additional airline service at the Airport. In general, this analysis serves as a “back-in” analysis whereby certain levels of daily or weekly flights to various markets are assumed. Based on these assumed service levels, basic assumptions regarding the number of aircraft seats and load factors are assumed to estimate the potential number of enplanements for each city pair examined.
- In general, the following additional air service components were examined:
 - American Airlines Committed Service – Based on the recently negotiated agreement with American Airlines for air service at the Airport from 2003 through 2006.
 - Regional Service – Assumes that regional air service would be provided via regional/commuter aircraft, or regional jets, to the northern and southern California markets.
 - Non-Winter Service – Assumes that service would be provided throughout the remainder of the year (i.e., 36 weeks) by both regional/commuter and jet aircraft.
 - Additional Hub Service – Assumes that additional air service would be provided to two additional airline hubs.
- From 2003 to 2006, the *American Airlines Committed Service* is based on the recently negotiated agreement with American, and results in an estimated 576 annual flights and nearly 66,000 estimated enplanements for the winter season in 2006. Beyond 2006, annual enplanements for the committed American Airlines service are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA.³ By 2022, approximately 116,000 annual enplanements are projected for the American Airlines service.
- *Regional Service* assumes that service would be provided to via regional/commuter and/or regional jet aircraft to markets in Southern California (i.e., Los Angeles, San Diego, etc.), as well as Northern California (i.e., San Francisco, San Jose, etc.). Initially in 2003, 21 weekly flights were assumed to be provided to Southern California, while 14 weekly flights were assumed to be provided to Northern California. By 2007, 23 weekly flights were assumed to be provided to Southern California, while 18 weekly flights were assumed to be provided to Northern California. Based on these assumptions, approximately 13,500 enplanements are estimated to be accommodated via regional service in 2003, and 17,100 enplanements in 2007. Beyond 2007, annual enplanements for are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 29,200 annual enplanements are projected to be accommodated via regional service.
- *Non-Winter Service* was assumed to be provided beginning between 2003 and 2007 for the remaining 36 weeks throughout the year. This service could be provided to any number hub airports. In general, non-winter service was assumed to be provided via both

regional/commuter and jet aircraft. Initially, 516 total flights were assumed via regional/commuter aircraft, while 224 total flights were assumed via jet aircraft⁴. Based on these assumptions, approximately 32,300 enplanements are estimated to be accommodated via regional service in 2007. Beyond 2007, annual enplanements are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 77,900 annual enplanements are projected to be accommodated via non-winter service.

- *Additional Hub Service* was assumed to be provided to two additional airline hubs, including the following potential hubs:
 - *Short-Range Hub Airports* – Phoenix and Seattle
 - *Mid-Range Hub Airports* – Minneapolis, Houston (Intercontinental), and St. Louis
 - *Long-Range Hub Airports* – Pittsburgh, Detroit, New York, and Atlanta
- Potential service from these hubs would likely be dependent on the airlines electing to provide service, as well as the location of the airline's hub, and potential aircraft they would use to service the Mammoth Lakes market. Nonstop hub service at each of the case study airports was initiated to either one or two major hub airports. As each airport's nonstop hub service matured, service to other major hub airports was added. In each case, the airport's hub service fully matured within a five to ten year period. While this type of maturity may not necessarily occur for Mammoth Lakes, it is reasonable to assume that given time and the proper marketing by the region, the Airport could provide nonstop service to at least three or four major hub airports within a five to ten year period after the initiation of commercial service.

It is assumed that an average aircraft size in the range of 130-seats, such as the B-737 series, or mix of B-757 and regional jets, would begin service to these additional hubs in 2007. Initially, 14 weekly flights were assumed to be provided to one hub, while 9 weekly flights were assumed for the second hub. Based on these flight assumptions, approximately 26,300 enplanements are estimated to be accommodated in 2007. Beyond 2007, annual enplanements are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 44,700 annual enplanements are projected to be accommodated via additional hub service.

- When combined, the various components of air service assumed for the City Pair Market Analysis result in 36,100 annual enplanements in 2003, increasing to 143,900 enplanements in 2007, and to 244,900 annual enplanements by 2022. Overall, this enplanement growth represents an annual compounded growth rate of approximately 9.5 percent (31.8 percent ACG from 2003-2007 and 3.6 percent ACG from 2007-2022).
- By 2022, winter service is estimated to account for approximately 70 percent (189,900 enplanements), while non-winter service is estimated to account for the remaining 30 percent (55,000 enplanements).
- By comparison, beyond the initial five year startup period, the City Pair Growth Analysis is roughly 11 percent higher than the Low Case Scenario and 27 percent lower than the Base Case Scenario presented earlier. **Table H-27** presents a summary of the various enplanements projections:

Table H-27

Mammoth Mountain Enplanement Forecast Comparison

<u>Year</u>	<u>Base Case</u>	<u>Low Case</u>	<u>High Case</u>	<u>City Pair</u>
2002	37,000	27,500	79,400	36,100
2007	159,900	90,400	213,100	143,900
2012	242,700	152,900	313,100	171,900
2017	287,500	183,200	377,100	205,200
2022	333,800	217,500	449,800	244,900

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc.

The exhibits on the following pages present the results of the three enplanement projection scenarios from the skier-day/case study analysis and the city pair market analysis. As shown in this comparison, in the first five years, the Base Case and City Pair are similar in enplanements. However, the slower growth rate of 3.6% beyond 2007 results in the City Pair long-term trend being between the Low Case and Base Case. The city pair market analysis is sensitive to the assumptions of the number of air carriers and number of cities served from Mammoth Yosemite Airport. The information provided above is based on the best available information from airline discussions regarding service at Mammoth Yosemite Airport and experience at other startup airport operations such as at Vail/Eagle County Airport. The addition of service of additional hub airports beyond those assumed above could result in similar long-term demand levels as the Base Case.²

H.10 General Aviation Forecasts

A forecast of general aviation activity was developed for the 1997 Environmental Impact Report (EIR). A review of this forecast was conducted by examining existing records (FAA Form 5010 dated 01/16/96) and interviewing personnel from airport management.

The airport manager confirmed the general aviation activity, that was forecasted in the 1997 EIR, has failed to materialize. These sources indicated that Mammoth Yosemite Airport experiences approximately 600 operations per month during peak seasons. General aviation activity reported on FAA Form 5010 for the 12 months ending July 1996, was 12,000 annual operations. However, based on interviews with the airport manager and FBO operator, the annual operations for 1999 was estimated to be 6,000.

Although the annual general aviation operations levels are well below the estimates in the FAA Terminal Area Forecast, it is anticipated that there would be growth in general aviation activity of about 3% annually over the next 20 years up to the 12,000 annual operations level of the FAA Terminal Area Forecast. This growth is anticipated as a result of recent construction of high quality hanger facilities at the Airport and the leasing of these hanger facilities to new airport users. Additional hanger development is also planned. **Table H-28** summarizes the general aviation

2 516 flights = 16 weeks with 21 flights per week and 20 weeks with 9 flights per week

4 224 flights = 16 weeks with 14 flights per week (summer season)

component for the forecast. It is also assumed that military operations would remain consistent with the FAA Terminal Area Forecast at 50 annual operations from year 2000 on.

Table H-28

General Aviation Operations Forecast

<u>Year</u>	<u>General Aviation Annual Operations</u>
2002	6,600
2007	7,600
2012	8,900
2017	10,300
2022	12,000

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc.

H.11 Summary of Forecasts

Table H-29 presents a summary of the comparison of the passenger and operations forecasts for each of the forecast scenarios developed in this study. **Table H-30** shows the FAA Terminal Area Forecast through 2012. The primary difference between the FAA Terminal Area Forecast and the forecast scenarios documented in this study lies in the reduced general aviation activity at the Airport and projected air carrier/commuter activity. The FAA Terminal Area Forecast was based in part on the limited data for past air carrier/commuter service and estimates of industry intentions. At the time that the FAA Terminal Area Forecast was developed, there was no commitment from the airline industry for commercial service to Mammoth Lakes. The forecast developed for the Airport has the advantage of knowledge that a member of the airline industry has committed, subject to airport improvements, to commercial service to Mammoth Lakes.

Table H-30

FAA Terminal Area Forecast

<u>Annual Aircraft Operations</u>					
<u>Year</u>	<u>Air Carrier</u>	<u>Commuter</u>	<u>GA</u>	<u>Military</u>	<u>Total</u>
2002	500	700	12,000	50	13,250
2007	500	700	12,000	50	13,250
2012	500	700	12,000	50	13,250

Source: Federal Aviation Administration (FAA)

Prepared by: Ricondo & Associates, Inc., October 2000.

Forecasts were also prepared as part of the preparation of the Subsequent Environmental Impact Report for the Mammoth Lakes Airport Expansion, March 1997. These forecasts estimated 1,460 air

carrier jet operations by 2005 and 2,920 by 2015 and overall operations growing from 29,010 in the year 2005 to 34,430 by 2015. Annual enplanements were anticipated to be 60,000 by 2005 and between 90,000 and 125,000 by 2015. These forecasts were based on the best available information at the time, which did not include the current Air Service Agreement from American Airlines.

Table H-29

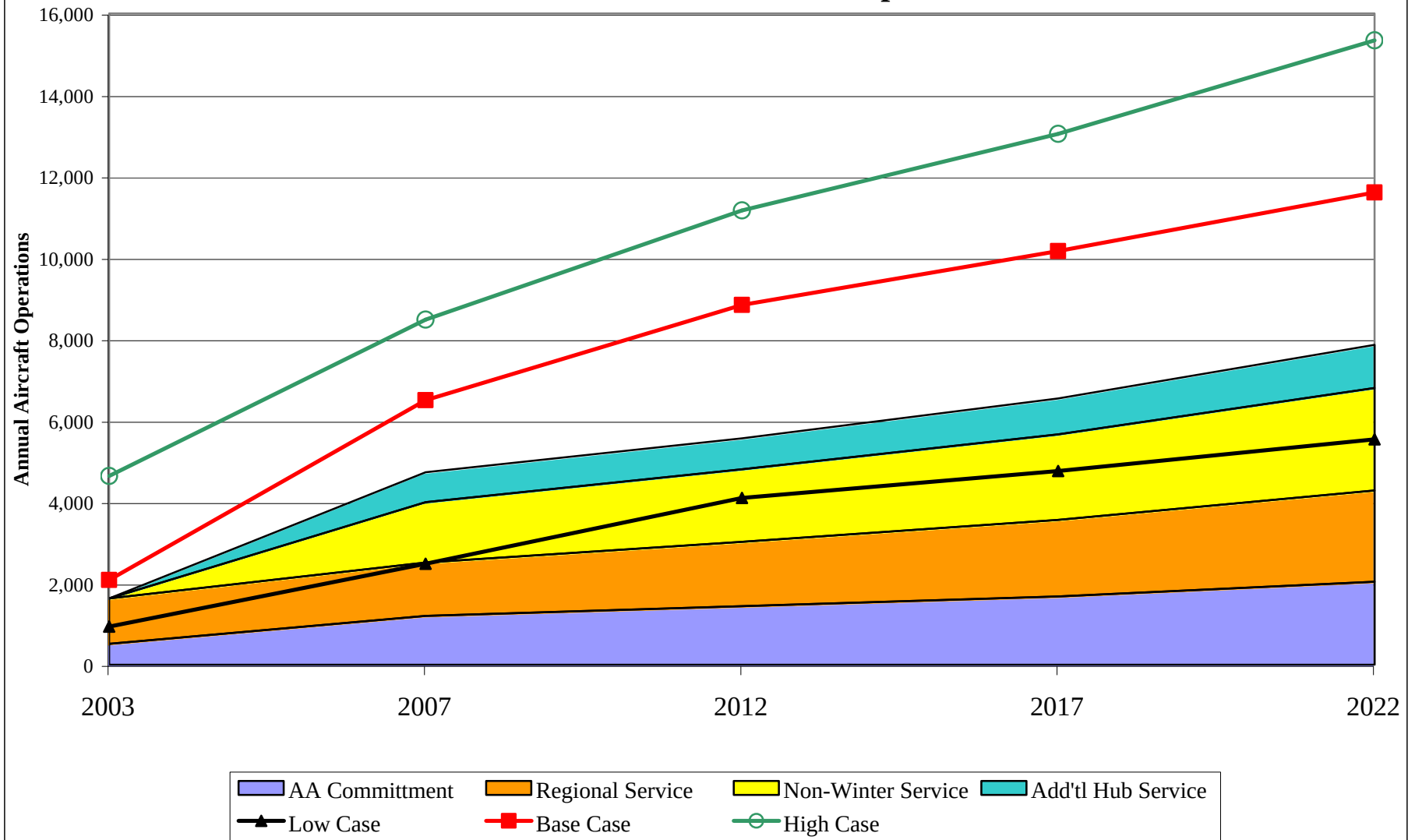
Summary of Projected Aviation Activity at Mammoth Lakes Airport
Years 2002, 2007, 2012, 2017, and 2022

Annual Airline Enplanement Projection						
	<u>1999</u>	<u>2003</u>	<u>2007</u>	<u>2012</u>	<u>2017</u>	<u>2022</u>
Base Case	--	37,000	159,900	242,700	287,500	333,800
Low Case	--	27,500	90,400	152,900	183,200	217,500
High Case	--	79,400	213,100	313,100	377,100	449,800
City Pair Market Analysis	--	36,100	143,900	171,900	205,200	244,900
ANNUAL AIRCRAFT OPERATIONS						
<u>Base Case</u>						
Air Carrier	--	600	2,420	3,800	4,360	5,000
Regional/Commuter/RJ	--	1,480	4,080	5,040	5,800	6,600
General Aviation/Military	<u>6,050</u>	<u>6,650</u>	<u>7,650</u>	<u>8,950</u>	<u>10,350</u>	<u>12,050</u>
Total Base Case Operations	6,050	8,730	14,150	17,790	20,510	23,650
<u>Low Case</u>						
Air Carrier	--	480	1,320	2,200	2,540	2,960
Regional/Commuter/RJ	--	460	1,160	1,900	2,220	2,580
General Aviation/Military	<u>6,050</u>	<u>6,650</u>	<u>7,650</u>	<u>8,950</u>	<u>10,350</u>	<u>12,050</u>
Total Low Case Operations	6,050	7,590	10,130	13,050	15,110	17,590
<u>High Case</u>						
Air Carrier	--	1,200	3,040	4,660	5,460	6,400
Regional/Commuter/RJ	--	3,440	5,440	6,500	7,580	8,940
General Aviation/Military	<u>6,050</u>	<u>6,650</u>	<u>7,650</u>	<u>8,950</u>	<u>10,350</u>	<u>12,050</u>
Total High Case Operations	6,050	11,290	16,130	20,110	23,390	27,390
<u>City Pair Market Analysis</u>						
Air Carrier	--	512	2,384	2,740	3,200	3,860
Regional/Commuter/RJ	--	1,120	2,344	2,820	3,340	4,000
General Aviation/Military	<u>6,050</u>	<u>6,650</u>	<u>7,650</u>	<u>8,950</u>	<u>10,350</u>	<u>12,050</u>
Total Market Analysis Operations	6,050	8,282	12,378	14,510	16,890	19,910

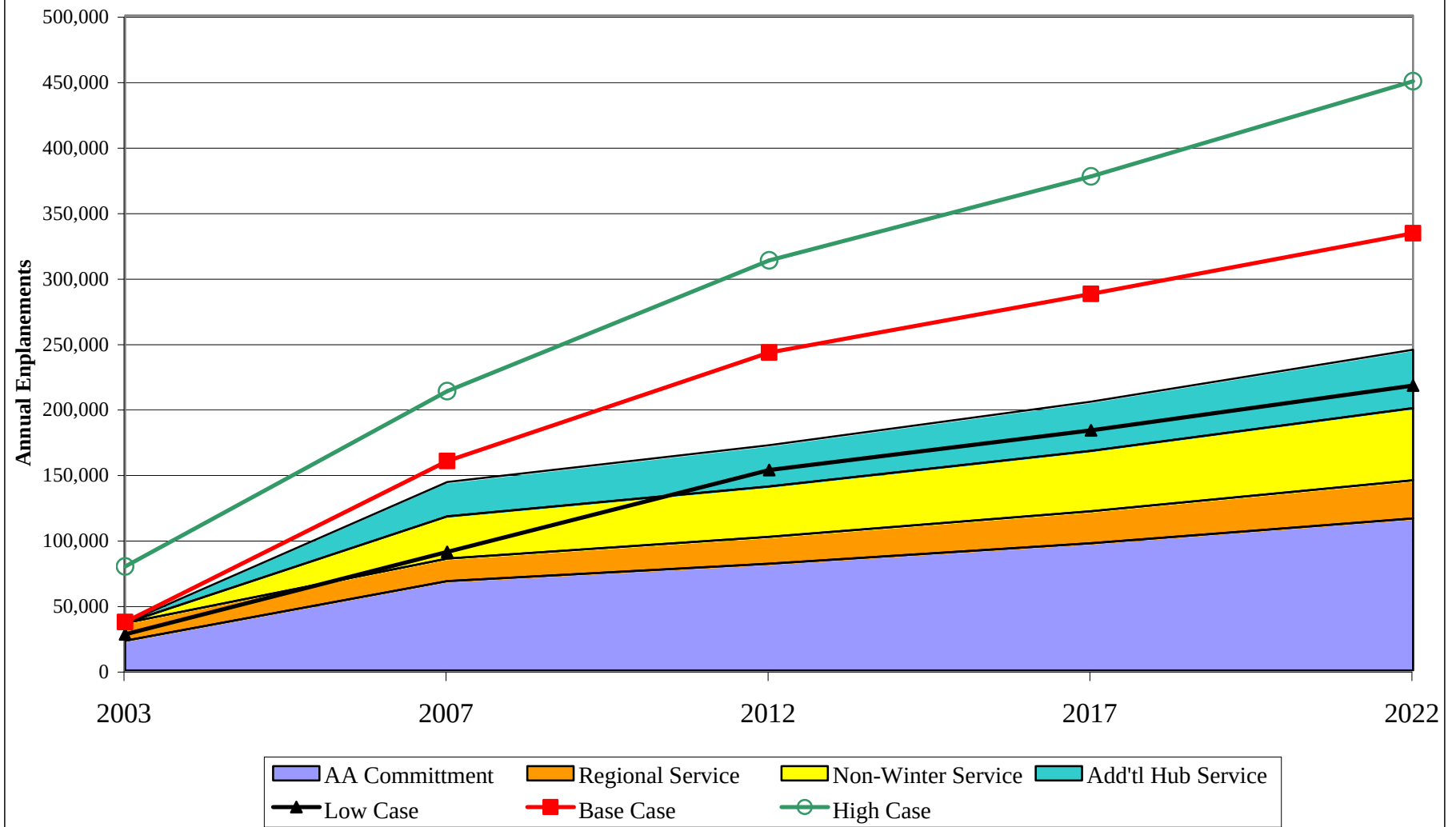
Source: Ricondo & Associates, Inc., Kent Myers, and American Airlines.

Prepared by: Ricondo & Associates, Inc, October 2000.

Comparison of Air Carrier Operations Forecasts Mammoth Lakes Airport



Comparison of Enplanement Forecasts Mammoth Lakes Airport



Appendix I – Biological Assessment

**Draft Biological Assessment for the
Mammoth-Yosemite Airport Expansion Project
Mono County, California**

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Appendix A. U.S. Fish and Wildlife Service Species List

Figure 1.	Mammoth-Yosemite Airport Habitat Type Locations follows page 1-1
Figure 2.	Regional Direction of Groundwater Flow follows page 5-2

Chapter 1

Introduction

Background

Jones & Stokes was retained by Reinard Brandley, Consulting Airport Engineer, to assist Mammoth-Yosemite Airport with biological resource issues related to the proposed expansion of the Mammoth-Yosemite Airport project in Mono County (Figure 1). The Federal Aviation Administration (FAA) is providing funding for this project; therefore, this biological assessment is being prepared in compliance with Section 7 of the federal Endangered Species Act of 1973 (ESA) (16 USC 1536). A portion of the project occurs on U.S. Forest Service (USFS) land; therefore, a USFS district biologist is reviewing the biological assessment to ensure that the document meets the requirements of the Inyo National Forest.

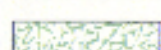
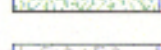
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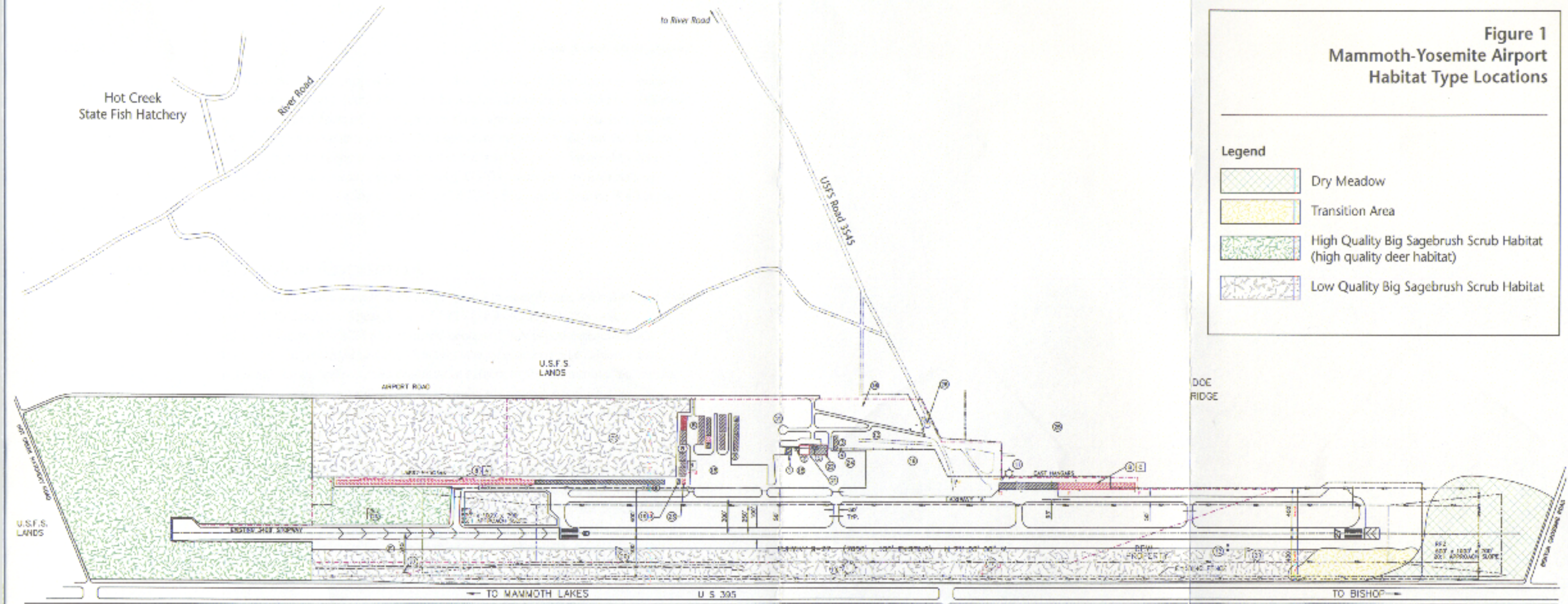
On November 22, 2000, Jones & Stokes requested a list from the U.S. Fish and Wildlife Service (USFWS) of federal candidate, proposed, and listed endangered or threatened species that could occur in the project area. A species list from USFWS was received on January 22, 2000 (Attachment A). This list includes the Owens tui chub (*Gila bicolor snyderi*), the Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), the bald eagle (*Haliaeetus leucocephalus*), and the Sierra Nevada bighorn sheep (*Ovis canadensis californianus*). All of these species are analyzed in this biological assessment.

Jones & Stokes contacted USFWS biologist George Walker on November 30, 2000, to discuss the proposed project and its potential effects on the bald eagle and the Owens tui chub (Walker pers. comm.). It was

Figure 1
Mammoth-Yosemite Airport
Habitat Type Locations

Legend

-  Dry Meadow
-  Transition Area
-  High Quality Big Sagebrush Scrub Habitat (high quality deer habitat)
-  Low Quality Big Sagebrush Scrub Habitat



BUILDING INVENTORY

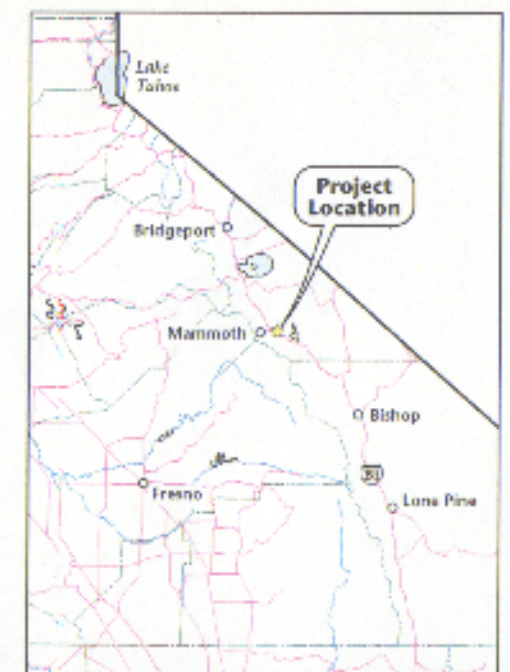
1. TERMINAL BUILDING	14. ROSSWAD
2. AIRPORT OFFICE	15. TROOP AVIATION
3. ARTS & SHOW EQUIPMENT BUILDING	16. FUTURE AIRCRAFT PARKING
4. ELECTRICAL WAREHOUSE	17. STORAGE AREA
5. FBO OFFICE (TO BE REMOVED)	18. TULSA COMMERCIAL AIRPORT
6. HANGAR	19. TULSA BUILDING
7. HANGAR	20. SUPPLEMENTAL WIND CONES
8. AIRCRAFT HANGARS	21. COMMERCIAL DEVELOPMENT AREA
9. PRESERVED	22. AVIATION DEVELOPMENT AREA (HANGARS & FBO BUILDINGS)
10. MND CONE AND SEGMENTED CONE	23. NEW AV. GAS STORAGE PHASE 1
11. AVIATION TOWER	24. CORPORATE AIRPORT
12. T.A.P.	25. CENTRAL AVIATION AIRPORT EXPANSION
13. FUTURE TERMINAL BUILDING SITE	26. WATER STORAGE FACILITY

LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	---
EXISTING SAFETY AREA (SFA)	---	---
EXISTING SAFETY AREA (SFA)	---	---
PAVED	▨	▨
ROAD DRIVE	---	---
INTERNATIONAL ROAD	---	---
RAILROAD	---	---
SUPPLEMENTAL WIND CONE	---	---

0 400 800
1 inch = approx. 850 feet

Base map provided by:
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER



determined that the project site was within the range for the species, suitable habitat was present at the site, and a biological assessment would be required to address the effects of the project on these species that are federally listed as threatened and endangered. The Lahontan cutthroat trout and the Sierra Nevada bighorn sheep were included in the analysis, as evidenced by their inclusion on the species list provided by USFWS and by the information exchanged at the meeting attended by USFWS biologists George Walker and Tim Thomas on January 19, 2001.

Objectives of the Biological Assessment

This biological assessment is being prepared in compliance with Section 7 of the U.S. Endangered Species Act of 1973 (16 USC 1536). Section 7 consultation with USFWS is required because FAA is providing federal funds for the proposed project. This biological assessment evaluates the potential direct, indirect, and cumulative effects of the Mammoth-Yosemite Airport expansion project on the bald eagle, the Owens tui chub, the Lahontan cutthroat trout, and the Sierra Nevada bighorn sheep, which are federally listed species.

The objectives of this biological assessment are to summarize the results of existing resource information, determine whether the species included in this biological assessment are likely to be adversely affected by the expansion project, and describe minimization measures that would reduce or avoid potential project effects on these species and their habitats.

Project Description

The Town of Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth-Yosemite Airport. The project consists of the following components:

- strengthening the runway and taxiways to accommodate up to B-757-200 aircraft;
- widening the runway from 100 feet to 150 feet on its south side, thereby shifting the runway centerline 25 feet to the south;
- widening the parallel taxiway from 50 feet to 75 feet—20 feet on its south side and 5 feet on its north side;
- extending the runway 1,200 feet to the west to provide the necessary runway length for air-carrier aircraft operations (e.g., the B-757-200);
- extending the parallel taxiway to be consistent with the length of the runway extension;
- adding an air-carrier apron for 3 air-carrier aircraft;
- adding a 75-foot-wide connecting taxiway to access the air-carrier apron area;
- improving the security fencing from the existing 3-strand barbed wire fence to an 8-foot-high chain-link fence to meet FAA standards;
- developing passenger-terminal building facilities;
- constructing airport access-road improvements;
- creating an off-site mitigation area (6 acres);
- conducting all work during the summer months;

- expanding the automobile parking lot; and
- acquiring in fee simple and/or lease of lands owned by the City of Los Angeles Department of Public Works that currently occupy the eastern portion of the runway and taxiway system and a portion of the runway safety area.

Preliminary Illustrative Alternatives

As listed below, 9 preliminary alternatives have been identified and would be assumed in the Biological Assessment if they are initially determined to warrant further consideration. Alternatives 1–7, which pertain to the Mammoth-Yosemite Airport, are reviewed in this report; Alternatives 8 and 9 would not directly pertain to Mammoth-Yosemite Airport and are therefore not discussed after this chapter. These alternatives primarily address various runway extension alternatives.

Alternative 1. No Action: Retain Runway 9-27 at its existing length of 7,000 feet, and do not make any further improvements to the airport except for maintenance or improvements required by FAA for safety measures.

Alternative 2. Proposed Action—8,200-Foot Runway: Extend Runway 9-27 to the west to a length of 8,200 feet, and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

Alternative 3. Extend Runway to 9,000 Feet: Extend Runway 9-27 to the west to a length of 9,000 feet and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

Alternative 4. Extend Runway Beyond 9,000 Feet: Extend Runway 9-27 to the west to a length greater than 9,000 feet and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

Alternative 5. Extend Runway to the East: Extend Runway 9-27 to the east to a length of 8,200 feet, 9,000 feet, or greater than 9,000 feet.

Alternative 6. Widen Runway, but Retain Existing Length of 7,000 Feet: Retain Runway 9-27 at its existing length of 7,000 feet, but widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

Alternative 7. Widen the Runway Without Shifting the Runway 25 Feet to the South: Widen Runway 9-27 equally on the north and south sides, retaining the existing centerline.

Alternative 8. Develop Another Airport in the Region: Develop air-carrier facilities at an airport in the region other than Mammoth-Yosemite Airport. (This alternative is not reviewed in this report.)

Alternative 9. Use Alternate Modes of Transportation: Continue to assume that major access to the Mammoth Lakes region would be via private vehicle, bus, or a new rail system. (This alternative is not reviewed in this report.)

Habitat Evaluation Methods

The methods for determining presence of federally listed species in the project area involved a review of literature for species on the USFWS list, a review of records from the California Department of Fish and Game's (DFG's) Natural Diversity Database (CNDDB)(2000), a field visit to the project site, and discussions with agency biologists (USFS biologist Richard Perloff, Bureau of Land Management biologist Steve Nelson, and USFWS biologist George Walker). The habitat assessment methods used focused on determining the presence or absence of suitable habitat conditions for special-status species. Field visits to the project site were conducted by Jones & Stokes personnel. The purpose of these field visits was to:

- describe general site characteristics,
- evaluate the suitability of wildlife habitats for federally listed species, and
- identify sensitive biological resources that could lead to constraints on airport expansion activities.

Chapter 4

Species Accounts

This chapter describes the status, the distribution and habitat requirements, and the reasons for the decline of the Owens tui chub, Lahontan cutthroat trout, bald eagle, and the Sierra Nevada bighorn sheep.

Description of the Action Area

The project site is located within the East Sierra Nevada Region of the Great Basin Floristic Province at approximately 7,080 to 7,130 feet elevation. Much of the project survey area lies close to Mammoth-Yosemite Airport, U.S. Highway 395, and Airport Road and has been disturbed by these developments.

The project site is dominated by mostly disturbed big sagebrush scrub and includes a nonjurisdictional dry meadow located between the east end of the airport runway and Benton Crossing Road.

These biological communities are described below and depicted in Figure 1.

Big Sagebrush Scrub

Big sagebrush scrub is the predominant plant community in the project study area. Much of this community in the study area has been disturbed by construction and maintenance of airport facilities, an access road, and highway facilities.

The big sagebrush scrub community occupies well-drained upland sites on sandy to gravelly soils and is dominated by shrubs and scattered grass and herb species. Dominant shrub species are big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), and rubber rabbitbrush

(*Chrysothamnus nauseosus*), with scattered desert peach (*Prunus andersonii*) and horsebush (*Tetradymia canescens*). Rabbitbrush is the dominant shrub in some areas. Common grass species include cheatgrass (*Bromus tectorum*), needle-and-thread (*Hesperostipa comata* ssp. *comata*), Indian ricegrass (*Achnatherum hymenoides*), and squirreltail (*Elymus elymoides*). Commonly encountered native herbs include sulphur buckwheat (*Eriogonum umbellatum* ssp. *subaridum*), buckwheat (*E. elatum* var. *elatum*), spurred lupine (*Lupinus argenteus*), Eriastrum (*Eriastrum sparsiflorum*), Nuttall's tiquilia (*Tiquilia nuttallii*), mentzelia (*Mentzelia* sp.), cryptantha (*Cryptantha circumcissa*), prickly phlox (*Leptodactylon pungens*), Stansbury's phlox (*Phlox stansburyi*), groundsmoke (*Gayophytum diffusum*), nama (*Nama* sp.), and others. Ruderal nonnative species include goosefoot (*Chenopodium* sp.), amaranth (*Amaranthus* sp.), and woolly mullein (*Verbascum thapsus*).

The following wildlife species were observed in big sagebrush scrub habitat: gopher snake (*Pituophis melanoleucus*), sage thrasher (*Oreoscoptes montanus*), green-tailed towhee (*Pipilo chlorurus*), common raven (*Corvus corax*), black-billed magpie (*Pica pica*), rock wren (*Salpinctes obsoletus*), Nuttall's cottontail (*Sylvilagus nuttallii*), and California ground squirrel (*Spermophilus beecheyi*). Wildlife that prefer big sagebrush scrub habitat include sagebrush lizard (*Sceloporus graciosus*), Brewer's sparrow (*Spizella breweri*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

Nonwetland, Dry Meadow

Within the project area, nonwetland dry meadow is associated with the eastern portion of the project area between the east end of the runway and Benton Crossing Road. This community supports hydrophytic vegetation and exhibits low chroma (10YR 2/1), which is a hydric soil indicator. The site lacks primary or secondary indicators of hydrology and therefore does not meet the definition of a jurisdictional wetland. Water appears to enter the site in the form of seasonal snowmelt and overland runoff from adjacent highway and runway surfaces. A small, artificially excavated drainage feature drains surface runoff toward the site from the north margin of U.S. Highway 395. Although the site does not qualify as a jurisdictional wetland, it does perform limited wetland functions, such as stormwater sediment and pollution retention and wildlife forage.

Wetland and nonwetland habitat was evaluated using the wetland indicator status system developed by Reed (1988), as follows:

OBL Obligate. Occur almost always under natural conditions in wetlands.

FACW Facultative wetland. Usually occur in wetlands, but occasionally found in nonwetlands.

FAC Facultative. Equally likely to occur in wetlands or nonwetlands.

FACU Facultative upland. Usually occur in nonwetlands, but occasionally found in wetlands.

The dry meadow is dominated by mostly native hydrophytic rhizomatous grass and grasslike species, including Baltic rush (*Juncus balticus*) (OBL), straight-leaved rush (*Juncus orthophyllus*) (FACW), clustered field sedge (*Carex praegracilis*) (FACW-), Nebraska sedge (*Carex nebrascensis*) (OBL), and Kentucky bluegrass (*Poa pratensis*) (FACU). Common herbaceous forbs include long-stalked clover (*Trifolium longipes*) (FACW), long-stalked starwort (*Stellaria longipes* var. *longipes*) (OBL), Missouri iris (*Iris missouriensis*) (OBL), and dandelion (*Taraxacum officinale*) (FACU). Also present are a few scattered interior rose (*Rosa woodsii*) (FAC+) and several small willow shrubs (*Salix* sp.) (> FAC).

Species using dry meadow habitat include killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), and sage grouse (*Centrocercus urophasianus*). Most of the wildlife species found in the adjacent big sagebrush scrub habitat (described above) would also forage in the dry meadow habitat.

Description of Affected Species

Owens Tui Chub

Status and Distribution

The Owens tui chub is federally listed as an endangered species. The subspecies is 1 of several cyprinids found throughout the Great Basin and Pacific Ocean drainages (Moyle 1976). The Owens tui chub is endemic to the Owens River basin in Mono County and is restricted to 5 isolated locations:

- Hot Creek headsprings,

- Owens River Gorge downstream from Crowley Lake,
- springs and seeps of Cabin Bar Ranch along the west shore of Owens Lake,
- Owens Valley Native Fish Sanctuary, and
- Little Hot Creek.

Critical habitat for the Owens tui chub includes two areas: (1) the Owens River and 50 feet on each side of the river from Long Valley Dam downstream for a distance of 8 stream miles; and (2) a portion of Hot Creek and its outflows and those areas of land within 50 feet of all sides of the springs, their outflows, and the portion of Hot Creek (50 FR 31594).

Reasons for Decline

The reasons for the decline of the Owens tui chub have been attributed to the introduction of the Lahontan tui chub into Crowley Lake (Miller 1973). Hybridization of the Lahontan tui chub and the Owens tui chub has spread throughout the lower reaches of the Owens River system. Only those populations of Owens tui chub that are isolated by barriers have not hybridized. Predation by exotic species and water development have also led to the decline of native populations (Williams 1985).

Habitat Requirements

Tui chubs are mainly found in the middle spring of the Hot Creek headsprings and were particularly abundant in a small backwater area covered with ample vegetation and no flow (McEwan 1990). Diet analysis showed that chubs are opportunistic generalist feeders, and their principal food sources (chironomid larvae, caddisfly larvae, and detritus) are eaten at all times of the year. Most of these food sources are found in aquatic vegetation. Vegetation also is suspected to play an important role for predator avoidance and water velocity displacement.

Tui chub spawn from late winter to early summer. They spawn in areas with aquatic vegetation.

Occurrence in the Project Area

The nearest occurrence of the Owens tui chub is located at Hot Creek headsprings, approximately 0.75 mile northwest of the airport runway.

Lahontan Cutthroat Trout

Status and Distribution

The Lahontan cutthroat trout were federally listed as an endangered species on October 13, 1970, but were reclassified as a threatened species on July 16, 1975 (40 FR 29864 [1975]). A recovery plan was prepared for the Lahontan cutthroat trout by USFWS (1995).

This cutthroat trout subspecies is endemic to the Lahontan basin in northern Nevada, eastern California, and Southern Oregon. Their historic ranges comprised Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Nye, Pershing, Storey, and Washoe Counties in Nevada; Alpine, El Dorado, Lassen, Mono, Nevada, Placer, and Sierra Counties in California; and Harney and Malheur Counties in Oregon (58 FR 11061 [1993]).

Reasons for Decline

Loss of riparian vegetation, channelization, human development, and water management have exacerbated these temperature fluctuations as the alterations of the river environment expose more surface water to solar radiation and to convective heat exchange with the air (Dickerson and Vinyard 1999). Reduced flows have decreased the species' access to spawning habitat.

Lahontan cutthroat have hybridized with Yellowstone cutthroat and rainbow trout so extensively that there are only few genetically isolated populations of uncertain purity (McAfee 1966, Moyle 1976). This hybridization either decreases the phenotypic variability or allows the rainbow trout phenotype to become dominant (Moyle 1976). In addition, it reduces the Lahontan cutthroat fitness by producing a less fertile offspring (McAfee 1966).

Habitat Requirements

Lahontan cutthroat trout live under temperature fluctuations that range between 5°C to 20°C per day (Dickerson and Vinyard 1999). Lahontan cutthroat trout are slow-growing fish; they seldom live longer than 9 years or reach lengths of 61 centimeters (cm) (Moyle 1976). They migrate short distances upstream from lake habitat into stream habitat to spawn from April through July (depending on water temperature and flow conditions) in their

second to fourth year of life. Spawning substrate includes washed gravels in riffle habitat. Although mortality rates are high after spawning, some individuals may survive to spawn in subsequent years.

After hatching, the young fish (alevins) remain in the gravel until the yolk sac has been absorbed, at which time, they move into the water column, seeking lower water velocities. Juveniles remain in the stream habitat for about 1 year and then begin migrating downstream toward the lake habitat where they rear until adulthood. However, some individuals may remain in stream habitat throughout their life cycle (Moyle 1976).

Freshwater invertebrates and terrestrial insects are the main diet for juvenile and adult cutthroat trout. In streams, the fish select the food as the invertebrates drift by. In lakes, they feed on insects at the surface and on zooplankton; however, when this is less abundant, they will feed on bottom-dwelling insect larvae, crustaceans, and snails. Larger trout will feed on small fish, as well (Moyle 1976).

Occurrence in the Project Area

Lahontan cutthroat trout inhabit the Lahontan Drainage, with the southern end of its range just below the Walker River (U.S. Fish and Wildlife Service 1995). USFS information indicates that the closest population of Lahontan trout is 6 miles north of the project site in O'Harrel Canyon Creek, a tributary to the Owens River (Perloff pers. comm.).

Bald Eagle

Status and Distribution

The bald eagle is federally listed as a threatened species. Historically, it nested throughout California; however, the current bald eagle nesting distribution is mostly restricted to mountainous habitats in the northern third of the state, primarily in the northern Sierra Nevada, Cascade Range, and northern Coast Ranges (California Department of Fish and Game 1992). As a result of reintroduction programs, bald eagles have recently nested in mainland southern and central California and on Santa Catalina Island. Bald eagles winter at lakes and reservoirs and along river systems throughout most of central and northern California and in a few southern California localities (California Department of Fish and Game 1992).

The breeding population of bald eagles in California is increasing in both numbers and range, and the winter population appears stable. In 1972, there were only 26 known active bald eagle territories in California (Thelander 1974). In 1981, 50 breeding bald eagle pairs were known to occupy territories in California. By 1992, the number of breeding bald eagle pairs had increased to 99.

In 1981, the bald eagle breeding range in California included portions of 8 counties. By the early 1990s, the breeding range in California had expanded to portions of 19 counties. Although the winter population of bald eagles in California varies from year to year, it may exceed 1,000 birds in some winters (California Department of Fish and Game 1992).

Because the population status of the bald eagle has improved in most of the country, USFWS is considering removing the bald eagle from the threatened species list.

Reasons for Decline and Recovery

Early declines in bald eagle populations have been attributed to human persecution and disturbance and to destruction of riparian, wetland, and coniferous forest habitats (Detrich 1986). The most important factor that contributed to the decline of bald eagle populations, however, was environmental contamination resulting from the introduction of dichloro-diphenyl-dichloroethylene (DDE), a metabolite of the agricultural pesticide dichloro-diphenyl-trichloroethane (DDT), into the food chain (Detrich 1985).

Various legal and management measures, including the banning of DDT in 1972 and development and implementation of the Pacific Bald Eagle Recovery Plan (U.S. Fish and Wildlife Service 1986) and local bald eagle management plans, have contributed to the continuing recovery of the bald eagle breeding population in California (California Department of Fish and Game 1992).

Habitat Requirements

Bald eagle nesting territories in California are found primarily in ponderosa pine and mixed conifer forests (Lehman 1979). Ponderosa pine is the tree most often used for nesting (Lehman 1979), although nest sites have been observed in a variety of tree species (Jurek 1990).

Bald eagle nest sites are always associated with a lake, river, or other water body and are usually within 1 mile of water. Nests are usually constructed in a tree that provides an unobstructed view of the water body and almost always is the dominant or codominant tree in the surrounding stand (Lehman 1979). Snags and dead-topped live trees are important habitat components in a bald eagle nesting territory, providing perch and roost sites.

Bald eagles winter along rivers, lakes, and reservoirs that support adequate fish or waterbird prey and have mature trees or large snags available for perch sites. This species often roosts communally during the winter, typically in mature trees or snags with open branching structures. Winter roost areas are usually isolated from human disturbance.

Occurrence in the Project Area

A pair of wintering bald eagles has been observed by DFG personnel to perch on telephone poles near the study area at the Hot Creek Fish Hatchery. USFS biologists have recorded up to 6 bald eagles at one time during the winter months at Laurel Pond located approximately 1 mile southwest of the project site (Perloff pers. comm.). Bald eagles have also been recorded in the project vicinity along Convict Creek, Hot Creek, and the alkali ponds and flats east of the project area (Perloff pers. comm.). No nesting by bald eagles are known to occur in the project area (Perloff pers. comm.). The Bureau of Land Management biologists have observed wintering bald eagles foraging in the project vicinity at the alkali ponds area, around Crowley Lake, and along Convict Creek (Nelson pers. comm.). Wintering birds likely roost at the Alpers fish hatchery located approximately 7 miles northwest of the project site, but birds may also roost along Hot Creek gorge approximately 2 miles from the airport and at Convict Lake approximately 2 miles from the airport (Perloff pers. comm.).

Sierra Nevada Bighorn Sheep

Status and Distribution

The Sierra Nevada bighorn sheep is federally listed as endangered. The Sierra Nevada bighorn sheep is 1 of 3 bighorn sheep subspecies to occur in California and is considered a distinct vertebrate population segment. Although this species' pelage exhibits a great deal of color variation, it is similar in appearance to other desert-associated bighorn sheep. They range from almost white to fairly dark brown, with a white rump. Both males and

females have permanent horns, with males possessing larger horns and female horns lacking coiling (Buechner 1960).

Reasons for Decline

Historically, in California, their range included the eastern slope and a portion of the western slope of the Sierra Nevada from Sonora Pass in Mono County south to Walker Pass in Kern County (Wehausen 1980). Disease is believed to be the factor most responsible for the disappearance of Sierra Nevada bighorn sheep subpopulations (65 FR 1:20). Today 5 disjunct subpopulations occupy the eastern escarpment of the Sierra Nevada in Mono and Inyo Counties. These populations occur at Lee Vining Canyon, Wheeler Crest, Mount Baxter, Mount Williamson, and Mount Langley (65 FR 1:20).

Currently, the number of Sierra Nevada bighorn sheep comprising these 5 subpopulations is thought to total no more than 125 animals. Disease, mountain lion predation, and loss of genetic variability because of the small number and isolated nature of the population are threatening the continued existence of the Sierra Nevada bighorn sheep (65 FR 1:20).

Habitat Requirements

During summer, Sierra Nevada bighorn sheep live in the alpine and subalpine zones (10,000–14,000 feet). They forage in open spaces with low-growing vegetation near steep slopes and canyons that are rough, rocky, and sparsely vegetated. These rugged areas are used as escape cover, bedding, and lambing sites. In winter, they move to high, wind-swept ridges or migrate to the lower elevation sagebrush-steppe habitat (4,790 feet) to escape deep snow and find more nutritious forage. During the winter months, they also exhibit a preference for south-facing slopes (Wehausen 1980).

Occurrence in the Project Study Area

The population of bighorn sheep that is closest to the project site is located in Lee Vining Canyon and Wheeler Crest (Perloff pers. comm.). The Wheeler Crest bighorn sheep population is located approximately 12 miles southeast of the airport, and the Lee Vining sheep population is located approximately 20 miles northwest of the airport.

Potential Effects of the Proposed Project

This section describes the potential direct effects of the proposed Mammoth-Yosemite Airport expansion project on the local and regional populations of Owens tui chub, Lahontan cutthroat trout, bald eagle, and Sierra Nevada bighorn sheep. The primary direct effect mechanisms considered for this biological assessment were the expansion of the runway, placement of the fence around the runway, and direct disturbance or mortality to listed species.

Indirect effects of the proposed project include potential contamination of groundwater from accidental fuel or chemical spills, groundwater pumping at the airport, potential plane crashes into Hot Creek headsprings or the fish hatchery that result in fuel spills and groundwater contamination, potential fuel spill risk associated with fuel trucks traveling to the airport, and potential increase or decrease in the number of automobile travelers on U.S. Highway 395 as a result of a change in travel types to the ski resort from auto to plane.

Direct and Indirect Effects on the Owens Tui Chub

Construction activities at the airport would be confined to the airport runway area. No disturbance to habitat occupied by Owens tui chub would occur as a result of the project. Therefore, the project would have no direct effect on this listed fish.

An extensive groundwater study was conducted by Kenneth D. Schmidt and Associates in October 1996 for the Mammoth Community Water District Reclaimed Water Project. The groundwater study reported that groundwater

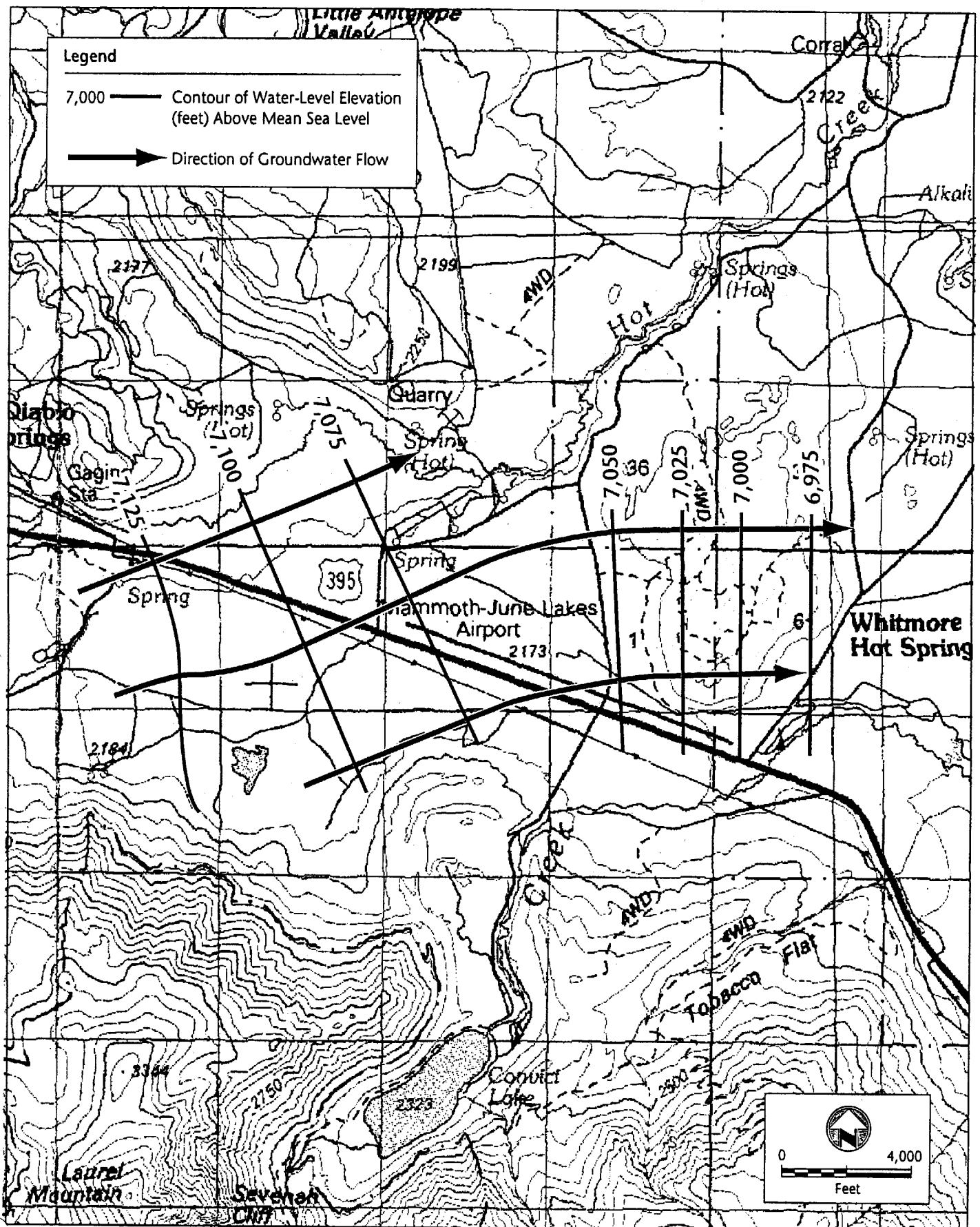
flows travel in an easterly direction throughout the project vicinity (Figure 2). Because the Hot Creek headsprings are located northwest of the airport, there is no groundwater flow or water quality that can be affected by airport operations. The hydrology studies were summarized in the comments and responses of the Subsequent Environmental Impact Report and Updated Environmental Assessment for the Mammoth Lakes Airport (Reinardt Brandley, Consulting Airport Engineer 1997). It was determined in that document that the groundwater extraction for the entire airport property including the proposed project and the Hot Creek Development would not affect the Hot Creek fish hatchery springs. Therefore, the project would have no indirect effect on the availability of water for the Owens tui chub.

Fuel trucks traveling to the airport would turn off of Hot Creek Hatchery Road onto Airport Road (Figure 1). The fuel trucks would not travel past the Hot Creek hatchery located approximately 0.75 mile north of the airport. The probability of an accidental fuel spill from a fuel delivery truck crash is extremely remote. In the unlikely event of a spill along the travel route, groundwater flow would carry any seepage away from the Hot Creek hatchery springs (Figure 2).

Direct and Indirect Effects on Lahontan Cutthroat Trout

No direct effects on Lahontan cutthroat would result from the project. The closest Lahontan cutthroat population is more than 6 miles from the project site.

As discussed above for Owens tui chub, the groundwater study reported that groundwater flows travel in an easterly direction throughout the project vicinity (Figure 2). Because O'Harrel Canyon Creek is more than 6 miles northwest of the airport and on the other side of the valley, neither groundwater flows nor water quality could be affected by airport operations. The flight path at the airport is about 2 miles from the closest population of cutthroat trout. At their closest point to the cutthroat populations, the proposed jet aircraft would be flying at an altitude of 10,000 feet above ground on departure and 5,000 feet on approach. The potential for an aircraft to crash into O'Harrel Canyon Creek and affect water quality is extremely remote. Therefore, based on the distance of the closest population of Lahontan cutthroat trout from the airport and on the direction of water flow in Long Valley (in the opposite direction from the Lahontan trout



Source: Kenneth D. Schmidt and Associates Groundwater Quality Consultants Fresno, California 1996.

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population), the proposed project is unlikely to have any effect on the Lahontan cutthroat trout.

Direct and Indirect Effects on Bald Eagles

Bald eagles do not nest in the project vicinity; however, up to 6 bald eagles have been observed at one time during the winter months within 1 mile of the project site. The closest potential roosting area is approximately 2 miles from the project site (Hot Creek gorge)(Perloff pers. comm.). Aircraft departures and arrivals at Mammoth-Yosemite Airport have a low potential to strike foraging bald eagles.

No roost sites are known to occur at the project site. The closest likely roost site to the airport is near Alpers fish hatchery, more than 7 miles northwest of the project site and outside the flight path. Bald eagles have been reported perching on telephone poles at the Hot Creek fish hatchery approximately 0.75 mile from the project site. No additional perch areas have been identified in the project site.

Winter use of the project vicinity by bald eagles is largely concentrated north to northeast of the project site and outside the flight path for aircraft. Bald eagle use in the project vicinity is primarily along Hot Creek, the alkali ponds, Laurel Pond, and Crowley Reservoir (Perloff pers. comm., Nelson pers. comm.).

There have been no reported bird strikes at the airport in the last 10 years (Cleary pers. comm.). This is likely the result of several factors, including a limited amount of plane traffic, low densities of birds, and the lack of weather conditions, such as fog, that tend to increase the risk of bird strikes.

The proposed project is projected to generate two daily flight operations from air-carrier jet aircraft in 2002, growing to 14 daily operations in 2022. At present, there are roughly 8,000 departures and landings annually.

Takeoffs and landings are important when discussing bird strikes including bald eagles because 79% of reported bird strikes between 1990 and 1999 occurred below 1,000 feet above ground, of which 40% occurred on the ground (Cleary pers. comm). The class of aircraft was not evaluated separately in the FAA's bird strike data; however, the class of plane use in the proposed project (air-carrier jet aircraft) has a steeper takeoff path and higher cruising altitude than the majority of small planes currently using the

airport. Thus, the proposed plane usage would spend less time at low altitudes where bird strikes are most common.

Grubb and Bowerman (1997) reported disturbances and response characteristics for 3,122 bald eagle-plane interactions among three types of aircraft (light plane, jet aircraft, and helicopters) during a study conducted in Arizona (1983–1985) and Michigan (1989–1990) (Grubb and Bowerman 1997). No apparent bald eagle strikes occurred during the study. This research concluded that distance of the aircraft to the birds was the most important factor related to disturbance. Bald eagles showed no flight responses (96% in Arizona; 95% in Michigan) when the median distance to aircraft was greater than 1,150 feet. In terms of the proposed project, the closest distance to the nearest potential bald eagle perch site on Hot Creek is 3,960 feet which is more than twice the distance that almost all eagles showed no flight response in the Grubb and Bowerman (1997) study.

Given the lack of any bird air strikes at Mammoth-Yosemite Airport in the last 10 years, the low number of eagles in the project vicinity, the primary location of bald eagle use outside the flight path, the small amount of increase in flight operations, and the limited amount of time the planes are at low altitudes, the proposed project is unlikely to result in any incidental take of bald eagles. Because bald eagles occasionally roost near the project site (Hot Creek) and forage in the project vicinity, the chance of a bald eagle injury or mortality from an aircraft strike, however remote, cannot be ruled out.

Construction-related activities to expand the airport runway are unlikely to directly affect the bald eagle. Construction at the airport is scheduled to occur in summer when bald eagles are generally not present in the project vicinity.

No indirect effects on bald eagles are expected to result from the proposed project.

Direct and Indirect Effects on Sierra Nevada Bighorn Sheep

Based on the existing flight path, the closest the flight path comes to known Sierra Nevada bighorn sheep habitat is 3 miles. Jet aircraft would fly at an elevation of approximately 5,000 feet above runway elevation on departure and 2,500 feet above runway elevation on approach on the portion of the flight path closest to the sheep population. Based on the large distance and elevation of planes approaching and departing from Mammoth-Yosemite

Airport to the bighorn sheep use areas, it is unlikely that the sheep would be affected by jet aircraft.

Indirect effects on Sierra Nevada bighorn sheep could include disturbance to sheep and avoidance of preferred use areas due to an increase in the number of tourists arriving by jet aircraft to the Mammoth Lakes area and backpacking into the high Sierras where bighorn sheep occur. This indirect effect is unlikely to occur due to the location of the bighorn sheep use areas. The sheep primarily use USFS lands designated as wilderness areas. USFS strictly controls the number of back-country permits that are issued for the wilderness area travel. The potential increase in the number of tourists arriving at the Mammoth Lakes area would therefore have no effect on the quota of back-country use permits issued by USFS. Furthermore, USFS does not permit entry into some bighorn sheep use areas in the Sierra Nevada between July 1 and December 15 to reduce potential disturbance to sheep.

Cumulative Effects

Two development projects, the 2000 Sierra Business Park and the 1997 Hot Creek Development project are planned for the project vicinity. Environmental documentation prepared for these projects indicate that there would be no direct, indirect, or cumulative impacts on Owens tui chub, Lahontan cutthroat trout, bald eagle, or Sierra Nevada bighorn sheep.

Planned growth in the project vicinity within the range of wintering bald eagles is centered primarily in and around the Town of Mammoth Lakes (Intrawest Resort developments and Eastern Sierra College Center), with scattered developments proposed at Crowley Lake (Lakeridge Ranch Estates) and west of U.S. Highway 395 (Sherwin/Snowcreek ski area and Sierra Business Park). The conversion to urban uses may eliminate bald eagle foraging habitat. The project would contribute to conversion to other uses of a small quantity (10.5 acres) of undeveloped lands; therefore, it would likely contribute to the removal of low-quality foraging habitat. Because bald eagles prefer to forage near water bodies including creeks, reservoirs, and alkali ponds, and because the proposed project would affect none of those habitats, the cumulative effects resulting from the proposed project would not affect bald eagles.

Determination

It has been determined that the proposed project would not affect Owens tui chub, Lahontan cutthroat trout, Sierra Nevada bighorn sheep, or their designated critical habitat.

Due to the remote chance of a bald eagle collision with a jet carrier aircraft, the project as proposed may affect but is not likely to adversely affect the bald eagle. The project would not affect any designated critical habitat for the bald eagle.

Chapter 6

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- Steve Nelson. Wildlife Biologist. Bureau of Land Management. Bishop Office. Meeting. November 29, 2000 and January 19, 2001.
- Richard Perloff. Wildlife Biologist. U.S. Forest Service. Mammoth Lakes Ranger District. Meeting. November 29, 2000 and January 19, 2001.
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**Appendix A. U.S. Fish and Wildlife Service Species
List Dated January 31, 2001**



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

January 31, 2001

Steven Avery
Jones & Stokes
2600 V Street
Sacramento, CA 95818-1914

Subject: Species List for Mammoth Lakes Airport Expansion Project, Mono County, California

Dear Mr. Avery:

This letter is in response to your request, dated November 22, 2000, and received in our office on December 4, 2000, for information on threatened and endangered species which may be present in or near the vicinity of the Mammoth Lakes Airport Expansion Project in Mono County, California.

This response fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (Act). The Federal Aviation Administration (FAA), as the lead federal agency for the proposed action, has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the proposed action requires the preparation of an environmental impact statement, the FAA has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species. If the FAA determines that a listed species is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species prior to a written request for formal consultation. During this review process, the FAA may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

The only known federally listed species which may occur in the vicinity of or be affected by the Mammoth Lakes Airport Expansion Project are the federally threatened Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*), and the federally endangered bald eagle (*Haliaeetus leucocephalus*), Sierra Nevada bighorn sheep (*Ovis canadensis nelsoni*), and Owens tui chub (*Gila bicolor snyderi*). Critical habitat has been designated for the Owens tui chub at Hot Creek. Only listed species receive protection under the Act. However, other sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to

Steven Avery

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project completion. We recommend that you review information in the California Department of Fish and Game's (CDFG) Natural Diversity Data Base and that you contact the CDFG at (916) 324-3812 for information on other species of concern that may occur in this area.

If you have any questions, please call Tim Thomas of my staff at (760) 255-8890.

Sincerely,

A handwritten signature in cursive script that reads "Diane k. Noda".

Diane K. Noda
Field Supervisor

Appendix J – Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

of pages -

To Tom Cornell	From E. Novak
Dept./Agency Ricondo	Phone #
Fax # (415) 547-1940	Fax #
NSN 7540-01-317-7360	5099-101

GENERAL SERVICES ADMINISTRATION

Elisha Novak, Airport Planner
Federal Aviation Administration
831 Mitten Road
Burlingame, California 94818-1301

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RICONDO & ASSOCIATES
July 23, 2001

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

of pages - 20

To JOSEPH RODRIGUEZ	From Geo. Walker
Dept./Agency	Phone #

Subject: Mammoth Lakes Airport Expansion, Mono County, California (1-8-01-F-33)

Dear Mr. Novak:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion for the Federal Aviation Administration's (FAA) activities related to the Final Environmental Assessment for the Mammoth Yosemite Airport Expansion Project and its effects on the endangered Sierra Nevada bighorn sheep (*Ovis canadensis californiana*) and Owens tui chub (*Gila bicolor snyderi*) and its designated critical habitat. This biological opinion has been prepared in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act).

This biological opinion is based on information you supplied on March 8, 2001, in the biological assessment for the Mammoth Yosemite Airport (Jones and Stokes 2001), the December 2000, Final Environmental Assessment for the Mammoth Yosemite Airport Expansion (Mammoth Lakes 2000), field visits, personal communications with staff of the Town of Mammoth Lakes and other sources. A complete administrative record of this consultation is on file at the Service's Ventura Fish and Wildlife Office.

The Service recognizes that expansion of airport facilities and certification of the Mammoth Yosemite Airport by the FAA to accommodate the larger passenger aircraft will likely result in an increase of visitor use throughout the east slope of the Sierra Nevada. The Town of Mammoth projects an annual increase of one million visitors (Mammoth 2001). This increase in visitation is liable to result in changes to visitor use patterns on the Inyo National Forest including the back country or wilderness areas, and is likely to affect the Sierra Nevada bighorn sheep. At this time, we are unable to accurately predict where or how those changes to visitor use patterns would occur; thus, we are unable to analyze their effects on the Sierra Nevada bighorn sheep and its habitat. The Service believes that the Forest Service is the proper agency,

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through its policies, regulations, and land use plans, to address potential adverse effects to the Sierra Nevada bighorn sheep that could result from changes to recreational use patterns. If the Forest Service was required to make specific management decisions regarding use levels in the Inyo National Forest, it would be required to consult, pursuant to section 7(a)(2) of the Act with the Service. Such future consultations may also benefit from the information to be contained in the recovery plan for the Sierra Nevada bighorn sheep, which is currently being developed by the interagency Sierra Nevada bighorn sheep recovery team. For this reason, the Sierra Nevada bighorn sheep will not be addressed further in this document.

CONSULTATION HISTORY

On December 15, 2000, the FAA requested, via FAX, a letter of concurrence from the Service on the determination that activities covered in the subject project would not affect the federally threatened bald eagle (*Haliaeetus leucocephalus*). During a phone conversation on that day, the Service informed the FAA that, based on the information provided by the FAA, we could not concur with a no affect for the bald eagle. In response, the FAA sent a copy of the final environmental assessment to us, which we received on December 19, 2000. Our letter of January 11, 2001, again noted that we could not concur with a determination of no affect.

We attended a meeting on January 19, 2001, where various wildlife issues were discussed and supplemental information was presented by the Town of Mammoth Lakes and its consultants, Jones and Stokes. At that meeting several issues were discussed that either clarified or elevated them. Our concerns with the project affects to bald eagles were addressed through a presentation on bird air strike hazards by Jones and Stokes. Other issues that were raised during the meeting include effects to the Sierra Nevada big horn sheep through indirect effects, and hydrologic effects to the Owens tui chub.

Your letter of March 6, 2001, requested a letter of concurrence for a determination of no affect for listed species or designated critical habitat and was accompanied by the Draft Biological Assessment for the Mammoth-Yosemite Airport Expansion Project. On March 23 and 28, 2001, we received copies of groundwater hydrology reports for the area of Mammoth Lakes. We also received additional information over the last seven months via electronic mail, telephone conversations, and faxed material from the FAA, the Town of Mammoth Lakes, and Jones and Stokes.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Town of Mammoth Lakes has requested a permit and funding from the FAA to extend the runway at the Mammoth Yosemite Airport in Mono County, California. The purposes of the request are to: 1) obtain approval of the Airport Layout Plan from the FAA, 2) obtain the necessary certifications from the FAA to operate as an air carrier airport, 3) be eligible to receive

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funds from the FAA under its Airport Improvement Program or impose Passenger Facility Charges to assist in funding some of the proposed improvements, and 4) to obtain environmental clearance for the construction of the first phase of development.

The existing airfield at Mammoth Yosemite Airport does not currently meet all of the FAA airfield design criteria for the operation of a Boeing 757 aircraft (Mammoth Lakes 2000). The primary purpose of the action is to enable air carrier jet service, using aircraft up to the size of a Boeing 757, to safely and efficiently operate at the airport. Calculations for runway length were conducted using the methodology prescribed in the B757-200 FAA-approved Aircraft Flight Manual. The safety criteria for certifying airports for commercial service are contained in the Federal Aviation Regulation (FAR) Part 139. FAR Part 139 prohibits an airport from servicing any scheduled passenger operation on an airline operating an aircraft with a seating capacity of more than 30 passengers if all criteria are not met. The certification process ensures that the safety of the airport environment is adequate for the proposed operation considering such items as size, surface, obstruction, and lighting. The Town of Mammoth Lakes currently only possesses a limited FAR Part 139 certificate, which would not allow the operation of a commercial aircraft with more than 30 seats. The proposed commercial airline service would use aircraft up to the size of a Boeing 757-200, which has a capacity of 176 seats. The proposed action would adequately address the operational requirements for the FAR Part 139 certification process. The following are included and described in the EA for the proposed action :

- Extend the current runway from 7,000 feet to 8,200 feet
- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft
- Widen the runway from 100 to 150 feet on the south side of the runway, shifting the runway centerline 25 feet to the south. The Town of Mammoth Lakes would be required to obtain a special use permit from the U.S. Forest Service (USFS) for an additional 20 feet of land to the west of Airport property for the runway safety area
- Widen the parallel taxiway from 50 to 75 feet by 20 feet on the south and five feet on the north side
- Widen selected connecting taxiways from 50 to 75 feet
- Extend the parallel taxiway to match the runway extension
- Add an air carrier apron for three air carrier aircraft with expansion capabilities to accommodate up to six air carrier aircraft
- Construct Airport access road improvements

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- Expand the automobile surface parking facilities
- Acquire land to the east of the Airport that is currently leased from the Los Angeles Department of Public Works (LADWP) for Airport use
- Improve security fencing to include a 6 to 8 foot high perimeter fence around the airfield
- Construction of a passenger terminal complex and related support areas

The design and maintenance of all wastewater treatment and disposal facilities would be in accordance with the requirements and regulation of the Regional Water Quality Control Board (RWQCB) and Mono County Health Department. Wells to sample ground water would be provided to monitor both performance of the subterranean wastewater disposal and to assess adverse water quality impacts.

All existing pavement and the pavement for the future runway extension and taxiways would drain into the surrounding ground as they presently are allowed to do. All new pavements for the commercial aircraft parking apron, automobile parking lot, and terminal roadway will be designed such that all the drain water from these areas will be collected in inlets and pipe structures. These drain waters will be carried through an oil/water separator to separate any oils from the stormwater. The resulting stormwater will then be discharged into leaching trenches or leaching fields. The EA states that the discharge from the oil/water separator will be tested on a routine basis to determine the continuing effectiveness of this type of treatment. Should the discharge show any deleterious contamination, additional treatment would be provided. The information and details of these separators are not included in the EA. The EA states that to prevent accidental spill of fluids, such as aviation fuel, the Town of Mammoth Lakes has adopted a Spill Prevention Plan for the airport. The EA contains no plan, there are only checklists to report spills and designation of responsible parties.

STATUS OF THE SPECIES

The Owens tui chub was federally listed as endangered and critical habitat was designated on August 5, 1985 (50 *Federal Register* 31592). The Owens tui chub was listed as endangered because of population declines due to the introduction of non-native fish that effect Owens tui chub through competition, predation, and hybridization, diversion and impoundment of water for agricultural and municipal use, and habitat destruction and alteration. Critical habitat for the Owens tui chub exists along 8 miles of the Owens River and 50 feet of riparian vegetation on either side of the river, encompassing a total of approximately 97 acres in the Owens Gorge, and at two spring provinces, including 50 feet of riparian vegetation on either side of spring brooks, encompassing approximately 5 acres at Hot Creek Fish Hatchery. Constituent elements of critical habitat for the Owens tui chub include high quality, cool water with adequate cover in the form of rocks, undercut banks, or aquatic vegetation, and a sufficient insect food base.

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Activities described in the final rule that may adversely modify designated critical habitat include: 1) introduction of exotic aquatic animals; 2) activities that decrease available water or cause a significant change in the physical or chemical properties (e.g., temperature, pH or dissolved gases) of the water; 3) removal of natural riparian and/or submerged vegetation, except what might be required to maintain an open-water habitat for the Owens tui chub; 4) pollution of aquatic habitats or adjacent terrestrial habitats; 5) channelization or diversion of water flows; and 6) overgrazing of adjacent riparian areas. Recovery goals for this species are contained in the Recovery Plan (Service 1998).

The Owens tui chub was described in 1973 as a subspecies of *Gila bicolor* endemic to the Owens Basin (Miller 1973). It is distinguished from its closest relative, the Lahontan tui chub (*G. b. obesus*), by scales with a weakly developed or absent basal shield, lateral and apical radii that number 13 to 29, the structure of its pharyngeal arches, the number of anal fin rays, gill raker counts of 10 to 14, and 52 to 58 lateral line scales (Miller 1973). Dorsal and lateral coloration varies from bronze to dusky green, grading to silver or white on the belly. It may reach a total length of 12 inches. Owens tui chub are believed to be derived from the Lahontan Basin tui chub that entered the Owens Basin from the north during the Pleistocene Epoch (Miller 1973, Smith 1978).

Early fish collections in the Owens Basin documented Owens tui chub in Owens Lake (Gilbert 1893), several sites along the Owens River from Long Valley to Lone Pine, tributary streams near the Owens River in Long Valley and Owens Valley, Fish Slough, and irrigation ditches and ponds near Bishop, Big Pine, and Lone Pine (Snyder 1917, Miller 1973). The scattered distribution of these localities and the ease with which researchers captured fish suggest that Owens tui chub were common and occupied all valley-floor wetlands near the Owens River in Inyo and Mono counties. Tui chub currently occupy many valley-floor habitats in the Owens River and its tributaries. However, few of these populations are genetically pure Owens tui chub. Few populations of unhybridized Owens tui chub are known to exist, and occur only where suitable habitat is isolated from non-native fishes (particularly Lahontan tui chub and predatory fish). Habitats occupied by non-introgressed Owens tui chub populations include the headsprings at Hot Creek Fish Hatchery (McEwan 1990), the Owens River downstream from Crowley Lake (Jenkins 1990), ponds at Cabin Bar Ranch near Lone Pine, and Mule Spring. Owens tui chub populations also occur in Sotcher Lake, Madera County (Middle Fork San Joaquin River drainage), and Silver Lake in the Mono Basin, Mono County. Both of these populations are outside of the Owens tui chub native range, and they were probably established during fish stocking from Hot Creek Fish Hatchery (Service 1998).

McEwan (1990) observed that Owens tui chub prefer pool habitats with low current velocities and dense aquatic vegetation that provide adequate cover and habitat for insect food items. Gut analyses showed that Owens tui chub also consume detritus and aquatic vegetation, which may be incidentally taken with insects.

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Although only a few studies have examined the behavior, life history, and habitat use of the Owens tui chub, a number of aspects of its ecology can be generally surmised from studies of other tui chub subspecies. Tui chub congregate from late winter to early summer to spawn over aquatic vegetation or gravel substrate (Kinsey 1954). Females may produce a large number of eggs. Kinsey (1954) found that an 11 inch female from Lake Tahoe contained 11,200 eggs. Tui chub may reach sexual maturity at 2 years and may live more than 30 years (Scoppettone 1988).

On September 30, 1998, the Service released the Owens Basin Wetland and Aquatic Species Recovery Plan which addressed recovery needs for the Owens tui chub. The Recovery Plan identifies eight conservation areas necessary for the recovery and protection of Owens tui chub. These areas include habitat for the species, characteristic Owens Basin valley-floor wetland landforms and soils, and sufficient buffers to maintain ecological and geological processes necessary to protect aquatic and mesic alkali meadow ecosystems. They are also ecologically diverse and encompass habitats where species richness is highest, impacts of existing land and water uses are minimal, and chances for recovery are greatest. The eight conservation areas for the Owens tui chub are identified in the recovery plan as Little Hot Creek, Hot Creek, Round Valley, Fish Slough, Warm Springs, Mule Spring, Blackrock, and Southern Owens.

ENVIRONMENTAL BASELINE

Mammoth Lakes, in Mono County, California, is a resort town located in the Eastern Sierra Nevada Mountain Range approximately 170 miles south-southwest of Reno, Nevada. The Mammoth Yosemite Airport is seven miles east of the Town of Mammoth Lakes and sits immediately parallel to Highway 395.

The project site is dominated by big sagebrush scrub with a small amount of dry meadow on the east end of the runway. The big sagebrush community occupies well-drained upland sites on sandy to gravelly soils and is dominated by shrubs interspersed with grass and herbaceous species. The big sagebrush community is dominated by big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), and rubber rabbitbrush (*Chrysothamnus nauseosus*), with scattered desert peach (*Prunus andersonii*) and horsebush (*Tetradymia canescens*). Rabbitbrush is the dominant shrub in some areas. Common grass species include the alien cheatgrass (*Bromus tectorum*), needle-and-thread (*Hesperostipa comata* ssp. *comata*), Indian ricegrass (*Achnatherum hymenoides*), and squirreltail (*Elymus elymoides*). Commonly encountered native herbs include sulphur buckwheat (*Eriogonum umbellatum* ssp. *subaridum*), tall buckwheat (*E. elatum*), spurred lupine (*Lupinus argenteus*), woollystar (*Eriastrum sparsiflorum*), Nuttall's tiqullia (*Tiqullia nuttallii*), and cryptantha (*Cryptantha circumcissa*). The dry meadow found in the eastern portion of the project location is dominated by mostly native hydrophytic rhizomatous grass and grasslike species including Baltic rush (*Juncus balticus*), straight-leaved rush (*Juncus orthophyllus*), clustered field sedge (*Carex praegracilis*), Nebraska sedge (*Carex nebrascensis*), and Kentucky bluegrass (*Poa pratensis*). Common herbaceous forbs of the dry meadow include long-stalked clover (*Trifolium longipes*), long-stalked starwort (*Stellaria longipes* var. *longipes*), and Missouri iris (*Iris missouriensis*).

Llisha Novak (1-8-01-F-33)

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The Owens tui chub and one of its two designated critical habitat units occurs less than a mile from the Mammoth Yosemite Airport. The Owens tui chub occurs in two headsprings (AB and CD) at Hot Creek Fish Hatchery. At the AB headsprings the Owens tui chub are concentrated in the upper one-third of the channel between the spring's origin and an artificial rock weir. At the CD headsprings Owens tui chub occurs throughout the spring channel, but are found predominantly in a low velocity side cove approximately midway along the length of the channel. The areas inhabited by Owens tui chub in both AB and CD headsprings support dense aquatic vegetation. Both spring channels terminate at the fish hatchery intake grates effectively isolating the habitat. Hybrid chubs exist below the barriers created by the water intake structures. Trout which are potential predators of the Owens tui chub and which compete with the slower Owens tui chub for invertebrate prey, coexist with Owens tui chub in both headsprings. The Owens tui chub prefer habitats with slowly flowing water and dense aquatic vegetation. The presence of vegetation is important for predator avoidance and reduction of water velocity. Vegetation also serves as a food source itself, as a substrate which supports aquatic invertebrate fauna, and as spawning habitat (McEwan 1990).

Constant water temperature and food availability enable Owens tui chub to remain active year-round in Hot Creek headsprings. McEwan (1990) speculates that adaptation to a constant environment would result in lower tolerance of temperature fluctuations than is present in fish which live in thermally variable environments.

The hydrologic system which underlies the Long Valley Caldera generally consists of a shallow cold water subsystem and a deeper hydro thermal subsystem. Although the dynamics of the aquifer are complex there have been observations of changes in flow and chemistry of the Hot Creek headsprings (Service 1991). Reduction in flows at the Hot Creek headsprings is thought to be attributable to reductions in the non-thermal contributions of water. At reduced flows, temperature in the AB headsprings increase, accompanied by a greater concentration of undesirable chemical components including boron, arsenic, and heavy metals (Chubb and McLean 1990). Arsenic is the element of primary concern. If arsenic concentrations exceed 0.25 milligrams/liter, acute and chronic impacts will probably occur to the Owens tui chub, its food supply and plants within its habitat.

Two previous biological opinions have been issued by the Service for Federal actions associated with the Owens tui chub at the Hot Creek springs (1-1-88-F-3 and 1-1-90-F-4). A draft Jeopardy Biological Opinion (1-6-90-F-43) was transmitted to the U.S. Forest Service on February 13, 1991, for the proposed issuance of a special use permit to the Town of Mammoth Lakes for groundwater pumping (well #11) and its potential effects to the Owens tui chub and its designated critical habitat (Service 1991).

EFFECTS OF THE ACTION

The Mammoth Yosemite Airport expansion is an integral part of a plan to increase visitation to the Eastern Sierra (Mammoth Lakes 2001). The region has year-round recreational attractions

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consisting of skiing in the winter and numerous outdoor recreational activities in the spring, summer, and fall. Winter skiing at Mammoth Mountain attracted nearly one million visitors in the 1998/99 winter season. Based on statistics provided by the California Department of Transportation, approximately 1.5 million summer tourists visit the Mammoth Lakes region annually. The Mammoth Lakes Strategic Marketing Plan 2001-2002 estimates the need to increase visitors by approximately 1,000,000 annually to maintain economic viability. Most of the increase visitation is expected to be accomplished through air carrier transport. The proposed action provides no measures to minimize effects to listed species.

Commercial airline service to the Mammoth Yosemite Airport is proposed to begin during the winter season of 2001/2002 with Boeing 757 aircraft serving Dallas/Fort Worth International Airport and Chicago O'Hare International Airport (Mammoth Lakes 2000). This service is scheduled to expand, in following years, to include air carrier and commuter service to other regional and national destinations. Current airport operations require weekly fuel deliveries. At full operation projected services will require daily fuel deliveries. Accidental delivery spills in the vicinity of the airport could have drastic effects on the viability of the Owens tui chub and its designated critical habitat. There also exists the potential threat of aircraft accidents that could contaminate the groundwater associated with the Owens tui chub critical habitat.

The existing drainage from the runways and taxiways begins with sheet flow from the pavement to the infield areas of the airport and then infiltration into the ground (Mammoth Lakes 2000). The drainage from the aircraft parking apron, access roads, and other paved areas begins as sheet flow to drainage inlet structures. The effluent is then piped to an infiltration trench located east of the current ground vehicle building where it infiltrates into the ground. While it is not anticipated that a large quantity of deicing fluids will be used on aircraft, it will be necessary that facilities be available on site when needed. Commercial airline service will generally operate at the airport during Visual Flight Rules conditions when the weather is good. These aircraft will stay on the ground for periods of approximately two to three hours and the aircraft skin will remain cold soaked, thereby making the accumulation of ice or frost difficult. Deicing, when required, would generally be accomplished by the use of glycol diluted to a 50 percent solution by water. If the glycol used in deicing escapes the airfield containment in a large storm event and enters the surface waters of the Hot Creek headsprings there could be a potential risk to the Owens tui chub. The Materials Data Safety Sheet information for ethylene glycol (Mallinckrodt Chemicals 2001) states that when released into water, this chemical will readily biodegrade. There is a negative environmental aspect to biodegradability. When chemicals biodegrade the breakdown process requires oxygen. There are two measures of this, the Biological Oxygen Demand or BOD (demand by the microbes) and the Chemical Oxygen Demand or COD (oxygen used in chemical decomposition). The oxygen demand during the breakdown of chemicals discharged into bodies of water can have very serious short term impact on aquatic life by removing oxygen from the water to the point where aquatic life dies from lack of oxygen.

Airport flight operations generate wastes consisting of oils, grease, deicing fluid, and other complex hydrocarbon compounds. The paved surfaces, existing and proposed for the aircraft

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apron and runway and taxiway extensions are impervious to water. Impervious surfaces increase the volume of stormwater runoff and can effect the relative quantity of surface drainage. Construction of a new terminal building and automobile parking facilities would also result in an increase in runoff by increasing the impervious surface area. The Service recognizes the potential beneficial effects to surface and subsurface water quality by the installation of an oil/water separator system to collect all run-off from the proposed commercial airliner parking apron, the automobile parking lot, and the terminal roadway. The system would effectively separate any oils and other petroleum products from stormwater, thus reducing their entry into the local aquifers and possibly the source waters for Hot Creek springs.

Effects of the proposed action to the Owens tui chub-aviation spill contaminations

The soils at the airport have high porosity exhibiting little or no surface runoff, instead the airport runoff will percolate quickly into the subsurface water. Petroleum contamination can cause debilitation or death of fish depending on the duration and concentration of the exposure. Effects can occur and be measured at multiple levels of ecological organization: cellular, organismal, population, community, and ecosystem levels. In general, however, potential ecological effects can be subdivided into acute toxicity, chronic toxicity, physical fouling, and damage from cleanup activities.

Monocyclic aromatic hydrocarbons, which consist primarily of benzene, toluene, ethylbenzene and xylene (BTEX), have been documented in the EA as associated with underground storage tanks at the airport. BTEX toxicity affects fish through induced narcosis. BTEX's are the most abundant aromatic hydrocarbons, but they are the least persistent because of their relatively high vapor pressures. The polycyclic aromatic hydrocarbons (PAH) are the second most abundant class of toxic compounds in petroleum after the BTEX, and are much more persistent. PAH's are a standard product of combustion from airplanes and are found in major petroleum spills and the inestimable minor spills of petroleum products (NASA 2001).

The hydrocarbon contamination threat is not from acutely toxic concentrations that result in immediate fish kills, but in the more subtle effects of low level pollution to sensitive life stages. Incubating fish eggs are very sensitive to long-term exposure to PAH concentrations because they may sequester toxic hydrocarbons from low or intermittent exposures into lipid stores for long periods, and because developing embryos are highly susceptible to the toxic effects of pollutants. PAH can be very persistent, biologically available for a long period of time, and very toxic to sensitive life stages. The result is that fewer juvenile fish survive, so that recruitment from the early life stages is reduced, and adult populations are not replaced at sustainable levels. The effects to juveniles include increased mortality, abnormalities, and reductions in swimming ability, while effects to eggs include altered incubation time and stunted growth in fry. Morphological abnormalities include edema, skeletal defects, finfold defects, and chromosomal aberrations. Several of these effects are not indicative of narcotic forms of toxicity, but of structural and genetic impacts. Eventually, adult populations may be extirpated.

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The Service reviewed hydrologic reports that were prepared for projects other than the airport expansion that were the basis of the hydrology information in the EA. It is the Service's opinion that there exists the potential, from a catastrophic accident or the gradual accumulation from airport runoff, for a subsurface plume of contaminants to reach the Hot Creek springs. While the potential for a petroleum contamination event is low it is none the less possible.

Effects of the proposed action to the Owens and Chub-nitrogen oxide (NOx) deposition

During combustion of gas fired engines, oxygen reacts with nitrogen to form nitric oxide (NO), nitrogen dioxide (NO₂), and relatively small amounts of other compounds of oxygen and nitrogen. Both molecular nitrogen (N₂) in the atmosphere and the chemically bound nitrogen in materials being burned (called "fuel nitrogen") can react with oxygen to form oxides of nitrogen (NOx). When ultraviolet light from the sun reacts with a mixture of oxides of nitrogen and hydrocarbons, ozone is formed. Ozone is the major constituent of what is commonly referred to as smog. NOx emissions are produced almost entirely by combustion processes. NOx emissions are one of the principle precursors to tropospheric ozone (smog), and also contribute to fine particulate matter pollution (Cal EPA, 1997). The photochemical reactions in the atmosphere convert oxides of nitrogen into nitrate salts and compounds, which in many areas of California contribute substantially to fine particulate matter pollution and consequently acid rain deposition (Cal EPA 1997).

Acid rain deposition has been well documented in California aquatic systems and results in the "acidification" of these systems. The ecological effects of acid rain are most clearly seen in the aquatic environments of lakes, streams, and ponds (Schindler, 1988). The U.S. Environmental Protection Agency (USEPA) estimates that acid rain has caused acidification in 50% of streams surveyed (USEPA 2001). Wide spread damage to Scandinavian and North American ecosystems was not noticed until the 1930s to 1950s. This is thought to be a result of a few factors: 1) increased construction of large power plants and smelters with tall smokestacks coupled with a decrease in use of coal for home heating, converting the local air pollution problem into a long-range, transboundary one; 2) emissions of NOx and other pollutants that aid in the oxidation of sulfur and nitrogen oxide have increased; and 3) it took years for lakes, streams and their catchments to lose their buffering capabilities, so that lower pH levels were not recognized until some time after the precipitation became acidic (Schindler 1988).

The Atmospheric Acidity Protection Act of 1988 requires the California Environmental Protection Agency-Air Resources Board (Cal EPA) to quantify the potential for damage to aquatic ecosystems due to acidic deposition. In 1994 Aircraft related NOx emissions in California were 33 tons average/day, while all sources were estimated to be 3,600 tons average/day (Cal EPA 1997). In the Great Basin Valleys of California the Cal EPA estimates there were 11 tons/day average NOx emissions (Cal EPA 1997). Airport emissions inventories indicate that in 1999 all sources associated with the Mammoth Airport, primarily autos and aircraft, contributed 1.18 tons/year. By the year 2022, with implementation of the proposed

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action, estimates indicate 55.85 tons/year of NOx will be attributed to the Mammoth-Yosemite Airport (Mammoth Lakes 2000).

The final environmental assessment indicates that, "while introducing air carrier service to Mammoth Yosemite Airport would increase aircraft-related pollution in the future...it could significantly reduce highway related emissions in the region as more people access the region by air". However, information provided for NOx indicates otherwise. Table V-12 of the final Environmental Assessment indicates that in the year 2022 the no action alternative would result in 2.07 tons/year of NOx and the proposed action alternative would result in 55.85 tons/year of NOx. California Department of Transportation, in their November 13, 2000, comment letter on the draft Environmental Assessment states that, "[W]e take exception with the conclusion that the potential for increased air pollution will not be significant (Pages V-25 to V-34). The potential degradation of air quality due to the increased motorized traffic needs to be examined."

Acidification of aquatic environments causes a cascade of effects that harm or kill individual fish, reduce fish population numbers and decrease biodiversity (USEPA, 2001). Several species of amphibians were studied as potential indicators of adverse ecological effects of acidic deposition in the Sierra Nevada (Bradford and Gordon 1992). Sublethal effects observed in this study may represent long-term threats to amphibians and by association other life forms such as fish and insects as well. Reduced aquatic pH has a direct negative impact on aquatic organism survival. In addition, when waters are acidified, the metal ion content increases; metals can be toxic to animals. Further, the sensitivity of animals to low pH is greater at low aquatic ionic concentrations. Animals may be most sensitive to reduced pH during the embryo or larval stages. Changes in aquatic chemistry may result in lower hatching and survival and increased deformities (Bradford and Gordon 1992, USEPA 2001). As pH in a stream decreases, aluminum levels increase. Both low pH and increased aluminum levels are directly toxic to fish and cause chronic stress that leads to lower body weight and smaller size and makes fish less able to compete for food and habitat (USEPA, 2001). Effects similar to those that impact fish can impact other aquatic lifeforms including insects, thus, impacting the prey base of the Owens tui-chub.

The critical habitat designation for the Owens tui chub (50FR31592) identifies the "constituent elements that provide the ecological, behavioral, and physiological requirements" of the Owens tui chub. These criteria include, "high quality, cool water with adequate cover in the form of rocks, undercut banks, or aquatic vegetation and a sufficient insect food base". In addition, the designation identified activities that could adversely modify the critical habitat of the tui chub to include, "[A]ctivities that decrease available water or cause significant change in the physical or chemical properties (e.g., temperature, pH, or dissolved gases) of the water;" and "[P]ollution of aquatic habitats or adjacent terrestrial habitats. . .".

As stated in the preceding subsection, increases in airborne nitrogen oxides can result in measurable changes in water chemistry in stream environments (decrease in pH or acidification).

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The significant increase in the amount of NOx, as projected in the Environmental Assessment, would result in adverse impacts to water quality in the Hot Creek springs critical habitat unit.

The proposed action anticipates a significant increase (from 1.18 tons/year to 55.85 tons per year) in the amount of NOx attributable to increases of aircraft and automobile traffic at the Mammoth Yosemite Airport expansion. Thus, adverse impacts to water chemistry and consequently water quality would result from these increased levels of NOx. These changes would in turn result in adverse impacts to the endangered Owens tui chub and designated critical habitat.

Based on the available information it is uncertain whether this expected increase in NOx will result in immediate or long-term significant or measurable "localized" changes in water chemistry. Because of the lack of major sources of NOx (factories, power plants, urbanization) the Mammoth-Owens Valley is a relatively "pristine" area relative to the effects of NOx deposition. Therefore, even small increases in NOx and changes in aquatic pH can significantly effect the Owens tui chub which appears to be adapted to a narrow range of water quality criteria. Any changes in the status of this species could significantly reduce the viability of this population over time. Because the preponderance of evidence suggests that increases in NOx emissions result in impacts to aquatic systems we believe that monitoring and adaptive management will be necessary to assure that these expected impacts are detected early and minimized. The project proponent has not proposed any measures to identify or minimize the effects of increased NOx associated with the airport expansion.

The airport stormwater system has been designed to contain runoff from a 20-year storm. The RWQCB has requested that plans should be in place to manage stormwater above the designated capacity of the system. The EA states that the stormwater will be treated using Best Management Practices (BMP). However, the project as proposed did not list BMP's that will be used to treat stormwater. While the EA contains statements that monitoring wells around the airport will be established there is no mention about how or what kind of response there will be to provide for contaminant clean up. The EA refers to three pages of checklists in Appendix D as a Spill Prevention Control and Countermeasure Plan. A detailed plan to implement the containment and clean up for a hazardous materials contamination that could affect the waters of the Hot Creek springs where the Owens tui chub occurs is not discussed in the EA.

Effects of the proposed action to the Owens tui chub-increase water use

The passenger terminal facility and supporting employees will increase the demand on subsurface water resources. Fire protection requirements are the dominant factor in the design of the proposed water supply and transmission facilities. A 1997 study of water and sewer requirements estimated that the maximum daily demand for water was 16,000 gallons (Mammoth Lakes 2000). An average daily water demand for the sewage treatment is projected at 8,000 gallons. A potential reduction in stream flow could have an adverse effect on the waters associated with Owens tui chub critical habitat. The cumulative use of ground waters that are associated with the Hot Creek spring and Owens tui chub critical habitat could have several

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consequences. As the cold water component to the springs declines, the relative contribution of the thermal component will increase. This will raise temperatures in the springs. It will also result in increased concentrations of the various chemicals present in the thermal waters. These chemicals could affect the chub through direct toxic effects, as well as reduction in spawning. Alteration of the chemical environment could also affect the food source of the chub. Owens tui chubs are omnivores; their diet in Hot Creek is predominately aquatic invertebrates (chironomid and caddis fly larvae) and aquatic vegetation.

Groundwater extraction from the well field upgradient of the Hot Creek headsprings may result in reduced flows and consequently in reduction of the habitat area available to Owens tui chub in AB and CD headsprings. This could reduce the population size of the Owens tui chub at this location. Closed populations, such as those of the Owens tui chub in the AB and CD headsprings, which are maintained at small numbers of individuals over long periods of time, will lose genetic variation through genetic drift, and are also at risk of declines in fitness through inbreeding. Perhaps more importantly, increasingly smaller populations are subject to a greater risk of extinction owing to demographic instability (Soulé 1980).

The Service believes that the airport expansion is essential to the local and regional growth and the effects to groundwater are not adequately known. The additional water extraction or a drought event could result in decline of the Owens tui chub population and adverse modification of its critical habitat. The magnitude of these impacts is not quantifiable or predictable through the use of existing information or technology.

The potential effects to groundwater will become greater with the expansion than present conditions. The proposed build out for the industrial and commercial land uses in the Airport Development District (ADD) all have the potential to adversely affect the Owens tui chub

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7(a)(2) of the Act.

There are a number of associated proposed development actions directly associated with and dependent upon the airport expansion (Mammoth Lakes 2000). The airport is situated approximately seven miles east of the city limits and is not contiguous with the Town of Mammoth Lakes. Unincorporated Mono County surrounds the airport. The various land uses designated in the Airport Land Use Plan are intended to be consistent with either the provisions of Title 19, Mono County Zoning and Development Code or Title 17 of the Town of Mammoth Lakes. However, none of the land use designations, plans, or studies have specifically addressed the potential for ground water quality and quantity regarding the long term needs of the Owens tui chub. This issue is compounded by other water uses that exist upstream including snow

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making at Mammoth Mountain, geothermal energy facilities, and the development of wells on private lands. In 1991 the Service issued a draft Jeopardy Biological Opinion (1-6-90-F-43) to the USFS for affects to the Owens tui chub (Service 1991), for a well in the airport vicinity.

Lands that surround the airport to the north and west and adjacent to the upstream boundary of the Hot Creek Fish Hatchery have been designated as the Airport Development District (ADD). The intent of the ADD designation is to permit the development of commercial, industrial, and other related land uses. The ADD was specifically created to recognize the economic development potential associated with the expansion of services and facilities at the airport site. Light industrial, manufacturing, and warehousing developments have been identified as necessary for economic stability and growth.

Subject to the constraints associated with the proximity of aircraft activities, the following land uses have been determined as appropriate for the Airport Development District:

- Airport operational facilities
- Aviation products and services
- Housing for airport employees
- Hotel and residential condominium developments
- Light industrial and warehousing
- Office, business, and commercial
- Public buildings
- Retail sales and services ancillary to airport terminal or hotel/motel facilities
- Automobile service stations
- Recreational vehicle park
- Low intensity recreational development

Additional airport improvements were reviewed and approved in 1997 with an Environmental Impact Report prepared under the California Environmental Quality Act. The airport expansion is integral to the improvements. The improvements include the proposed building of 135 private and public use hangers, an aviation fuel storage complex, facilities for the operation of a fixed base operator, hotel and residential condominium complex, retail development, a restaurant complex, and a recreational vehicle park. The Airport Commercial Development Plan and Sierra Business Park projects will require access coordination to avoid traffic congestion.

A privately owned parcel, in the watershed above the Hot Creek Fish Hatchery, has plans for the development of an industrial park. This proposed project, named Sierra Business Park, is located on a 36-acre parcel that formerly was used by the Sierra Quarry. The developers propose to subdivide this parcel into 37 parcels to be used for industrial use.

It is likely these additional improvements would result in impacts to federally listed species, thus, would require coverage under section 7 or 10 of the Act.

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CONCLUSION

After reviewing the current status of the Owens tui chub, the environmental baseline for the action area, the effects of the proposed airport expansion and the cumulative effects, it is the Service's biological opinion that the FAA's funding and approval of the airport expansion, as proposed, is not likely to jeopardize the continued existence of the Owens tui chub and is not likely to destroy or adversely modify designated critical habitat. The FAA and the Town of Mammoth Lakes have proposed some measures to monitor contamination from airport operations in surface and groundwater and contain these chemicals during chronic and catastrophic spills. In addition, the project proponents have indicated they would be subject to and comply with applicable State and Federal regulations to protect surface and groundwater.

The take of any Owens tui chub as a result a large catastrophic fuel spill is not considered incidental because it is outside of the standard operation procedures as described to the Service in the biological assessment. Any take resulting from such an event may be considered a violation of section 9 of the Act.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measure described below is non-discretionary and the FAA must make it a binding condition of any authorization issued to the Town of Mammoth Lakes for the exemption in section 7(o)(2) to apply. The FAA has a continuing duty to regulate the activity covered by this incidental take statement. If the Town of Mammoth Lakes fails to implement the terms and conditions of the incidental take statement, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the FAA or the Town of Mammoth Lakes must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement.

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Amount or Extent of Take

Given the distance of the Hot Creek Fish Hatchery from the Mammoth Yosemite Airport and the protective measures proposed, we anticipate that few Owens tui chub will be killed or injured as a result of activities at the Mammoth Yosemite Airport in any given year. Estimating a precise number is impossible because of the secretive nature of the Owens tui chub, the available dense cover, and natural population fluctuations. Furthermore, changes in numbers of Owens tui chub at the Hot Creek Fish Hatchery can be attributed to several factors, not solely to the activities at the Mammoth Yosemite Airport. Because we are unable to anticipate with a great deal of certainty the number that may be killed or injured, the Service shall contact the FAA whenever the Owens tui chub population decreases substantially and the cause of death or injury is unknown or may have been caused by FAA activities. Provided that the protective measures proposed by the FAA and the term and condition of this biological opinion are being fully implemented, operations need not cease while the cause of death is being determined. Once the cause of death or injury has been determined, the Service and FAA shall decide whether any additional protective measures are required to address the cause of the loss of the Owens tui chub.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize take of Owens tui chub:

1. Minimize impacts to the water quality of the Hot Creek springs.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the FAA must comply with or ensure the Town of Mammoth Lakes complies with the following term and condition, which implements the reasonable and prudent measure described above. This term and condition is non-discretionary.

1. The following term and condition implements reasonable and prudent measure 1:

Prior to construction the FAA shall assure that a Fish and Wildlife Service and Regional Water Quality Control Board approved monitoring, response and containment plan is developed and implemented to detect changes, identify and correct impacts to water quality and quantity in Hot Creek that may result from NOx emissions and hydrocarbon contamination and associated water use.

REPORTING REQUIREMENTS

The FAA shall ensure that a report is presented to the Service within one month of a spill event

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REPORTING REQUIREMENTS

The FAA shall ensure that a report is presented to the Service within one month of a spill event or when monitoring wells indicate contaminants are present in the monitoring sample as indicated in term and condition 1 above. The report shall include details of clean up implementation and any potential affects to the Owens tui chub or its designated critical habitat.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. The Service recommends that the FAA assists, both technically and financially, the Town of Mammoth Lakes and Mono County to develop an HCP to provide protection for the local and regional federally listed species within the sphere of influence of projected growth.
2. Because the airport expansion is integral to the growth needed for economic viability, the FAA should assist the Town of Mammoth to monitor groundwater use and the effects to the Hot Creek headsprings and develop and implement a protection plan that ensures the long term viability of the Owens tui chub.
3. The FAA should assist the Town of Mammoth Lakes to develop and implement a Service approved plan to establish a transplanted Owens tui chub population away from the area of groundwater downdrafting and potential contamination. Such a site should be located where non-native fish will not affect the refugia. Any such action should be in accordance with the goals and purposes of the Owens Basin Wetland and Aquatic Species Recovery Plan (Service 1998).
4. The Service recommends that the FAA require the Mammoth Yosemite Airport to construct and maintain an information kiosk that serves for public education regarding conservation of endangered and threatened species. The Service, if requested, will work with Mammoth Yosemite Airport on developing information for the kiosk.

REINITIATION NOTICE

This concludes formal consultation on FAA's proposed permitting and funding of proposed facility expansion to accommodate commercial aircraft at the Mammoth Yosemite Airport. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by

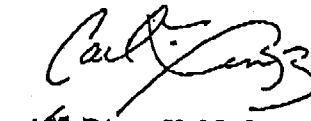
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law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact Tim Thomas of my staff at (760) 255-8890.

Sincerely,


for Diane K. Noda
Field Supervisor

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Appendix K - Revegetation Requirements

Airport Expansion Project Mitigation/Gravel Pit Revegetation

The following revegetation plan may be implemented on designated sites as mitigation for the airport expansion project. Successful implementation of this plan will help to replace wildlife habitat lost to the airport expansion, as well as prevent soil erosion in the gravel pit, aid in the re-establishment of the main components of a sagebrush/bitterbrush scrub community, and prevent the establishment of new populations, or spread of existing populations of any non-native weed species.

The following seed mix will be applied to all areas designated as mitigation sites for the airport expansion project:

Big sagebrush (<i>Artemisia tridentata</i>)	.5 PLS lb/ac
Desert peach (<i>Prunus andersonii</i>)	5 PLS lbs/ac
Indian ricegrass (<i>Achnatherum hymenoides</i>)	3 PLS lbs/ac
Western needlegrass (<i>Achnatherum occidentale</i>)	2 PLS lbs/ac
Squirreltail (<i>Elymus elymoides</i>)	3 PLS lbs/ac
Sliver lupine (<i>Lupinus argenteus</i>)	1 PLS lbs/ac
Blazing star (<i>Mentzelia laevicaulis</i>)	1 PLS lb/ac
Chicalote, prickly poppy (<i>Argemone munita</i>)	1 PLS lb/ac
TOTAL:	16.5 PLS lbs/ac

PLS = Pure Live Seed

In addition, antelope bitterbrush (*Purshia tridentata* var. *tridentata*) seedlings will be planted on 2 meter centers.

The project area is in the Mono Section/Crowley Flowlands Subsection of the Ecological Subregions of California (Miles and Goudey 1997). If it is not possible to collect/obtain seed from the immediate vicinity of the project, due to poor seed availability, seed from anywhere within the Mono Section will be acceptable; however, efforts will be made to obtain seed from within the Crowley Flowlands Subsection. Seed collection will be restricted to areas no more than 500 feet higher or lower in elevation than the project site.

Bitterbrush seedlings will be planted in the fall (approximately late September), late enough to avoid summer heat, but early enough to allow seedlings to become established prior to soil freezing. Protection from browsing will be provided for the seedlings, using vexar tubing or similar methods. Mulch will be applied around the base of the seedlings as further protection. Supplemental water will be provided as needed for seedling survival, depending on site conditions and local weather variations. I would anticipate watering seedlings once or twice/week, depending on temperatures, until freezing conditions and/or significant precipitation events occur.

Seeding of other species will be conducted in the late fall, preferably just prior to the onset of winter snows, in order to minimize seed predation losses. A harrow or other acceptable method would be used to cover seed once it has been spread, followed by application of an approved mulch, e.g. certified weed free rice straw, or native mulch. No soil amendments will be added.

In addition, non-native species not already present on the site prior to the project will be removed manually. The significance of other weed species that may occur will be evaluated upon receipt of the revegetation monitoring reports, and control measures required if deemed necessary, based on density and potential effects on the revegetation goals. All non-native weed species, including cheatgrass (*Bromus tectorum*) as well as those species mentioned above, will account for no more than 5% total of the relative cover at the end of the 5 year evaluation period.

Success standards for this project are as follows:

- At least 3 shrubs and 8 perennial grasses and/or forbs per 4 square meters will be established on the site.
- Perennial grasses will account for at least 10% of the relative cover.
- Antelope bitterbrush survival will be at least 75%.
- All non-native weed species will account for no more than 5% total of the relative cover at the end of the 5 year evaluation period (see above).

The revegetation project will be monitored for compliance with the success standards defined above, and a report provided to the Forest Service 1, 3, and 5 years following completion of the project. Failure to meet the success standards will require additional planting and/or weed control, as appropriate.

References:

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Appendix L – Traffic Impact Analysis

MAMMOTH LAKES - YOSEMITE VALLEY AIRPORT TRAFFIC IMPACT ANALYSIS

~~November 30, 2000~~ Revised August 31, 2001

Prepared for:

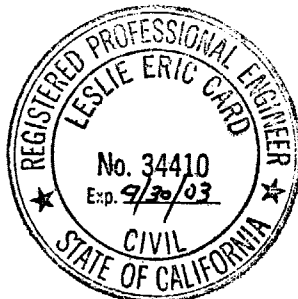
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This traffic study has been prepared under the supervision of Leslie E. Card, P.E.

Signed *Les Card 8/31/01*



MAMMOTH LAKES - YOSEMITE VALLEY AIRPORT TRAFFIC IMPACT STUDY AUGUST, 2001

EXECUTIVE SUMMARY

This traffic study has been prepared to assess the airport specific short-range and long-range impacts, and to consider the cumulative impacts of two adjacent development projects: Hot Creek Resort and Sierra Business Park. The study examines conditions in 2000 and 2020 and considers growth in through traffic on U.S. Route 395 (US-395). Information for the Sierra Business Park is taken from the traffic study dated May, 2000, and November, 2000, prepared by Traffic Safety Engineers.

Several different development combinations are considered in order to isolate substantial impacts and to consider proportionate share responsibilities. An additional access to US-395 at the existing Benton Crossing intersection is considered with the Hot Creek Resort project only.

As part of the initial airport expansion program, minor mitigation improvements will be installed at the US-395 intersection with Hot Creek Fish Hatchery Road. Those mitigation improvements include both northbound US-395 right turn deceleration and acceleration lanes and the lengthening of the southbound US-395 left turn deceleration lane. These mitigation improvements will be consistent with the design requirements of Topic 405 - Intersection Design Standards of the *Highway Design Manual* (July 1, 1995).

When the intersection of US-395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. In this case, a traffic signal is not considered acceptable by Caltrans due in part to the high vehicular speeds; therefore, either minor intersection channelization is recommended or alternative access locations on US-395.

The tables on the following page illustrate the various land use and access alternatives and provide the LOS results.

In summary, mitigation in the long range is necessary only in the case of all three projects without a Benton Crossing access.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes or construction of a connector road to Benton Crossing from the airport would be required to reduce the impacts. The costs of either improvement should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short range and long range for the Airport and Hot Creek Resort.

YEAR 2000

Scenario	US-395/Hot Creek Road ¹						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay ²	Approach	LOS	Max Queue ²	Movements	Max Queue ²	Movements
WITH EXISTING CIRCULATION SYSTEM							
Existing Year 1999/2000 Conditions ⁴	10.8 sec.	westbound	B	0.04 veh.	SB-L	0.09 veh.	WB-LTR
Existing + Airport	10.9 sec.	westbound	B	0.29 veh.	SB-L	0.49 veh.	WB-LTR
Existing + Airport + Hot Creek Resort	18.5 sec.	westbound	C	0.65 veh.	SB-L	3.29 veh.	WB-LTR
Existing + Sierra Business Park	14.6 sec.	eastbound	B	0.04 veh.	SB-L	1.54 veh.	EB-LTR
Existing + Airport + Hot Creek Resort + Sierra Business Park	27.2 sec.	eastbound	D	0.65 veh.	SB-L	3.57 veh.	WB-LTR
WITH CONNECTION TO BENTON CROSSING³							
Existing + Airport + Hot Creek Resort	11.6 sec.	westbound	B	0.57 veh.	SB-L	1.20 veh.	WB-LTR
Existing + Airport + Hot Creek Resort + Sierra Business Park	25.3 sec.	eastbound	D	0.57 veh.	SB-L	2.98 veh.	EB-LTR

Note: See Table A for footnotes.

YEAR 2020

Scenario	US-395/Hot Creek Road ¹						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay ²	Approach	LOS	Max Queue ²	Movements	Max Queue ²	Movements
WITH EXISTING CIRCULATION SYSTEM							
Year 2020 Baseline Conditions ⁴	11.6 sec.	westbound	B	0.04 veh.	SB-L	0.10 veh.	WB-LTR
2020 + Airport	11.6 sec.	westbound	B	0.33 veh.	SB-L	0.54 veh.	WB-LTR
2020 + Airport + Hot Creek Resort	22.2 sec.	westbound	C	0.74 veh.	SB-L	4.13 veh.	WB-LTR
2020 + Sierra Business Park	16.4 sec.	eastbound	C	0.04 veh.	SB-L	1.82 veh.	EB-LTR
2020 + Airport + Hot Creek Resort + Sierra Business Park	37.4 sec.	eastbound	E	0.74 veh.	SB-L	4.59 veh.	EB-LTR
Business Park - with mitigation	31.1 sec.	eastbound	D	0.74 veh.	SB-L	3.53 veh.	EB-L
WITH CONNECTION TO BENTON CROSSING³							
2020 + Airport + Hot Creek Resort	12.5 sec.	westbound	B	0.65 veh.	SB-L	1.36 veh.	WB-LTR
2020 + Airport + Hot Creek Resort + Sierra Business Park	34.1 sec.	eastbound	D	0.65 veh.	SB-L	4.17 veh.	EB-LTR

Note: See Table C for footnotes.

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INTRODUCTION

Project Description and Location

The proposed project consists of the expansion of the existing Mammoth Lakes-Yosemite Valley Airport. Figure 1 illustrates the location of the project.

The Mammoth Lakes-Yosemite Valley Airport Expansion project would occur in conjunction with the tourist/skier developments planned in the Town of Mammoth Lakes. These developments partially rely on the expansion of the existing airport to add to the transportation infrastructure and bring additional business to these resort developments. The airport is currently located on the east side of US-395, with primary access at Hot Creek Fish Hatchery Road. Based on discussions with airport staff, the airport expansion would allow for 2,760 passengers on a daily basis during the peak winter season.

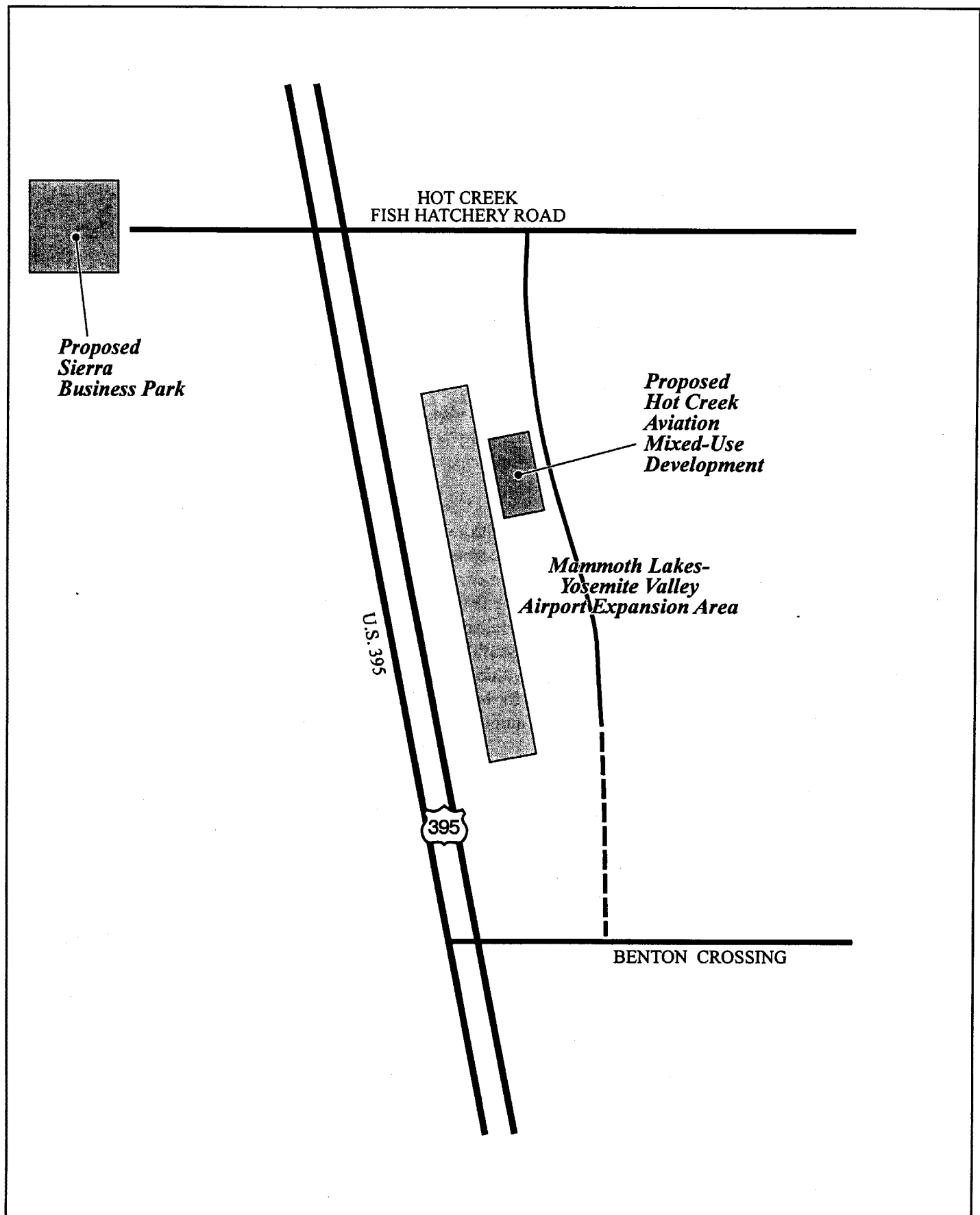
In addition, two other development projects surrounding the existing Mammoth Lakes-Yosemite Valley Airport are proposed: the Hot Creek Aviation Mixed-Use Development and the Sierra Business Park Specific Plan. Figure 1 illustrates the locations of these projects.

The Hot Creek Aviation Mixed-Use Development is an approved mixed retail/residential use development. This project would occur only with the expansion of the existing airport. Planned land uses include: 24 pump gasoline service station, 188 units of townhouses, a 62 room hotel, a recreation vehicle park with 100 sites, and sit-down restaurants totaling 100 seats. This project would be located north of and adjacent to the airport. In addition to the land uses planned, this project is considering the construction of a roadway connection from the airport area, south to Benton Crossing (which also has access to US-395).

The proposed Sierra Business Park Specific Plan is planned to be developed as a light industrial use park; the existing concrete batch plant would remain as part of the development. The entire Specific Plan area will consist of 36 acres. This project is located directly across from the airport, on the west side of US-395. This project will upgrade its current access on US-395 to Caltrans' standards. Traffic data used for the Sierra Business Park Specific Plan are based on the traffic analysis and the addendum traffic analysis for this project prepared by Traffic Safety Engineers in May and November, 2000.¹

¹ Traffic Impact Study for the Sierra Business Park Specific Plan, Traffic Safety Engineers (TSE), May, 2000.

Addendum to the Traffic Impact Study for the Sierra Business Park Specific Plan, TSE, November, 2000.



11/30/00(TML030)

Figure 1



LSA

Schematic - Not to Scale

Project Study Area and
Future Project Locations

METHODOLOGY

The traffic analysis for the Mammoth Lakes-Yosemite Valley Airport expansion been prepared to be generally consistent with the Guide for the Preparation of Traffic Impact Studies (Caltrans, October, 2000). The Highway Capacity Software 2000 (HCS2000) and the TRAFFIX (version 7.5) level of service software packages were utilized to determine the intersection levels of service at the unsignalized US-395/Hot Creek Road and US-395/Benton Crossing intersections. Both HCS2000 and TRAFFIX are consistent with the 2000 *Highway Capacity Manual* (HCM) methodology for the analysis of unsignalized intersections.

In previous traffic analyses dated November, 2000, the 1997 HCM method was used to analyze the US-395/Hot Creek Road intersection. As a limitation of the 1997 HCM, the US-395/Hot Creek Road intersection was analyzed as two separate intersections due to the width of the existing median. However, the current HCS2000 and TRAFFIX 7.5 software packages are able to analyze US-395/Hot Creek Road as a single intersection with a "two-stage gap acceptance" process (Chapter 17 of the HCM2000).

The existing median is approximately 70 feet in width. Assuming a standard vehicle length of 22 feet per vehicle, which includes front and rear clearance space, approximately three vehicles can be stored in the median. A vehicle queuing analysis has been conducted consistent with the HCM2000 methodology. The queuing analysis will determine the length of forecast vehicle queues at the US-395/Hot Creek Fish Hatchery Road intersection, specifically within the 70 foot wide median storage lanes. In particular, the northbound and southbound left turn queues from US-395 were analyzed to ensure that vehicles already stored within the median would not be blocked from their intended maneuvers. The time period analyzed for both intersections is the winter Friday p.m. peak hour, since this period would yield the greatest amount of traffic from all three projects as a whole.

Additional LOS analysis was conducted for the intersection of Benton Crossing and US-395 in both existing and year 2020 conditions. These analyses indicate that LOS is not significantly affected and will not exceed LOS C in the year 2020 plus project condition. The worksheets for these analyses are provided in Appendix B.

Project impacts for the proposed project (airport), Hot Creek Development, Sierra Business Park, and all three developments were analyzed for the following scenarios:

Existing + Project Scenario

1. Existing conditions
2. Existing + airport expansion
3. Existing + airport expansion + Hot Creek Aviation (with and without connection to Benton Crossing)
4. Existing + Sierra Business Park
5. Existing + airport expansion + Hot Creek Aviation + Sierra Business Park (with and without connection to Benton Crossing)

Year 2020 + Project Scenario

1. Year 2020 baseline conditions
2. Year 2020 + airport expansion
3. Year 2020 + airport expansion + Hot Creek Aviation (with and without connection to Benton Crossing)
4. Year 2020 + Sierra Business Park
5. Year 2020 + airport expansion + Hot Creek Aviation + Sierra Business Park (with and without connection to Benton Crossing)

According to Caltrans' guidelines, the minimum acceptable level of service for intersections is LOS D. Therefore, when an intersection is forecast to operate at LOS E or LOS F, mitigation would be required to bring the intersection level of service to LOS D or better.

EXISTING CONDITIONS***Circulation Network***

Figure 1 illustrates the local and regional circulation networks of the project area. Regional access to the proposed project is from US-395. North of the project site, US-395 provides access to the Town of Mammoth Lakes and the Lake Tahoe region. South of the project site, US-395 provides access to Crowley Lake, Bishop, and Southern California. Local access to the airport is provided via Hot Creek Fish Hatchery Road (Hot Creek Road). Hot Creek Road is an undivided, two lane road with an at-grade intersection with US-395. An approximately 70 foot wide median exists on US-395 at its intersection with Hot Creek Road. This intersection is characterized with high vehicle speeds on US-395 (60 to 70 mph), and stop control along Hot Creek Road, including the vehicle storage lanes within the median.

Volumes and Levels of Service

Figure 2 presents the existing intersection geometrics and weekday p.m. peak hour traffic volumes for a typical winter condition. The existing traffic volumes for the US-395 mainline were provided by Caltrans staff (Tom Meyers, District 9, 11/17/00). Peak hour traffic volumes on Hot Creek Road were based on a manual count collected by LSA on November 16, 2000, and are provided in Appendix A. Table A presents the existing intersection levels of service for the intersection of US-395 at Hot Creek Road. According to the table, the US-395 intersection at Hot Creek Road currently operates with a satisfactory level of service at LOS B (10.8 seconds). Appendix B contains the level of service worksheets.

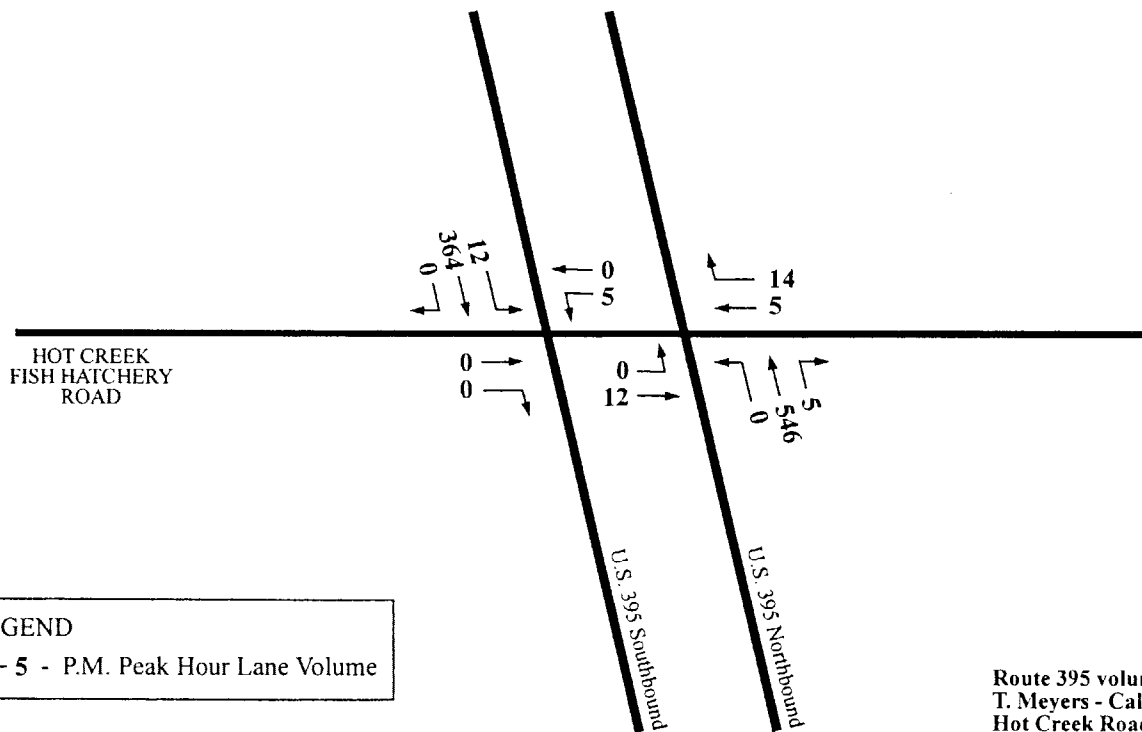
PROJECT TRIP GENERATION AND ASSIGNMENT***Mammoth Lakes-Yosemite Valley Airport***

Table B presents the trip generation for the three projects within the airport area (airport expansion, Hot Creek Resort, and Sierra Business Park). Trip generation data for the Mammoth Lakes-Yosemite

EXISTING GEOMETRICS



EXISTING P.M. PEAK HOUR VOLUMES



11/28/00(TML030)

Figure 2



LSA

Schematic - Not to Scale

Existing Geometrics and Weekday P.M. Peak
Hour Traffic Volumes for Typical Winter Conditions

Table A - Existing and Existing Plus Project Intersection Level of Service Summary

Scenario	US-395/Hot Creek Road ¹						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay ²	Approach	LOS	Max Queue ²	Movement ³	Max Queue ²	Movement ³
WITH EXISTING CIRCULATION SYSTEM							
Existing Year 1999/2000 Conditions ⁴	10.8 sec.	westbound	B	0.04 veh.	SB-L	0.09 veh.	WB-LTR
Existing + Airport	10.9 sec.	westbound	B	0.29 veh.	SB-L	0.49 veh.	WB-LTR
Existing + Airport + Hot Creek Resort	18.5 sec.	westbound	C	0.65 veh.	SB-L	3.29 veh.	WB-LTR
Existing + Sierra Business Park	14.6 sec.	eastbound	B	0.04 veh.	SB-L	1.54 veh.	EB-LTR
Existing + Airport + Hot Creek Resort + Sierra Business Park	27.2 sec.	eastbound	D	0.65 veh.	SB-L	3.57 veh.	WB-LTR
WITH CONNECTION TO BENTON CROSSING⁵							
Existing + Airport + Hot Creek Resort	11.6 sec.	westbound	B	0.57 veh.	SB-L	1.20 veh.	WB-LTR
Existing + Airport + Hot Creek Resort + Sierra Business Park	25.3 sec.	eastbound	D	0.57 veh.	SB-L	2.98 veh.	EB-LTR

Notes:

¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections. However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored in median.

² Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis.

Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of vehicles.

³ SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek Resort and/or hot springs.

EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-395.

⁴ Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November, 2000.

⁵ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour		Total
				In	Out	
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport ¹	based on data provided by Mammoth Lakes-Yosemite Valley Airport					
Hot Creek Aviation Mixed-Used Development²						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)		162.78	6.69	6.69	13.38
Residential High Density (MF) Seasonal	per dwelling unit (DU)		8.00	0.50	0.25	0.75
Hotel	per occupied room		8.92	0.35	0.36	0.71
Campground/Recreational Vehicle Park	per occupied campsite		4.00	0.20	0.20	0.39
High Turnover Sit-Down Restaurant	per seat		4.83	0.24	0.18	0.42
Sierra Business Park Specific Plan ³	based on data provided in Sierra Business Park Specific Plan TIA					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	702 passengers		898	79	79	158
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24 FPs		3,907	161	161	321
Residential High Density (MF) Seasonal ⁴	150 DUs		1,203	76	37	113
Hotel ⁴	50 rooms		442	17	18	35
Campground/Recreational Vehicle Park ⁴	80 campsites		320	16	16	31
High Turnover Sit-Down Restaurant	100 seats		483	24	18	42
Sierra Business Park Specific Plan	36 acres		1,487	48	181	229
Total Trip Generation			8,740	420	509	929
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market ⁵	(90 percent reduction)		-3,516	-145	-145	-289
Residential High Density (MF) Seasonal ⁶	(60 percent reduction)		-722	-45	-22	-68
Hotel ⁷	(75 percent reduction)		-332	-13	-13	-26
Campground/Recreational Vehicle Park	no trip reductions anticipated					
High Turnover Sit-Down Restaurant ⁸	(100 percent reduction)		-483	-24	-18	-42
Total Trip Reductions			-5,053	-227	-198	-425
NET EFFECTIVE TRIP GENERATION			3,688	193	311	504

¹ Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).² Trip rates for Hot Creek Mixed-Use Development provided in *Trip Generation*, 6th Edition, Institute of Transportation Engineers (ITE), 1997. Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM).

Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

³ Trip generation data provided in *Traffic Impact Study Addendum for Sierra Business Park Specific Plan*, Traffic Safety Engineers (TSE), 11/00.⁴ Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.⁵ A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.⁶ A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.⁷ A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.⁸ A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.

Valley Airport were furnished by airport staff (Tom Cornell, Ricondo & Associates) and are provided in Appendix C. According to airport staff, the airport expansion project would generate approximately 898 daily trips and 158 p.m. peak hour trips. The p.m. peak hour trip generation indicates that 79 vehicles (shuttles, taxis, buses, etc.) would be entering and exiting the airport once during the p.m. peak hour. Each vehicle would generate an inbound and an outbound trip; therefore, a total of 158 trips would occur in the p.m. peak hour (79 vehicles trips x 2 trips per vehicle = 158 trips).

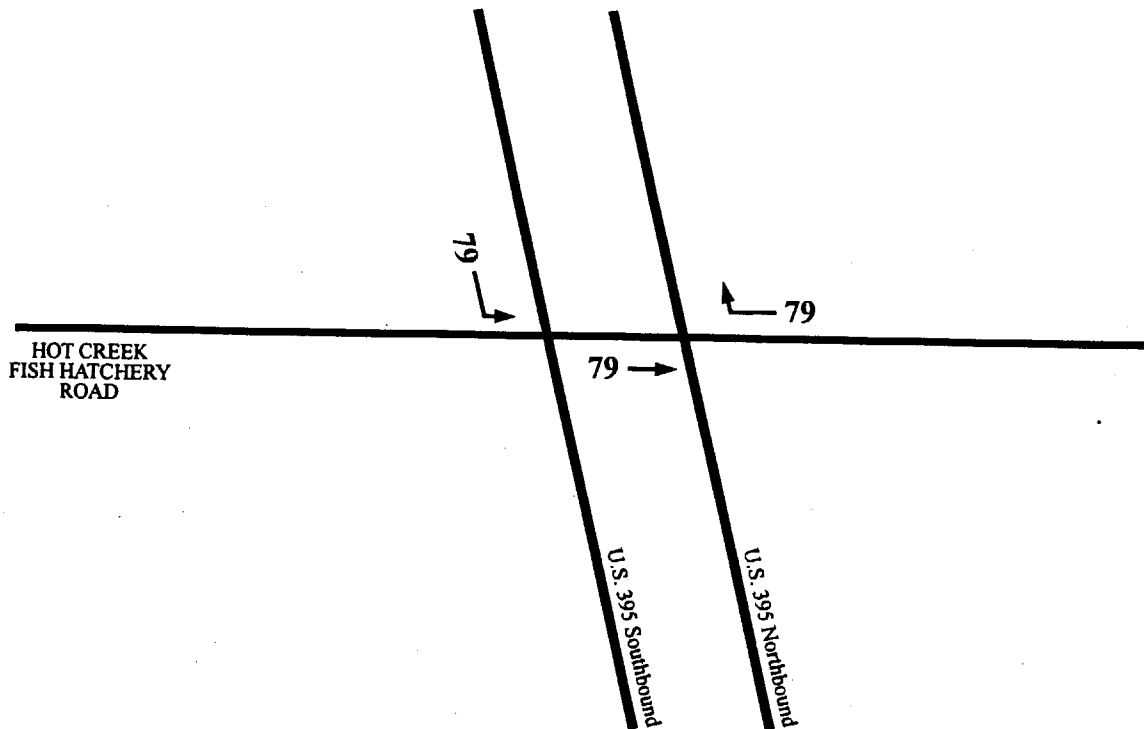
Figure 3 illustrates the airport's trip assignment. It is anticipated that all p.m. peak hour trips associated with the airport would originate from and be destined to the Town of Mammoth Lakes.

Hot Creek Aviation Mixed-Use Development

The trip generation estimates for the approved Hot Creek Development are based on trip rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 6th Edition (1997). Based on the project description of the lodging component of the Hot Creek resort, a total of 188 multifamily townhomes, a 62 room hotel, and a 100 site RV park would be developed. An 80 percent occupancy rate was factored for these lodging type land uses to account for the "typical" winter conditions consistent with Town of Mammoth Lakes methodology. Therefore, trips were generated for Hot Creek resort's lodging component, which consisted of 150 multifamily townhomes, a 50 room hotel, and an 80 site RV park during the "typical" winter condition. According to Table B, the approved Hot Creek resort would generate a total of 6,355 daily trips and 542 p.m. peak hour trips.

In addition to the 80 percent occupancy factor for the lodging components, trip reductions for the multifamily rental townhomes and hotel were applied due to the available shuttle service for residents of the townhomes and hotel guests to the resort areas of the Town (i.e., Mammoth Mountain Ski Area - MMSA). The planned shuttle service would be available to guests of the townhomes and hotel on a regular basis throughout the day, and would be operated to minimize passenger vehicle traffic between the Hot Creek resort and the MMSA. A 60 percent reduction was applied to the trip generation of the townhomes; a 75 percent reduction was applied to the hotel's trip generation estimates.

To account for the pass-by trip making for the retail components of Hot Creek, a 90 percent reduction in new trips generated by the gas station and a 25 percent reduction in new trips generated by the restaurant were applied. In addition, a 75 percent reduction in restaurant trips was applied for the internal trip capture of lodging residents and airport patrons who would utilize the restaurants on site. It should be noted that 100 percent of the restaurant trips were removed from the overall trip generation (75 percent via internal trip capture and 25 percent via pass-by trips). Based on the reductions for occupancy, shuttle service, pass-by trip making, and internal trip capture, a total of 5,053 daily and 425 p.m. peak hour trips were removed from the total Hot Creek resort total trip generation. Therefore, according to Table B the Hot Creek resort would generate approximately 1,302 new daily trips and a 117 new p.m. peak hour trips.



LEGEND

← 5 - P.M. Peak Hour Trip Assignment

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Figure 3



LSA

Schematic - Not to Scale

Mammoth Lakes-Yosemite Valley
Airport Trip Assignment

Figure 4 illustrates the trip assignment for the Hot Creek Development with and without the connection to Benton Crossing. It should be noted that reductions on the northbound and southbound through movements on US-395 were made to account for the pass-by trips of the gas station and restaurant components. In other words, a pass-by trip is a through trip that is diverted into the project via southbound left or northbound right turn and then reassigned to US-395 via another right or left turn back onto US-395.

Sierra Business Park

Trip generation estimates and the trip assignment for the Sierra Business Park were obtained from the traffic impact study addendum completed by Traffic Safety Engineers (TSE). Appendix D contains the trip generation and trip assignment completed by TSE for this specific project. Based on Table B, the Sierra Business Park would generate 1,487 daily trips, and 229 p.m. peak hour trips. Figure 5 presents the trip assignment as prepared by TSE.

According to Table B, when trip generation estimates for all three development projects are added together, the projects would generate a total of 8,740 daily trips and 929 p.m. peak hour trips (420 inbound and 509 outbound). With the trip reductions for the occupancy, shuttle service, pass-by trip making, and internal trip capture for the components of the Hot Creek resort development applied to the total trip generation, the new trips generated by all three projects are 3,688 daily trips and 504 p.m. peak hour trips (193 inbound and 311 outbound). Figure 6 illustrates the trip assignment for all three development projects.

EXISTING + PROJECT LEVELS OF SERVICE

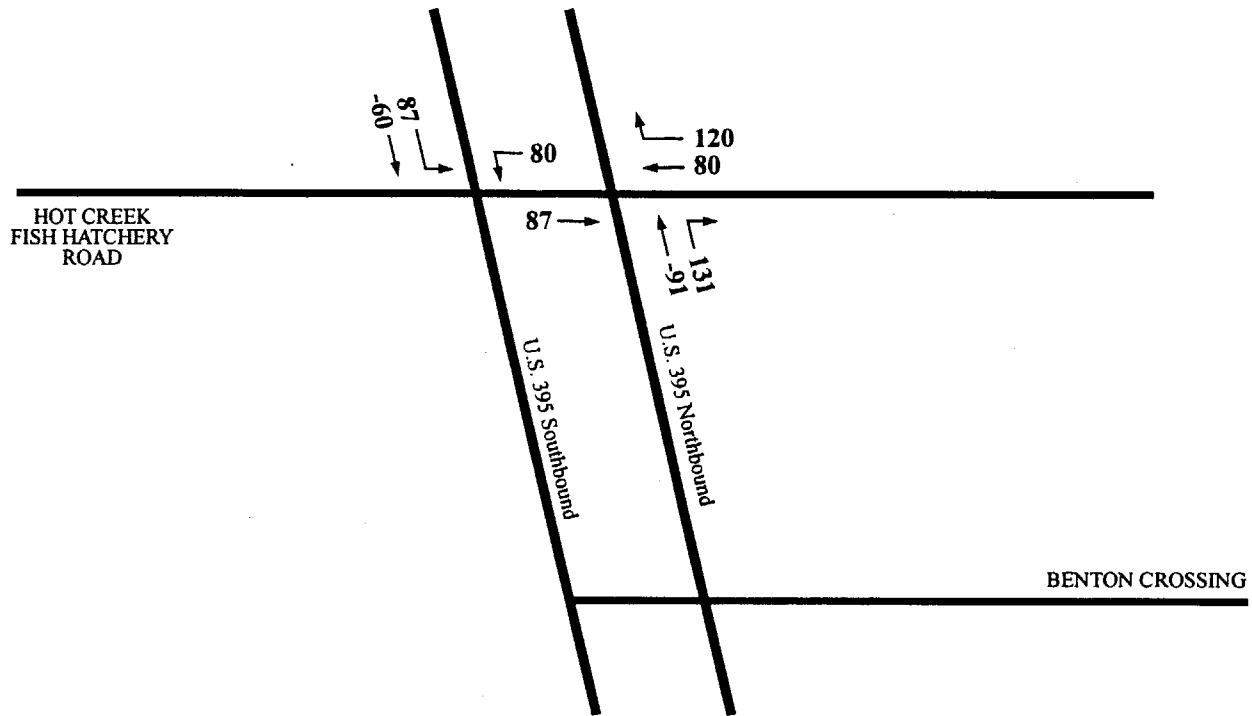
The existing traffic volumes at the US-395/Hot Creek Road intersection were added to the project trip assignments discussed above, and intersection levels of service were determined for the existing + airport expansion; existing + airport expansion + Hot Creek resort (with and without connection to Benton Crossing); existing + Sierra Business Park; and existing + airport expansion + Hot Creek resort + Sierra Business Park (with and without connection to Benton Crossing) scenarios. Figures 7, 8, 9, and 10 illustrate the existing plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Table A also presents the results of the existing + project(s) level of service analysis, with and without Benton Crossing. Appendix B contains the level of service worksheets.

Based on the level of service analysis results provided in Table A, all of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the existing conditions.

YEAR 2020 BASELINE CONDITIONS

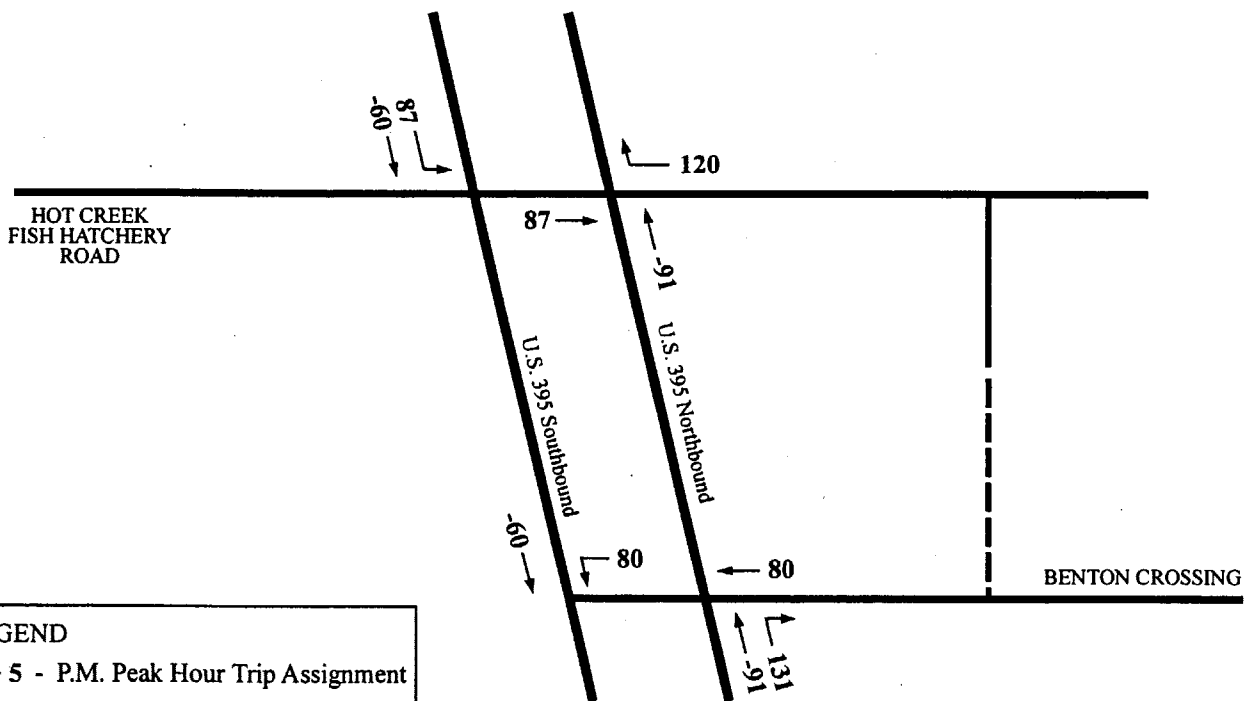
Per direction by Caltrans staff (Tom Meyers - District 9), a 1.0 percent annual growth rate, compounded, was applied to the northbound and southbound through volumes for US-395. This rate constitutes a growth of 22 percent from 2000 to 2020. Figure 11 presents the 2020 weekday p.m.

HOT CREEK AVIATION TRIP ASSIGNMENT



Negative volumes represent diverted trips.

HOT CREEK AVIATION TRIP ASSIGNMENT WITH BENTON CROSSING CONNECTION

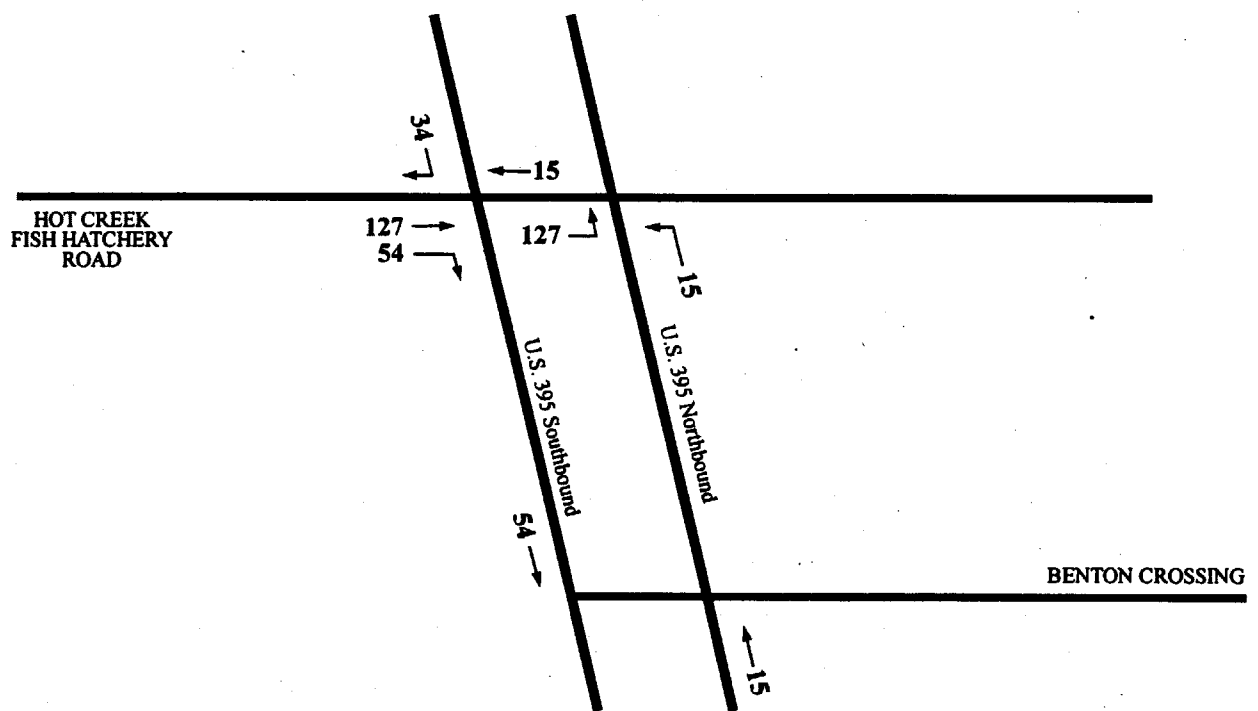


Negative volumes represent diverted trips.

11/28/00(TML030)

Figure 4





LEGEND

← 5 - P.M. Peak Hour Trip Assignment

11/30/00(TML030)

Figure 5

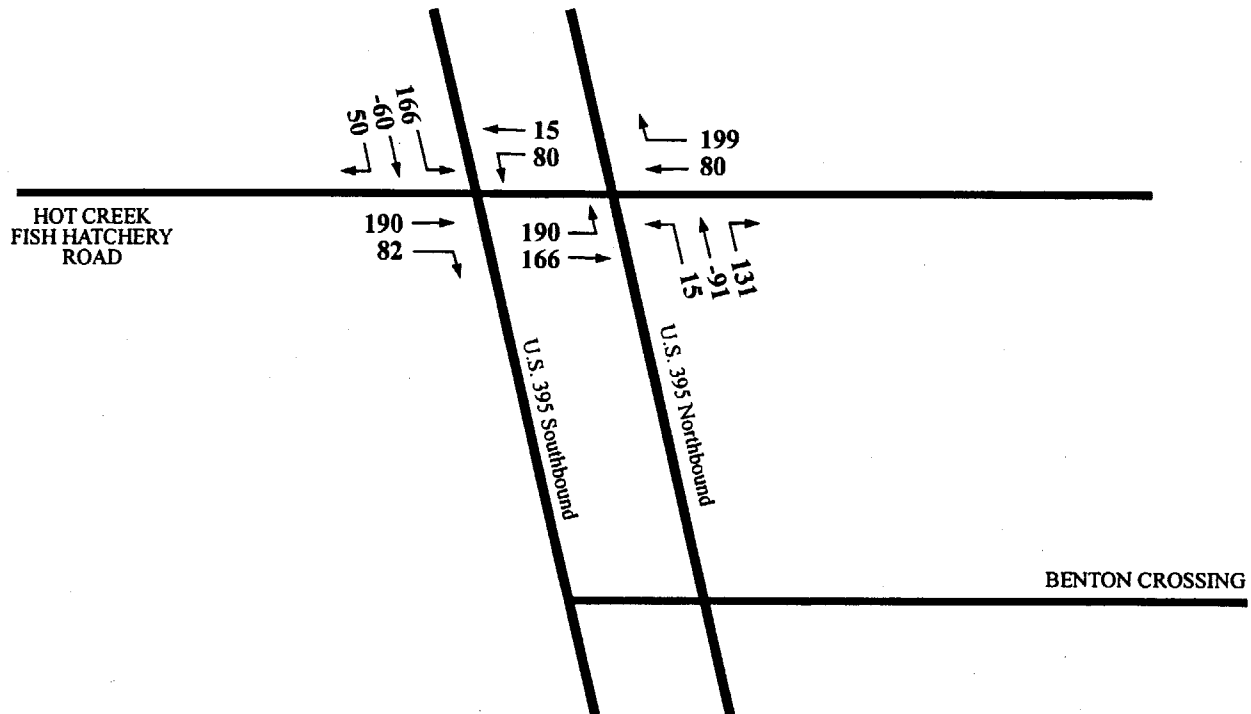


LSA

Schematic - Not to Scale

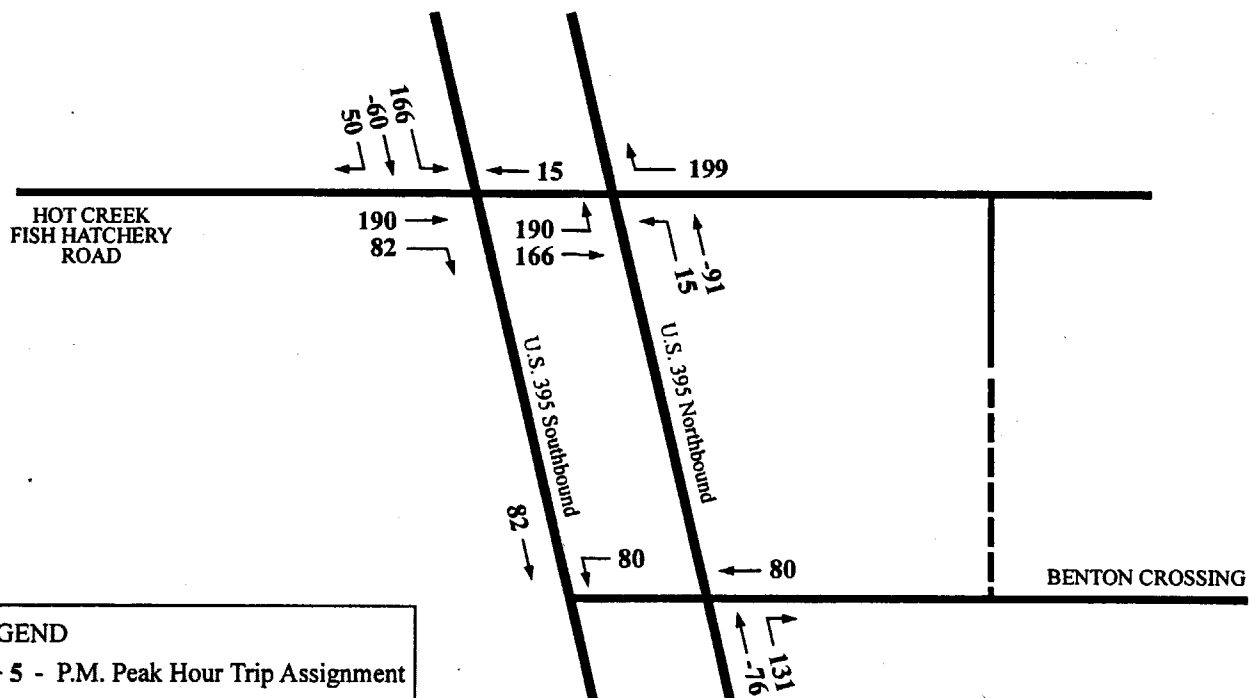
Sierra Business Park Trip Assignment

AIRPORT + HOT CREEK + INDUSTRIAL TRIP ASSIGNMENT



Negative volumes represent diverted trips.

AIRPORT + HOT CREEK + INDUSTRIAL TRIP ASSIGNMENT WITH BENTON CROSSING CONNECTION



LEGEND

← 5 - P.M. Peak Hour Trip Assignment

Negative volumes represent diverted trips.

11/28/00(TML030)

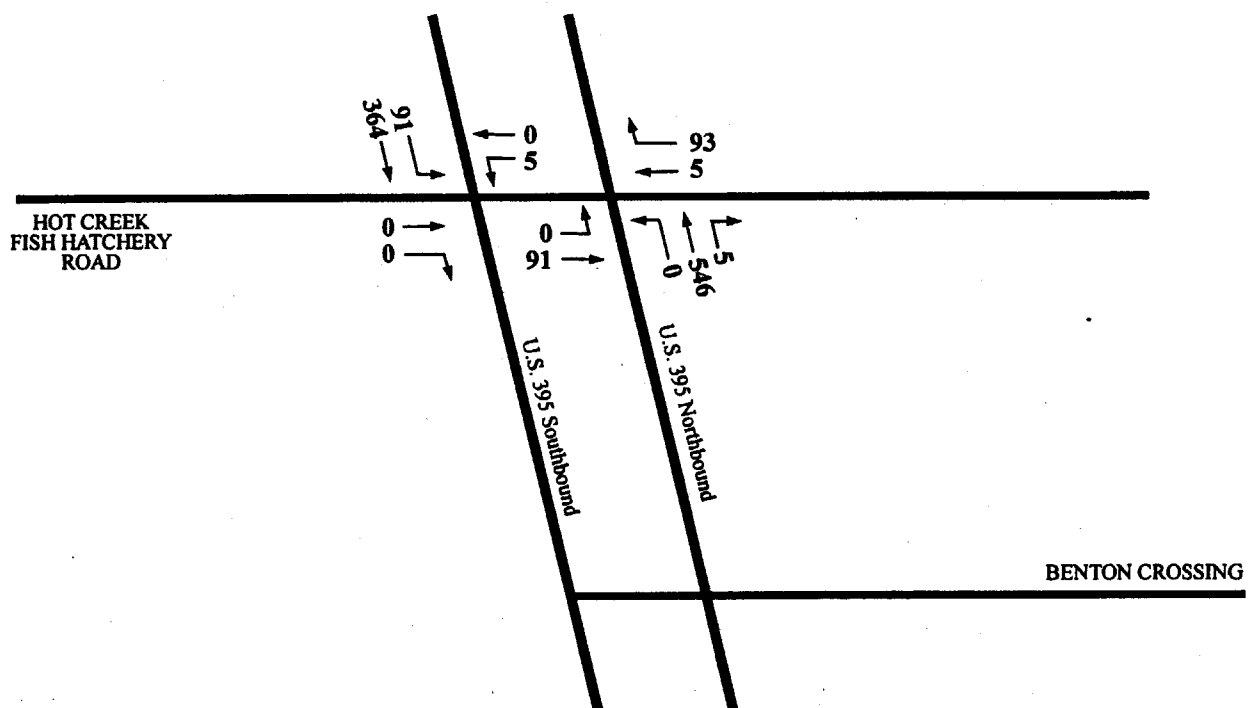
Figure 6



LSA

Schematic - Not to Scale

Cumulative Projects Trip Assignment



LEGEND
 ← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

Figure 7

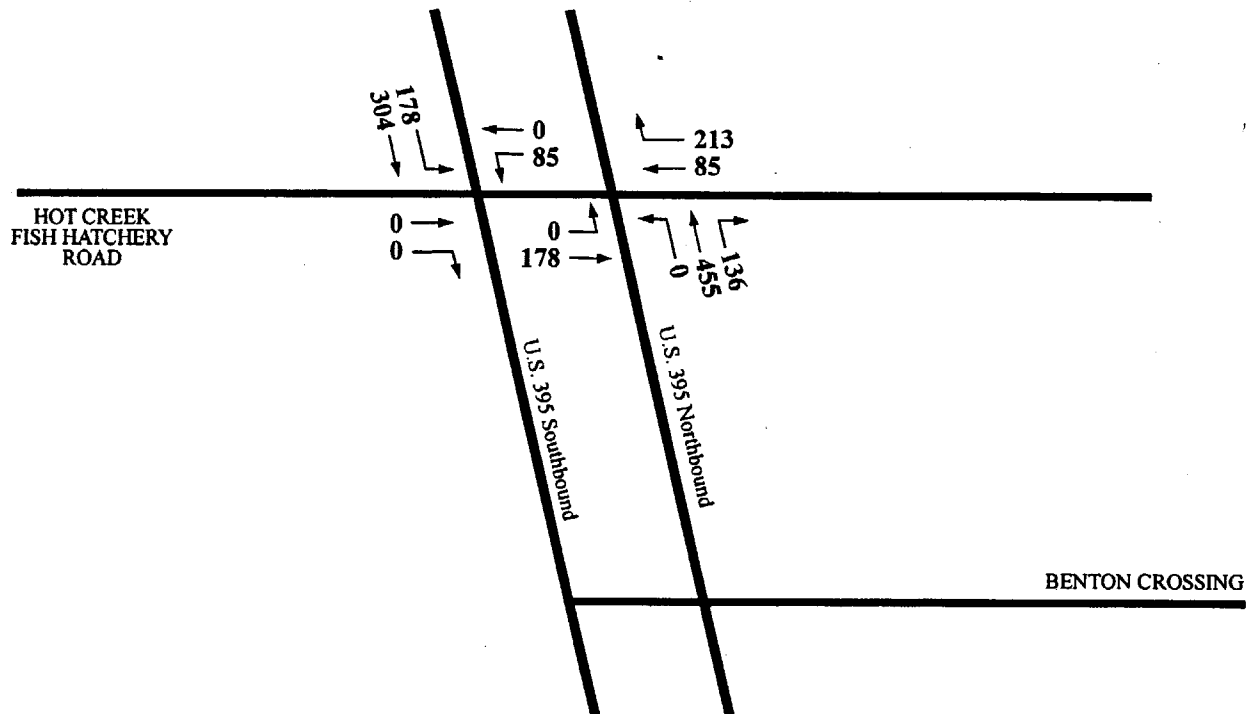


LSA

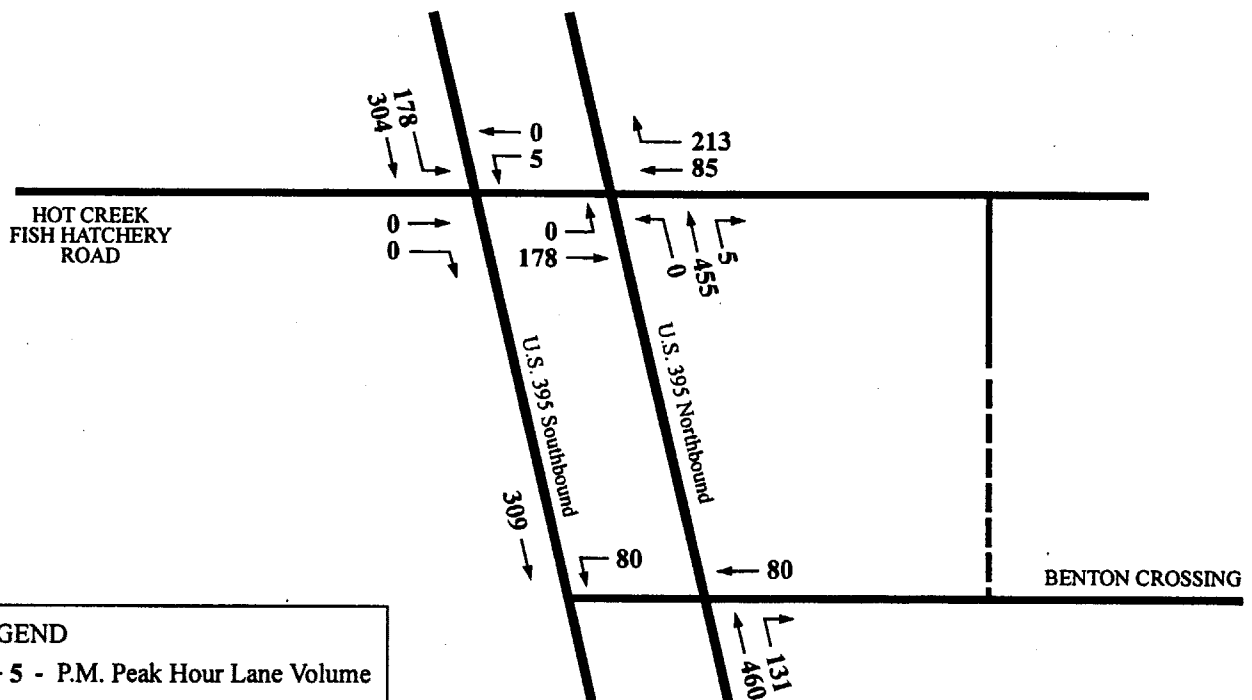
Schematic - Not to Scale

Existing + Airport P.M. Peak
 Hour Traffic Volumes

EXISTING + AIRPORT + HOT CREEK TRAFFIC VOLUMES



EXISTING + AIRPORT + HOT CREEK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



LEGEND

← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

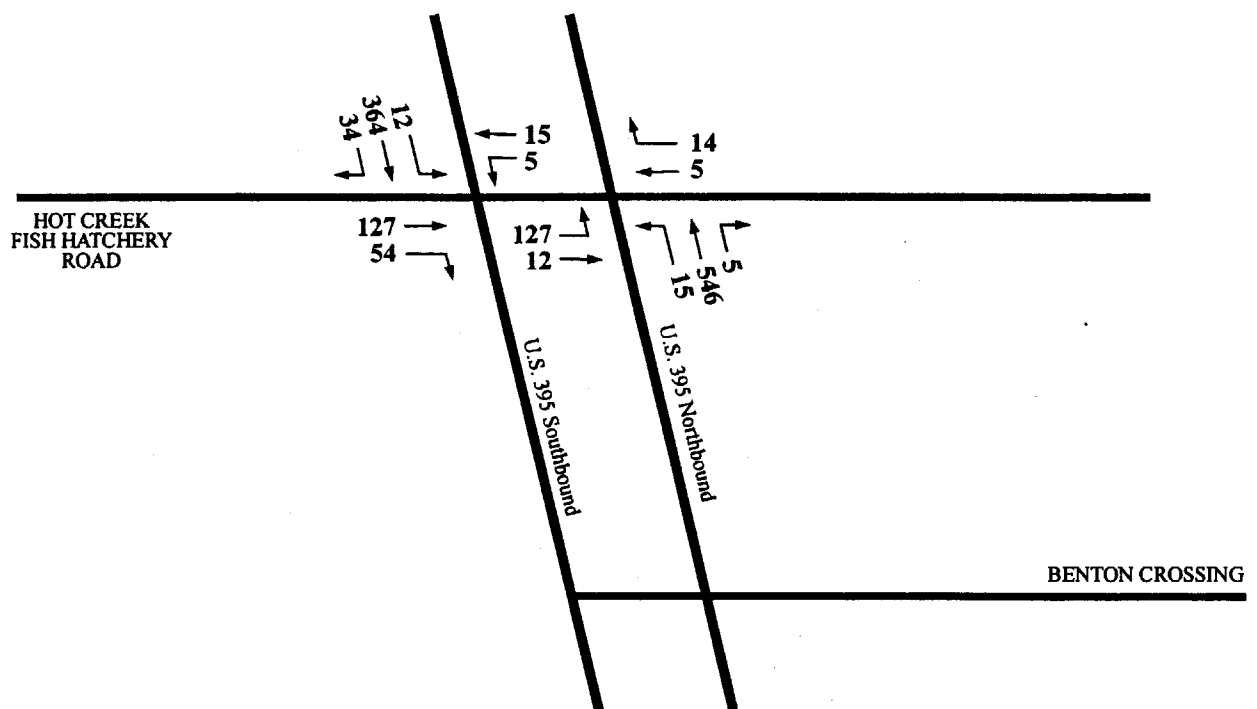
Figure 8



LSA

Schematic - Not to Scale

Existing + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



11/28/00(TML030)

Figure 9

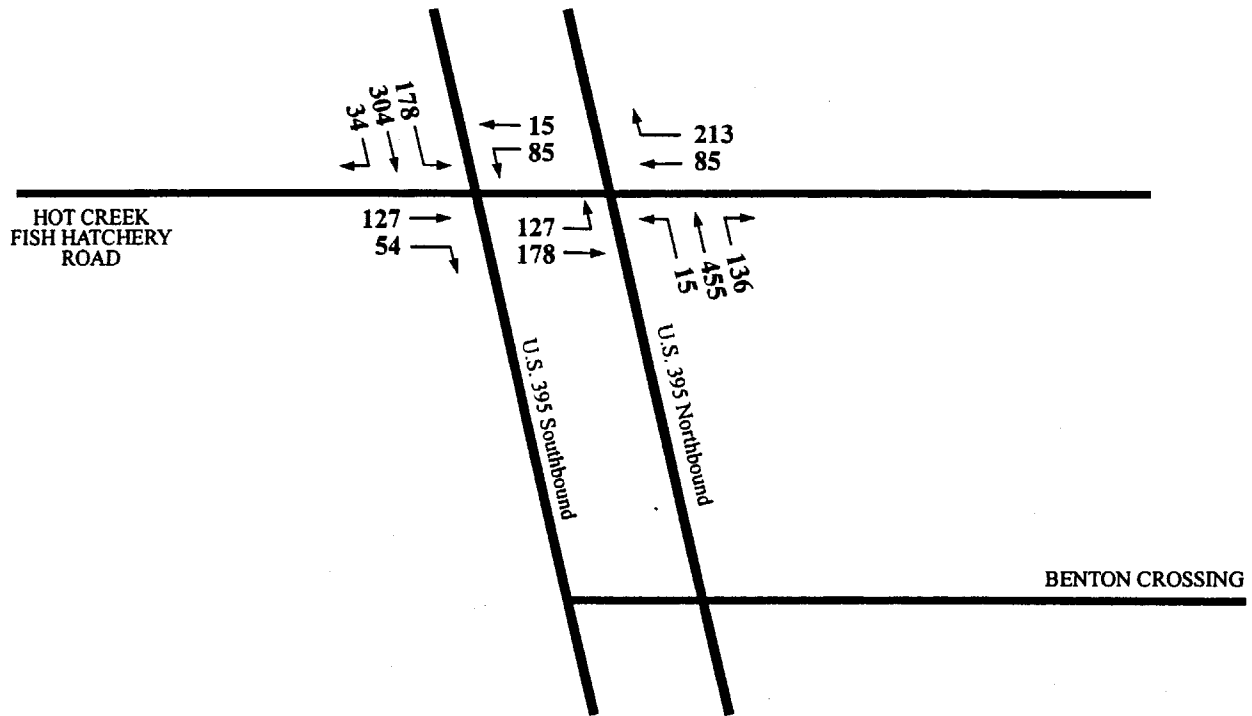


LSA

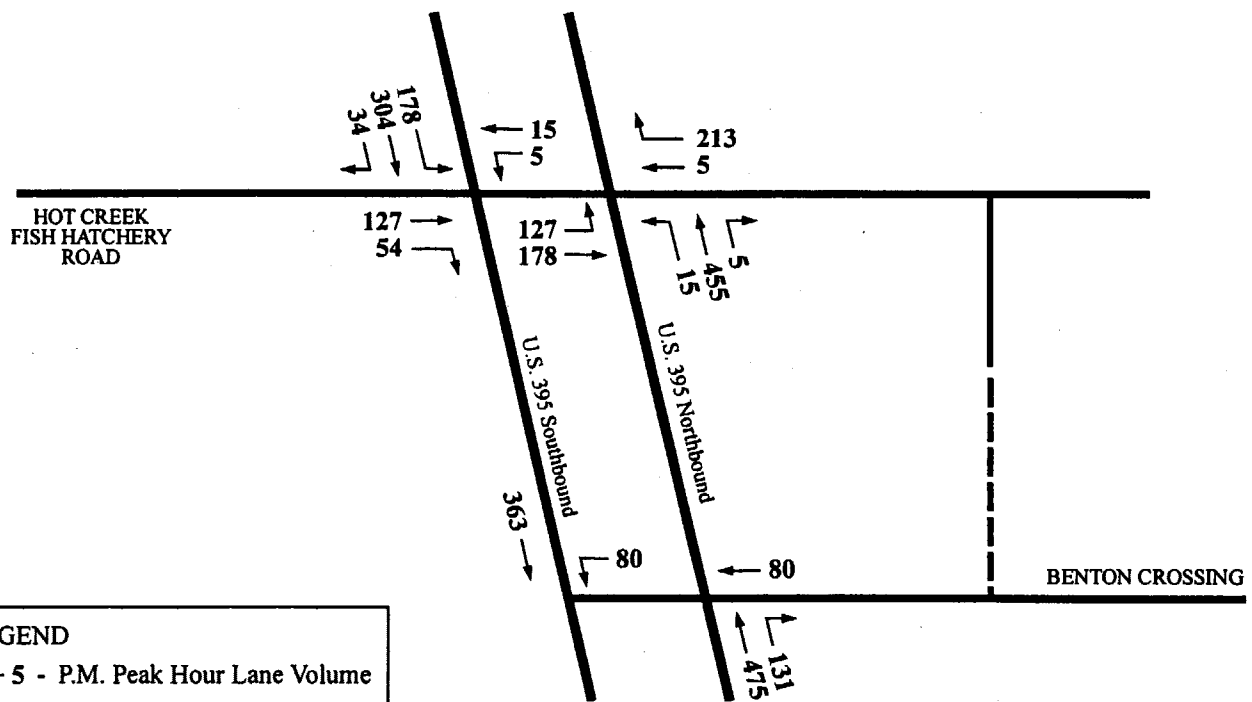
Schematic - Not to Scale

Existing + Industrial Park
 P.M. Peak Hour Traffic Volumes

EXISTING + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES



EXISTING + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



11/28/00(TML030)

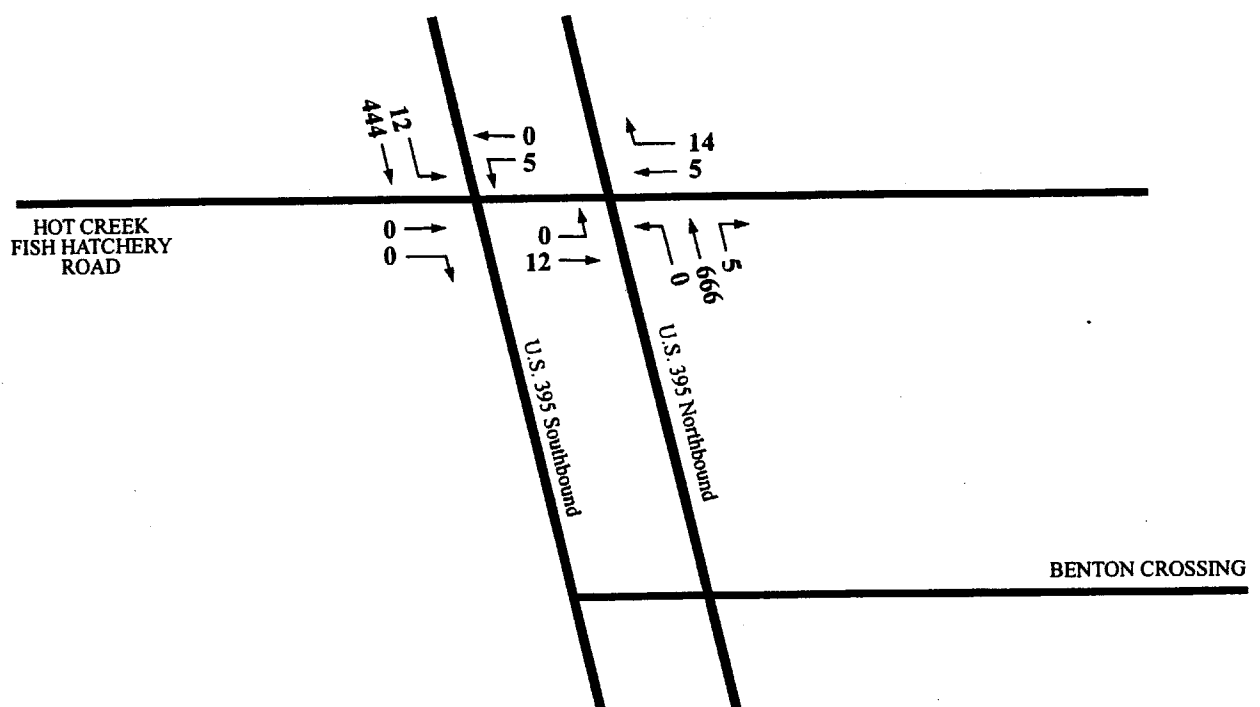
Figure 10



LSA

Schematic - Not to Scale

Existing + Airport + Hot Creek + Industrial Park
 P.M. Peak Hour Traffic Volumes



LEGEND
 ← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

Figure 11



LSA

Schematic - Not to Scale

Year 2020 Baseline P.M. Peak Hour Traffic Volumes for Typical Winter Conditions

peak hour traffic volumes for a typical winter condition. Existing geometrics were assumed for the 2020 baseline scenario. Table C presents the 2020 baseline intersection levels of service for the northbound and southbound intersections of US-395 at Hot Creek Road. According to the table, the US-395 intersection at Hot Creek Road is forecast to continue to operate with a satisfactory level of service at LOS B (11.6 seconds). Appendix B contains the level of service worksheets.

YEAR 2020 + PROJECT LEVELS OF SERVICE

The 2020 baseline traffic volumes at the US-395/Hot Creek Road intersection (northbound and southbound) were added to the project trip assignments discussed previously, and intersection levels of service were determined for the 2020 + airport expansion; 2020 + airport expansion + Hot Creek resort (with and without connection to Benton Crossing); 2020 + Sierra Business Park; and 2020 + airport expansion + Hot Creek resort + Sierra Business Park (with and without connection to Benton Crossing) scenarios. Figures 12, 13, 14, and 15 illustrate the year 2020 plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Table C also presents the results of the year 2020 + project(s) level of service analysis, with and without Benton Crossing. Appendix B contains the level of service worksheets.

Based on the level of service analysis results provided in Table C, most of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the cumulative conditions except for the 2020 + airport expansion + Hot Creek resort (without Benton Crossing) + Sierra Business Park scenario. This scenario is forecast to operate at LOS E (37.4 seconds) due to the volume and delay of eastbound left turning vehicles from the Sierra Business Park, and eastbound through traffic volumes destined to the airport and the Hot Creek resort. Mitigation measures are required for this scenario to bring the US-395/Hot Creek Road intersection to LOS D or better.

CONCLUSIONS AND MITIGATION MEASURES

In summary, in the short range (existing conditions) minor mitigation measures are committed for the intersection of US-395/Hot Creek Road as described in the Executive Summary. In the long range (2020) additional mitigation measures are necessary when all three projects are developed without access to Benton Crossing.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes, or constructing a connector road to Benton Crossing from the airport developments, would be required to reduce the impacts and maintain LOS D or better conditions. The resultant LOS in the full project development scenario is shown on Tables A and C.

A minimum nose to nose width of 48 feet in the median is required to provide separate eastbound and westbound left and through lanes. A figure illustrating the median lanes is provided in Appendix E. The costs of either improvement (Benton Crossing access or restriping the center median) should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation. With either mitigation measure constructed, long-term levels of service for the baseline + airport expansion + Hot Creek Aviation + Sierra Business Park scenarios would operate with satisfactory levels of service (LOS D or better).

Table C - Year 2020 Baseline and Year 2020 Plus Project Intersection Level of Service Summary

Scenario	US-395/Hot Creek Road ¹						
	Intersection Delay/LOS			NB/SB Queue Lengths		EB/WB Queue Lengths	
	Max Delay ²	Approach	LOS	Max Queue ²	Movement ³	Max Queue ²	Movement ³
WITH EXISTING CIRCULATION SYSTEM							
Year 2020 Baseline Conditions ⁴	11.6 sec.	westbound	B	0.04 veh.	SB-L	0.10 veh.	WB-LTR
2020 + Airport	11.6 sec.	westbound	B	0.33 veh.	SB-L	0.54 veh.	WB-LTR
2020 + Airport + Hot Creek Resort	22.2 sec.	westbound	C	0.74 veh.	SB-L	4.13 veh.	WB-LTR
2020 + Sierra Business Park	16.4 sec.	eastbound	C	0.04 veh.	SB-L	1.82 veh.	EB-LTR
2020 + Hot Creek Resort + Airport + Sierra Business Park	37.4 sec.	eastbound	E	0.74 veh.	SB-L	4.59 veh.	EB-LTR
- with Mitigation	31.1 sec.	eastbound	D	0.74 veh.	SB-L	3.53 veh.	EB-L
WITH CONNECTION TO BENTON CROSSING⁵							
2020 + Airport + Hot Creek Resort	12.5 sec.	westbound	B	0.65 veh.	SB-L	1.36 veh.	WB-LTR
2020 + Airport + Hot Creek Resort + Sierra Business Park	34.1 sec.	eastbound	D	0.65 veh.	SB-L	4.17 veh.	EB-LTR

Notes:

¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections.

However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored in median.

² Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis.

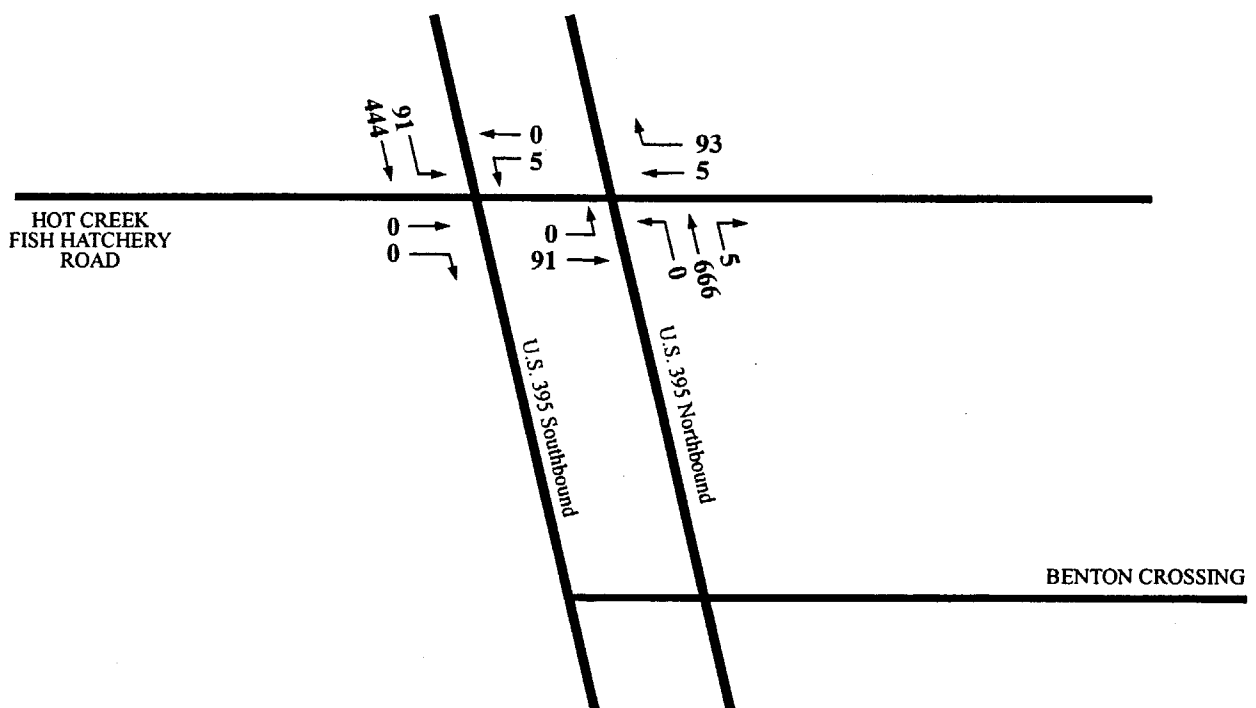
Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of vehicles.

³ SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek Resort and/or hot springs.

EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-395.

⁴ Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

⁵ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.



LEGEND
 ← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

Figure 12

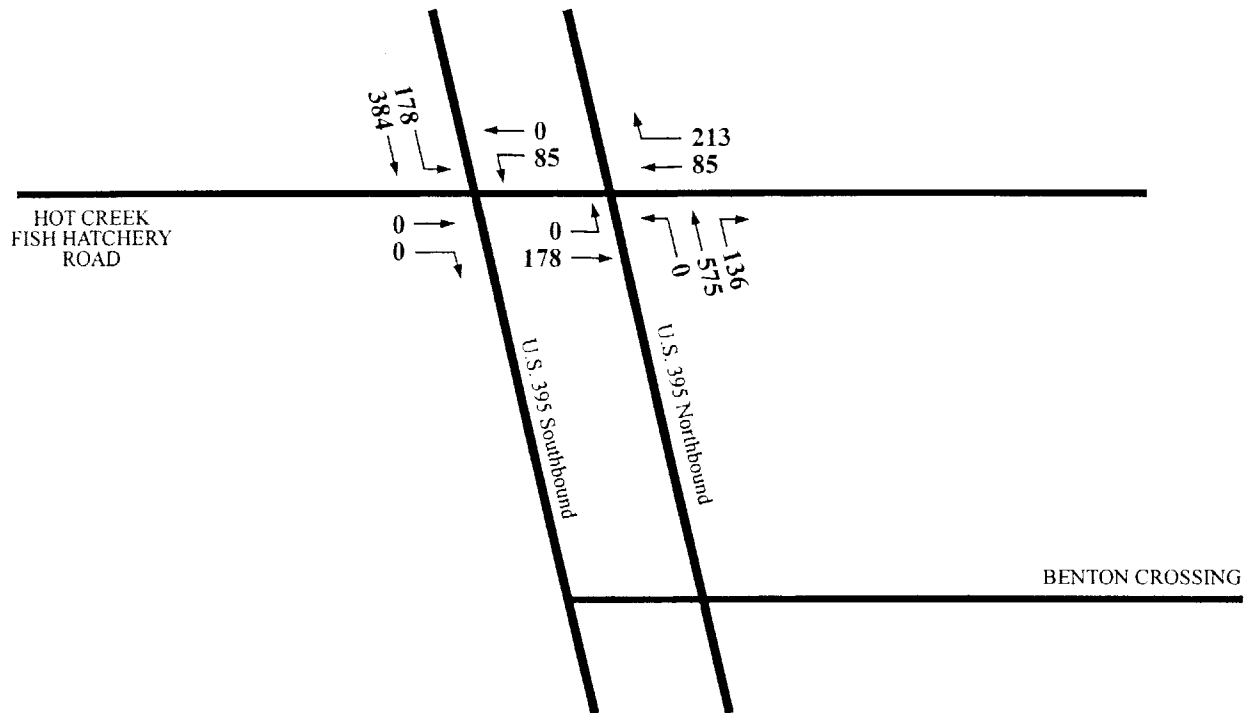


LSA

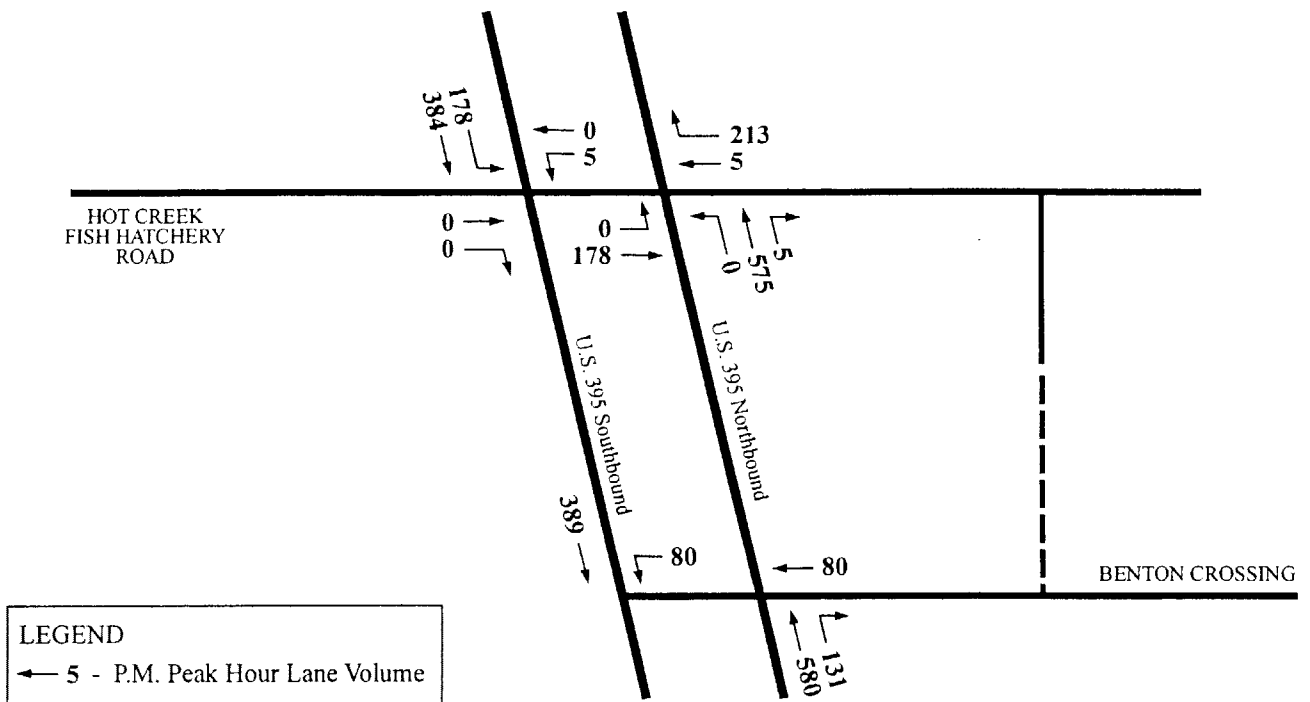
Schematic - Not to Scale

Year 2020 + Airport P.M. Peak
 Hour Traffic Volumes

YEAR 2020 + AIRPORT + HOT CREEK TRAFFIC VOLUMES



YEAR 2020 + AIRPORT + HOT CREEK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



LEGEND

← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

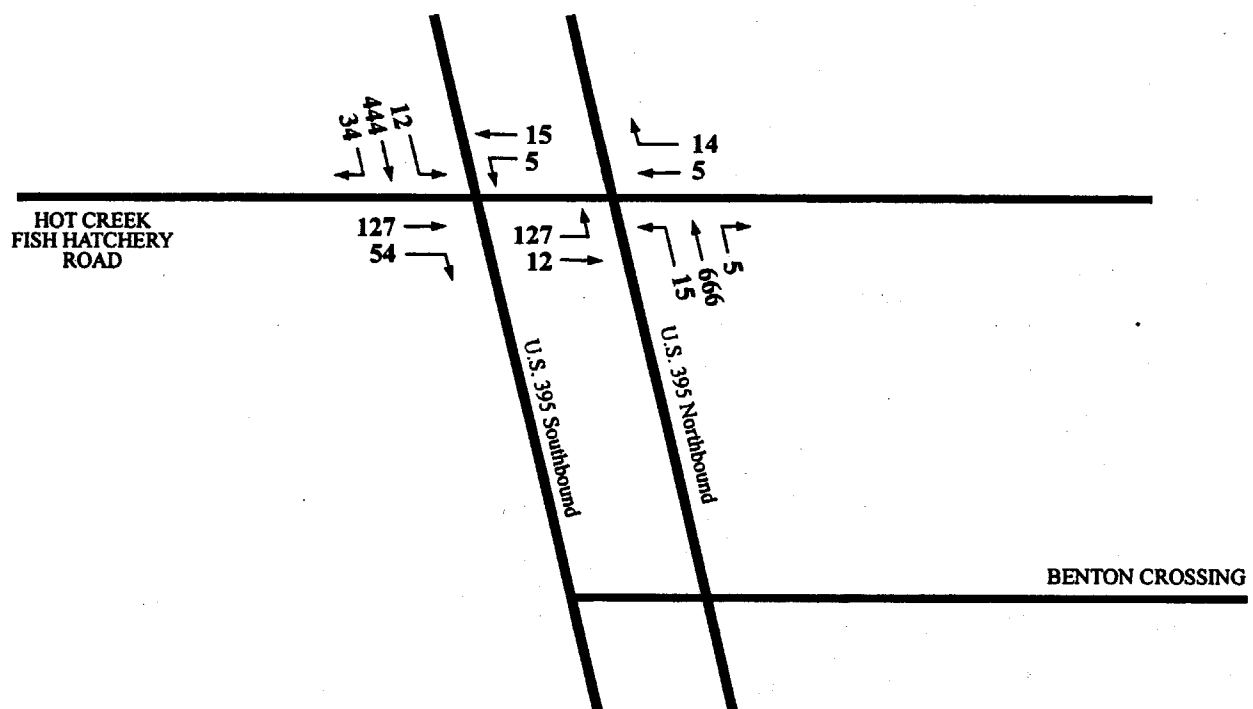
Figure 13



LSA

Schematic - Not to Scale

Year 2020 + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



11/28/00(TML030)

Figure 14

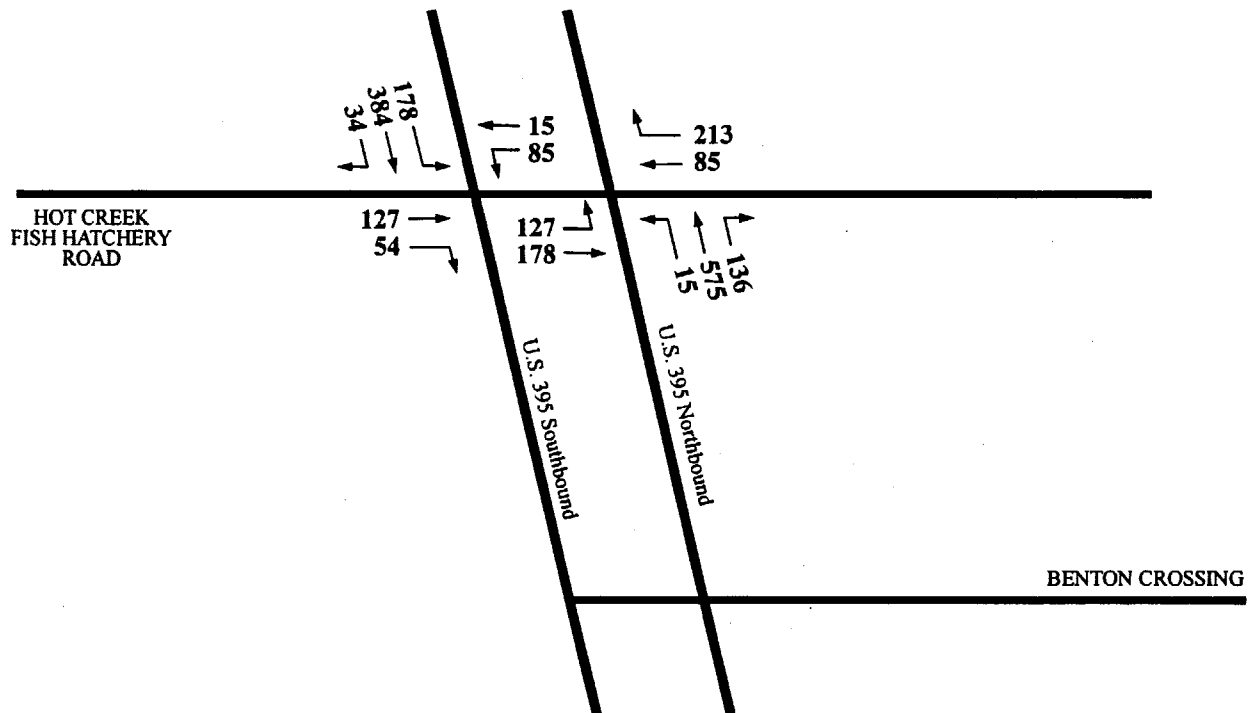


LSA

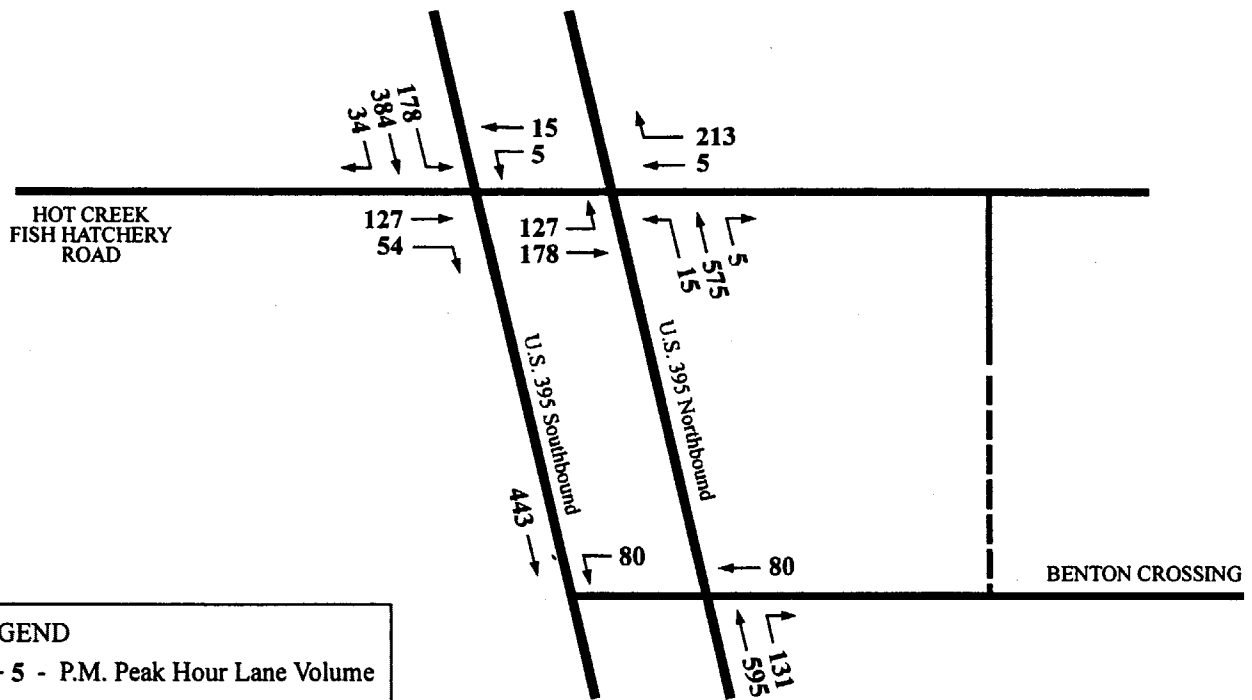
Schematic - Not to Scale

Year 2020 + Industrial Park
P.M. Peak Hour Traffic Volumes

YEAR 2020 + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES



YEAR 2020 + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



11/28/00(TML030)

Figure 15



LSA

Schematic - Not to Scale

Year 2020 + Airport + Hot Creek + Industrial Park
 P.M. Peak Hour Traffic Volumes

The specific phasing and absorption of each cumulative project cannot be reasonably projected at this time and, therefore, specific timing for the implementation of the alternative mitigation measures cannot be specified. However, to provide assurance that adequate LOS is maintained for capacity and safety benefits, an annual monitoring program is recommended.

The annual monitoring reports would begin at the onset of airport expansion and report the traffic counts and LOS at the Hot Creek Fish Hatchery Road intersection with US-395. The objective of the monitoring reports is to implement mitigation measures prior to reaching LOS E. To achieve this, Caltrans project development activities for either mitigation measure would be initiated when LOS D is reached.

It is further recommended that both summer and winter conditions be reported and that the monitoring program objective be aimed at collecting peak and/or design level traffic data.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary. In addition, if the Benton Crossing access is constructed prior to being triggered by the monitoring program then the annual report would be suspended.

APPENDIX A

HOT CREEK ROAD TRAFFIC COUNTS

Received Nov-16-00 07:08pm

from 7609343119 → LSA

page 3

11/16/2000 19:06 7609343119

MAMMOTH AIRPORT

PAGE 03

Type of VEH
2 OR R

INTERSECTION

N

S

575

R CAR

R CAR

L TRUCK

L TRUCK

L CAR

L BUS

L TRUCK

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947-553-8076

²⁷ R = NORTH²⁴ L = SOUTH

APPENDIX B

LEVEL OF SERVICE WORKSHEETS

EXISTING AND EXISTING + PROJECT(S) SCENARIOS

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Existing
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach	Northbound			Southbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	546	5	12	364	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	546	5	12	364	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	14	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	14	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound		Eastbound		
Movement	1	4	7	8	9	10	11 12
Lane Config	LT	L		LTR			LTR
v (vph)	0	12		19			0
C(m) (vph)	1206	1029		635			0
v/c	0.00	0.01		0.03			
95% queue length	0.00	0.04		0.09			
Control Delay	8.0	8.5		10.8			
LOS	A	A		B			F
Approach Delay				10.8			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Existing + Airport
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach Movement	Northbound			Southbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	546	5	91	364	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	546	5	91	364	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT		TR	L T		
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Westbound			Eastbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	93	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	93	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach Movement	NB	SB	Westbound			Eastbound	
	1	4	7	8	9	10	11 12
	LT	L		LTR			LTR
v (vph)	0	91		98			0
C(m) (vph)	1206	1029		703			0
v/c	0.00	0.09		0.14			
95% queue length	0.00	0.29		0.49			
Control Delay	8.0	8.8		10.9			
LOS	A	A		B			F
Approach Delay				10.9			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Existing + Airport + Hot Creek
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street:	Approach	Northbound			Southbound	
	Movement	1	2	3	4	5
		L	T	R	L	T
Volume		0	455	136	178	304
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		0	455	136	178	304
Percent Heavy Vehicles		0	--	--	0	--
Median Type	Raised curb					
RT Channelized?						
Lanes		0	2	0	1	2
Configuration		LT	TR		L	T
Upstream Signal?		No			No	

Minor Street:	Approach	Westbound			Eastbound	
	Movement	7	8	9	10	11
		L	T	R	L	T
Volume		85	0	213	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		85	0	213	0	0
Percent Heavy Vehicles		0	0	0	0	0
Percent Grade (%)			0			0
Median Storage	3					
Flared Approach: Exists?		No			No	
Storage						
RT Channelized?						
Lanes		0	1	0	0	1
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service						
Approach	NB	SB	Westbound		Eastbound	
Movement	1	4	7	8	9	10
Lane Config	LT	L		LTR		LTR
v (vph)	0	178		298		0
C(m) (vph)	1268	995		563		0
v/c	0.00	0.18		0.53		
95% queue length	0.00	0.65		3.29		
Control Delay	7.8	9.4		18.5		
LOS	A	A		C		F
Approach Delay				18.5		
Approach LOS				C		

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Existing + Industrial
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach Movement	Northbound			Southbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume		15	546	5	12	364	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	546	5	12	364	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Westbound			Eastbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	15	14	127	12	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	15	14	127	12	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound		Eastbound		
Movement	1	4	7	8	9	10	11 12
Lane Config	L	L		LTR			LTR
v (vph)	15	12		34			193
C(m) (vph)	1172	1029		525			566
v/c	0.01	0.01		0.06			0.34
95% queue length	0.04	0.04		0.21			1.54
Control Delay	8.1	8.5		12.3			14.6
LOS	A	A		B			B
Approach Delay				12.3			14.6
Approach LOS				B			B

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Exist+Airprt+HotCrk+Industrial
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		15	455	136	178	304	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	455	136	178	304	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		
Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		85	0	213	127	0	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		85	0	213	127	0	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service

Approach Movement	NB	SB	Westbound			Eastbound		
	1	4	7	8	9	10	11	12
Lane Config	L	L		LTR			LTR	
v (vph)	15	178		298			181	
C(m) (vph)	1232	995		541			342	
v/c	0.01	0.18		0.55			0.53	
95% queue length	0.04	0.65		3.57			3.24	
Control Delay	8.0	9.4		19.7			27.2	
LOS	A	A		C			D	
Approach Delay				19.7			27.2	
Approach LOS				C			D	

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Exstng+Airprt+HotCrk w/Benton
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach Movement	Northbound			Southbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	455	5	178	304	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	455	5	178	304	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Westbound			Eastbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	213	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	213	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service										
Approach	NB	SB	Westbound			Eastbound				
			1	4	7	8	9	10	11	12
			LT	L		LTR			LTR	
v (vph)	0	178		218				0		
C(m) (vph)	1268	1112		762				0		
v/c	0.00	0.16		0.29						
95% queue length	0.00	0.57		1.20						
Control Delay	7.8	8.9		11.6						
LOS	A	A		B				F		
Approach Delay				11.6						
Approach LOS				B						

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: Exstng+Airprt+HtCrk+Ind w/Bntn
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
	Movement	1	2	3	4	5
		L	T	R	L	T
Volume		15	455	5	178	304
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	455	5	178	304
Percent Heavy Vehicles		0	--	--	0	--
Median Type	Raised curb					
RT Channelized?						
Lanes		1	2	0	1	2
Configuration		L	T	TR	L	T
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11
		L	T	R	L	T
Volume		5	0	213	127	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	213	127	0
Percent Heavy Vehicles		0	0	0	0	0
Percent Grade (%)			0			0
Median Storage	3					
Flared Approach: Exists?		No			No	
Storage						
RT Channelized?						
Lanes		0	1	0	0	1
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
	1	4	7	8	9	10	11	12
Movement	L	L		LTR			LTR	
Lane Config	L	L		LTR			LTR	
v (vph)	15	178		218			181	
C(m) (vph)	1232	1112		758			357	
v/c	0.01	0.16		0.29			0.51	
95% queue length	0.04	0.57		1.21			2.98	
Control Delay	8.0	8.9		11.7			25.3	
LOS	A	A		B			D	
Approach Delay				11.7			25.3	
Approach LOS				B			D	

YEAR 2020 AND YEAR 2020 + PROJECT(S) SCENARIOS

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020 Baseline
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach	Northbound			Southbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	666	5	12	444	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	666	5	12	444	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	14	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	14	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach:	Exists?	No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11 12
Lane Config	LT	L		LTR			LTR
v (vph)	0	12		19			0
C(m) (vph)	1127	929		566			0
v/c	0.00	0.01		0.03			
95% queue length	0.00	0.04		0.10			
Control Delay	8.2	8.9		11.6			
LOS	A	A		B			F
Approach Delay				11.6			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020 + Airport
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach	Northbound			Southbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	666	5	91	444	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	666	5	91	444	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	93	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	93	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound		Eastbound		
Movement	1	4	7	8	9	10	11 12
Lane Config	LT	L		LTR			LTR
v (vph)	0	91		98			0
C(m) (vph)	1127	929		640			0
v/c	0.00	0.10		0.15			
95% queue length	0.00	0.33		0.54			
Control Delay	8.2	9.3		11.6			
LOS	A	A		B			F
Approach Delay				11.6			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020 + Airport + Hot Creek
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	575	136	178	384	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	575	136	178	384	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT		TR	L T		
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Westbound			Eastbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		85	0	213	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		85	0	213	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
Storage							
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound		Eastbound		
Movement	1	4	7	8	9	10	11 12
Lane Config	LT	L		LTR			LTR
v (vph)	0	178		298			0
C(m) (vph)	1186	898		506			0
v/c	0.00	0.20		0.59			
95% queue length	0.00	0.74		4.13			
Control Delay	8.0	10.0-		22.2			
LOS	A	A		C			F
Approach Delay				22.2			
Approach LOS				C			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020 + Industrial
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		15	666	5	12	444	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	666	5	12	444	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		
Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		5	15	14	127	12	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	15	14	127	12	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service

Approach Movement Lane Config	NB	SB	Westbound		Eastbound		
	1 L	4 L	7 L	8 LTR	9	10 L	11 LTR
v (vph)	15	12		34			193
C(m) (vph)	1095	929		464			507
v/c	0.01	0.01		0.07			0.38
95% queue length	0.04	0.04		0.24			1.82
Control Delay	8.3	8.9		13.4			16.4
LOS	A	A		B			C
Approach Delay				13.4			16.4
Approach LOS				B			C

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020+Airport+HotCrk+Industrial
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach	Northbound			Southbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		15	575	136	178	384	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	575	136	178	384	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		

Minor Street:	Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		85	0	213	127	0	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		85	0	213	127	0	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach:	Exists?	No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound		Eastbound		
Movement	1	4	7	8	9	10	11 12
Lane Config	L	L	LTR			LTR	
v (vph)	15	178	298			181	
C(m) (vph)	1152	898	486			290	
v/c	0.01	0.20	0.61			0.62	
95% queue length	0.04	0.74	4.54			4.59	
Control Delay	8.2	10.0-	24.0			37.4	
LOS	A	A	C			E	
Approach Delay			24.0			37.4	
Approach LOS			C			E	

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020+Airport+HotCrk+Ind w/ MIT
 Project ID: Hot Creek Aviation Mixed-Use Development
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach Movement	Northbound			Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		15	575	136	178	384	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	575	136	178	384	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		
Minor Street:	Approach Movement	Westbound			Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume		85	0	213	127	0	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		85	0	213	127	0	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach: Exists?		No			No		
	Storage						
RT Channelized?							
Lanes		1	1	0	1	1	0
Configuration		L		TR	L		TR
Delay, Queue Length, and Level of Service							
Approach Movement Lane Config	NB	SB	Westbound		Eastbound		
	1 L	4 L	7 L	8 TR	9 L	10 L	11 TR
v (vph)	15	178	85		213	127	54
C(m) (vph)	1152	898	300		646	228	803
v/c	0.01	0.20	0.28		0.33	0.56	0.07
95% queue length	0.04	0.74	1.17		1.47	3.53	0.22
Control Delay	8.2	10.0-	21.7		13.3	40.2	9.8
LOS	A	A	C		B	E	A
Approach Delay				15.7			31.1
Approach LOS				C			D

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020+Airport+HotCrk w/Benton
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach	Northbound			Southbound		
	Movement	1	2	3	4	5	6
		L	T	R	L	T	R
Volume		0	575	5	178	384	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		0	575	5	178	384	
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		0	2	0	1	2	
Configuration		LT	TR		L	T	
Upstream Signal?		No			No		

Minor Street:	Approach	Westbound			Eastbound		
	Movement	7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	213	0	0	0
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	213	0	0	0
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach:	Exists?	No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11 12
Lane Config	LT	L		LTR			LTR
v (vph)	0	178		218			0
C(m) (vph)	1186	1004		696			0
v/c	0.00	0.18		0.31			
95% queue length	0.00	0.65		1.36			
Control Delay	8.0	9.4		12.5			
LOS	A	A		B			F
Approach Delay				12.5			
Approach LOS				B			

HCS2000: Unsignalized Intersections Release 4.1

TWO-WAY STOP CONTROL SUMMARY

Analyst: Meghan Macias
 Agency/Co.: Town of Mammoth Lakes
 Date Performed: 8/30/01
 Analysis Time Period: PM Peak Hour
 Intersection: US395/Hot Creek Road
 Jurisdiction: Caltrans
 Analysis Year: 2020+Airport+HotCrk+Ind w/Bntn
 Project ID: Mammoth Lakes - Yosemite Valley Airport
 East/West Street: Hot Creek Road
 North/South Street: US395

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments							
Major Street:	Approach Movement	Northbound			Southbound		
		1	2	3	4	5	6
		L	T	R	L	T	R
Volume		15	575	5	178	384	34
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		15	575	5	178	384	34
Percent Heavy Vehicles		0	--	--	0	--	--
Median Type	Raised curb						
RT Channelized?							
Lanes		1	2	0	1	2	0
Configuration		L	T	TR	L	T	TR
Upstream Signal?		No			No		

Minor Street:	Approach Movement	Westbound			Eastbound		
		7	8	9	10	11	12
		L	T	R	L	T	R
Volume		5	0	213	127	0	54
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR		5	0	213	127	0	54
Percent Heavy Vehicles		0	0	0	0	0	0
Percent Grade (%)			0			0	
Median Storage	3						
Flared Approach:	Exists?	No			No		
	Storage						
RT Channelized?							
Lanes		0	1	0	0	1	0
Configuration		LTR			LTR		

Delay, Queue Length, and Level of Service							
Approach	NB	SB	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Config	L	L		LTR			LTR
v (vph)	15	178		218			181
C(m) (vph)	1152	1004		693			303
v/c	0.01	0.18		0.31			0.60
95% queue length	0.04	0.65		1.37			4.17
Control Delay	8.2	9.4		12.6			34.1
LOS	A	A		B			D
Approach Delay				12.6			34.1
Approach LOS				B			D

APPENDIX C

AIRPORT TRIP GENERATION

Les Card

From: John Bergener [J_Bergener@Ricondo.com]
Sent: Thursday, November 16, 2000 4:41 PM
To: les.card@lsa-assoc.com
Subject: [Fwd: MMH Trip Generation]



MMH_GT3.xls

----- Original Message -----

Subject: MMH Trip Generation
Date: Thu, 16 Nov 2000 16:18:02 -0800
From: John Bergener <J_Bergener@Ricondo.com>
Reply-To: J_Bergener@Ricondo.com
Organization: Ricondo & Associates, Inc.
To: les.card@lsa-oc.com
CC: T_Cornell@ricondo.com

Vehicle trip generation numbers as we discussed.

--

John Bergener
Ricondo & Associates, Inc.
221 Main St. Suite 1460
San Francisco, CA 94105
Phone: (415) 547-1930
FAX: (415) 547-1940
J_Bergener@Ricondo.com

Vehicle trip generation at MMH (Winter)

	PAL 1		PAL 5 (year 2020)		
	Airport peak hour (12-1 p.m.)	Daily	Airport peak hour (12-1 p.m.)	Traffic peak period (4-6 p.m.)	Daily
Passengers					
Arriving	249	351	452	252	1,380
Departing	254	351	294	260	1,380
Vehicles					
Buses	7	10	11	7	41
Shuttle vans	7	10	10	7	37
Rental cars	32	45	51	33	189
Private vehicles, parking	11	15	18	12	67
Private vehicles, dropoff/pickup	20	28	31	20	115
Total Vehicle Trips ^(a)	77	108	121	79	449

(a) One vehicle trip equals one round trip from the town of Mammoth Lakes, CA to the Mammoth Lakes-Yosemite Valley Airport and back to the town of Mammoth Lakes, CA.

APPENDIX D

TSE REVISED TRIP GENERATION AND TRIP ASSIGNMENT

**TRAFFIC SAFETY ENGINEERS**

November 27, 2000

Ms. Sandra Bauer
Bauer Environmental Services
15901 Red Hill Avenue, Suite 210
Irvine, CA 92614

Subject: Sierra Business Park Specific Plan

Dear Ms. Bauer:

In response to Caltrans' letter of comments dated November 8, 2000 for the subject development, our responses to the specific traffic comments are as follows:

1. Comment: Based on our preliminary review of the submitted traffic analysis, we do not agree with the conclusions for the full buildout because of other developments within this vicinity.

Response: In conjunction with the future Mammoth Lakes/ Yosemite Airport Expansion Plan, the Hot Creek Aviation Mixed-use Development is also proposed. This development is to be located immediately adjacent to the airport. Anticipated site uses include a 24-fuel pump gasoline/service station with convenience market, 188 units of high-density residential/lodging, a 62-room hotel, a 100-campsite recreational park and a 100-seat restaurant. The Airport Expansion Plan and the Hot Creek Aviation Mixed-use Project are the only two known significant developments within the vicinity of the proposed Sierra Business Park Project.

According to LSA's traffic impact study, both the Airport Expansion and Hot Creek Mixed-use Developments will generate a total of 3,688 daily trips and 504 trips during the P.M. peak traffic hour (see Exhibit "A"). Figure 1 shows the project trips assigned to the intersection of Highway 395 and Hot Creek Fish Hatchery Road.

Page 2

2. Comment: A thorough traffic intersection operation study needs to be completed to assess the potential impacts to and remediation measures required for U.S. Highway 395.

Response: Figure 2 shows the existing P.M. peak hour traffic turning movements at the intersection of Highway 395 and Sierra Business Park Project Entrance/Hot Creek Fish Hatchery Road.

Traffic volume data for Highway 395 were provided by Caltrans. These traffic volumes represent the existing P.M. peak hour counts during the peak traffic season of the year, i.e. winter months.

Future project traffic volumes for the proposed Sierra Business Park Project were forecasted based on trip generation rate established by the Institute of Transportation Engineers (ITE) for Land Use Code (130), Industrial Park. Traffic counts were recently conducted at an existing industrial/business park center located in the Town of Mammoth Lake. Results of this traffic survey indicate that the derived trip rate from this industrial site is consistent with the trip generation rate established by ITE for an industrial park land use. For this reason, ITE's trip generation rate for Land Use Code (130), Industrial Park is determined to be most appropriate for forecasting future traffic for the proposed Sierra Business Park Project.

Page 3

Table A, below, shows the trip generation forecasts for the proposed Sierra Business Park Project.

TABLE A

Site Use	A.M. Peak Hour			P.M. Peak Hour			Daily Traffic
	Inbound	Outbound	Total	Inbound	Outbound	Total	
Generation Rate: Industrial Park (Trips/Acre)	8.88	1.82	10.7	2.35	8.82	11.17	72.7
Traffic Generated: Industrial Park $36.7 - 12.64(*) = 24.06$ acres	215	44	259	56	213	269	1,749
** Less 15% pass-by and work trips	-32	-7	-39	-8	-32	-40	-262
Net Project Traffic	183	37	220	48	181	229	1,487

(*) Total unbuildable areas = 4.1 acres for internal streets, plus 2.8 acres for existing concrete plant plus 1.04 acres for Lot 15 which is reserved for utility and water wells plus 4.7 acres for perimeter maintenance zone.

** A 15% reduction was applied due to pass-by trips and existing employment trips originated from communities south of the Town of Mammoth Lakes that no longer need to work in the Town because of the proposed project.

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Figure 3 shows the project trips assigned to the intersection of Highway 395 and project entrance/Hot Creek Fish Hatchery Road.

Intersection Traffic Impact Analysis

Exhibit "B" shows the detailed volume-to-capacity ratio and level of service calculations for existing traffic, existing traffic plus Sierra Business Park traffic, and existing traffic plus Sierra Business Park traffic plus Airport Expansion traffic plus Hot Creek Mixed-use Project traffic including Year 2020 traffic analysis at the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road. These detailed volume-to-capacity and level of service calculations were provided by LSA, traffic consultant for the Airport Expansion and Hot Creek Projects, and are re-outlined below for comparison.

TABLE B

Scenario	Highway 395/Hot Creek Fish Hatchery Road ¹			
	Northbound Delay ²	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 1999/2000 Conditions ³	13.3 sec.	B	9.6 sec.	A
Existing + Sierra Business Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport Expansion	15.2 sec.	C	10.7 sec.	B
Existing + Airport Expansion + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Sierra Business Park + Airport	36.8 sec.	E	21.9 sec.	C
Expansion+ Hot Creek				
Existing + Sierra Business Park + Airport	19.6 sec.	C	-	-
Expansion+ Hot Creek (with median mitigation)				
WITH CONNECTION TO BENTON CROSSING⁴				
Existing + Airport Expansion + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport Expansion + Hot Creek	23.4sec.	C	17.6 sec.	C
+ Sierra Business Park				

Notes:

- ¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.
- ² Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.
- ³ Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November, 2000
- ⁴ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

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TABLE C

Scenario	Highway 395/Hot Creek Fish hatchery Road ¹			
	Northbound Delay ²	LOS	Southbound Delay	LOS
<i>WITH EXISTING CIRCULATION SYSTEM</i>				
Year 2020 Baseline ³	14.8 sec.	B	9.9 sec.	A
2020 + Sierra Business Park	13.8 sec.	B	14.4 sec.	B
2020 + Airport Expansion	17.4 sec.	C	11.0 sec.	B
2020 + Airport Expansion + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Sierra Business Park + Airport	58.7 sec.	F	24.7 sec.	C
Expansion + Hot Creek				
Existing + Sierra Business Park + Airport	24.0 sec.	C	-	-
Expansion + Hot Creek (with median mitigation)				
<i>WITH CONNECTION TO BENTON CROSSING⁴</i>				
2020 + Sierra Business park + Airport	19.2 sec.	C	12.3 sec.	B
Expansion + Hot Creek				
2020 + Sierra Business park + Airport	31.7 sec.	D	19.8 sec.	C
Expansion + Hot Creek				

Notes:

¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

² Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.

³ Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

⁴ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

As indicated in Tables B and C, the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road will continue to maintain an acceptable 'C' level of service or better with the addition of traffic from the proposed Sierra Business Park Project for both Current Year and Year 2020 traffic conditions. However, with additional traffic from the Sierra Business Park Project, the Airport Expansion Project and the Hot Creek Aviation Mixed-use Project, the intersection will operate at an unacceptable 'E' level of service for current traffic condition and 'F' for Year 2020 traffic conditions. To mitigate traffic impacts, installation of separate left-turn and through traffic lanes in the median opening area of Highway 395 or construction of a connector road to the Benton

Page 6

Crossing with Highway 395 from the airport developments would be required (see Figure 4). With either mitigation improvements implemented, the intersection level of service would operate with a satisfactory D or better.

We trust that the above information/clarifications will be of assistance to Caltrans. If you have any questions or need additional information, please do not hesitate to call us.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "C. Hui Lai".

C. Hui Lai, P.E.
Traffic Engineer

FIGURES

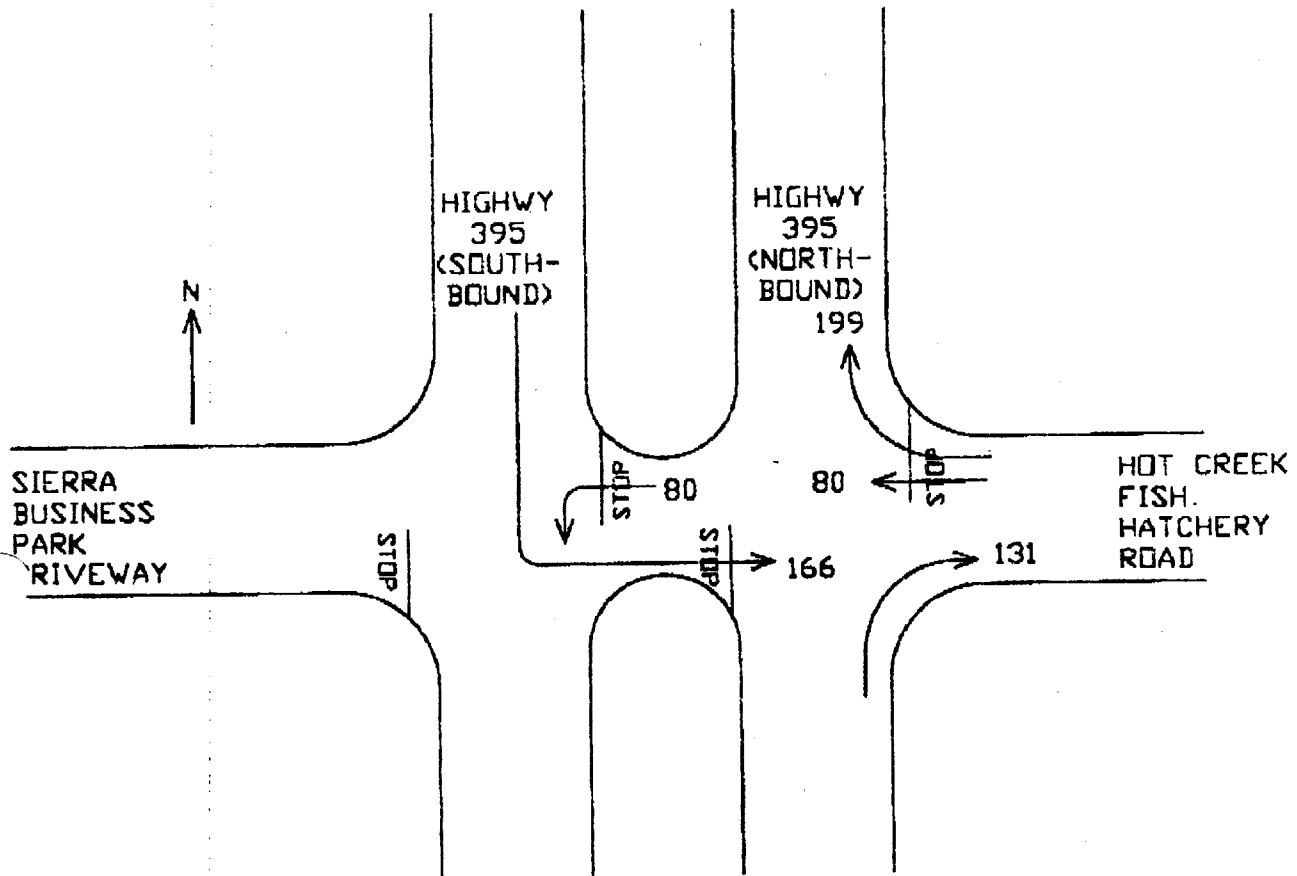


FIGURE 1

CUMULATIVE MAMMOTH LAKES/YOSEMITE AIRPORT
EXPANSION PROJECT TRAFFIC PLUS HOT CREEK
MIXED-USE PROJECT TRAFFIC (P.M. PEAK TRAFFIC HOUR)

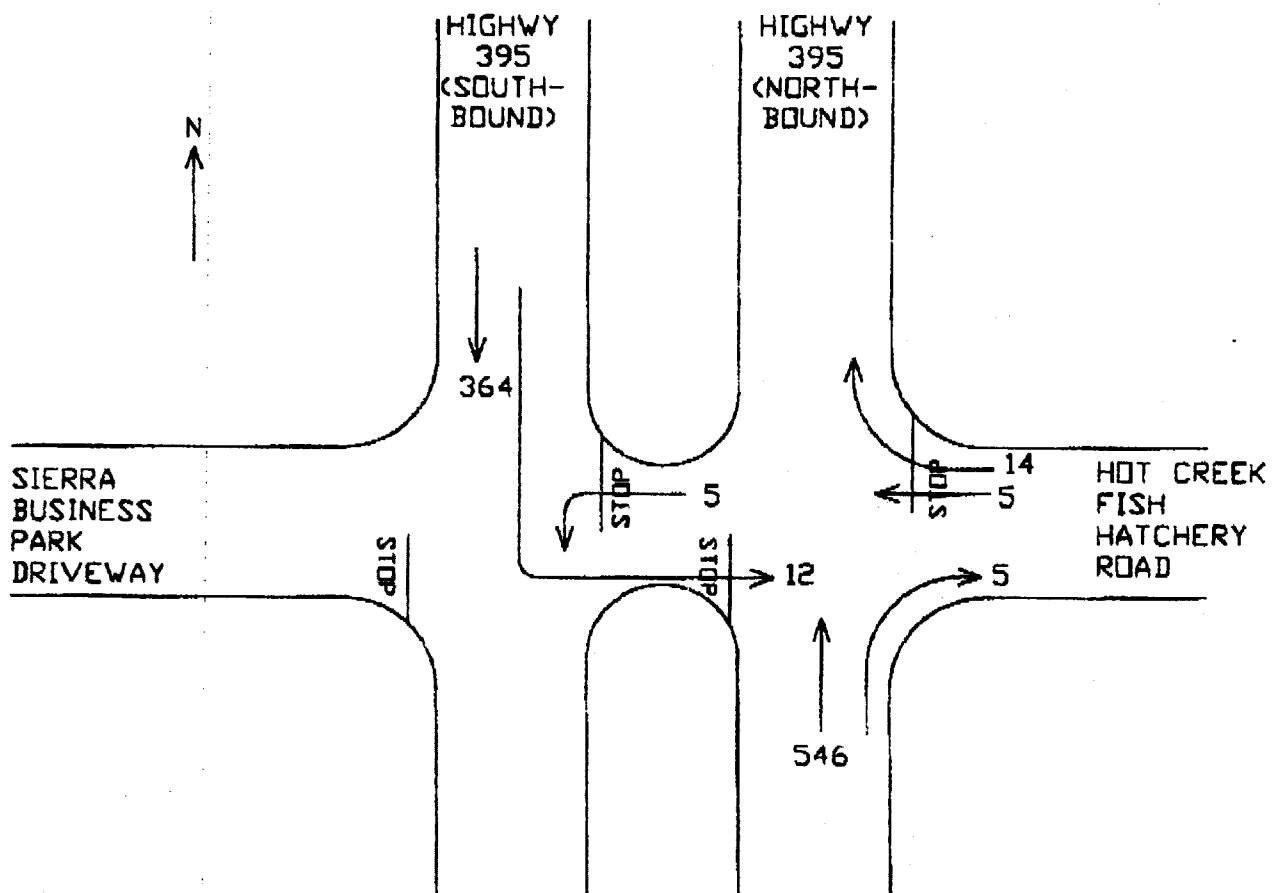


FIGURE 2
EXISTING P.M. PEAK HOUR TRAFFIC

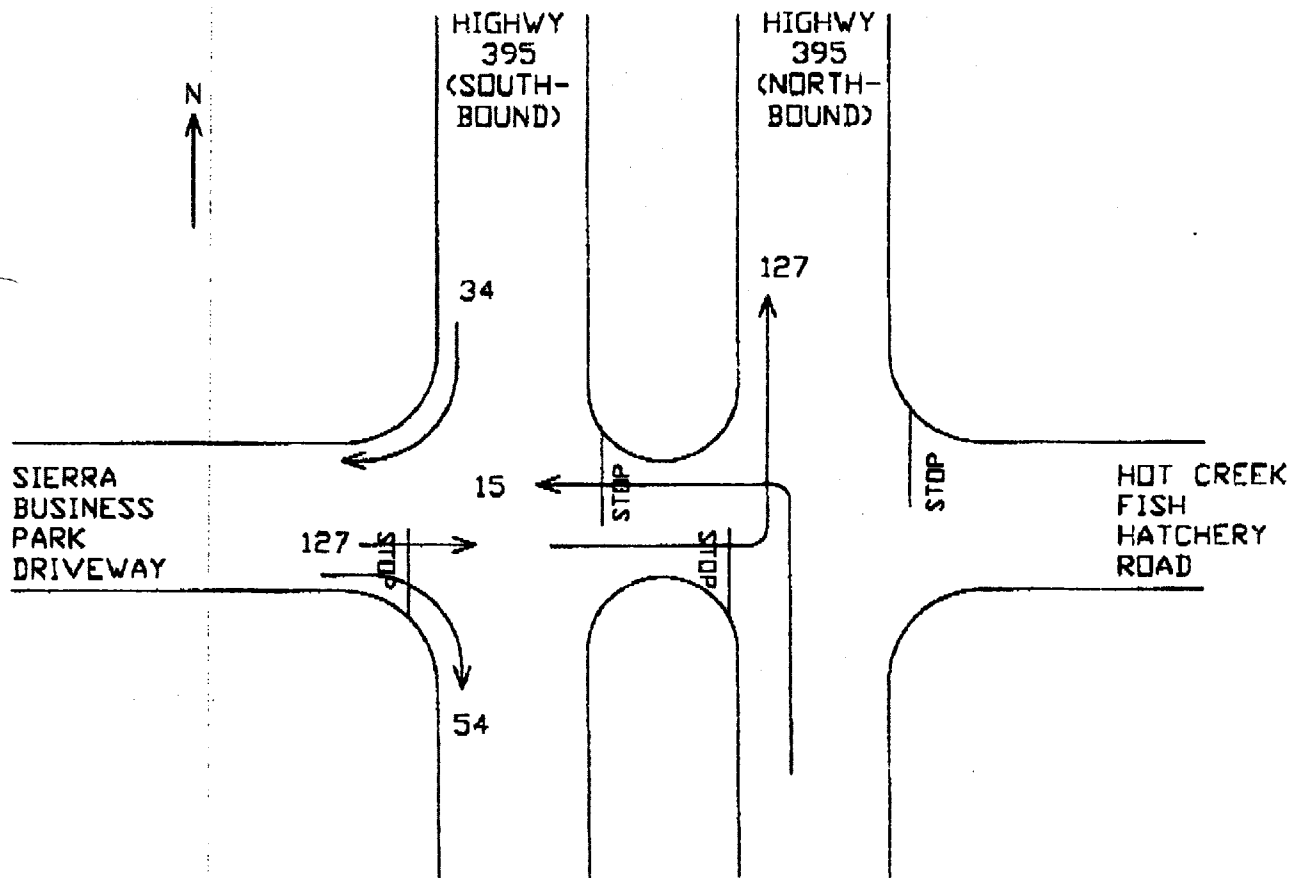


FIGURE 3

P.M. PEAK TRAFFIC HOUR
SIERRA BUSINESS PARK TRAFFIC

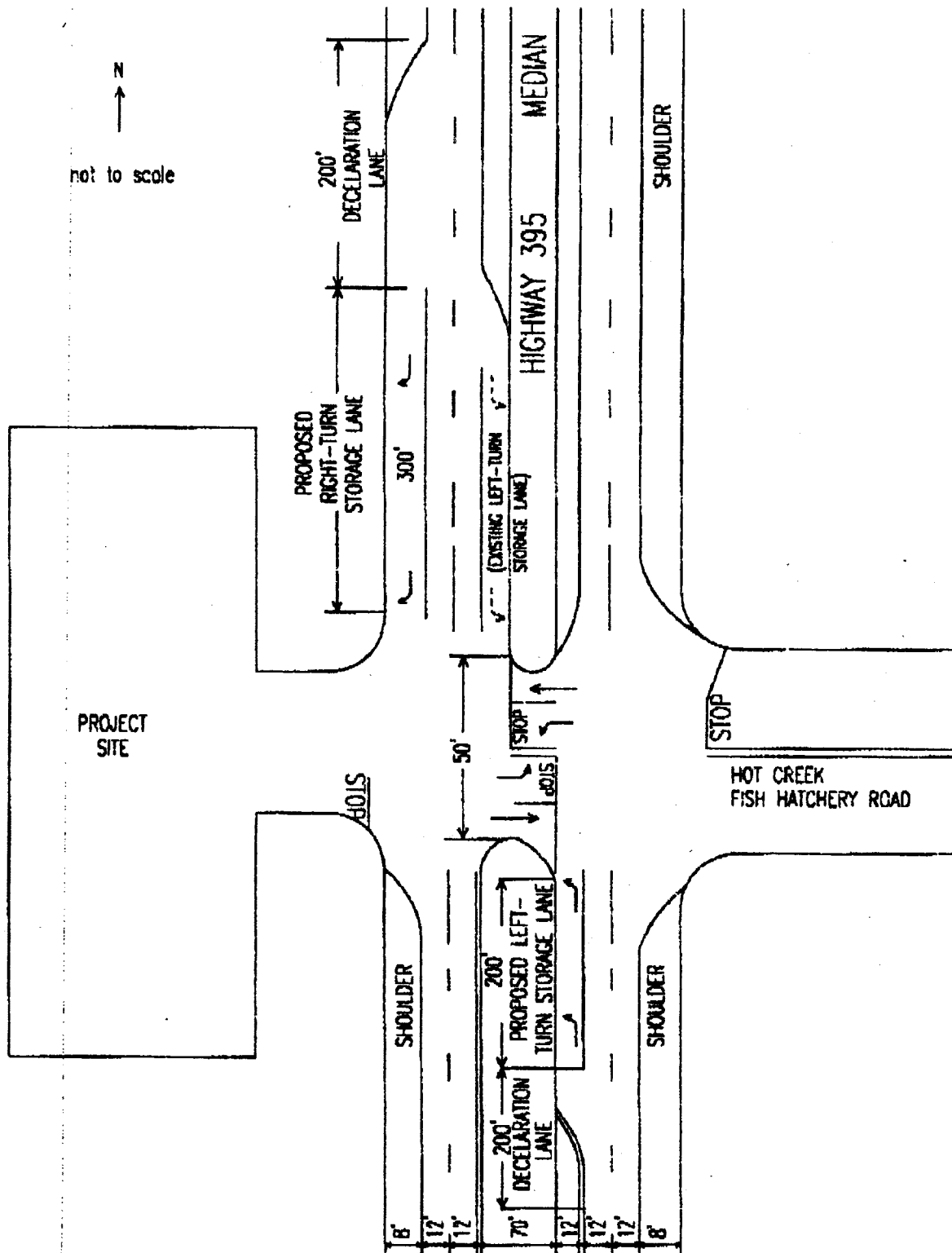


FIGURE 4
PROPOSED INTERSECTION TRAFFIC TURN LANE CONFIGURATIONS

EXHIBIT "A"

**AIRPORT EXPANSION AND HOT CREEK MIXED-USE
PROJECT TRIP GENERATION**

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour		Total
				In	Out	
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport ¹	based on data provided by Mammoth Lakes-Yosemite Valley Airport					
Hot Creek Aviation Mixed-Used Development ²						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)	162.78	6.69	6.69	13.38	
Residential High Density (MF) Seasonal	per dwelling unit (DU)	8.00	0.50	0.25	0.75	
Hotel	per occupied room	8.92	0.35	0.36	0.71	
Campground/Recreational Vehicle Park	per occupied campsite	4.00	0.20	0.20	0.39	
High Turnover Sit-Down Restaurant	per seat	4.83	0.24	0.18	0.42	
Sierra Business Park Specific Plan ³	based on data provided in Morgan Industrial Park Specific Plan TIA					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	702 passengers	898	79	79	158	
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24 FPs	3,907	161	161	321	
Residential High Density (MF) Seasonal ⁴	150 DUs	1,203	76	37	113	
Hotel ⁴	50 rooms	442	17	18	35	
Campground/Recreational Vehicle Park ⁴	80 campsites	320	16	16	31	
High Turnover Sit-Down Restaurant	100 seats	483	24	18	42	
Sierra Business Park Specific Plan	36 acres	1,487	48	181	229	
Total Trip Generation		8,740	428	509	929	
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market ⁵	(90 percent reduction)	-3,516	-145	-145	-289	
Residential High Density (MF) Seasonal ⁶	(60 percent reduction)	-722	-45	-22	-68	
Hotel ⁷	(75 percent reduction)	-332	-13	-13	-26	
Campground/Recreational Vehicle Park	no trip reductions anticipated					
High Turnover Sit-Down Restaurant ⁸	(100 percent reduction)	-483	-24	-18	-42	
Total Trip Reductions		-5,053	-227	-198	-425	
NET EFFECTIVE TRIP GENERATION		3,688	193	311	504	

¹ Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).

² Trip rates for Hot Creek Mixed-Use Development provided in Trip Generation, 6th Edition, Institute of Transportation Engineers (ITE), 1997.

Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM)

Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

³ Trip generation data provided in Traffic Impact Study Addendum for Sierra Business Park Specific Plan, Traffic Safety Engineers (TSE), Novem

⁴ Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.

⁵ A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.

⁶ A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area.

A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

⁷ A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area.

A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

⁸ A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.

EXHIBIT "B"**H.C.M. CALCULATIONS****REFER TO APPENDIX B OF LSA REPORT**

EXHIBIT "C"

H.C.M. CALCULATION WITH TRAFFIC MITIGATION

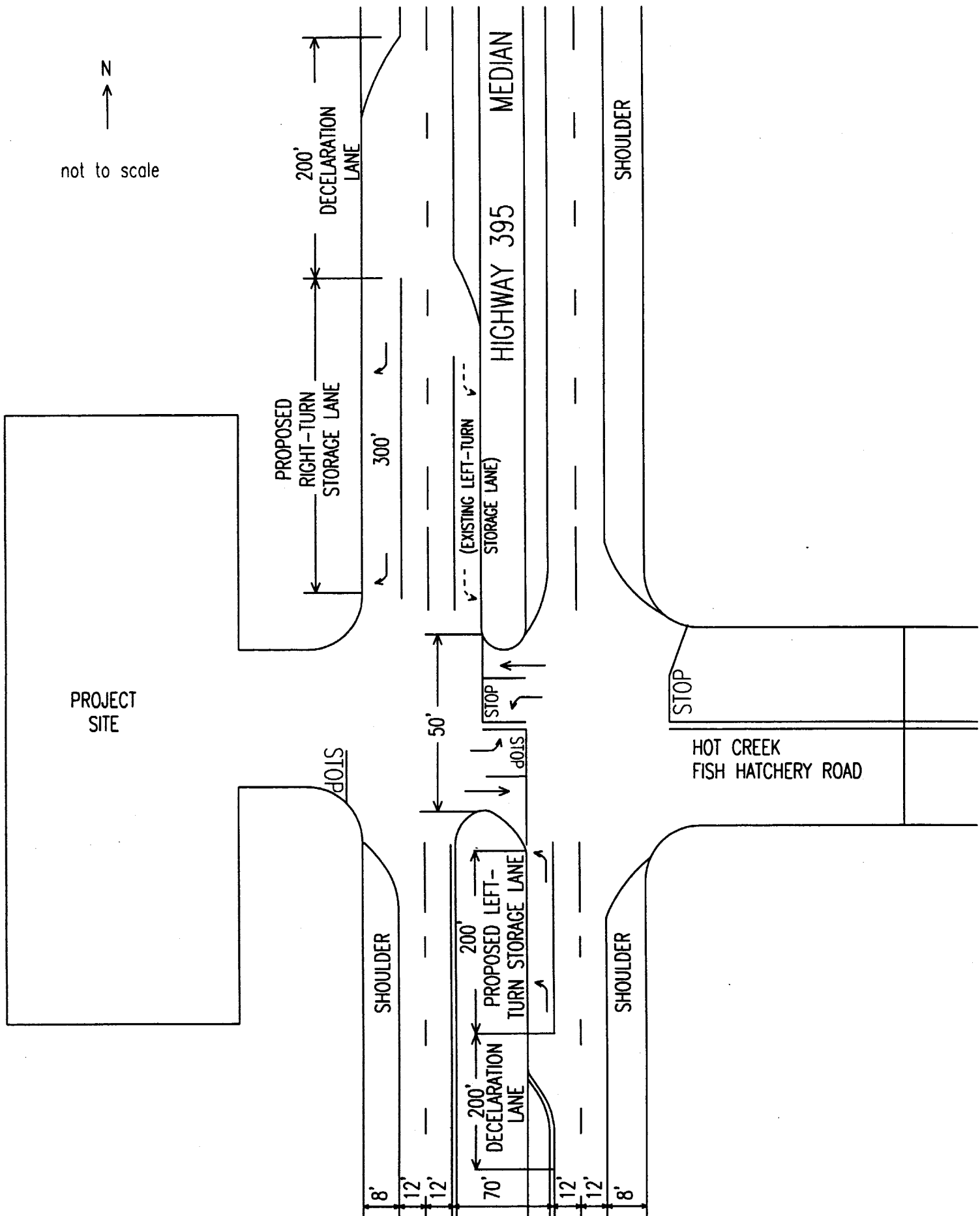
REFER TO APPENDIX B OF LSA REPORT

APPENDIX E

MEDIAN IMPROVEMENTS

not to scale

N
↑



Appendix M – Air Services Agreement

AIR SERVICE AGREEMENT

This Air Service Agreement (this "Agreement") is made and entered into as of the 30 day of May, 2000, by and between American Airlines, Inc. ("American"), a Delaware corporation having its principal offices at P.O. Box 619616, Dallas/Fort Worth International Airport, Texas 75261-9616, and Mammoth Mountain Ski Area ("Mammoth"), a California corporation having its principal offices at Box 24, Mammoth Lakes, CA 93546.

RECITALS

WHEREAS, American is an air carrier engaged in the transportation of persons, property, and mail; and

WHEREAS, Mammoth desires to have American provide air transportation service between Chicago O'Hare ("ORD") and Mammoth Lakes, CA ("MMH"), and between Dallas/Forth Worth International Airport ("DFW") and MMH; and

WHEREAS, American desires to provide such air transportation at a reasonable return on its investment; and

WHEREAS, American and Mammoth wish to enter into this Agreement regarding air transportation between ORD and MMH and between DFW and MMH.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, the parties agree as follows:

1. Air Service

(a) American, subject to using its reasonable efforts to procure all necessary governmental approvals and subject to the existence of adequate operating facilities at MMH, shall provide regularly scheduled passenger air service between ORD and MMH and between DFW and MMH (the "Air Service," with each flight and "Air Service Flight") during Mammoth's 2001-2002, 2002-2003, 2003-2004, 2004-2005 and 2005-2006 ski seasons (each, a "Ski Season" or an "Air Service Period"). Notwithstanding the foregoing, it is understood and agreed that either party may terminate this Agreement as follows: (i) with respect to the 2002-2003 Ski Season, by giving written notice to the other party on or before May 15, 2002, and (ii) with respect to any subsequent Ski Seasons, by giving written notice to the other party on or before the May 15, prior to such Ski Season. Upon giving such notice, this Agreement shall terminate as to all Ski Seasons which have not yet commenced as of the date such notice was given.

(b) It is anticipated that Mammoth's 2001-2002 Ski Season will run from December 15, 2001 through April 6, 2002 (Inclusive), provided however, that the exact operating dates for 2001-2002 Ski Season shall be mutually agreed to by the parties on or before May 15, 2001. The dates of each subsequent Ski Season shall be mutually

agreed by the parties by the May 15, preceding such Ski Season. Should the parties be unable to agree on such dates by the deadlines set forth in this Paragraph 1 (b), then such failure to agree shall cause this Agreement to immediately terminate as to all Ski Seasons which have not yet commenced as of such deadline.

(c) American agrees to operate one daily round-trip, plus a second round-trip each Saturday, between MMH and DFW and one daily round-trip, plus a second round-trip each Saturday, between MMH and ORD during each Air Service Period. Operating times for such flights shall be determined by American, in its sole discretion, taking into consideration Mammoth's advice. It is the currently the intent of both American and Mammoth to increase the Air Service over the term of the Agreement, as outlined in Table 1. Any such increase, however, shall be subject to the mutual agreement of the parties, as to the terms and conditions applicable to such increased service.

(d) American agrees to schedule Boeing 757 aircraft to perform the Air Service hereunder. American's Boeing 757 aircraft are presently scheduled to be configured with 176 seats, however, the actual number of seats on such aircraft shall be subject to change if American, in its sole discretion, deems a change appropriate.

2. Term

This Agreement shall commence upon the date first written above, and unless sooner terminated as provided for herein, shall remain in full force and effect until June 15, 2006 (the "Term").

3. Minimum Revenue Requirement

(a) American and Mammoth agree that the Total Revenue (as that term is defined in Paragraph 4 (b) of this Agreement) for each Air Service Period, must equal or exceed the Minimum Revenue Requirement (as that term is defined in the next sentence) for that same Air Service Period or Mammoth shall be required to pay the Revenue Shortfall (as that term is defined in Paragraph 5 of this Agreement). For purposes of this Agreement, the "Minimum Revenue Requirement" for each Air Service Period shall mean the Base Charge (as set forth in Subparagraph 3(b) below) for each round-trip Air Service Flight, multiplied by the actual number of round-trip Air Service Flights operated by American during the relevant Air Service Period, plus the Per Revenue Passenger Charge (as that term is defined in Subparagraph 3(c) of this Agreement) for each round-trip revenue Air Service Passenger who actually travels during such Air Service Period, plus the Miscellaneous Expenses (as that term is defined in Subparagraph 3(d) of this Agreement) applicable to such Air Service Period.

(b) The "Base Charge" is [REDACTED]
Dollars ([REDACTED]) per round-trip DFW-MMH Air Service Flight and [REDACTED]

[REDACTED] 90) per round-trip ORD-MMH Air Service Flight.

(c) The "Per Revenue Passenger Charge" is [REDACTED] per round-trip revenue passenger carried on the DFW-MMH Air Service Flights, and [REDACTED] per round-trip revenue passenger carried on the ORD-MMH Air Service Flights.

(d) "Miscellaneous Expenses" shall mean:

- (i) The actual and reasonable cost of de-icing for flights at MMH; plus
- (ii) The actual and reasonable cost directly associated with the diversion of a flight originating at DFW or ORD due to weather conditions at MMH; it being understood that if a flight is diverted for reasons other than airport conditions or weather related problems at MMH (e.g., mechanical problems), then American shall pay all additional costs associated with such diversion and such additional cost shall be included as part of Miscellaneous Expenses hereunder.

(e) American, in its sole discretion, may change the "Base Charge" and "Per Revenue Passenger Charge" for the 2001-2002 Ski Season by giving written notice to Mammoth of such change(s), no later than June 15, 2001.

(f) American, in its sole discretion, may change the "Base Charge" and "Per Revenue Passenger Charge" for all subsequent Ski Seasons by giving written notice to Mammoth of such change(s), no later than the May 1, preceding each such Ski Season.

4. Revenue Calculation

(a) The "Net Revenue" for each Air Service Flight shall be established by deducting [REDACTED] (%) from the Segment On-Board Revenue (as that term is defined below and as calculated by American using American's Marketing Information Report System ("MIRS") for such Air Service Flight). (American and Mammoth agree that the foregoing [REDACTED] (%) deduction is an agreed upon amount that reflects all cost attributable to credit card fees, commissions, and overrides, and that there shall be no other deductions with respect to such fees, commission, and overrides in connection with the calculation of Net Revenue or Total Revenue hereunder). For purposes of this Agreement, the "Segment On-Board Revenue" for each Air Service Flight shall be the total amount paid by passengers in connection with the applicable Air Service Flight, less applicable taxes, and shall be rate-prorated by segment. A rate-prorate is used to divide total on-board revenue paid per Air Service Flight among the actual number of segments flown by an Air Service Passenger according to the ratio of each segment's local fare to the sum of all the local fares applicable to the passenger's actual itinerary.

(b) For purposes of this Agreement, "Total Revenue" shall mean the Net Revenue for each Air Service Flight times the actual number of Air Service Flights operated by American during the relevant Air Service Period.

(c) MIRS shall be the sole source of information for calculating Segment On-Board Revenue, Net Revenue, and Total Revenue hereunder. Notwithstanding the foregoing, Mammoth shall have the right, upon providing at least five (5) business days' prior written notice to American to conduct, at Mammoth's sole expense, one audit during the Term of this Agreement, of the information and documents used to calculate Segment On-Board Revenue, Net Revenue, and Total Revenue hereunder. Any such audit must be reasonable in all respects.

5. Payment of Revenue Shortfall

A "Revenue Shortfall" shall be deemed to occur if the Total Revenue received by American for any Air Service Period falls below the Minimum Revenue Requirement described in Paragraph 3 for the same Air Service Period. Should this occur, Mammoth agrees to pay the total amount of such Revenue Shortfall within fifteen (15) business days after receipt of an invoice from American detailing the amount of the Shortfall. Such invoices shall be provided by American to Mammoth on or before the May 31 immediately following the relevant Air Service Period. Mammoth agrees to pay interest on any overdue payment (including without limitation any Revenue Shortfall) at an annual rate of eighteen percent (18%) from the date such payment was due hereunder until the date on which such payment is received by American.

6. Guarantee by Mammoth

(a) In consideration of the Air Service to be provided by American hereunder, Mammoth, on or before August 15, 2001, shall establish and maintain during the Term of this Agreement, a letter of credit ("Letter of Credit"), issued by a bank acceptable to American and in the form of Exhibit A attached hereto, in the amount of [REDACTED]

(a) The Letter of Credit will be irrevocable and will provide that American may draw upon all or any part thereof at any time upon presentation to the bank of a letter signed by a vice president of American stating that American is entitled to draw upon the Letter of Credit for amounts owed under this Agreement. American shall have the right to draw upon the Letter of Credit to recover any unpaid amounts which Mammoth owes to American under this Agreement. Upon termination or expiration of this Agreement, American agrees to give notice to the bank authorizing it to release and cancel the Letter of Credit.

7. Termination and Default

In addition to any other termination rights provided for herein, this Agreement may be terminated by the party specified below, effective immediately upon written notice to the other party, upon the happening of any one or more of the following events:

- (i) By American, without liability or obligation on the part of either party if American is unable to obtain the governmental approvals necessary to commence the Air Service, or if in American's sole discretion, American determines that the operating facilities at MMH are inadequate for American to commence service at MMH;
- (ii) By American, if Mammoth fails to make any payment due and owing hereunder when due and Mammoth does not make such payment within five (5) days after receipt of written notice of demand therefore; or
- (iii) By either party, if the other party is in breach of or default under any provision of this Agreement and such party does not cure such default within a period of five (5) days after receipt of written notice from the non-breaching or non-defaulting party, which notice shall specify the breach or default, or, if such cure cannot be accomplished in five (5) days, if the noticed party does not commence a cure within five (5) days.

A termination under (ii) or (iii) above shall not limit the non-defaulting party's right to pursue or enforce any of its rights under this Agreement or otherwise. Moreover, if bankruptcy proceedings are commenced with respect to a party and if this Agreement has not otherwise terminated, then the other party may suspend all further performance of this Agreement until the party involved in bankruptcy assumes or rejects this Agreement pursuant to § 365 of the Bankruptcy Code or any similar or successor provision. Any such suspension of further performance by a party pending the other party's assumption or rejection will not be a breach of or default under this Agreement and will not affect a party's right to pursue or enforce any of its rights under this Agreement or otherwise.

In the event of any termination under this Paragraph 7, Mammoth shall pay all amounts owed to American as of the date of such termination within three (3) business days after receipt of an invoice from American. The obligation of Mammoth to pay all amounts due under this Agreement shall survive the termination or expiration of this Agreement for any reason.

8. Promotional Materials, Booking Information and Fares

- (a) All promotional materials prepared by Mammoth which contain any reference to American shall be subject to the prior review and written consent of American.

(b) American and Mammoth will cooperate in exchanging flight and accommodations booking information for the ORD-MMH and DFW-MMH routes in order to accurately calculate no-show ratios; provided, however, the parties agree that any such information supplied by one party to the other is proprietary and confidential information which shall be made available to only to those directors, officers, and employees of such party with a need to know such information, unless otherwise consented to in advance and in writing by the party supplying such information.

(c) American agrees to establish and modify, as needed, the air fares for the Air Service and agrees to provide yield and inventory management services with respect thereto. Mammoth acknowledges that American has agreed to establish and modify the air fares and to provide yield and inventory management services as an accommodation to Mammoth and that American hereby disclaims all liability for, and Mammoth hereby waives all claims against American which may arise out of or in connection with the establishment or modification of such air fares or the yield and revenue management services provided hereunder. American agrees to consult (to the extent American deems appropriate) with Mammoth regarding pricing for such air fares; provided, however, that such consultations need not occur prior to any fare changes; and provided, further, that American shall at all times have the unconditional right in its sole discretion to determine air fares for the Air Service.

9. Final Accounting and Settlement

American agrees to provide Mammoth with a monthly accounting of the prior month's Segment On-Board Revenue generated by the Air Service Flights. This accounting will be furnished to Mammoth approximately thirty (30) days following the end of the applicable month during each Air Service Period. A final report and, if necessary, an accounting, covering the entire Air Service Period, will be provided to American to Mammoth on or before the May 31 following each Air Service Period. Any amount due pursuant to this accounting (including without limitation any Revenue Shortfall) shall be paid by Mammoth within fifteen (15) business days after receipt of such final report.

10. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflict of laws principles thereof. Mammoth hereby consents and submits to the jurisdiction of the courts of the State of Texas in all questions or controversies arising from or otherwise in connection with this Agreement.

11. Excusable Delay and Waiver of Consequential Damages

Except as otherwise expressly provided herein, neither party shall be liable for obligations hereunder (other than payment of monetary obligations due and owing by

Mammoth) to the extent such obligations are prevented or delayed by reasons or circumstances beyond the reasonable control of such party; provided, however, such party, shall provide the other party with prompt written notice thereof and shall use its best reasonable efforts to avoid or remove such causes of non-performance and, immediately thereafter, continue performance to the extent such causes are removed or avoided. EXCEPT WITH RESPECT TO EACH PARTY'S INDEMNIFICATION OBLIGATIONS HEREUNDER, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, EVEN IF SUCH PARTY HAD BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

12. Indemnification

(a) American agrees to indemnify, defend, and hold harmless Mammoth and its officers, directors, employees, agents, and affiliates from and against (i) any and all liabilities, damages, losses, claims, suits, liens, demands, actions, causes of action, judgments, fines, penalties, and expenses of any nature (including without limitation reasonable attorney's fees) whatsoever (collectively "Claims") arising out of or related to any loss, cost, damage, or injury (including, without limitation the death of any person or damage to property of any kind) caused by the willful misconduct or negligent acts, errors or omissions of American, its subcontractors, or any person directly or indirectly employed by American, while engaged in any activity associated with or related in any way to the operation of the Air Service Flights, the provision of the equipment in connection with this Agreement, or American's performance under this Agreement, and (ii) any and all Claims made by third parties as a result of or arising out of or in connection with American's products or services supplied or performed in connection with this Agreement or otherwise.

(b) Mammoth agrees to indemnify, defend and hold harmless American, its subsidiaries and affiliated companies, and their respective officers, directors, employees, and agents from and against (i) any and all Claims arising out of or related to any loss, cost, damage, or injury (including, without limitation, the death of any person or damage to property of any kind) caused by the willful misconduct or negligent acts, errors, or omissions of Mammoth, its subcontractors, or any person directly or indirectly employed by Mammoth, or any of them, while engaged in any activity associated with or related in any way to Mammoth's performance under this Agreement, and (ii) any and all claims made by third parties as a result of or arising out of or in connection with Mammoth's products or services supplied or performed in connection with this Agreement or otherwise.

(c) The provisions of this Paragraph 12 shall survive the termination or expiration of this Agreement.

13. Insurance

(a) American

At all times during the Term of this Agreement, American shall carry and maintain, at its sole cost and expense, the following insurance: (i) aircraft liability insurance with aggregate limits of at least [REDACTED] for personal injury (including without limitation and bodily injury and death) and property damage; (ii) Workmen's Compensation insurance covering all its employees while engaged in any of the Air Service Flights or any services under this Agreement. If so requested by Mammoth, on or before October 15, 2001, American will furnish Mammoth within thirty (30) days of such request an insurance certificate which: (a) specifies Mammoth as an additional insured; (b) indicates that the insurer has accepted and insured Paragraph 12 (a) of this Agreement; (c) includes the insurer's commitment to give Mammoth not less than thirty (30) days prior written notice in the event of cancellation or material change in coverage; and (d) indicates that such coverage is primary without right of contribution from any insurance carried by Mammoth.

(b) Mammoth

At all times during the Term of this Agreement, Mammoth shall carry and maintain at its sole cost and expense, comprehensive commercial general liability insurance, with aggregate limits of at least [REDACTED] for personal injury (including, without limitation bodily injury and death) and property damage. If so requested by American, Mammoth will furnish American within thirty (30) days of such request an insurance certificate which: (a) specifies American as an additional insured; (b) indicates that the insurer has accepted and insured Paragraph 12 (b) of this Agreement; (c) includes the insurer's commitment to give American not less than thirty (30) days prior written notice in the event of cancellation or material change in coverage; and (d) indicates that such coverage is primary without right of contribution from any insurance carried by American.

14. Assignment

Neither party may assign this Agreement (in whole or in part) or any interest under it without prior written consent of the other party.

15. Waivers and Modifications

This Agreement embodies the entire Agreement and understanding of the parties with respect to the subject matter hereof, and as of its effective date, terminates and supercedes all prior and/or independent agreements and understanding between the parties covering the subject matter hereof. The provisions of this Agreement shall govern

all services to be provided hereunder by the parties, and no addition, amendment, waiver, modification of, or document contrary to these provisions shall be effective unless signed jointly by an officer of American and an officer of Mammoth after the effective date of this Agreement.

16. Headings/Construction

The headings contained herein are for convenience and reference and are not intended to define or limit the scope of any provision of this Agreement.

17. Severability

In the event that any one or more of the provisions of this Agreement shall be determined to be invalid, unenforceable or illegal, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and the Agreement shall be construed as if such invalid, illegal, and unenforceable provision had never been contained herein.

18. Confidential Agreement

Each party hereto agrees that it will not disclose the terms of this Agreement to any third party without the prior written consent of the other party (i) except when required to do so by law or by a court of competent jurisdiction; (ii) except to the attorneys, accountants, or lending institutions of either party; or (iii) unless such terms are, by their nature, in the public domain.

19. Relationship of the Parties

For the purposes of this Agreement, neither party shall be deemed to be the agent, partner, employee, joint venturer, or fiduciary of the other party.

20. Notices

Any notice required to be given by one party to the other party to the other pursuant to this Agreement shall be in writing and shall be deemed to have been properly given if delivered in person, transmitted by telecopier, sent by overnight delivery, or sent by registered or certified mail, return receipt requested, addressed to the other party at the following address, and shall be deemed to have been given on the day so delivered, transmitted or mailed:

By Mammoth to American:

American Airlines, Inc.
Attention: Walter J. Aue, Vice President, Capacity Planning
MD 5535, PO Box 619616
Dallas/Fort Worth Airport, Texas 75261-9616
Telecopier No: (817) 931-6670

By American to Mammoth:

Mammoth Mountain Ski Area
Attention: Rob Perlman, Vice President Marketing
Box 24
Mammoth Lakes, CA 93546
Telecopier No. _____

21. Successor and Assigns

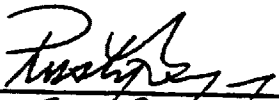
This Agreement shall be binding upon and inure to the benefit of the parties, their successors, and permitted assigns.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed by their duly authorized officers as of the date first above written.

MAMMOTH MOUNTAIN SKI AREA

AMERICAN AIRLINES, INC

By
Title



CEO

By
Title



VP/Capacity Planning



COMMUNITY DEVELOPMENT

***P. O. Box 1609 Mammoth Lakes, CA 93546
(760) 934-8989 Ext. 225 Fax (760) 934-8608***

Date: February 21, 2002

To: Responsible Agencies, Trustee Agencies and Commenting Agencies
From: William Taylor
Town of Mammoth Lakes

Subject: State Clearinghouse No. [2000034005] - Responses to Comments on the Mammoth Yosemite Airport Expansion Project Draft Supplement to Subsequent Environmental Impact Report

The Town of Mammoth Lakes encloses Responses to Comments on the Mammoth Yosemite Airport Expansion Project Draft Supplement to Subsequent Environmental Impact Report, pursuant to Public Resources Code section 21092.5. On Wednesday, February 27th, 2002 the Planning Commission will consider its recommendations on this project at its regularly scheduled meeting. Subsequently, on March 6th, 2002 the Town Council will consider certifying this supplemental environmental impact report and approving the modifications to the project proposed since the previous environmental document was certified.

Enclosure

cc: State Clearinghouse

Appendix N – Written Comments and Response to Comments

N.1 Introduction

In accordance with California Environmental Quality Act (CEQA) guidelines the Draft Supplement to the Subsequent Environmental Impact Report (the "Supplement") was circulated for public and agency review. CEQA requires a minimum of a 45-day review period. The review period of the Supplement was from October 9th through November 26th, 2001, a total of 48 days. The Supplement was sent to the State Clearing House (SCH # 2000034005) for distribution to public agencies. The distribution list of the Supplement is provided in Appendix B of the Supplement. The Supplement was also made available at the Town of Mammoth Lakes offices for individuals.

The Town of Mammoth Lakes (the "Town"), as the CEQA Lead Agency, received 32 comment letters from public agencies, organizations, and individuals. In accordance with CEQA Guidelines § 15088, the Town has evaluated the comments and has prepared written responses to each pertinent comment related to the adequacy of the environmental analysis contained in the Supplement or to the environmental issues related to the proposed project. This section provides responses to comments received on the Supplement.

N.2 Responses to Comments

N.2.1 Purpose of Responses to Comments

The public comment and response element of the EIR process serves an important and essential role. It allows the lead agency to assess the impacts of the project based on the analysis of other responsible, concerned or adjacent agencies and the public, and provides the opportunity to amplify and better explain the analysis that the lead agency has undertaken to determine the potential environmental impacts of the proposed project. To that extent, these responses to comments are intended to provide complete and thorough explanations to commenting agencies, organizations, and individuals, and to improve the overall understanding of the project and its potential effects for the decision making body.

N.2.2 Organization of Responses to Comments

Table N-1 provides a list of agencies, organizations and individuals who submitted comments on the Supplement. Each comment submitted in writing is included along with a written response. Each comment letter is identified with an abbreviated reference in the upper right corner of the first page of the letter. The individual comments have been given reference numbers, which appear in the left margin next to the bracketed comment. For example, Letter A will have comment and response numbers A-1, A-2, A-3, etc.

Table N-1**List of Commentors and Identifier Codes**

Commentor	Identifier Code
State Agencies	
Carolyn Yee, Caltrans Department of Transportation, District 9, Bishop, California	A
Janill L. Richards, Attorney General's Office	B
Douglas E. Feay, California Regional Water Quality Board, Lahontan Region	C
Sandy Hesnard, Caltrans Department of Transportation, Division of Aeronautics	D
Darrell M. Wong, Department of Fish and Game, Inland Deserts-Eastern Sierra Region	E
Daniel R. Dawson, Director	
University of California, Santa Barbara, Sierra Nevada Aquatic Research Laboratory	H
Local Agencies, Businesses, and Interest Groups	
Tammy Teachout, Mammoth Properties, Mammoth Lakes, California	F
Tony Fryer, The Real Estate Book of the Eastern Sierra	G
Cooley Godward LLP and Earthjustice on behalf of the Sierra Club, the California Wilderness Coalition, the National Resources Defense Council, California Trout, Inc., and the National Parks Conservation Association.	I
Eric Callow and Bruce G. Whitmore, Pasadena Casting Club	J
Individuals	
Phil Hamilton, Mammoth Lakes, California	K
William J. Robens, Santa Fe, New Mexico	L
Andy Selters, Bishop, California	M
Rob Perlman, Mammoth Lakes, California	N
Rick Jali, Mammoth Lakes, California	O
Allan D. Sapp, Garnerville, Nevada	P
Karen McGillis	Q
Fred Howley, Mammoth Lakes, California	R
Don & Pam Rake, June Lake, California	S
Philip R. Jobe, Topanga, California	T
Dr. Peter Anderson, Jamul, California	U
Mary Walker, Mammoth Lakes, California	V
James Laing	W
Rick Bramble	X
Stephen Kalish, Swall Meadows, California	Y
Wilma Wheeler, Mammoth Lakes, California	Z
John and Nancy Walter, Mammoth Lakes, California	AA
Pat Eckart, Mammoth Lakes, California	BB
Bruce Hopper, Mammoth Lakes, California	CC
Steve Miesel	DD
Daniel Bacon, Bishop, California	EE
Jim Lerner, California	FF

Prepared By: Ricondo & Associates, Inc.

Definitions.

These Responses to Comments use a number of terms that are defined or explained as follows:

- a. 1978 EIR: 1978 Final Environmental Impact Report (EIR) for a Mammoth Lakes Area Airport Site Selection and Master Plan.
- b. 1986 EIR/EA: The Environmental Impact Report and Environmental Assessment prepared and certified by Mono County and the Inyo National Forest respectively in 1986 for the Mammoth June Lake Airport Land Use Plan. (As explained in the Supplement, the Town of Mammoth Lakes bought the Airport from Mono County in 1992.)
- c. 1997 Subsequent EIR/EA: Subsequent Environmental Impact Report (to 1986 EIR/EA) and updated Environmental Assessment prepared and certified by the Town of Mammoth Lakes to address and analyze changes in the project from that proposed and analyzed in the 1986 EIR/EA.
- d. Supplement: Draft Supplement to Subsequent Environmental Impact Report analyzing changes in the project from that proposed and analyzed in the 1997 Subsequent EIR/EA.
- e. Enplanement: An enplanement represents one passenger boarding an aircraft. For more details refer to Response to Comment I-1.

Introduction to Responses to Comments.

During the public comment period on the Supplement, the Town of Mammoth Lakes received 32 comment letters containing a number of individual comments. A summary of the comments and responses is provided in the following paragraphs with detailed responses to each comment following the summary.

The comments generally fell into the following seven categories.

- Growth inducing and cumulative impacts are understated in the Supplement.
- The alternative of developing the Bishop Airport was improperly dismissed.
- Water quality impacts and ground water impacts are understated and need more analysis.
- Sage grouse and mule deer will be significantly impacted, both directly by the proposed project and cumulatively with the other projects in the region.
- The project will adversely affect rare, threatened, or endangered species.
- Enplanement assumptions are unsupported or understate the potential use of the Airport.
- The assumption that 70 percent of the Airport patrons will use transit is unsupported.

As demonstrated throughout these responses, the Town disagrees with each of these contentions. In the 1997 Subsequent EIR/EA, the proposed Airport project consisted of lengthening the existing 7,000 foot long, 100 foot wide runway by 2,000 feet to 9,000 feet along with the construction of the associated taxiway, ramp and terminal improvements. In the Supplement, the proposed project includes lengthening the runway 1,200 feet (instead of 2,000 feet), increasing the width of Runway 9-27 to 150 feet (instead of maintaining the runway at 100 feet), and minor changes to the taxiway improvements as approved under 1997 Subsequent EIR/EA. (See Page i of the Supplement for a complete description of the changes in the proposed project.)

Projections for Airport usage (both aircraft operations and passenger enplanement numbers) were revised from the 1997 Subsequent EIR/EA and were prepared for the Benefit Cost Analysis of the project, which was approved by the FAA. [*Benefit Cost Analysis, Mammoth Lakes Airport Expansion Project*, March 2000.] These revised projections were used for all evaluations in this Supplement.

Growth Inducing Impacts of the Proposed Project

The proposed Airport expansion is specifically designed to accommodate the demand from travelers and the local population that is anticipated by the Town of Mammoth Lakes General Plan. Growth in the region is already occurring, and is expected to continue with or without the project. Mammoth Yosemite Airport has accommodated commercial service intermittently since 1973 provided by a variety of air carriers using aircraft as large as BAE 146 four-engine jets. (See Page xi of the Supplement.) The Airport has a limited Federal Aviation Regulations (FAR) Part 139 certificate that permits commercial charter service for commuter and smaller jets. Under current operational and facility constraints and assuming the projected 20-year growth of general aviation to 12,000 annual operations, the Airport could accommodate approximately 35,000 charter aircraft operations of commuter or smaller jets and nearly 500,000 commercial enplanements annually. The planned facility improvements are needed to meet the operational and safety requirements of major national carriers for scheduled airline service using narrow-body aircraft, up to and including Boeing 757 aircraft and commuter aircraft with the intention of providing service to national markets.

The Town of Mammoth Lakes does not have additional developable land that might encourage additional growth. The Supplement's conclusion that there would be little or no growth in the vicinity of the Airport that is attributable to the project "because various governmental bodies own most of the land" outside of the Town's jurisdiction is supported by the evidence as shown on Exhibit II-2 of the Supplement. It is reasonable for the Town to assume that these agencies will not permit private development on that land in the foreseeable future. Also, much of the public land in the area is subject to various federal land and resource management plans that are required by federal law to protect open space and natural resources, and which the Town of Mammoth cannot modify. Thus, the Supplement's reliance on existing planning and zoning documents to support its conclusion is well justified.

The Town is hopeful that air service will generate additional skier days, particularly the type of winter resort traveler who more typically flies to a resort, and then stays for a longer period, typically including an increase in mid-week skier days. This would allow the Town to accommodate additional skier days, but would not induce growth because the construction of additional facilities is not required to serve the additional skier days.

Although the Town does hope and has planned for additional skier days, experience with other airports demonstrates that there is not a causal link between commercial air service and growth in skier days. (See Supplement at Table H-8). The proposed Airport project would provide air transportation infrastructure to serve the existing and projected residents and visitors. To that extent, the proposed project would accommodate the projected regional growth, but would not induce that growth nor would it induce additional growth.

Previous environmental analyses of the proposed project determined that the project is not growth inducing. Additional analyses were done in the Supplement to address the assumption in the

comment that growth could be accelerated by the project, hence qualifying as growth inducing. The results, which are explained in more detail in Responses to Comments B-7 and B-12, show that future additional growth is limited by the extremely high degree of public ownership of land in the region (96 percent of Mono County is publicly owned), as well as the limited bed base and recreational opportunities in the area. Because of the limited availability of non-public land in the region and the adopted policies of federal and local land management agencies that limit growth, no significant adverse growth inducing impact would result from the proposed project.

Cumulative Impacts of the Proposed Project

The project has no significant impacts individually and because of its physical isolation from the other proposed and existing developments, the likelihood of significant cumulative impacts is minimal. Existing and reasonably foreseeable future projects in the vicinity of the Airport were selected for the cumulative impact analysis in the Supplement. However, in response to comments, additional projects were considered relative to air quality, wildlife, and traffic. As explained below, no significant adverse cumulative impacts would be expected to result from the proposed Airport project combined with other development projects. If other projects in the vicinity have significant impacts individually, those impacts are on environmental categories not affected by the proposed Airport development.

Elimination of Development of Bishop Airport Alternative

The decision to develop the Mammoth Yosemite Airport as a regional general purpose airport was made by Mono County in 1978. Upgrading the Airport began in 1983 with the lengthening of the then 5,000-foot runway to 7,000 feet. The current proposal is based on the same objectives in terms of passenger numbers as the Mono County plan. Improved aircraft technology, safety requirements, and updated analyses have resulted in the proposed modifications to the development plan to more efficiently accommodate the projected enplanements. The location and use of the Airport are incorporated into the Mammoth Lakes General Plan, the Mono County General Plan, the Mono County Regional Transportation Plan, the Mammoth June Lake Airport Land Use Plan, and the Inyo National Forest Land and Resource Management Plan.

Once a regional plan has been adopted, CEQA does not require that it be revisited every time a new phase of development is proposed. (*Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal.3d 1990.) Neither does CEQA require analysis of an off-site alternative unless significant adverse environmental impacts exist (CEQA Guideline 15126.6(f)).

Under the rule of reason, alternatives evaluated in the Supplement must be feasible. The Bishop Airport alternative is not feasible as that facility is owned and operated by another governmental entity. The Town has neither the power to acquire the Bishop Airport nor the authority to compel Inyo County to expand or operate the Bishop Airport in a manner consistent with the objectives of the project. The Bishop Airport is also not the environmentally superior alternative. A primary reason for this is that it could result in substantial additional car traffic on U.S. Highway 395 between Bishop and Town of Mammoth Lakes.

Water Quality/Quantity Impacts

The data presented in the Supplement and the 1997 Subsequent EIR/EA accurately depicts the water supply and water quality impacts. Further analysis that was completed and documented in the response to the comments reaffirms the earlier determinations and shows that impacts are expected to be negligible. Please see Responses to Comments C-1 through C-15.

Impacts on Sage Grouse/Mule Deer

The analysis presented in the Supplement show that no significant adverse impacts to sage grouse or mule deer would result from the project. (See Supplement at Section 3.3.) Neither the sage grouse nor the mule deer is listed as rare, threatened or endangered species by a State or federal agency. Both are identified as sensitive or indicator species and are appropriately evaluated as such in the Supplement.

The Round Valley mule deer herd is characterized in the comments as experiencing rapidly declining numbers and being impacted by the proposed project. The herd did suffer a rapid decline in population from a peak of around 6,000 animals in 1990 to a low of around 1,500 animals in the mid 1990s. Since that time the herd numbers have increased to about 2,500 animals. Optimal numbers for the herd have not been established, but as shown by the recovery in population, the population is healthy despite continued hunting. (See Inyo National Forest Wildlife News, Attachment A to Response to Comments.)

The Airport does not significantly affect the Round Valley mule deer herd as the major migration area for the herd is entirely to the south of the Airport and does not cross the Airport property. Other deer migrate to the north and west of the Airport, but, again, do not migrate through the project area. Some deer, probably from the Casa Diablo herd, do forage in the vicinity of the Airport. As explained in detail in Section 3.3 of the Supplement, the lead agency believes that there is no evidence of any significant impacts to mule deer due to the proposed project.

According to the California Department of Fish and Game (DFG), researchers have postulated that the sage grouse in Mono County are “genetically distinct” from other populations. To date, no formal determination has been made, and this proposition has no legal weight under CEQA. However, even considering this evidence, the improvements to the Airport would have no significant adverse impacts on sage grouse, either overall or as a distinct and isolated population. Sage grouse exist in the project vicinity, as they do throughout much of the Long Valley and southern Mono County, although there are no major lek sites (mating grounds) within two miles of the Airport.

The proposed project does not include a change in the existing flight paths and aircraft will not fly any closer to sage grouse with the completion of the project than they do presently. As explained in detail in Response to Comment B-9, none of the proposed aircraft expected to use Mammoth Yosemite Airport after the implementation of the proposed project would produce more noise at the closest leks than aircraft that currently operate at the Airport. Experience at Jackson Hole Airport, which has comparable sage grouse use adjacent to the facility and comparable aircraft, shows that there would be no significant impacts on sage grouse associated with the proposed project.

As shown in Attachment A to Response to Comments, the California Department of Fish and Game website indicates that the Mono County sage grouse populations are among the most stable in the State.

Impacts on Endangered and Threatened Species

A Biological Assessment was prepared in conjunction with the FAA review of the project. (Please see Appendix I of the Supplement.) In response to that assessment, the United States Fish and Wildlife Service issued a Biological Opinion. The Biological Opinion found no likely adverse effect to rare, threatened or endangered species, which included Owens tui chub, Nevada bighorn sheep, and bald eagles. (Please see Appendix J of the Supplement.)

Despite this, concerns continued to be raised regarding the tui chub, a federally listed endangered fish, bighorn sheep, and bald eagles. As shown in the Biological Assessment and this response to comments, the proposed project is unlikely to have any measurable impacts on the tui chub or their habitat. Runoff from the runway percolates into the ground before reaching the tui chub habitat due to the porosity of the soil, and ground water flows from the Airport are to the northeast, not towards the habitat, which is northwest of the Airport. (Please see Section 3.6 of the Supplement.) Total water extraction for the project is minimal and, based upon well tests, will not have a discernable impact at the springs that feed the tui chub habitat.

As determined in the Biological Opinion, based on data obtained from the FAA on collisions between aircrafts and eagles in United States, it was concluded that these collisions are such a low probability event, that they do not constitute a threat to the species. (See Supplement at Section 3.3.)

The Biological Opinion also found no impacts to Nevada bighorn sheep.

Enplanement Numbers

As stated on Page I-6 of the Supplement, an enplanement is one passenger boarding an aircraft. Passengers are assumed to make a round-trip through an airport, therefore this definition of enplanements accurately reflects passengers and their impacts because an enplanement captures each “visit” to an airport by a passenger – coming and going. This is consistent with prior documents and is used in all project evaluations.

The forecast used in the Supplement was prepared for the Benefit Cost Analysis of the project and was approved by the FAA. [*Benefit Cost Analysis, Mammoth Lakes Airport Expansion Project*, March 2000.]

Transit Use Assumptions

The Supplement assumes that 70 percent of the visitors arriving at Mammoth Yosemite Airport would use the transit from the Airport to lodging facilities throughout the Town. This projected usage, while an estimate, is based upon comparisons with other resort airports and is supported by their experience. (Please see Page III-64 of the Supplement.)

Conclusion

In summary, the proposed project does not cause significant adverse environmental impacts directly, indirectly, or cumulatively. The lead agency believes that this conclusion is supported by substantial evidence in the record and is not contradicted by any substantial evidence contained in the response to comments on the Supplement or elsewhere.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION

500 South Main Street
Bishop, CA 93514
PHONE (760) 872-1492
FAX (760) 872-0754
TTY (760) 872-9043



*Flex your power!
Be energy efficient!*

November 26, 2001

Mr. William T. Taylor, Senior Planner
Town of Mammoth Lakes
PO Box 1609
Mammoth Lakes, California 93546

File: 09-MONO
DSSEIR
SCH #: 2000034005

REF: DRAFT SUPPLEMENT TO SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (DSSEIR) ON THE MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT (AKA MAMMOTH LAKES AIRPORT EXPANSION PROJECT) FOR THE TOWN OF MAMMOTH LAKES (OCTOBER 2001)

Dear Mr. Taylor:

The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Draft Supplement to Subsequent Environmental Impact Report concerning the proposed Mammoth Yosemite Airport Expansion Project for the Town of Mammoth Lakes (Town).

Our public safety and traffic concerns and/or recommendations for this proposed project along and near U.S. Highway (Hwy) 395 still have not been fully addressed. These concerns were stated within our previous correspondence to you dated, 1) November 13, 2000 on the Draft Environmental Assessment; 2) May 21 & 26, 2000 on the Notice of Intent to Prepare an Environmental Assessment; and 3) May 16, 2001 on the Notice of Preparation of the Draft Subsequent Environmental Impact Report. Along with our previously stated traffic impacts and mitigation measures, we strongly suggest that the following recommendations be incorporated with our aforementioned concerns when you respond to this comment letter.

Caltrans suggests that the Town continue to coordinate and consult with the Federal Aviation Administration (FAA), U.S. Fish and Wildlife Services (FWS), Caltrans Division of Aeronautics, Caltrans District 9 in Bishop, and the California State Department of Fish and Game (DF&G). It is necessary that we continue to actively and cooperatively work together in addressing any potential issues that may impact our transportation corridors during all stages of planning, design, and construction on this proposed project. We must ensure that all traffic safety and quality standards are met on State facilities. After close review of this DSSEIR Caltrans suggests that the below recommendations also need to be addressed and/or further addressed within the EIR and implemented during the initial construction phase of this expansion project:

A-1

November 26, 2001

- Executive Summary, Table ES-1, Page ES-4, Section 3.2, Part 1, Mule Deer; The existing environmental study area will need to incorporate territory outside of the designated project location. Because of the multitude of proposed development projects within this vicinity there will be a potential increase(s) of vehicular accidents and deer mortality when these animals are channeled by fencing to alter their migration pattern(s) further north or south along U.S. Hwy 395 of this project area. Continued coordination and consultation with all affected federal, state, and local agencies will need to cooperatively identify, develop, approve, and implement appropriate remediation measure(s) for these impacts. The proposed deer monitoring program would also need to be accomplished in the same coordinated manner.

A-2

A-3

Executive Summary, Table ES-1, Pages ES-3 to ES-4, Section 3; Other potential environmental concerns may also require mitigation because of the expanded study area. These concerns include endangered species, threatened species, and their habitat; cultural and archaeological resources; air, noise, and water pollution; scenic value; etc within State right-of-way and/or facilities.

A-4

- Executive Summary, Table ES-1, Page ES-6, Section 7, Noise; A study will need to be completed that identifies potential impact(s) and mitigation measure(s) regarding the effects of jet engine blasts (noise, winds, dust/debris, etc.) along and/or near U.S. Hwy 395 upon multi-modal transportation methods (vehicular, cyclist, etc.). It should address visibility, various forms of pollution, wind force, etc.

A-5

A-6

- The estimated number of maximum daily enplanements needs to be clarified. Hence the existing prepared analysis will need to reflect those revisions within the environmental document and all affiliated reports.

A-7

- Coordination and consultation with Caltrans will need to continue in identifying, reviewing, approving, and implementing the following.
 1. Alternate/new emergency access that will be executed under specified conditions and timelines.

A-8

- Executive Summary, Table ES-1, Page ES-4 to ES-5, Section 4, Transportation/Traffic; Traffic impacts, alternate remediation measures, and monitoring programs will need to be executed under more detailed specified conditions and timelines at the intersections of 1) U.S. Hwy 395 and Hot Creek Hatchery Road and 2) U.S. Hwy 395 Benton Crossing Road. All

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potential mitigation measures will need to be considered (i.e. channelization devices, turn pockets, extended turn lanes, interchanges, etc.).

- All work and costs will be the responsibility of the Town, County, and Developer.

A-8

Please continue to forward copies of reports on this proposed project for our review, comments, and records. If you have any questions, please contact me at (760) 872-1492. We look forward in continuing to work with you in a cooperative manner.

Sincerely,



CAROLYN YEE

IGR/CEQA Coordinator

c: Jerry Gabriel

Ralph Cones

Nancy Escallier

Brian Mc Elwain

Robert A. Wiswell

Bill Costa

Ron Helgeson

State Clearinghouse: Brian Grattidge

Janill L. Richards, California State Department of Justice

Darrell M. Wong, California State Department of Fish & Game

Diane K. Noda, U.S. Fish & Wildlife Service

Elisha Novak, Federal Aviation Administration

William Manning, Mammoth Lakes Airport

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bc: Thomas Hallenbeck

Katy Walton

Craig Holste

Dave Grah

Brad Mettam

Tom Meyers

Sandy Hesnard

Denise Racine, California State Department of Fish & Game

PUBLIC AGENCY COMMENTS

A. California Department of Transportation (Caltrans)

Response to Comment A-1

Prior comments of this commentor are addressed in the Supplement, or earlier environmental documents. The Town will continue to coordinate and consult with the Federal Aviation Administration (“FAA”), the U.S. Fish and Wildlife Service (“USFWS”), Caltrans Division of Aeronautics, Caltrans District 9, and the California Department of Fish and Game (“DFG”) as necessary and appropriate. In particular, the Town will work with Caltrans to ensure that all traffic safety and quality standards are met on U.S. Highway 395. Caltrans’ other recommendations are addressed throughout these responses to comments as appropriate.

Response to Comment A-2

Contrary to the comment’s assertion that the analysis in the Supplement is limited to the project site, as described in the sections on traffic, air quality, water quality, and biological resources, the analysis in the Supplement covers areas outside of the designated project location, including U.S. Highway 395. Please also see Response to Comment B-11.

Nonetheless, the Town has prepared the following information to further clarify the cumulative impacts section of the Supplement. The following projects are of a size and scope that could potentially affect mule deer, sage grouse, or the tui chub. However, some of these projects are either not located in habitat for these species or are not in migration routes; therefore, any potential cumulative impacts are minimal. For those projects that are located in mule deer migration routes, project specific mitigation has been required to reduce impacts to less than significant levels.

Pacifica Residential Development

The Pacifica Residential Development (Project) is located in Inyo County. The final environmental document is anticipated to be distributed by March, 2002.

The maximum disturbance scenario for the Project would involve 280 acres. The Rovana portion of the Project is an older development that covers 40 acres and is included in the 280 acres. The Rovana development consists of small, older structures surrounded by landscaping. Some of the structures would be refurbished while others would need to be rebuilt or replaced. The Project is located in the deer migration corridor for the Round Valley Herd. No information on traffic trip generation is available.

The Pacifica project includes mitigation for mule deer because the EIR for that project identified potentially significant impacts. No such potentially significant impacts are present in the Airport project, therefore no mitigation is required there.

The environmental review of Pacifica Residential Development project does not identify any significant impacts on tui chub and sage grouse, nor does it affect any special status species habitat. Therefore, after the implementation of the mitigation for mule deer migration corridors explained

above, it is unlikely that the Pacifica project would, when combined with the Airport project, contribute to any potential cumulative impacts on biological resources.

Sherwin Ski Area

The Sherwin Ski Area Project covers approximately 3,100 acres, although only a small portion of that area would be disturbed. Five alternatives were formulated with the maximum amount of disturbance at 106 acres. The alternative selected by Inyo National Forest requires the disturbance of 75 acres. Relative to the other alternatives, the fewest acres within the Mammoth Rock and the Solitude Canyon mule deer migration corridors, and the mule deer holding area would be lost due to facility placement.

The cumulative impacts section of the Sherwin Ski Area environmental assessment mentioned the geothermal power plant expansion, the Gateway Industrial Park and wastewater treatment facility expansions, development in Mammoth Meadow, and proposed golf courses. The increased use of the area would likely cause abandonment of upper Mammoth Meadow as a fawning site for resident deer. Increased growth from any of these developments would have growth-inducing influences upon the Town of Mammoth Lakes, which would increase human intrusion into the holding area. The Airport improvements proposed since the prior environmental review, however, do not have significant impacts on the mule deer, and the distance between the two projects and their location in different deer habitats demonstrates that there cannot be cumulative impacts on deer or deer habitat. Moreover, while the Airport may serve travelers with destinations at the Sherwin Bowl area, it is the Sherwin Bowl project, not the Airport that is drawing those travelers. Thus, with respect to both deer impacts and growth inducing impacts, the proposed Airport improvements will not combine with the Sherwin Bowl project to create potentially significant cumulative impacts.

The effects of traffic from the Sherwin Bowl project were analyzed in the Transportation and Circulation Element of Town of Mammoth Lakes General Plan. That broad analysis did not identify any traffic impacts from the Sherwin Bowl project that could combine with traffic from the Airport improvements to create potentially significant cumulative impacts. This is also demonstrated by the distance between the two projects, the small amount of traffic generated by the Airport improvements, and the fact that air service could actually reduce traffic on U.S. Highway 395.

The environmental assessment of Sherwin Ski Area project does not identify any significant impacts on tui chub and sage grouse, nor does it affect any special status species habitat. Therefore, it is unlikely that the Sherwin Bowl project would, when combined with the Airport project, contribute to any potential cumulative impacts on biological resources.

Inaja Land Company (Arcularius Ranch)

Based on information received from Mono County (Arcularius Ranch EIR 1993) the entire Arcularius Ranch Project covers 1,080 acres. However, only 53 acres of habitat would be disturbed. The Arcularius project is located in the migration corridor of the Casa Diablo deer herd.

The environmental review of the Arcularius Ranch (Inaja Land Company) project does not identify any significant impacts on tui chub and sage grouse, nor does it identify any special status species habitat that would be affected by that project. Therefore after the implementation of mitigation for potential impacts to the Casa Diablo deer herd migration corridors, it is unlikely that the Arcularius project, when combined with the Airport project, which also has no significant impacts in these areas, would contribute to any potential cumulative impacts on biological resources.

Lakeridge Ranch

Disturbance from the Lakeridge Ranch development would cover approximately 86 acres. Deer that inhabit that project area are from the Round Valley herd. Although mule deer utilize the area, no deer migration routes were identified in the Lakeridge project area or the immediately surrounding vicinity. No special status species were identified either from the field work completed on the project nor from the California Natural Diversity Data Base; however, the area does provide potential habitat for sage grouse, Golden eagle, and Prairie falcon. A number of mitigation measures were incorporated into that project for potential biological impacts.

Radio-telemetry studies indicated that 75 percent of the Round Valley deer herd migrated through the area. However, the Wildlife Assessment Study (Taylor 1994) indicated no migration routes through the property.

The environmental review of the Lakeridge Ranch project does not identify any significant impacts on tui chub nor does it identify any effects on special status species habitat. Therefore after the implementation of mitigation measures for Round Valley deer herd migration corridors and sage grouse, it is unlikely that the Lakeridge project, when combined with the Airport project, , which also does not have significant impacts on these resources, would contribute to any potential cumulative impacts on biological resources.

Rimrock Ranch

Mono County did not have information on the Rimrock Ranch Development, but a brief description was found on the internet at OPR CEQA County Query. The Rimrock project would cover 180 acres, of which approximately 70 acres would be two-acre residential lots. The remaining acreage would be used as a wildlife corridor.

Since Rimrock Ranch is located between Lakeridge Ranch and the Pacifica Residential Development, neither of which will combine with the proposed Airport improvements to create potentially significant cumulative impacts, it is unlikely that Rimrock Ranch, when combined with the Airport project, would contribute to any potential cumulative impacts.

Response to Comment A-3

The changes in the project will not have significant incremental effects on the mule deer, either individually or in conjunction with other development projects proposed in the area. Please see Section 3.3.2.2 of the Supplement for detailed analysis of potential impacts on mule deer due to increased light, noise, Airport and vehicle traffic, human disturbance, fencing and habitat loss. Regarding impacts of the new fence on deer migration patterns, the major migration routes are to the east, west, and south of the Airport property, as shown in **Exhibits N-1, N-2, and N-3**. The proposed runway and fence do not block these routes. Deer may occasionally cross the highway in the vicinity of the Airport, but these crossings are expected to be few in number. Further, the Supplement discusses the potential impacts of the new fence on deer migration patterns and concludes that the fence would not significantly impact such migration patterns because the deer could safely move parallel to the fence, and no additional deer crossing locations along U.S. Highway 395 will be caused by the installation of the proposed fence. Because this is not a significant impact, mitigation is not required. Nonetheless, the Town will continue to coordinate and consult with the appropriate federal, State and local agencies. Also see mitigation measures voluntarily proposed by the Town to reduce potential impacts to the mule deer on Page III-57 and III-58 of the Supplement.

Response to Comment A-4

Please see Response to Comment A-2

Response to Comment A-5

There is approximately 426 feet between the Runway 9-27 centerline and the edge of U.S. Highway 395. As explained in Section 3.4.2 of the Supplement, this is greater than Caltrans requirements for a runway/highway separation as set in Caltrans Highway Design Manual (HDM). Runway 9-27 is parallel to U.S. Highway 395 and the application of take-off thrust (thrust used during aircraft take-off) would be in a direction parallel to the traffic therefore all aircraft while landing and taking off would have no direct impacts on vehicular traffic on U.S. Highway 395.

Some taxiways are perpendicular to the highway, and would be used by aircrafts to access the runway. The only time jet engine blast might be directed towards the highway is when aircrafts would use the taxiway to exit the runway and approach the terminal after landing. The jet blast would not be directed towards vehicular traffic when the aircrafts are accessing the runway through these taxiways to take off, as the aircraft tail would be in opposite direction.

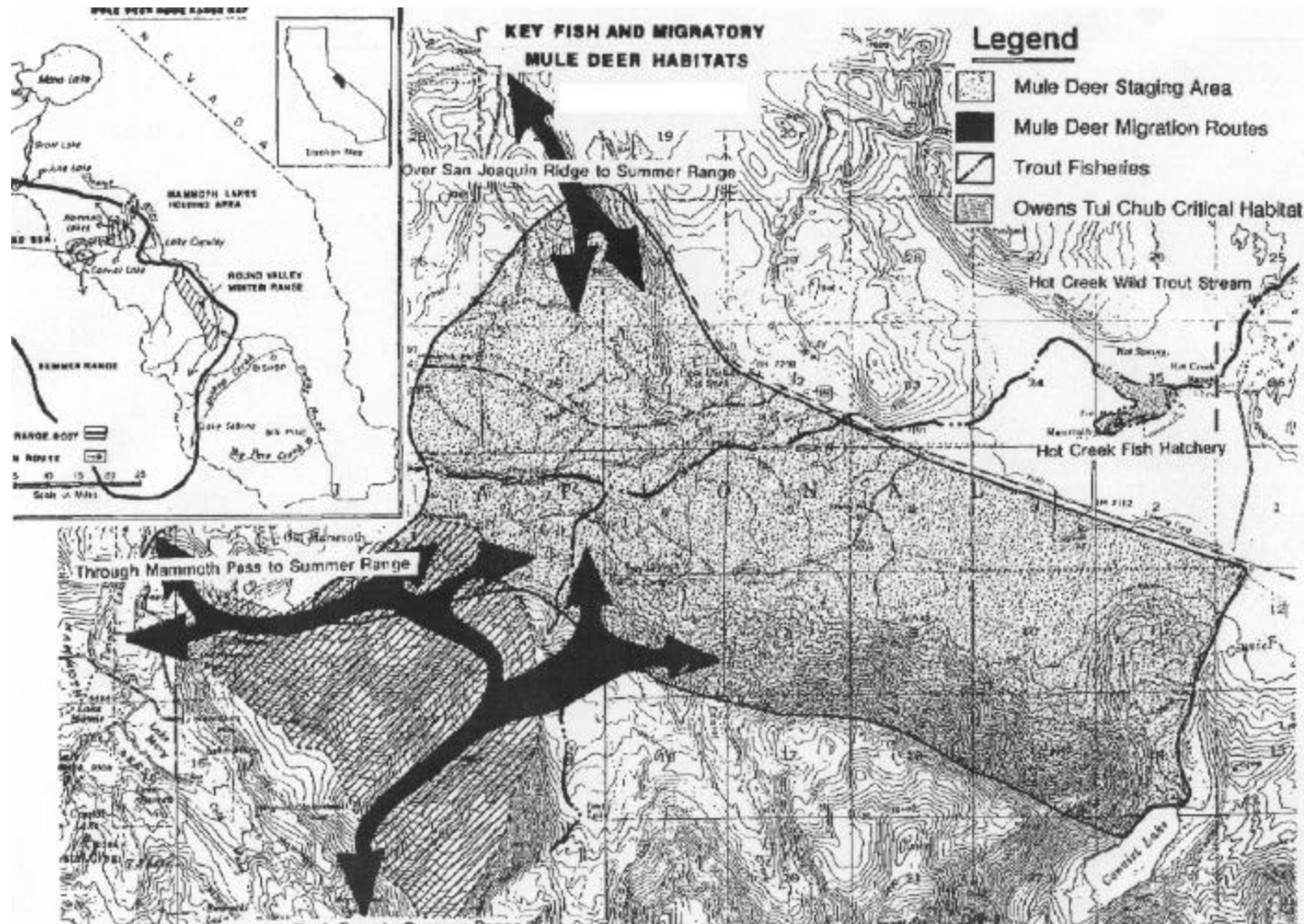
Standard jet engine blast contours provided by Boeing Corporation for narrow body jet aircraft such as the Boeing 757 and 737 confirm that the exhaust particles would not reach the highway which is at a distance greater than 500 feet from the taxiway. The aircrafts would be at idle power when exiting the runway after landing and the jet blast contours at idle power extend from 30 feet (100 mph jet blast contour) to 160 feet (35 mph jet blast contour) behind the aircraft. Hence these aircraft would not have any significant impacts on vehicular traffic (either motorized or non-motorized) on U.S. Highway 395 due to jet engine thrusts. [Boeing Commercial Airplane Group, *757-200 & 737-100/200 Airplane Characteristics for Airport Planning*, October 1994.]

Response to Comment A-6

The number of daily enplanements (an enplanement represents one passenger boarding an aircraft) in the year 2022 is estimated to be 1,380. This figure was obtained first by estimating traveler demand. Then a future schedule for possible air carrier operations was developed and used to analyze the traffic impacts of the proposed project. This number of enplanements is included in Appendix L of the Supplement. The exact number of daily enplanements would be dependent on airline scheduling practices. This figure is consistent throughout the Supplement and all supporting documents.

Response to Comment A-7

Construction and design of the security fence will be done in consultation with Caltrans and in compliance with Caltrans requirements if located within the state right-of-way or used to replace the existing right-of-way fence and emergency access gate. While it is an operational concern for Caltrans, the maintenance of an existing emergency access gate does not constitute a new environmental effect requiring analysis under CEQA.

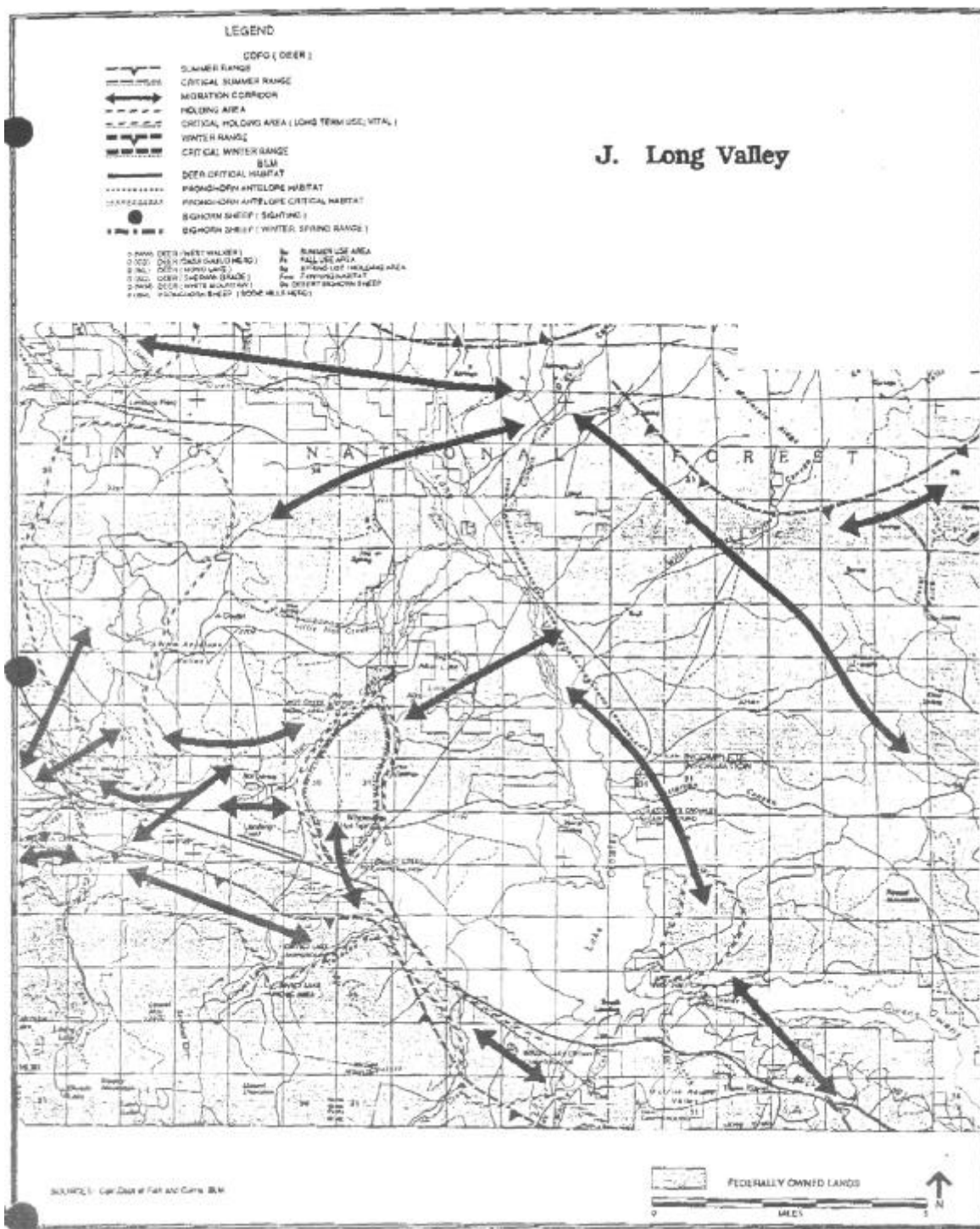


Source: Sherwin Ski Area Environmental Impact Statement
Prepared by: Ricondo & Associates, Inc.

Exhibit N-1

not to scale

Deer Migration Routes



Source: Mono County Master Plan Environmental Assessment
Prepared by: Ricondo & Associates, Inc.

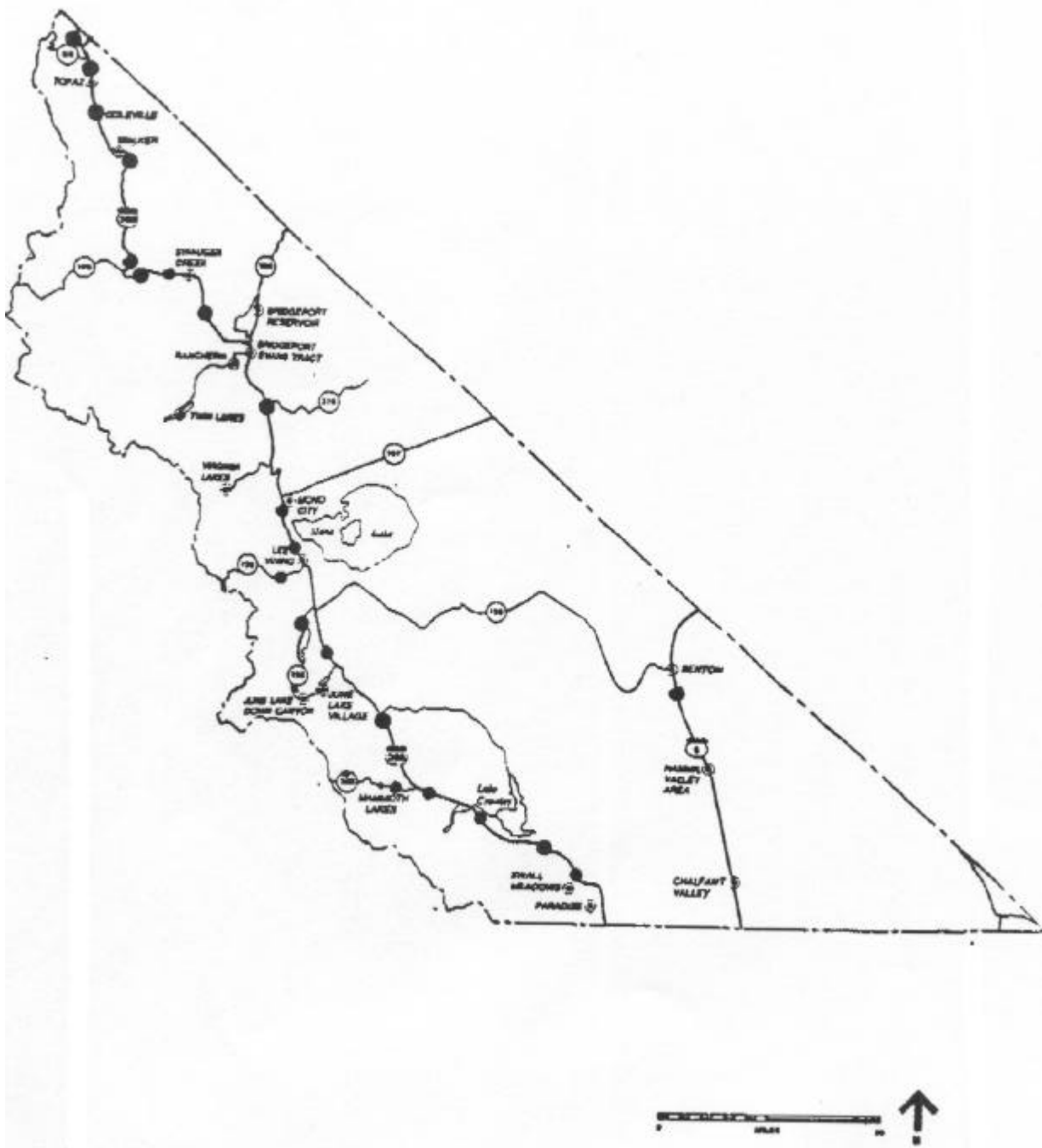
Exhibit N-2

not to scale

Wildlife Use Areas Big Game

Final Supplement to Subsequent Environmental Impact Report
Appendix N - Written Comments and Responses

March 2002



Source: Mono County Master Plan Environmental Assessment
Prepared by: Ricondo & Associates, Inc.

Exhibit N-3

not to scale

Deer Kill Locations Mono County

Response to Comment A-8

Numerous potential mitigation measures were considered (i.e. channelization devices, turn pockets, extended turn lanes, and interchanges). From these, “feasible mitigation measures” that could minimize significant adverse impacts were selected as explained in Section 3.4 of the Supplement. (See CEQA Guidelines 15126.4 and 15126.6.) The mitigation monitoring and reporting program will also be used to identify the responsible parties/agencies and timing for implementation of mitigation measures.

BILL LOCKYER
Attorney General

State of California
DEPARTMENT OF JUSTICE



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Via Facsimile and U.S. Mail

William T. Taylor, Senior Planner
Community Development Department
Town of Mammoth Lakes
P. O. Box 1609
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FAX: (760) 934-8608

**RE: Draft Supplement to Subsequent Environmental Impact Statement for Mammoth
Yosemite Airport Expansion Project**
(SCH# 2000034005)

Dear Mr. Taylor:

The California Attorney General's Office has reviewed the Draft Supplement to Subsequent Environmental Impact Report ("SSEIR") for the Mammoth Yosemite Airport Expansion Project ("Project"). As set forth in the SSEIR, the Town of Mammoth Lakes ("Town") proposes to expand the runway at the Mammoth Yosemite Airport ("Airport"), located in the Eastern Sierra off of U.S. 395 between the towns of Bishop and Mammoth Lakes. The Airport expansion project, if completed, will bring commercial jets to Mammoth Yosemite Airport; initial service would be provided from Chicago and Dallas Fort Worth, with additional hub service expected in the future. Under the Town's "high case" scenario, by 2022, the Airport will experience nearly 450,000 enplanements¹ and over 7,600 aircraft departures annually. (SSEIR at p. H-27, Table H-18; p. H-35, Table H-25.)

B-1

The expansion could significantly transform what is now a small, non-commercial airport. Expansion of the Airport, in turn, will likely transform the surrounding area; Mammoth Yosemite Airport is much closer to the area's natural attractions - which include Mono Lake, Yosemite National Park, the Ansel Adams Wilderness Area, June Lake, Devil's Postpile National Monument, Mammoth Mountain Ski Area and June Mountain Ski Area - than any other commercial airport, and it is within easy driving distance of the John Muir Wilderness Area and

¹Enplanements are defined as numbers of passengers boarding an aircraft. Total passengers are twice that number. (SSEIR at p. I-6, Table I-1.)

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Kings Canyon National Park. The expansion may, in addition, directly and indirectly impact the area's several sensitive, threatened, and endangered species, which include the genetically-distinct and isolated Mono County/Lyons County population of sage grouse, the rapidly-declining Round Valley mule deer herd, and the distinct subpopulations of Sierra Nevada Bighorn Sheep found in Mono and Inyo Counties, consisting of only 125 animals.

Although we appreciate that the Town has taken the initiative to provide additional information about the potential environmental impacts of the Airport expansion project, as required by the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 et seq., we have questions about the form of the document and its relationship to any documents that might be required under the National Environmental Protection Act ("NEPA"), 42 U.S.C. § 4321 et seq. In addition, we have substantial concerns about the adequacy of the SSEIR as a mechanism for public disclosure, since it consistently minimizes or fails to discuss significant impacts that may be caused by the Project.

B-2

B-3

The comments contained in this letter are made pursuant to the Attorney General's independent constitutional, common law, and statutory authority to represent the public interest. (See Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12; *D'Amico v. Board of Medical Examiners* (1974) 11 Cal.3d 1, 14-15 [112 Cal.Rptr. 786].) They are, accordingly, made on behalf of the Attorney General and not on behalf of any other California office or any state agency.

COMMENTS

The Project Warrants a Subsequent, Rather than a Supplemental, EIR

The Town has determined that a further CEQA document is required because it has made substantial changes to the Project since 1997, when the Town certified a document entitled "Subsequent Environmental Impact Report and Updated Environmental Assessment."² (See Pub. Res. Code, § 15162(a)(1); SSEIR at p. v.) The most important of these changes is the widening of the runway from 100 feet to 150 feet. While in 1997, the Town anticipated that it could accept

²The 1997 document was itself styled as subsequent to a 1986 document. The 1997 document supports an Airport Layout Plan and appears to have been prepared for submission to the Federal Aviation Administration as lead agency; it appears that the FAA, however, never acted on it. The 1986 document supports an Airport Land Use Plan and was prepared for submission to the Mono County Airport Land Use Commission and the U.S. Forest Service. The 1986 document did not discuss development of specific airport facilities, such as new or expanded runways, and stated that such facilities would be evaluated in separate documents that had not yet been completed (see 1986 document at p. 40); thus, it is not apparent how the 1997 document could have operated as a subsequent EIR to the 1986 document.

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Boeing 737s and 757s without widening the runway, this is not in fact the case; unless the runway is widened, the Airport will not be able to accept commercial jet service. (SSEIR at pp. I-8, E-2 to E-4.) In addition, the Town has implicitly acknowledged that it must consider new information of substantial importance, for example, additional and recently-developed information about sensitive, threatened, and endangered species in the area. (See Pub. Res. Code, § 15162(a)(3); see, e.g., SSEIR at p. III-30 (noting March 2001 Biological Assessment and July 2001 Biological Opinion).)

Where an EIR for a project already has been certified, and the circumstances requiring preparation of a further environmental document exist, the default document under CEQA is a subsequent EIR. (Pub. Res. Code, § 15162.) The lead agency may prepare a supplemental EIR – a more abbreviated document that "need contain only the information necessary to make the previous EIR adequate for the project as revised" – where "only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation." (Pub. Res. Code, § 15163.)

It unclear why a supplemental EIR has been prepared, rather than a subsequent EIR as announced in the April 13, 2001, Notice of Preparation. While the SSEIR states summarily that only minor changes are necessary to make the 1997 document adequate (SSEIR at p. v), the length of the SSEIR and the number of issues raised in response to the Notice of Preparation indicate otherwise. In light of the significance of the changes to the Project, the Project's long and confusing procedural history (which should in any event be clarified), the fact that previous documents now contain outdated and irrelevant discussion, and the complexity of the issues surrounding the Project's impacts, preparation of a single, comprehensive and updated document, that is, a subsequent EIR, would best serve CEQA's purposes.

B-4

CEQA and NEPA Processes Should be Coordinated

CEQA encourages state and local agencies to coordinate environmental review with federal agencies to avoid duplication. In this way, the decision makers and the public benefit from joint planning, joint environmental research and studies, joint public hearings, and joint environmental documents. (Cal. Code Regs., tit. 14, § 15226.) This streamlining greatly benefits the public, which can become confused by parallel, but not wholly consistent, proceedings and documents.

As you are aware, our office and others have taken the position that an environmental impact statement ("EIS") is required before the FAA can decide whether to approve the Airport Layout Plan and/or fund the proposed improvements.³ Since there is no apparent deadline by

³Although the FAA made a finding of no significant impact in December 2000 (SSEIR at p. xii.), the FAA has since announced that it has made no decision on the Project.

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[which the Town must prepare its CEQA documentation, it would best serve CEQA to prepare a joint subsequent EIR/EIS for review by all relevant state and federal agencies, or to wait to complete the CEQA process until after the NEPA process has been completed. (See Cal. Code Regs., tit. 14, §§ 15221, 15222.)]

B-5

The Final Document Should Not Minimize the Impacts of the Project

CEQA is designed to "[e]nsure that the long-term protection of the environment shall be the guiding criterion in public decisions" (Pub. Res. Code, § 21001(d)). The EIR serves CEQA's goals by "inform[ing] other government agencies, and the public generally, of the environmental impact of a proposed project" and "demonstrat[ing] to an apprehensive citizenry that the agency has in fact analyzed and considered the ecological implications of its action." (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 86 [118 Cal.Rptr. 34].)

[Notwithstanding CEQA's mandate, in many places the SSEIR appears to minimize the potential impacts of initiating regularly-scheduled commercial jet service to the Mammoth Lakes area. For example, one of the stated purposes of the Project includes providing a "transportation alternative to the private automobile for residents of and visitors to Mammoth Lakes" and "reduc[ing] adverse vehicular air emissions from forecast visitors to Mammoth Lakes and vicinity by replacing some of the vehicle trips with passenger trips." (SSEIR at p. I-2.) This assertion is unsupported by evidence or analysis and is at odds with the Town's intent to access new markets (including international markets), add service to additional hubs through additional carriers, and expand summer tourism. (See SSEIR, Appendix H.)]

B-6

[We are also concerned that the SSEIR may underestimate projected annual enplanements and aircraft operations. The SSEIR's primary method for projecting future enplanements and operations, which is set out in detail in Appendix H, relies on data provided by Mammoth Mountain Ski Resort for predicted "skier days" through 2022. It is not clear that the SSEIR takes into account that the introduction of commercial air service may itself increase the number of skier days – that is, that projected enplanements at an expanded Airport are not simply a percentage of skier days that are predicted to exist with or without commercial air service. In addition, it is not clear why projections of summer enplanements are dependant on projected winter enplanements – since the number of summer enplanements will likely be determined by the availability of lodging and services in the area during the summer months and the accessibility of the Eastern Sierra's many natural attractions.]

B-7

If the enplanement and operations projections do in fact understate the level of activity at an expanded Airport, then every section of the SSEIR that uses these figures as a starting point

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for analysis is called into question. And, even if these projections are reasonable, it appears that the SSEIR uses only the "base case" figures for calculating impacts. In order to disclose to the public the true impacts that may occur, the final document should also analyze impacts using the "high case" figures.

The Final Document Must Determine and Disclose Baseline Conditions and Analyze Impacts in Context

CEQA requires that an EIR begin with a description of the existing environment. (*Save our Peninsula Committee v. Monterey County Board of Supervisors* (2001) __ Cal.App.4th __ 104 Cal.Rptr.2d 326, 342.) Accordingly, for each potential impact, an EIR must set out a baseline of existing impacts against which the significance of the proposed project's impact may be measured. (*Id.* [holding that EIR was deficient for failing to quantify actual, rather than hypothetical, pre-project water use].) Where such data is not already compiled, the lead agency has an obligation to "conduct the investigation and obtain documentation to support a determination of pre-existing conditions." (*Id.* at 343.)

The SSEIR fails to establish a baseline of impacts caused by the Airport in its current state for several potential impacts, including any existing contamination caused by Airport operations, existing water quality in the area, and current levels of actual water use and groundwater recharge rates. (See letter from Douglas Feay, California Regional Water Quality Control Board, Lahontan Region (5/15/01) and letters attached). Similarly, for noise impacts, the SSEIR relies primarily on noise contour maps, but the contouring ends at fairly high levels of noise and does not adequately express the relative quiet that currently exists in the area outside the boundaries of the Airport.⁴ Without adequate baselines, it is impossible to judge whether impacts that would result from the expansion are significant.

B-8

B-9

The SSEIR does disclose certain baseline conditions for air quality in the region. The Town notes that the Great Basin Valley airshed, in which Mammoth Yosemite Airport is located, is designated a nonattainment area for PM₁₀ under state and federal standards; Mono County is also a designated nonattainment area for ozone under state standards and is considered an ozone transport region. The Town fails, however, to analyze the Project's potential impacts to air quality in context, instead stressing that the Project's emissions would be "only a minute fraction of the total emissions in the region." (SSEIR at p. III-26.) The relevant question, however, is whether any additional amount of particulate matter and ozone precursors should be considered

B-10

⁴The SSEIR justifies a limited noise on the ground that any exposure at Community Noise Equivalent Level ("CNEL") 60 or less is not significant because it is considered consistent with residential uses. (SSEIR at p. III-94.) Use of an absolute value to gauge the significance of noise impacts was expressly rejected in *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1380-81 [111 Cal.Rptr.2d 598].

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significant in light of the serious nature of dust and ozone problems in the air basin. (See *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 718 [270 Cal.Rptr. 650].) To comply with CEQA, this question must be answered in the final document.

B-10

The Final Document Must Consider All Closely Related Past, Present, and Reasonably Foreseeable Future Projects in its Cumulative Impacts Analysis

"Assessment of a project's cumulative impact on the environment is a critical aspect of the EIR." (*Los Angeles Unified School Dist. v. City of Los Angeles*, (1997) 58 Cal.App.4th 1019, 1025 [68 Cal.Rptr.2d 367].) Cumulative impacts include "the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." (Cal. Code Regs., tit. 14, § 15355(b).) The SSEIR lists nine projects "currently proposed in the region" – specifically, Intrawest Development; Eastern Sierra College, Sherwin Bowl Ski Area; Lake Ridge Ranch, Rimrock Ranch, Sierra Business Park, and Mammoth Lakes Commercial Development Plan. Without explanation, the SSEIR concludes that only the latter two projects "need to be considered part of the cumulative impact." (SSEIR at p. II-9.)

In fact, a reasonable argument can be made that all projects that will substantially rely on or benefit from the expanded Airport, e.g., condominium projects, hotels, and resorts within driving distance of the Airport, are closely related to the Airport and should be included in the cumulative impacts analyses. Such projects may include not only some or all of the nine projects listed above, but many other projects in the area. For example, Appendix H of the SSEIR, which addresses aviation demand, notes in passing three new Intrawest projects that are anticipated to add approximately 2,100 units to the existing bed base, and also that Mammoth Mountain is in the midst of a five-year, \$132 million improvement program. (SSEIR at p. H-3). A quick review of the CEQAnet database reveals many additional potential candidates for inclusion in a cumulative impacts analysis, as does the November 16, 2001, comment letter from the California Department of Fish and Game.

B-11

Limiting the cumulative impacts analysis to two future projects, without additional explanation, is unreasonable. The final document must substantially broaden the scope of the cumulative impacts analysis or adequately explain the failure to do so.

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The Final Document Must Acknowledge and Discuss the Project's Growth-Inducing Impacts

It is "settled that the EIR must discuss growth-inducing impacts even though those impacts are not themselves part of the project under consideration, and even though the extent of the growth is difficult to calculate." (*Napa Citizens for Honest Government v. Napa County Board of Supervisors*, (2001) 91 Cal.App.4th 342, 368 [110 Cal.Rptr.2d 579].)

The Airport expansion project is an essential component of the Town's plan to increase ski visitors and foster year-round tourism. (See SSEIR at pp. I-2, H-4.) Yet the SSEIR includes only a cursory, three and one-half page discussion of growth-inducing impacts that contains few statistics or facts. The growth-inducing section concludes that the expanded Airport "will provide beneficial environmental effects by accommodating the forecast growth in accordance with the Town's general policy to improve air quality by reducing vehicular miles traveled through provision of an alternative to the personal automobile." (SSEIR at p. V-5.)

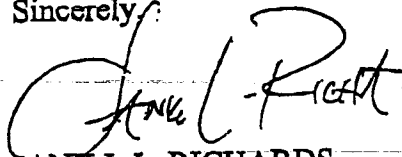
The final document must fully disclose the essential role that the Airport expansion project is designed to play in development of the Mammoth Lakes area into a year-round travel destination and discuss and analyze its growth-inducing potential.

B-12

CONCLUSION

We appreciate the opportunity to comment on the draft SSEIR and trust our comments will be taken into account in preparing a revised document.

Sincerely,



JANILL L. RICHARDS
Deputy Attorney General

For BILL LOCKYER
Attorney General

cc: Brian Grattidge, State Clearinghouse
Darrell M. Wong, California Department of Fish and Game
Douglas Feay, California Regional Water Quality Control Board
Caroline Yee, California Department of Transportation
Gary Honcoop, California Air Resources Board

B. California Attorney General

Response to Comment B-1.

The Supplement uses a forecast of 333,800 enplanements and 23,650 aircraft departures annually. This forecast was prepared for the Benefit Cost Analysis of the project and was approved by the Federal Aviation Administration (FAA). [*Benefit Cost Analysis, Mammoth Lakes Airport Expansion Project*, March 2000.] These projections are for the renewal of commercial air service to Mammoth Yosemite Airport, which would be allowed by the Airport improvements included in the proposed project. These improvements would allow the Airport to safely accommodate narrow body air carrier jet aircrafts. These revised projections were used for all evaluations in this Supplement.

The “high case” scenario of 450,000 enplanements and 27,390 aircraft departures annually was not deemed appropriate for Mammoth Yosemite Airport because, under that scenario, the Airport would experience a winter enplanement to skier ratio that is higher than all case study airports.

Winter enplanements are estimated to account for approximately 60 percent of the Airport’s annual enplanements. During the initial year of operation, it is assumed that the Airport would only provide commercial service during the winter season. As a result, winter enplanements are projected to represent 100 percent of the Airport’s enplanements in 2003, with the winter share of annual enplanements decreasing thereafter to approximately 60 percent of total airport enplanements by 2022.

The commentor incorrectly asserts that the expansion will likely transform the surrounding area because of its proximity to natural attractions including, Yosemite National Park, Kings Canyon National Park, June Lake, the Mono Lake, Devils Postpile National Monument, and the John Muir and Ansel Adams wilderness areas. The commentor further asserts incorrectly that the expansion may impact sensitive, threatened and endangered species, including the “genetically distinct and isolated Mono County/Lyons County population of sage grouse,” the “rapidly declining Round Valley mule deer herd,” and the distinct populations of Sierra Nevada Bighorn Sheep (sic).

The assertion that the expansion will “likely transform the surrounding area” is not supported by the existing land management plans (Inyo National Forest Land and Resource Management Plan, Bishop Resource Area Resource Management Plan, Wilderness Management Plan (WMP) for the Ansel Adams, John Muir, and Dinkey Lakes Wildernesses).

While close in air miles, Kings Canyon National Park is not readily accessible by car from the east side of the Sierra Nevada. Driving time from Mammoth Lakes to Kings Canyon is approximately seven hours, much farther than from other major California airports.

Neither the sage grouse nor the mule deer are listed as threatened or endangered contrary to the inference in the comment. Further, the Round Valley mule deer herd is not rapidly declining. The Inyo National Forest Wildlife Management News clearly describes the population dynamics of this herd. While the herd did experience a decline in the early nineties, the population was at record numbers and was probably not supportable by the range. Since the decline, the herd numbers have grown back by about 60 percent from the low. (See Attachment A to Response to Comments.) As

described in the Supplement and herein, the project would not have a significant impact on these species, either by itself or cumulative with other existing and proposed development.

To date, no formal determination has been made to confirm that sage grouse in Mono County are “genetically distinct” from other populations. The improvements to the Airport would have no significant adverse impacts on sage grouse, either overall or as a distinct and isolated population. Sage grouse exist in the project vicinity, as they do throughout much of the Long Valley and southern Mono County, although there are no major lek sites (mating grounds) within two miles of the Airport. As shown in Attachment A, the California Department of Fish and Game indicates that the Mono County sage grouse populations are among the most stable in the state.

As stated in the Biological Opinion issued by the US Fish and Wildlife Service, management of the Sierra Nevada bighorn sheep habitat is within the jurisdiction of the Inyo National Forest. (See Appendix J of the Supplement.) The Wild Life Management Plan (WMP) addresses bighorn sheep and sets quotas for wilderness use. As stated in the Biological Opinion, changes to the wilderness management direction would require consultation. There is nothing in the Mammoth Yosemite Airport improvements project that necessitates or promotes a change to wilderness management policies.

Response to Comment B-2

The form of the Supplement is influenced by the NEPA documents for the project only in one respect. The Environmental Assessment (“EA”) and Finding of No Significant Impact (“FONSI”) prepared by the FAA for the project provide substantial data and analysis about the project and its potential impacts. The Supplement uses that data where appropriate. (See CEQA Guideline 15150, which permits an EIR to incorporate other public documents by reference.) In addition to the Supplement’s use of data and analysis from the EA and FONSI, the relationship between the Supplement and the NEPA documents is essentially that the Supplement will be used for State of California and local approvals and the EA and FONSI will be used for federal approvals. Also, the EA and FONSI are part of the administrative record supporting the analysis in the Supplement. The Town and responsible agencies thus may rely on the data and conclusions set forth in the EA and FONSI as well as in the Supplement itself.

Response to Comment B-3

As explained in more detail throughout these responses, the Supplement properly and conservatively analyzes and discloses the potential environmental impacts of the changes in the proposed project since the 1997 Subsequent EIR, including any potentially significant impacts. See the discussion in the Supplement entitled “Public Review and Environmental Review Process,” beginning on Page ix of the Supplement, for additional detail on the uses of the Supplement and its relationship to other environmental documents for the project. The Supplement was provided to all Responsible and Trustee agencies, as well as the State Clearinghouse (SCH No. 2000 034005), to further ensure that all proper agencies were notified of its availability.

Response to Comment B-4

The commentor challenges the Town’s decision to prepare a Supplemental EIR, and asserts that the Town should prepare a Subsequent EIR instead. This comment is addressed in the Supplement at

Pages iv through xii. Subsequent and Supplemental EIRs are for most purposes (including public review and related requirements), treated as the same type of document. Like a Subsequent EIR, a Supplemental EIR updates the prior EIR to assure compliance with CEQA by analyzing all potential impacts from changes in the project proposed since certification of the prior environmental document(s). A supplemental EIR must be circulated for public comment and must include responses to comments received on the draft document. (CEQA Guidelines 15163(c),(d).) Further, as with a subsequent EIR, after a supplemental EIR is prepared, the Final EIR relied upon by the decision-maker includes the current document and all prior environmental documents. (CEQA Guideline 15163(e).) Thus, in either case, the record before the decision-maker and the public with respect to environmental impacts is the same.

The commentor also incorrectly asserts that a subsequent EIR is the default document under CEQA. There is no support in the case law, statute or guidelines for such a contention. (See Remy, Thomas, et. al., 1999 Guide to the California Environmental Quality Act at 538; Kostka & Zischke, Practice Under the California Environmental Quality Act at § 19.5.) The CEQA Guidelines state that a Subsequent EIR is a stand-alone document wherein the entire EIR is revised, whereas a Supplemental EIR adds the information that is necessary in light of the project changes. (CEQA Guideline 15163(b).) Where, as here, the entire EIR has not been revised, a Supplemental EIR is the appropriate document. Given the minor scope of the changes and the relatively limited number of issues to be analyzed, it would be a waste of resources and contrary to CEQA's public policies to prepare a complete stand alone supplement. (See Pub. Res. Code § 21002(e) (focus of environmental review should be on significant effects); § 21003(f).) Also, preparing a Supplemental, rather than Subsequent, EIR is consistent with CEQA's direction to reduce the volume of environmental documents where possible. (See CEQA Guidelines 15141, 15150, 15152 and 15153.) CEQA Guideline 15162 also states that CEQA does not require a new "comprehensive EIR" for all projects, particularly revised projects, in order to alleviate unnecessary review.

In general, in keeping with the concept that the Supplement only considers changes in the project since the previously certified 1997 Subsequent EIR, and that the 1978, 1986, and 1997 EIRs have been certified and the statutory periods for challenging the adequacy of those documents has passed, comments should be limited to such changes in the project as set forth in the Supplement. The current project is very similar to the original 1978 and 1997 proposals to accommodate commercial airline service including jet service, at Mammoth Yosemite Airport. The runway would be extended by 1,200 feet rather than 2,000 feet as previously proposed. The runway would also be widened from 100 to 150 feet, but that would occur primarily within the already graded area of the Airport. For these reasons, the Town properly determined that the required revisions to the EIR were minor and thus that a supplement is appropriate. Preparation of a Supplemental EIR allows the environmental analysis to focus on the environmental issues at hand that have not been previously analyzed. Conversely, recirculation of the previous EIRs with the Supplement would be contrary to CEQA's mandate, as well as the commentor's suggested goal of streamlining the environmental analysis to benefit the public.

The commentor further contends that unless the runway is widened, the Airport will not be able to accept commercial jet service. The acceptance of commercial jet service is not a change in the project. In fact, that has been part of the project since the 1978 EIR. (See 1978 EIR at Table A.) Indeed, the Mammoth Yosemite Airport as currently configured has previously accepted commercial jet service (See Supplement at Page xi.) The most recent service was provided by United Airlines in the mid-1980s, and was halted due to passenger complaints about flights being too full. (d.) The

currently proposed expansion is driven by modern safety and aircraft requirements. In any case, the proposal includes widening the runway as analyzed in the Supplement.

In order to alleviate potential confusion, the following summary of the project's procedural history is provided.

- In 1978, Mono County, then the owner of the Airport (then called the Mammoth-June Lakes Airport), proposed to expand the Airport to accommodate commercial airline service, including jet service, by expanding the commercial air carrier terminal building to 20,000 square feet, adding approximately 290 vehicular parking spaces, constructing a new access road (connecting to Benton Crossing Road), and extending the existing 7,000-foot runway to 9,000 feet.
- In 1986, Mono County adopted the Mammoth-June Lakes Airport Land Use Plan. In addition to the expansion proposed in 1978, this plan included a hotel and restaurant complex, an 18-hole golf course, and recreational vehicle park. This plan also included a 5,000-foot cross-wind runway. At that time, the Airport served general aviation and commercial flights, and there were approximately 1.5 million annual visitors to the Mammoth Mountain Ski Area. The County prepared and certified an EIR for that project and the Inyo National Forest prepared and signed an Environmental Assessment/Decision Notice to comply with the requirements of NEPA. Subsequently, the Town of Mammoth Lakes acquired and annexed the Airport property.
- In 1997, again seeking to accommodate commercial jet service, the Town proposed instead to extend the existing 7,000-foot runway to 9,000 feet and to extend the existing taxiway and add appropriate cross taxiways, to expand the commercial air carrier terminal building to 25,000 square feet, to construct a larger hotel/condominium building, and to add approximately 640 parking spaces and approximately 100 spaces for luxury recreational vehicle parking on approximately 10 acres. The golf course and cross-wind runway portions of the prior proposal were eliminated. Although larger in some respects, the 1997 proposal eliminated over eight million square feet of potential new land disturbance that would have occurred under the 1978/1986 proposal. In part for this reason, the Town determined at that time that a Subsequent EIR best met CEQA's requirements. (See CEQA Guideline 15162.) The Town prepared a Subsequent EIR and Updated Environmental Assessment. The Town certified the Subsequent EIR in July of 1997.
- In 2000, the Town proposed a further modification to the proposed project in 1978/1986 and modified in 1997. The 2000 proposal included extending the existing 7,000-foot runway by 1,200 feet, widening the runway from 100 to 150 feet, and expanding taxiways from 50 to 75 feet to meet current airline requirements. This work would take place primarily within the already-disturbed Airport property. The other elements of the project remained essentially the same as the 1997 proposal.
- In response to the Town's 2000 proposal, the FAA decided to prepare a separate NEPA document. In December 2000, the FAA published a Final Environmental Assessment and published a Finding of No Significant Impact based on the December 2000 EA. The FAA has not yet adopted a Decision on the 2000 FONSI.
- Given the modest changes in the project since the 1997 proposal, the Town concluded that the resultant changes in potential environmental impacts would likely be minimal. Accordingly, pursuant to CEQA Guideline 15163, the Town prepared the 2001 Draft Supplement to the 1997 Subsequent EIR (published October 5, 2001), comments on which are the subject of these responses.

Response to Comment B-5

Where a project is subject to NEPA and CEQA, CEQA Guideline 15221 permits a lead agency to rely on an Environmental Impact Statement or Finding of No Significant Impact, rather than preparing a separate EIR or negative declaration under certain circumstances. Where both documents will be prepared, CEQA Guideline 15222 states that the lead agency “should try” to prepare a combined document. There is, however, no requirement that a joint document be prepared. Further, the conclusions of the environmental documents prepared here — in the NEPA context the Environmental Assessment and FONSI and in the CEQA context this Supplement — are consistent with one another, and the Supplement relies on the data and conclusions set forth in the EA and FONSI where appropriate. It would unnecessarily delay the project to hold the CEQA process until the FAA adopts a Decision.

Response to Comment B-6

The Town’s conclusion that the project will provide a transportation alternative for skiers and tourists wishing to visit the Mammoth area does not, and is not intended to, minimize potential impacts of the project. Instead, that conclusion is consistent with and supported by the experiences of other similar resort areas described below and in the Supplement. (See Section 3.4 of the Supplement.) The Supplement fulfills CEQA’s mandate to inform governmental agencies and the public of potential environmental impacts of the changes in the project since the prior EIR was certified.

Providing a transportation alternative is one goal of the project, and that goal was formulated on substantial evidence that it could be achieved. Specifically, 90 percent of visitors to the Yampa Valley Regional Airport, which serves the Steamboat Springs ski area in northwestern Colorado, use shuttle buses to the ski area. [Personal communication with Jim Parkes, Airport Manager. August 2001.] 60 to 65 percent of visitors to the Gunnison County Airport, which serves the Crested Butte and Monarch ski areas in Colorado, use shuttle buses to the ski area. [Personal communication with Gunnison Airport Manager. August 2001.] Shuttle service between the Airport and the Town and the Airport and the ski resort is a mitigation measure in the 1986 EIR/EA, which carries through to the current document. These comparisons support the reasonable conclusion set forth in the Supplement that approximately 70 percent of Airport users would use public buses or private shuttles rather than private automobiles. (See Section 3.4 of the Supplement.) Further, because the project is proposed to accommodate existing tourists and recapture lost visitor numbers, the total number of visitors to the area is not expected to increase substantially over the mid 1980s. Instead, visitors who would have driven from Los Angeles or Reno (possibly after flying to those cities from elsewhere), for example, will now be able to fly directly to Mammoth Lakes. That eliminates the direct automobile trips from these arrivals. It also means that those who arrive directly by aircraft do not, by default, have an automobile during their stay in Mammoth Lakes, thereby further reducing automobile trips in and around the Town.

Response to Comment B-7

The Town is hopeful that air service will generate additional skier days, particularly the type of winter resort traveler who more typically flies to a resort, and then stays for a longer period, typically including an increase in mid-week skier days. This would allow the Town to accommodate additional skier days, but would not induce growth because the construction of additional facilities is not required to serve the additional skier days.

Although the Town does hope and has planned for additional skier days, experience with other airports demonstrates that there is not a causal link between commercial air service and growth in skier days (See Supplement at Table H-8). The Airport will accommodate the increase in skier days that is anticipated to occur due to improvements to the ski area and new and better accommodations within the Town. The projection of skier days reflects these facts. As shown in Appendix H of the Supplement, it is anticipated that skier days will increase to the level achieved in 1980s and the Airport will support such anticipated growth.

It is a standard practice within the aviation industry to prepare “unconstrained” forecasts in which they do not consider the potential impacts that other outside influences or constraints might have on the Airport’s enplanement potential. In this way, the Airport facilities needed to support the Airport’s unconstrained demand can be clearly identified and their potential impacts measured. The forecasts for the Airport were also prepared using this approach.

These projections used in the Supplement were developed based on a comparative study analysis of five comparable airports as prescribed in *FAA Airport Benefit-Cost Analysis (BCA) Guidance*, dated December 15, 1999. In order to compare each market’s characteristics, the following factors were examined.

1. Number of annual ski visitors (represented as skier days)
2. Number of ski lifts, trails and skiable acreage
3. Number of area beds/pillows
4. Number of annual national park visitors
5. Driving distances from competing commercial service airports
6. Historical enplanement levels

All these factors were used to develop a forecast for projected growth at Mammoth Yosemite Airport. Another factor that was considered is the total visitor capacity of Mammoth Lakes area. As explained in Section V of the Supplement, new development in the Town of Mammoth Lakes and its vicinity is limited due to lack of developable land, which in turn restricts additional bed base.

Similar to the visitor characteristics occurring at each of the other case study airports, it is assumed that a majority of the enplanements at Mammoth Yosemite Airport will be derived from the winter skiing activities. This is primarily due to the change in tourism demographics, from more affluent individual visitors in the winter to more discretionary family-oriented visitors in the summer. In addition, more visitors choose to make their trips via automobile in the summer months. As exhibited by each of the case study airports, anywhere from between 50 percent and 100 percent of each airport’s annual enplanements occur during the winter season. Excluding Yampa Valley Regional and Vail/Eagle County airport, which serve predominantly winter skiers, the percentage of winter enplanements ranges from 50 percent to 65 percent of total annual enplanements. Based on this comparison, Mammoth Yosemite Airport is forecast to have 60 percent of the Airport’s annual enplanements occurring in the winter season. These winter enplanements are directly related to the ski season at Mammoth Mountain and indirectly related to the bed base availability in the area. As a result of this relationship, a relationship of enplanements to skier days was used to project future winter enplanements at the Airport based on enplanement per skier day levels experienced at the case study airports.

Summer season enplanements are also indirectly related to the bed base availability but as evident from other comparable airports, is usually a constant percentage of the winter enplanements. These airports had similar summer national park and winter skiing numbers. There is no other information available on which to base summer enplanements; therefore, basing total enplanement projections on estimated skier days is a reasonable methodology for estimating year-round enplanements. (See Supplement at Appendix H for more detailed analysis and calculation of enplanement and Airport usage projections).

Response to Comment B-8

The Town will start a water quality monitoring program before the construction of the proposed project begins to establish a baseline. This baseline would be established before the start of air carrier service at Mammoth Yosemite Airport and would be used to detect any impacts on water quality and water supply in the region.

Response to Comment B-9

With respect to the analysis of potential noise impacts, the Supplement describes the existing environmental setting by reference to 1999 Airport operations. The noise impacts were analyzed to calculate the effects of the new aviation demand forecast developed for the proposed project, which allows for the re-initiation of commercial air carrier service at the Airport with improvement to Airport facilities.

The “relative quiet” in the area referred to in the comment is the converse of the existing noise in the area. On a 24-hour basis, U.S. Highway 395, located adjacent to the Airport, contributes substantial noise to the area in the vicinity. U.S. Highway 395 runs along the Airport boundary and generates substantial noise as shown in the **Exhibits N-4, N-5, N-6, and N-7**. As discussed in Section 3.7.2, the proposed project would only slightly increase the area exposed to noise of CNEL 65 and higher. This area remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Town through lease or use permits. There are no noise sensitive land uses and no people living within the area exposed to CNEL 65 and higher. The CNEL 60 and higher noise exposure area remains largely on Airport property, vacant land, or the U.S. Highway 395 right-of-way. There would be no change in the number of people affected by the slight increase in the 60 and 65 CNEL aircraft noise contours. There would be a small increase in the sound that can be heard by residents in the general vicinity of the Airport. There are no permanent residences within the area exposed to CNEL 60 and higher reflecting the full build out of the project in 2022. The wildlife around the Airport is already exposed to existing traffic noise generated by U.S. Highway 395 and aircraft operations at the Airport. Also, no significant night-time aircraft operations are expected to occur at Mammoth Yosemite Airport.

Aircraft noise exposure has been quantified using the Community Noise Equivalent Level (CNEL), as required by the California Airport Noise Regulation [CCR Title 21, Subchapter 6]. Noise exposure criterion levels of CNEL 60, 65, 70, and 75 were selected, as required by the California Department of Transportation, Division of Aeronautics. Because of the relatively small size of the CNEL 70 and 75 noise exposure areas, which do not extend beyond the airfield, only the CNEL 60 and 65 are presented on the noise exposure maps and were considered as threshold values for noise impacts. The methodology to analyze aircraft noise in the Supplement can be studied in detail in FAA Order 1050.1D which is consistent with State of California standards.

The Supplement uses a noise threshold of CNEL 60 for its determination of significance because noise below that level is compatible with residential uses. The commentor also states that use of an absolute value is improper. In fact, the use of an absolute value is not improper when that value is correlated to an actual impact as is the case here. CNEL 60 is the measurement, while compatibility with residential uses is the “threshold.”

Air carrier aircraft operations are anticipated to comprise a small percentage of the overall aircraft operations at the Airport. The air carrier aircraft operated by the major airlines that typically operate in similar high altitude airports include some of the quieter aircraft in the U.S. fleet. These aircraft include the B-757, newer B-737, and Bae-146 aircraft. Commuter aircraft and regional jets are also anticipated to enter the fleet mix at Mammoth Yosemite Airport. Business jets and turboprop aircraft, such as the Gulfstream II, Lear 35, and other aircraft, can and are currently operating at Mammoth Yosemite Airport and are as loud or louder than the proposed air carrier passenger aircraft.

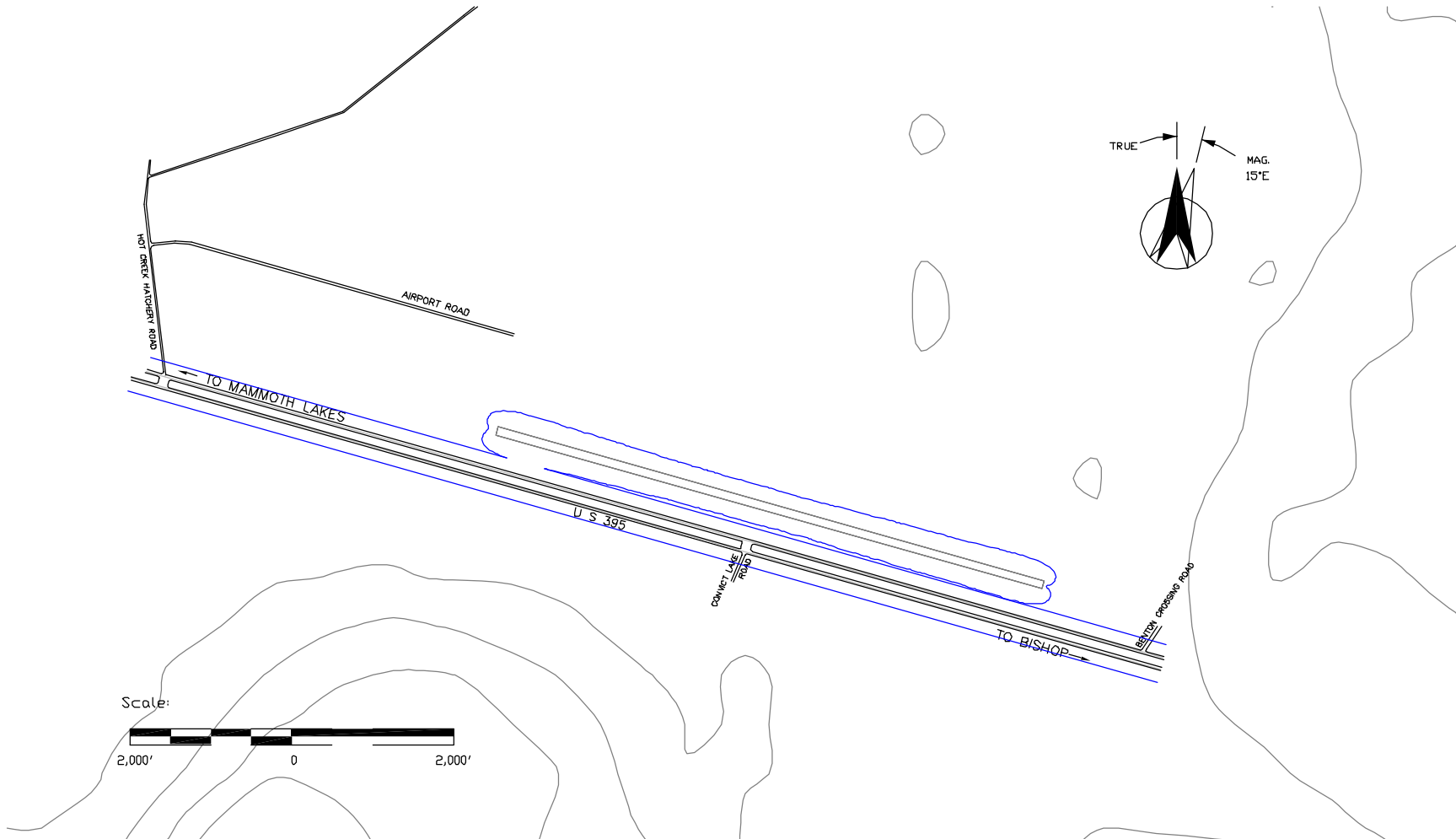
As discussed in Section 3.3.2.2 of the Supplement, noise analysis was also done to compare single-event noise analysis for sage grouse lek site 2. This analysis showed that the B-757 aircraft would produce less single event noise than aircraft in the existing fleet and flight patterns at the Airport.

In addition to the noise exposure maps in the Supplement, a grid point analysis was conducted to evaluate potential changes in noise exposure at specific points in the vicinity of the Airport as described on Page III-87 of the Supplement. These areas, as shown on Exhibit III-21 of the Supplement, include the Hot Creek State Fish Hatchery, the Hot Creek Ranch, the planned hotel/condominium complex on Airport property and SNARL. Table III-15 in the Supplement summarizes the CNEL values calculated by the Integrated Noise Model (INM) for the proposed project at these locations. None of these facilities are located within the existing or future CNEL 65 noise exposure area for the proposed project. Although each grid point would show some increase in noise exposure levels with the proposed project, the noise exposure levels remain low both in general and in the context of the existing land use at that grid point. It is anticipated that these areas would also not experience direct overflights of air carrier jet aircraft because the planned operating procedure is for air carrier jet aircraft to arrive on a straight-in arrival procedure from the east and depart using an initial turn to the south, away from these development areas for departures to the west.

Response to Comment B-10

The Supplement’s conclusions in this regard are based on the project’s net additions of various pollutants to the existing air quality context, as well as in comparison to the existing pollutant loads in the region. (See Supplement at III-21, III-25, III-28.) That the project will reduce pollutants by reducing car trips and vehicle miles traveled is an important part of this analysis and conclusion.

Please also see Responses to Comments I-40 and FF-2.

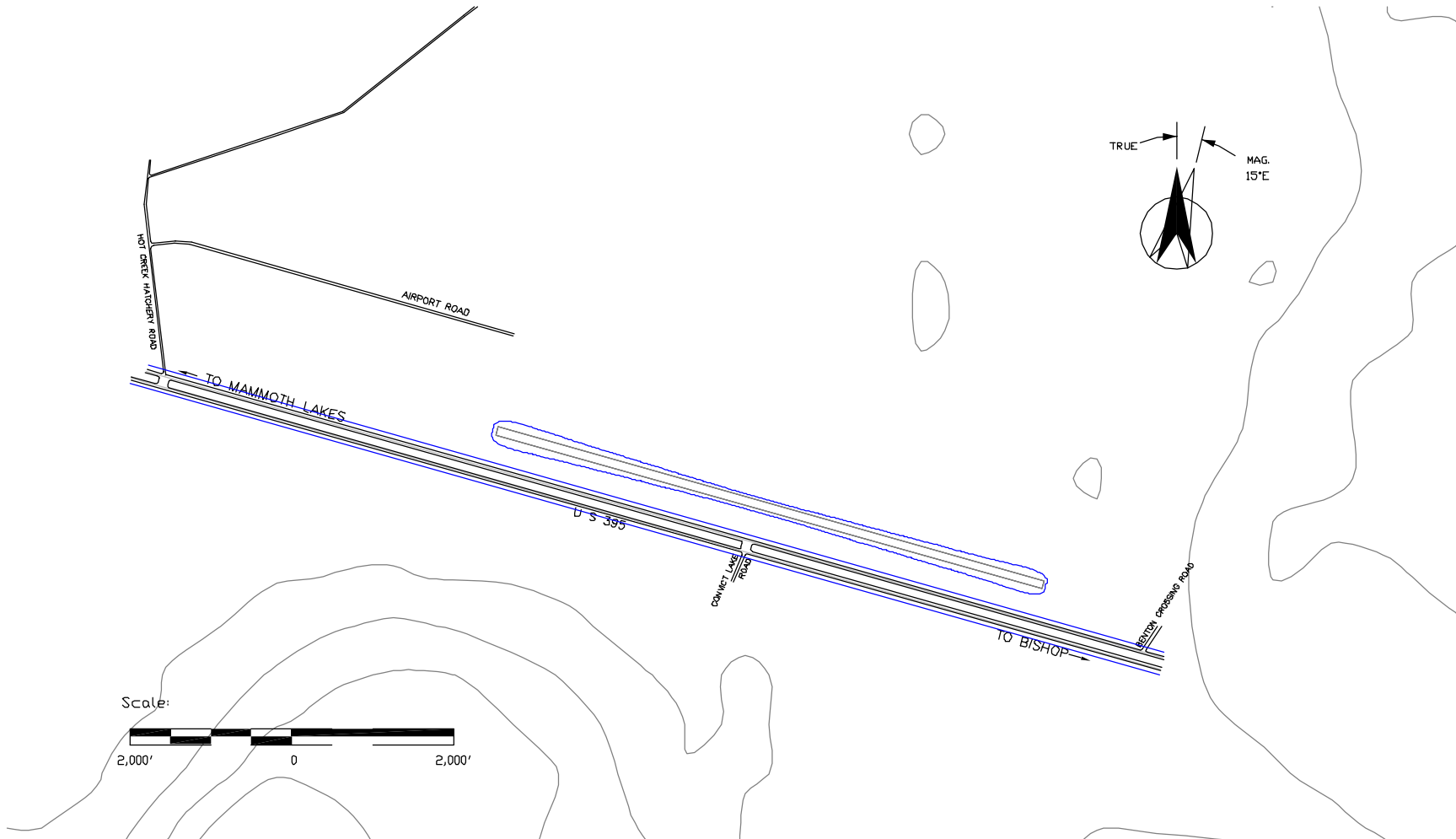


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-4

not to scale

Noise Exposure Map - 60dB CNEL U.S. Highway 395 and Mammoth Yosemite Airport - CY 2002 - 7000' Runway

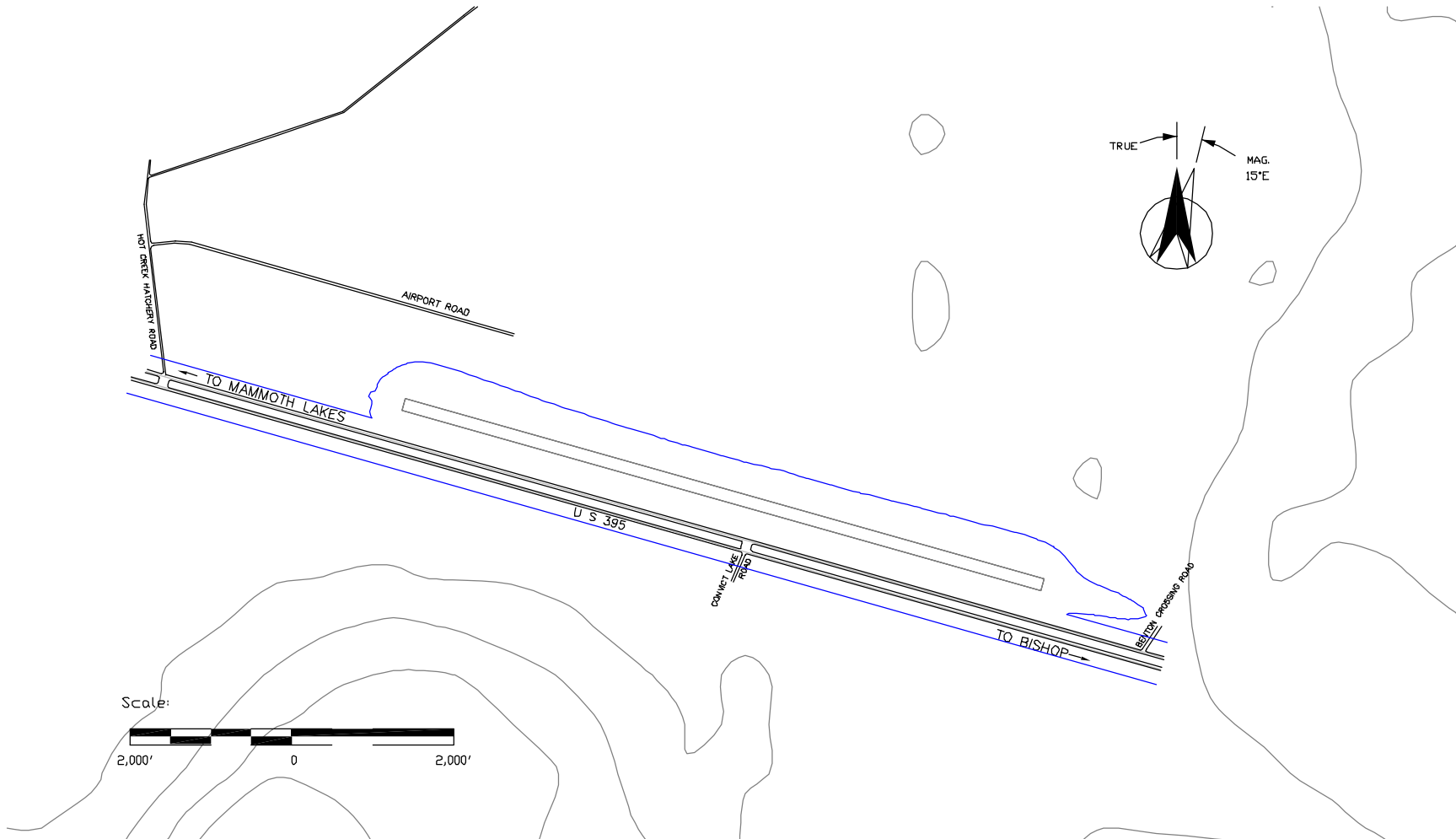


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-5

not to scale

Noise Exposure Map - 65dB CNEL U.S. Highway 395 and Mammoth Yosemite Airport - CY 2002 - 7000' Runway

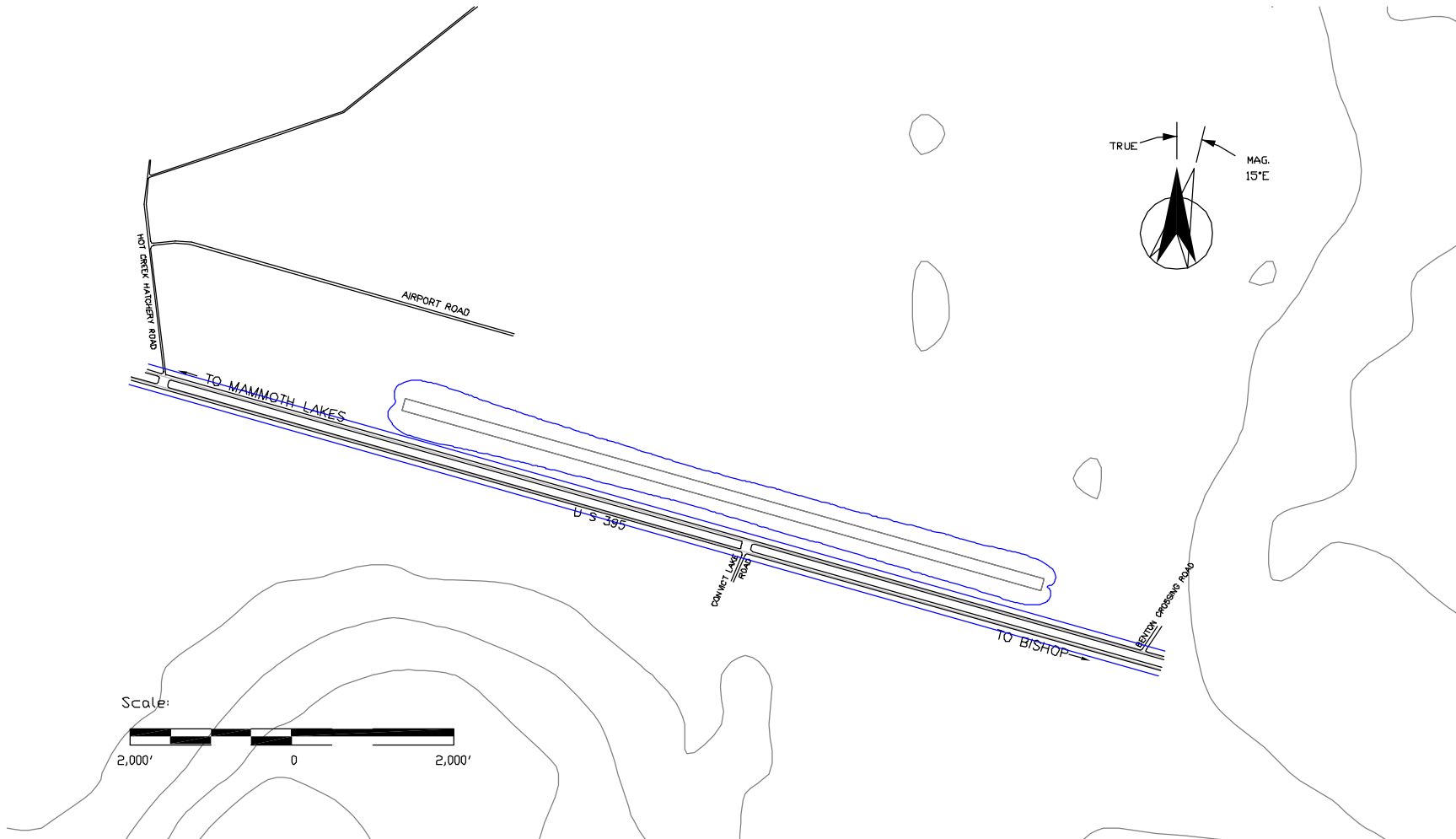


Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-6

not to scale

Noise Exposure Map - 60dB CNEL U.S. Highway 395 and Mammoth Yosemite Airport - CY 2022 - 8200' Runway



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-7

not to scale

Noise Exposure Map - 65dB CNEL U.S. Highway 395 and Mammoth Yosemite Airport - CY 2022 - 8200' Runway

Response to Comment B-11

The comment does not accurately reflect the cumulative impacts analysis included in the Supplement. In addition to the two projects selected for cumulative impacts analysis in all areas, the Supplement analyzes a broader range of potential cumulative impacts for potential traffic, biological, and air quality impacts and, as for other impact areas, concludes that there will be no significant cumulative impacts from the changed project. (See Supplement at III-60-III-61; ES-3-ES-7.) Nonetheless, the Town has prepared additional, clarifying cumulative impact analysis. Please see Response to Comment A-2.

The original selection of projects for the cumulative impact analysis in the Supplement was based on the principle set forth in CEQA Guideline 15130 that an EIR should discuss the potential cumulative impacts of other projects that, when combined with the subject project, could result in a cumulatively considerable incremental effect. In the supplemental EIR context, this principle focuses on the potential impacts from changes in the project since the previous certified EIR, when those changes are considered in conjunction with other past, present, and future projects. (See CEQA Guideline 15130(a)(1).) CEQA Guideline 15130(b)(1) lists factors to include when considering whether to include a potentially related project in a cumulative impacts analysis. That list includes the location of the project relative to the location of related projects and the type(s) of possible related project(s) and the resources potentially impacted. With respect to location, of the projects considered for possible inclusion in the Supplement's cumulative impacts analysis, the Town determined that only the two projects selected shared the common potential environmental impacts with changes in the Airport project analyzed in the Supplement that could lead to potentially significant adverse environmental impacts. The other seven projects are located many miles from the Airport and the Town concluded that they would have no significant cumulative impacts on any of the environmental categories being analyzed for changes to the proposed project in the Supplement. For example, Sherwin Bowl Ski Area is located six miles west of the Mammoth Yosemite Airport, this project is currently on hiatus and has an uncertain future. The 1997 Record of Decision for the project determined that the project would result in an unavoidable loss of habitat for mule deer, but concluded that the impacts were reduced to an acceptable level by mitigation measures including: restriction on construction timing, vegetative screening, restrictions on fencing, official habitat improvements, and monitoring. Thus, given the distance between that project and the Airport, and these conclusions, the Town determined that it was not necessary under CEQA Guideline 15130 to include the Sherwin Bowl project in the cumulative impact analysis for the Airport.

Response to Comment B-12

The reader should again refer to the scope of the Supplement, which is limited to the potential impacts from the proposed changes in the project since the previously certified 1997 Subsequent EIR/EA and the 1986 EIR/EA. (See Supplement at Page i.) The current proposal would allow for scheduled jet service similar to the proposal analyzed in the 1997 Subsequent EIR/EA. Because there has been no substantive change in the nature of the proposal since 1997, there can be no additional potential growth inducing impacts over those analyzed, and found to be less-than-significant, in the prior EIRs. (See Supplement at Section 5.3.)

In the 1980s, when Mammoth Mountain Ski Area experienced over 1.5 million annual skier days, Mammoth was accessible primarily by car, although there were some commercial flights available at

that time. These skier day levels have since declined to under 900,000, even during periods when commercial flights were available. U.S. Highway 395 has not reached its full capacity and access to Mammoth Lakes is not a limiting factor to growth. Therefore, enhancing alternate access opportunities to the region does not eliminate an obstacle to growth. The proposed Airport improvements upgrade an existing commercial aviation facility and support an alternative method of getting to the Mammoth Lakes area, but the Airport project does not create access that was not previously there. The proposed Airport improvements and enplanement levels are also consistent with the skier levels identified in the General Plan. [*Town of Mammoth Lakes General Plan, 1987.*]

Previous environmental analyses of the proposed project determined that the project is not growth inducing. Comments on the Supplement were received indicating concern that Airport development would accelerate the rate of development and, therefore, is growth inducing. Even if that were the case, an analysis based upon this assumption, still finds that no significant adverse environmental effects result. This is supported by the Supplement and as described below.

As set forth in Section 5.3 of the Supplement, the re-introduction of air carrier jet service to Mammoth Yosemite Airport¹ will not of itself cause or induce tourism or residential growth in the Mammoth Lakes area. The potential increases in tourism and residential growth in the area are anticipated in the General Plan and are separate from the Airport improvements, and do not rely on them. These increases are anticipated to occur regardless of the Airport project. (See Supplement at Section 5.3.) In fact, they are already occurring. (Id.) Also, improvements to the Airport are needed regardless of this additional development, to serve the existing population, which is currently a three-to six-hour drive from many services and amenities. Thus, there is no causal relationship between the proposed project and the anticipated growth. That disconnect demonstrates that the project, and even more clearly that the proposed changes in the project since the prior EIR was certified, are not "growth inducing."

The Mammoth Lakes vicinity is severely limited in its potential to grow and, consequently, neither the Town of Mammoth Lakes nor the federal land management agency management plans for any notable additional growth in the vicinity of the Airport. Most of the non-federal land within the town limits of Mammoth Lakes has been developed and the Town has adopted an urban limits policy that controls development outside of that designated in the General Plan. Outside of the Town, Mono County is 96 percent government controlled land with the majority of private land being more than a 50-mile drive from the Airport. Without substantial changes in federal policy related to development of public lands, there is no opportunity for significant induced growth. Thus, it is external factors, rather than access constraints, that will keep the Mammoth Lakes area from growing noticeably beyond the previous levels of visitation, regardless of the Airport improvements.

Appendix G of the CEQA Guidelines sets forth specific criteria for determining whether a project will have potentially significant impacts. The criterion relevant to growth-inducing impacts further demonstrates that the Town's conclusion here is appropriate under CEQA. That criterion states that a project may have a significant growth-inducing impact if it "[i]nduce[s] substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly

¹ The project represents a "re-introduction" of air carrier service to the Airport because commercial air carriers operated at the Airport until 1995. In fact, United Express operated a service to Fresno in 1993 and 1994 that was discontinued due to passenger dissatisfaction because the flights were frequently overbooked. That demonstrates that there is already pent-up demand for air carrier service to Mammoth, which also shows that the project is not growth-inducing, but instead accommodates existing demand.

(for example, through extension of roads or other infrastructure)." (CEQA Guidelines at Appendix G, § XII(a).) The proposed project does not directly induce substantial population growth because it only includes a few new residences and a small commercial component. These new residences and commercial components were analyzed in the 1997 Subsequent EIR/EA and are not changed as part of this Supplement. The Airport improvements also do not indirectly induce growth because they do not extend infrastructure in a way that allows something that could not, or did not, already exist to be created. Commercial air service existed previously with the current Airport. The proposed improvements are only necessary to accommodate the airlines' safety requirements and to provide an alternative to existing means of accessing the Mammoth Lakes area - the automobile.

In sum, the proposed Airport improvements are specifically designed to serve the anticipated demand from existing recreational and residential development with capacity to accommodate development under the General Plan should it occur. The Airport project is consistent with the General Plan, and any additional development near the Airport is severely constrained by the lack of available, privately owned land. The proposed Airport improvements assist in reducing future automobile travel, thereby providing an environmental benefit. For all these reasons, the project, and particularly the changes in the project since the previously certified 1997 Subsequent EIR/EA, will not have significant growth inducing impacts.



California Regional Water Quality Control Board

Lahontan Region



Winston H. Hickox
Secretary for
Environmental
Protection

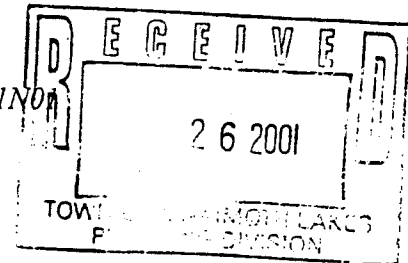
Victorville Office
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Gray Davis
Governor

November 21, 2001

FILE No.: 6B260111NOV

State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044



COMMENTS ON THE DRAFT SUPPLEMENT TO SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (SSEIR), STATE CLEARINGHOUSE (SCH) NO. 2000034005, MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT, MONO COUNTY

California Regional Water Quality Control Board (Board staff) has reviewed the referenced SSEIR, dated October 5, 2001, for the proposed Mammoth Yosemite Airport Expansion Project and have the following comments.

Background

The SSEIR was written in response to concerns raised during circulation of previous environmental documents and to incorporate revisions to the proposed project; including:

- 1) extending the existing runway by 1,200 feet and widening by 150 feet;
- 2) replacement of an existing 4.8-foot-high barbed wire fence with an 8-foot chain link security fence;
- 3) construction of a new package wastewater treatment plant;
- 4) updating an aviation demand forecast; and
- 5) relocation or replacement of the "Green Church" building.

The SSEIR does not supercede the 1997 Subsequent Environmental Impact Report (SEIR) or the Federal Environmental Assessment (EA). The evaluations of the SEIR and EA have not changed based on information presented in the SSEIR.

General Comments

The SSEIR should be as complete and scientifically accurate as possible in order to support the conclusions of the SSEIR. In reviewing the SSEIR, Board staff find that the evaluations and resulting conclusions are not based on a thorough understanding of the area's hydrogeology or background water quality. Both the quality and quantity of data used in the evaluation of the Hydrology, Water Supply, and Water Quality were insufficient to adequately evaluate the potential impacts resulting from the proposed project.

C-1

Surface and ground water in the proposed airport complex and industrial park area flow toward Hot Creek Springs, Hot Creek Fish Hatchery, and Owens Tui Chub habitat. Cold Freshwater Habitat and Wildlife Habitat are both highly-valued beneficial uses that could be adversely impacted if the current high quality of the water is not maintained. Board staff are concerned that the project could adversely affect current high quality waters. High-quality water resources play a significant role in the health and viability of biological communities. Any adverse impact to these resources, such as decreased supply or contamination, will have significant adverse effects on those communities. These potential impacts need to be evaluated.

C-2

California Environmental Protection Agency

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Specific Comments

The following specific comments address the SSEIRs conclusions regarding water quality and quantity. Comments on the various categories will be addressed in the order presented in Table ES-1 of the SSEIR.

Category 3. Biological Resources

A United States Department of the Interior Fish and Wildlife Service (USFWS) letter, dated July 23, 2001 (Appendix J of SSEIR), states that a loss of ground water due to pumping could have severe consequences for Hot Creek springs (Hot Creek Fish Hatchery) and the Owens Tui Chub habitat. The USFWS evaluation was based on the 1997 estimate of maximum daily demand, for pumped water, of 16,000 gallons per day (gpd). This 16,000 gpd is, however, for the airport terminal only. The average daily demand for the airport complex is 54,760 gpd (1997 Mammoth Lakes Airport Water and Sewer Analysis). Furthermore, this daily average demand does not account for ground water usage by the industrial park. Board staff share the concerns of the USFWS that impacts from increased ground water pumping have not been fully defined and need to be further evaluated.

C-3

The SSEIR concludes "no mitigation measures" are necessary for water resources (Section 3.3.3.4) under the Biological Resources Category because wetlands are absent. Board staff do not concur with this conclusion without valid scientific verification of no significant impact due to ground water pumping.

C-4

The 1997 Mammoth Lakes Airport Water and Sewer Analysis (MLAWSA) was based on a single well test which is not enough data to thoroughly understand the aquifer system. Board staff feel that, at a minimum, ground water modeling should be performed to evaluate the potential for water quality impacts to biological resources due to ground water pumping. Data from steady state pumping tests, using several wells, should be developed and used to model the impacts of the ground water withdrawals necessary to provide water to all the identified water users. The modeling should also be updated, with quarterly data from airport pumping operations, to predict if any future over draft situations would arise that could have adverse impacts to Hot Creek springs and the Owens Tui Chub habitat. The effects of ground water pumping and surface water diversion on wetlands at the project site should also be evaluated. The SSEIR should also identify appropriate monitoring to evaluate the effects of the project if implemented.

C-5

Board staff concur with the conclusion that no wetlands will be impacted (Section 3.3.4.4) by airport expansion. The only wetlands area delineated at the airport is southeast of the existing runway. This area is not part of the proposed runway expansion. If the airport decides in the future to expand in this area, then further review by Board staff will be necessary to determine possible impacts to the wetlands.

Category 5. Soil/Land Transformation

The SSEIR briefly discusses issues of stormwater control, both temporary and permanent, in Category 5 and 6 (Sections 3.5 and 3.6 of the SSEIR). A more in-depth discussion of on-site stormwater issues needs to be included in the SSEIR. Topographic maps identifying potential surface run-off routes for stormwater along with identification and proposed locations of critical Best Management Practices (BMPs) control measures should be identified in the SSEIR. The excavation for the permanent drop inlets should be geologically logged and a representative percolation rate determined for each location. Board staff request that drop inlet logs and percolation rates be submitted to the Regional Board for review.

C-6

C-7

California Environmental Protection Agency

Before construction begins, the Project Proponent is required to file a Notice of Intent (NOI) and obtain coverage under the National Pollutant Discharge Elimination System (NPDES) *General Permit to Discharge Stormwater Associated with Construction Activities* (Water Quality Order No. 99-08-DWQ). The NOI must be submitted to the Stormwater Unit at:

State Water Resources Control Board
Division of Water Quality
Storm Water Unit

P.O. Box 1977
Sacramento California 95812-1977
(916) 657-0919

C-8

The project must be designed and constructed to include both temporary (during construction) and permanent measures to ensure compliance with the General Permit requirements.

Category 6. Hydrology, Water Supply, and Water Quality

The airport is located upgradient of Crowley Lake and Upper Owens River. These two water bodies are listed on the Environmental Protection Agency's Section 303(d) list of Impaired Water Bodies (impaired by excess nutrients). Long-term operation of the airport complex has the potential to contribute nutrients, along with petroleum products, via stormwater runoff to these water bodies. As part of project's evaluation, the SSEIR must consider potential cumulative effects of the proposed project, including water use requirements of the surrounding area.

C-9

The SSEIR concludes, in Section 3.6.2, that the available water supply far exceeds demand based on the MLAWSA and a single well test from 1986 which yielded a calculated transmissivity of 73.92 acre-feet per year per foot. (The units for T are ft²/d, or gal/day/foot.)

The SSEIR also estimates that the recharge to the aquifer in the airport area to be 7,500 acre-feet/year. This recharge is purported to supply the ground water. Additionally, the SSEIR states that pumping would be done from the Convict Creek drainage system, which is downgradient from the Mammoth Creek/Hot Creek Basin, so there would be no impact to the Hot Creek Basin. SSEIR also states (ES-5) that using BMPs would mitigate any potential water quality impacts from hazardous materials used on site.

C-10

The conclusions of no significant impact and no significant impact with mitigation on water quality, supply and hydrology (in Section 3.6) are based on the 1997 SEIR and EA certification and on the SSEIR. These conclusions imply that the requirements of the California Environmental Quality Act (CEQA) have been met. Board staff do not concur with the conclusions and implications of Section 3.6. and are of the opinion that the CEQA analysis is inadequate.

Based on the paucity of evidence presented, the statement that recharge water would be available for pumping (Section 3.6.1) may not be valid. Wells in the area draw water from a depth of 200 feet and recharge to this depth would depend on many factors, mainly the characteristics of the vadose zone, in order for recharge of the aquifer to occur. No data were provided to determine the time necessary for rainfall and runoff from snow melt to recharge the aquifer. Furthermore, subsurface recharge (from upgradient sources) may not be sufficient to reach the predictions in the SSEIR.

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Recharge of sewage effluent from the proposed package treatment plant discharging to a leach field would develop a relatively constant head to drive a wetted front downward through vadose zone. However, recharge would only occur in a specific area and it has not been determined whether this area is hydraulically connected to the zone being pumped or whether this would even be desirable. Impacts from discharge of waste from the wastewater plant also need to be evaluated.

C-11

The description of potential impacts due to pumping from the Convict Creek Watershed assumes there is no hydraulic connection with the Mammoth Creek/Hot Creek Watershed. It is also assumed that, under long-term steady-state conditions, no subsurface hydraulic connection would be established. Sufficient data were not provided to support this assertion. Until the area's hydrogeology is sufficiently defined and aquifer characteristics quantified, there is no way to establish whether there would be an impact on the Mammoth Creek/Hot Creek Basin from ground water pumping in the Convict Creek Basin.

C-12

The estimated ground water usage of 17.94 acre-feet per year (16,000 gpd) was for the airport terminal only. When the pumping demands for the hotel, restaurant, and condominiums are added, the annual average demand is 60.4 acre-feet (from the MLWSA). This figure does not include the industrial park use or other surrounding uses. The SSEIR concludes that the area aquifer can supply 73.92 acre-feet/foot, annually. However, this supply estimate is based data from the single well test and does not include any long-term water level data which would include both wet and dry years. It is difficult to assume that the aquifer's characteristics can be accurately determined with such limited data and Board staff do not believe the estimated yield from the aquifer is supported by the data provided. In order to provide an accurate, scientifically valid evaluation of water usage and supply, the existing and projected operational conditions and hydrogeology must be thoroughly characterized. The SSEIR and other documents have not provided sufficient data to provide this characterization.

C-13

Regarding potential hazardous material spills, the use of BMPs at the airport will mitigate against hazardous materials contamination only if the BMPs are adequate and effectively implemented. A review of the proposed *Spill Prevention Control and Countermeasures Plan* found the Plan to be inadequate.

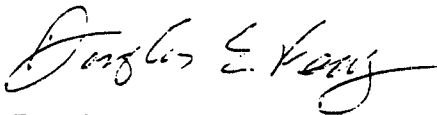
C-14

It is the Board staff's opinion that the SSEIR does not fulfill the requirements of CEQA. The surrounding area and airport complex cumulative environmental impacts have not been adequately evaluated to assess any potential impacts to water quality. We request the SSEIR be revised and re-issued as a draft incorporating responses and providing additional information to fully evaluate potential impacts of the project.

C-15

If you have any questions, please telephone me at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,



Douglas E. Feay, R.G.
Associate Engineering Geologist

cc: Attached Mailing List

DF/rp MamYosAirptSSEIR

California Environmental Protection Agency

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Sacramento, CA 95814-2922

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Bishop, CA 93514

U.S. EPA – Region 9
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C. California Regional Water Quality Control Board - Lahontan Region

Response to Comment C-1

The commentor incorrectly asserts that the quality and quantity of data used in the evaluation of the Hydrology, Water Supply, and Water Quality was insufficient to adequately evaluate the potential impacts resulting from the proposed project.

The Supplement used data from various sources to analyze the hydrology, water supply, and water quality impacts of the proposed project. These data have been explained in more detail at the request of Lahontan Regional Water Quality Control Board (commentor), in addition, at the request of the commentor well tests were conducted in January 2002. The results of these tests are included as Attachment B to these Response to Comments. [*Analysis of 96-hour Aquifer Test Data, Mammoth Yosemite Airport, Mono County, California*, Report dated February 8, 2002, by Richard C. Slade & Associates.] These additional tests reaffirm the Supplement's analysis that there are no significant impacts on hydrology, water supply, or water quality due to the construction of improvements at Mammoth Yosemite Airport proposed since the prior 1997 Subsequent EIR/EA was completed.

Consistent with CEQA Guidelines (Appendix G), Section 3.6 of the Supplement discusses the following items to analyze the potential impacts of the proposed project.

Surface Topography and Underground Water

As discussed in the Supplement, there are three surface drainage systems in the vicinity of the Airport. (See Supplement at Exhibit III-16.) **Exhibit N-8** shows the general topography in and around Mammoth Yosemite Airport, and shows that the surface runoff flows in an easterly direction. The area west of the Airport is within the western portion of the Mammoth Creek/Hot Creek watershed of the Mammoth Basin drainage system. The area south of the Airport is within the Convict Creek watershed. The drainage divide between the Mammoth Basin and Convict Creek watersheds passes through the westerly portion of the Airport. The third drainage divide lies east of Doe Ridge and flows into Crowley Lake.

The existence of the watershed divide between Mammoth Basin and Convict Creek Basin does not mean that a ground water basin divide also exists in the same place. (See Responses to Comments in 1997 Subsequent EIR/EA.) The groundwater gradient in this area is different than the surface water gradient. The groundwater gradient flows across the watershed divide in a southwest to northeast direction, from Mammoth Creek/Hot Creek water shed to the Convict Creek Watershed. (See 1986 EIR/EA at, Figure 18, *Area Groundwater Levels*.)

The Response to Comments for 1997 Subsequent EIR/EA contain exhibits showing groundwater gradient for the year 1987 and 1996 respectively. These data were obtained from Howle and Farrar (1996) and from a report entitled, "Groundwater Conditions and Potential Reuse of Reclaimed Water at Mammoth Lakes" by Kenneth Schmidt and Associates (October 1996).

Water Wells

In 1998 and 1999 three new water wells (Nos. 98-1, 99-1, and 99-2) were drilled on the Airport property. See **Exhibit N-9** for location of these wells. The results of these pumping tests, and water quality tests are supported by tests done in January 2002.

Well No. 98-1 is located west of the other two wells and Well No. 99-1 is the most easterly well. The grade of the surface of the blue clay gradually slopes from west to east. Pumping tests were conducted on both Wells 99-1 and 99-2. The water quality tests showed satisfactory primary drinking water. There were fairly high levels of iron, aluminum and zinc, which appeared to be attributable to sediments found in the samples, and it was anticipated that with usage these sediments would decrease. Water from these wells has been used since 1999 in the Airport system and the water has proven to be good quality for domestic use.

In January 2002, at the request of Lahontan Regional Water Quality Control Board (RWQCB) a pumping test was conducted on Well No. 99-1. Well No. 99-2, the Airport well, LV-19, SNARL Well, Church Well, ESN Well, and SQ Well were used as observation wells and are shown on Exhibit N-9. The purpose of these pump tests was to determine the transmissivity² of the soil, the capacity of the well, the draw down of the water table due to pumping, and the rate of recovery after pumping stopped. These tests were conducted by Triad/Holmes Associates and Richard C. Slade and Associates and support the results of previous studies, which indicated that there would be no significant impacts on hydrology, water quality and water supply in the region due to the needs of the proposed Airport improvements. (See Attachment B to Response to Comments.)

These studies demonstrate that there are three separate aquifers in the Airport influence area. The upper aquifer extends from the ground surface to a depth of approximately 60 feet. The middle aquifer extends from a depth of approximately 100 feet to 136 feet. The lower aquifer extends from a depth of 270 feet to 409 feet. The upper two aquifers, in a cobble, gravel and sand soil, produce cold, quality water. The lower aquifer, in a broken rock formation, produces warm water that smells of sulfur and is apparently of geothermal origin. The upper two aquifers are separated by a cobble clay layer. The lower two aquifers are separated by a gray blue clay layer. Airport Wells No. 99-1 and 99-2 draw from the middle aquifer and the operating Airport well, and wells on other properties surrounding the Airport appear to draw from the upper aquifer.

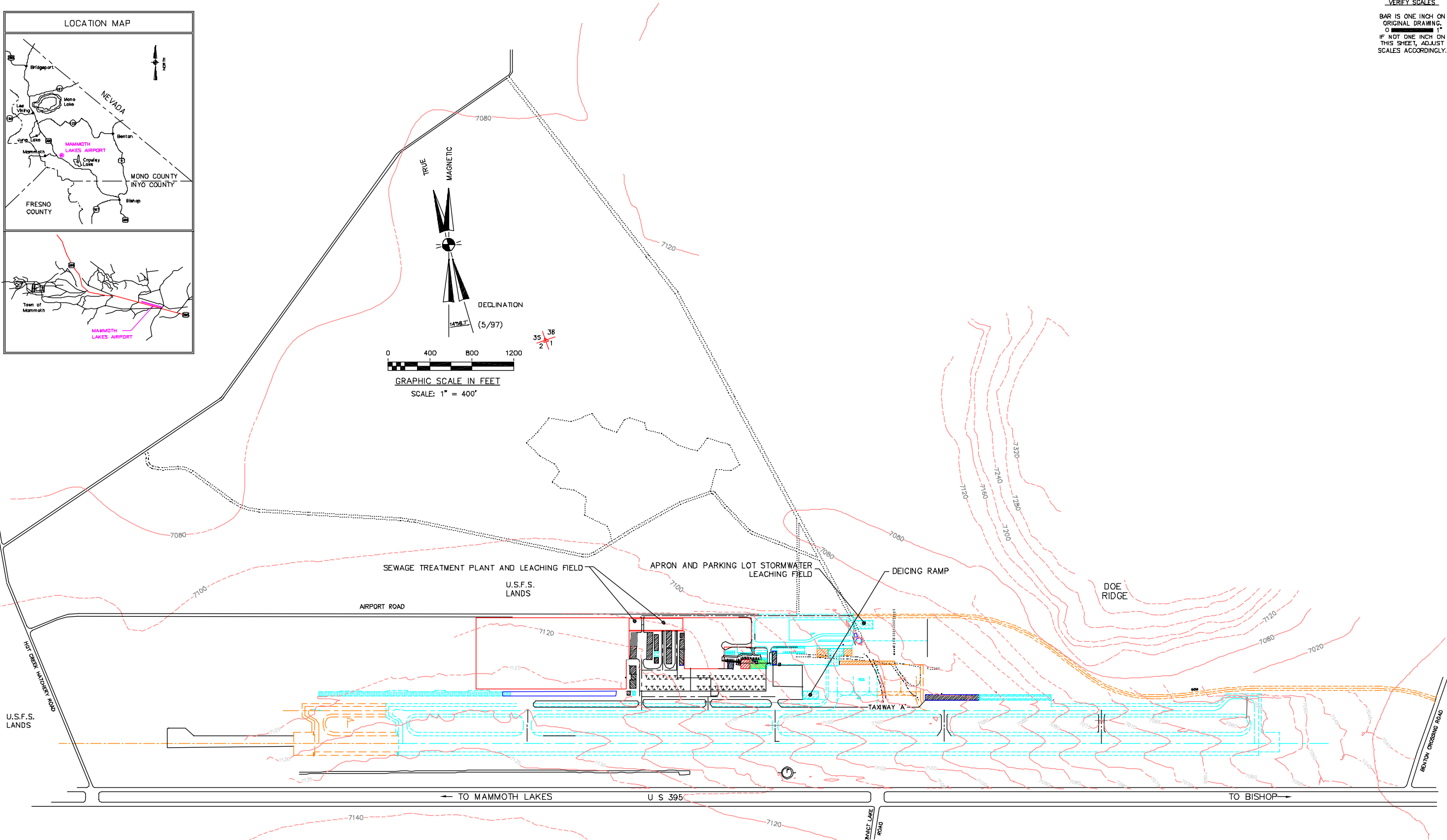
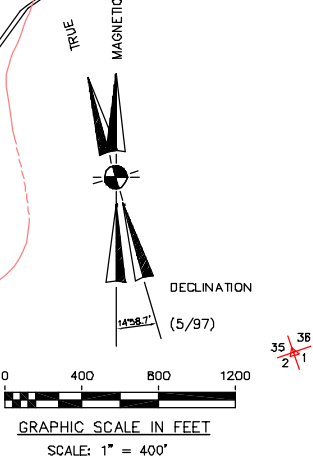
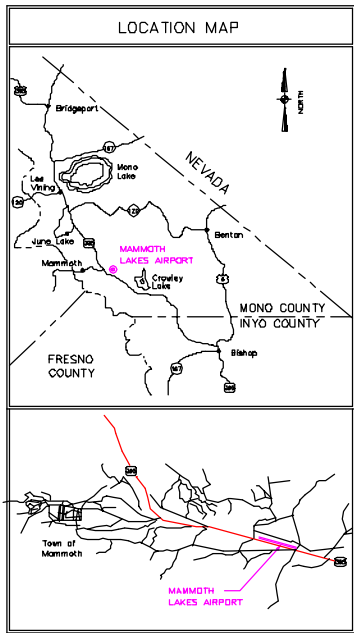
The pumping test showed shallow draw down in the well being pumped and even less draw down in the adjacent Airport well used as an observation well. The draw down occurred rapidly after pumping started, but full recovery occurred within a short time period after pumping stopped. The transmissivity was high.

These tests indicate a large water quantity in the aquifer being pumped, resulting in a minimal draw down and rapid recovery after the tests have ended. The tests showed no effect on groundwater in the upper aquifer therefore it can be concluded that other wells in the area which are at greater distance from the Airport wells and appear not to be in hydraulic continuity with the Airport wells would not be affected even if the pumping is at higher rates and for longer duration of time (much greater than the 4-day aquifer test).

Typical geologic cross sections were prepared by Triad/Holmes and Associates showing the generalized geological formation of the upper soils in this region. These sections are included in Attachment C to Response to Comments.

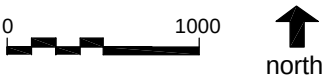
² Transmissivity (T) is a measure of the ability of an aquifer to transmit water to a pumping well, and is expressed in units of gallons per day per foot of aquifer width (gpd/ft).

VERIFY SCALES.
BAR IS ONE INCH ON
ORIGINAL DRAWING.
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

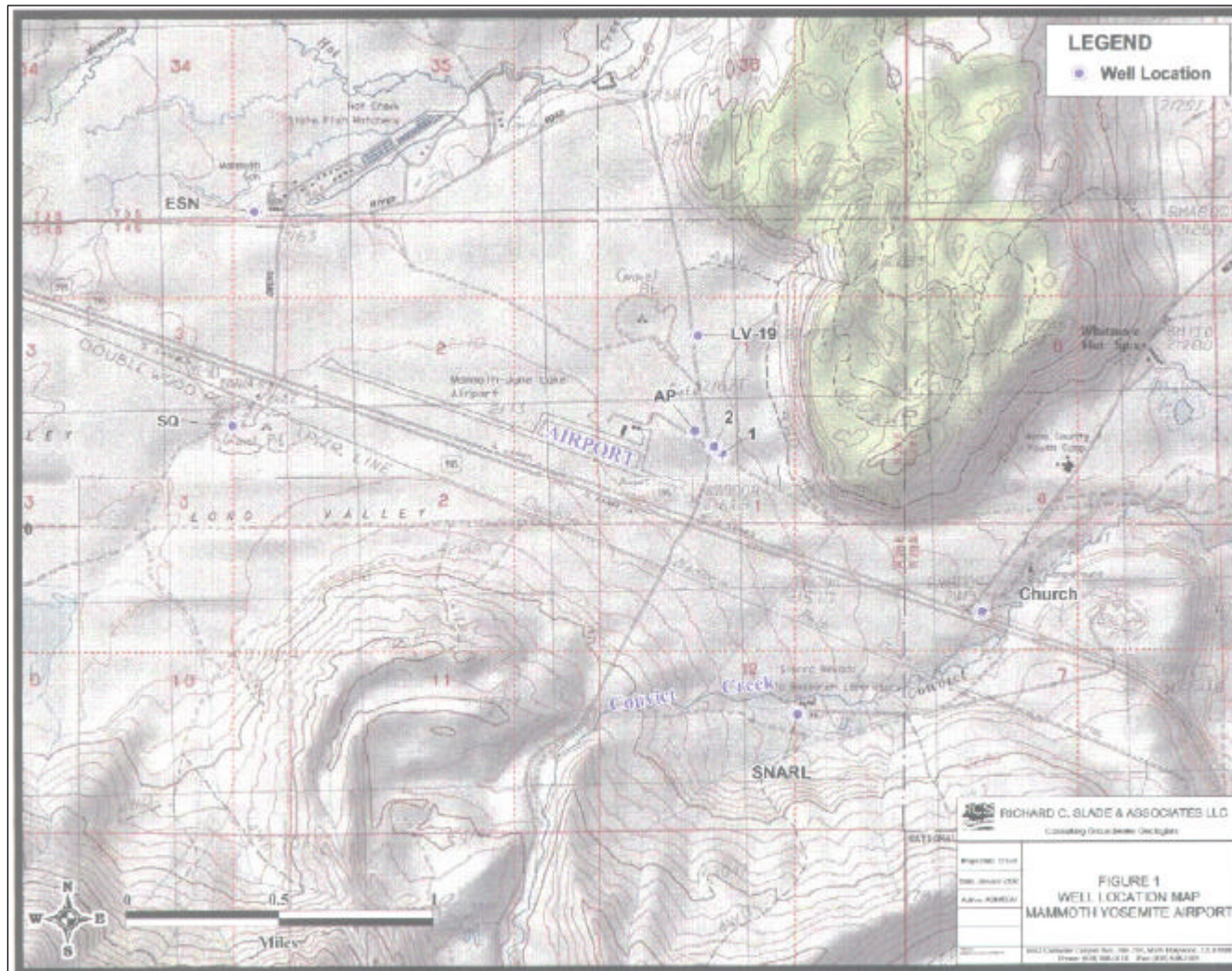


Source: Reinard W. Brandley, Consulting Airport Engineer
Prepared by: Ricondo & Associates, Inc.

Exhibit N-8



Mammoth Yosemite Airport Layout Plan



Source: Richard C. Slade Associates, LLC.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-9

not to scale

Well Location Map Mammoth Yosemite Airport

Storm Water Discharge

Because of the porous soils on and adjacent to the Airport, no surface storm water currently runs off the Airport property or is expected to run off the Airport property as a result of the proposed improvements. The upper 60 to 70 feet of soil consists of cobbles, rock, and sand, which are pervious and storm water infiltrates directly into the surface stratum. All storm water from the runway/taxiway complex drains off the pavement to the soil at the edge of pavement and immediately infiltrates the ground. The proposed development includes widening and lengthening the runway and taxiway. The only effect on storm water runoff by this widening and lengthening would be a displacement of the point of entry into the ground by a maximum of 100 feet. All storm water that falls on the Airport and does not evaporate would percolate into the existing soil.

All storm water from the commercial aircraft parking apron, the future terminal building, and the automobile parking lot would be collected in a storm drainage system, discharged through an oil/water separator, and then discharged into the ground in a leach field. See Exhibit N-8 for location of leach field. Ever since Mammoth Yosemite Airport was paved and expanded in the 1960s there has been no evidence of any storm water runoff leaving the Airport property. There would be no significant impacts due to materials on the runway being washed over the side and into the soil with storm water due to the relatively small increase in the quantity of these materials as the changes in the proposed project do not increase the total number of aircraft operations. In fact, the total number of aircraft operations is less than what was forecasted in the 1997 Subsequent EIR/EA.

The runways and taxiways are crowned in the center and all runoff from the pavement drains from the center of the item to the pavement edge. Observations have shown that in the rainy season the water infiltrates the sand and gravelly soil soon after leaving the pavement. The lack of any erosion in the sand and gravelly soils beyond the pavement edges is further evidence of high percolation. In the spring, while the ground is still frozen and the snow piled in the infield areas of the Airport by snow plowing operations melts, some water will accumulate in the areas between the runway and taxiway but this water quickly infiltrates the soil when the ground thaws. Even in these conditions there is no storm water runoff from Airport property.

All of the storm water that now falls on the paved aircraft and automobile parking areas is collected in a storm drain system and discharged into a leach pit. This leach pit is approximately 10' x 20' x 6' deep and it has never been observed to be full of water, and any water that accumulates in the leach pit infiltrates into the soil immediately after the storm.

Surface water does not and would not, as a result of the proposed project, drain off the Airport property. Therefore the Hot Creek Springs, Hot Creek Fish Hatchery and the Owens tui chub habitat would not be affected by storm water runoff from the Airport.

Sewage Treatment

As specified in Section 3.6 of the Supplement, a new package treatment plant would be installed on the Airport and would be located as shown on Exhibit N-8. This treatment plant would be sized to accommodate current and forecast use. The design and maintenance of this package treatment plant would be in accordance with the requirements and regulations of the RWQCB and Mono County Health Department. The proper permits for the discharge of waste would be obtained from these agencies prior to the installation of these facilities. No wastewater disposal system would be within 100 feet of a stream or in areas where groundwater is believed to be less than five feet below the

surface of the ground. The discharge of either treated or untreated wastewater to streams would be prohibited. Wells to sample groundwater would be provided to monitor both performance of the subterranean wastewater disposal and to access adverse water quality impacts. Treated discharge from the treatment plant would be discharged into the upper gravel layer through a leach field. Sludge from the sewage treatment plant would be disposed of at the Benton Crossing Land Fill. This facility already accepts sludge from the Mammoth Community Water District. A complete report of waste discharge for the package treatment plant would be filed with Regional Board staff at least 120 days prior to plant construction.

Conclusions

All water at the Airport for irrigation and domestic use would be obtained from Well 99-1 and Well 99-2 pumping from the middle aquifer and carried through the existing and future water system, including the existing storage tank. All water used, except for the landscaping water, would be delivered back into the upper stratum of gravelly soil at the sewage treatment plant leach field. Some water used for irrigating landscaping would return to the atmosphere by evaporation or transpiration. It is anticipated that in an average year, eight to nine acre-feet of water would be used for landscaping. Storm water would be returned to the upper stratum of sand and gravel. Water from the runway and taxiway complex would be returned to the upper stratum of sand and gravel at the edge of the runway/taxiway, which would be within 100 feet of the location where it falls. Storm water from the apron, terminal, and parking lot would be returned to the upper sand and gravel stratum at the storm water leach field area.

The sewage treatment plant leach field infiltration area and the apron storm water leach field infiltration area are both located between the active water wells and the Hot Creek Fish Hatchery and Hot Creek Springs and Owens tui chub habitat. The net effect is expected to result in some groundwater draw down in the center aquifer at the wells and some groundwater build up in the upper aquifer at the leach fields. The build up should not be extensive since the soil is so porous that water discharge would quickly dissipate. This build up, however, would protect the water supply at the Hot Creek Springs and the Hot Creek Fish Hatchery from being depleted or the groundwater from lowering.

Response to Comment C-2

Please see Response to Comment G-1. The comment raises issues that were analyzed in the prior EIRs. The Supplement only analyzes the potentials impacts of the changes to the proposed project since the 1997 Subsequent EIR/EA. There should be no effect on the surface or groundwater at the Hot Creek Springs, Hot Creek Fish Hatchery, or Owens tui chub habitat. The water gradient is such that water infiltrating the groundwater would flow away from the Hot Creek Springs, Hot Creek Fish Hatchery, and Owens tui chub habitat, eliminating the risk of contamination of groundwater in these areas. (See Response to Comments in 1997 Subsequent EIR/EA.) Water quality of discharge of storm water and treated discharge would remain good because of sewage treatment and oil-water separator.

The well test conducted on the Airport Well No. 99-1 shows that the Airport wells draw from the middle aquifer while the wells and groundwater at the Hot Creek Springs, Hot Creek Fish Hatchery and Owens tui chub habitat areas are influenced by the upper aquifer. (See Attachment B to these Response to Comments.) Pumping from the Airport well for four days at a rate higher than predicted average discharge from the two Airport wells, 45 gallons per minute (gpm) showed no draw down in

the wells located in the upper aquifer and only minor local draw down in the middle aquifer. After pumping was stopped in the well test, full recovery was rapid, indicating a high porosity aquifer and a large water supply.

All recharge of storm drain water and treated sewage discharge would be to the upper aquifer, which would tend to raise the groundwater table at the Hot Creek Springs and Hot Creek Fish Hatchery rather than lower it.

The operation of the Airport water wells and sewage and drain water treatment facilities is not expected to have any detrimental effect on the water supply, water quality, or discharge at the Hot Creek Springs, Hot Creek Fish Hatchery and Owens tui chub habitat.

Response to Comment C-3

Please see Response to Comment C-1. The average daily demand for the Airport complex, including the Airport facilities and the commercial developments, is 54,760 gallons per day (gpd), which is roughly equivalent to 38 gpm. The average daily demand for the Sierra Business Park located north and west of the Airport is 13,508 gpd (9.4 gpm)³. The wells providing water to the Sierra Business Park draw from the upper aquifer as explained in Response to Comment C-1. The wells that would serve the Airport draw from the middle aquifer. The well tests conducted on the Airport wells showed no draw down on the wells surrounding the Airport that draw from the upper aquifer and only local minor draw down in the water level for the middle aquifer. The Airport wells draw from a different aquifer than the other wells. The total demand for both the fully developed Airport and fully developed Sierra Business Park is 47.4 gpm.

The Airport test well was pumped at a rate of 45 gpm continuously for four days, which represents 118 percent of the average daily demand for the fully developed Airport. This pumping test showed high transmissivity values, small and local draw down, and very rapid recharge after pumping stopped, indicating a large supply of water in the aquifer and only minor draw down even after extended periods of time. (See Attachment B to these Responses to Comments.) The tests also indicated that pumping from the middle aquifer at the Airport had little or no effect on the water levels in the upper aquifer. These tests support the previous available data and the conclusion in Section 3.6 of the Supplement that there is an adequate good quality water supply in the aquifer which would not be effected by the proposed project and there would be little or no effect on the water currently available for use at the Hot Creek Springs and Owens tui chub habitat.

Rain falling on the runway and taxiway paved surfaces would flow across the pavement to the edge of the pavement and then would infiltrate into the pervious soils that form the upper aquifer. The surface waters from the commercial aircraft parking area, the automobile parking area, and the terminal building would be collected and disposed of in a surface drainage leach field and would recharge the upper aquifer. The treated sewage discharge from the package treatment plant would also recharge the upper aquifer. The quality of the water discharged from the sewage treatment plant would be controlled by the operation of the plant itself. The quality of the water from the storm drainage system would be controlled by passing the water through an oil/water separator prior to discharge into the leach field. Therefore, water quality will not be adversely affected by the proposed project.

³ *Sierra Business Park Specific Plan and Draft EIR* prepared by Baker Planning and Environmental Services dated July 21, 2000.

Due to the operations at the Airport, there would be some water pumped from the middle aquifer and deposited in the upper aquifer and all surface runoff would be re-deposited in the upper aquifer. The net effect would be a slight humping of the water table in the upper aquifer, which would protect the Hot Creek Springs and Owens tui chub habitat from water table degradation.

Response to Comment C-4

Please see Responses to Comments G-1 and G-3. As stated in Section 3.3.1.4, a wetlands analysis and delineation was prepared by the office of Jones and Stokes Associates, Sacramento, California along with a special-status species survey in a report entitled Biological Study for the Mammoth Yosemite Airport Expansion Project, September 2000. (See Supplement at Appendix I.) The results of these studies show that there are no waters of the United States, including wetlands, located on the project site for the proposed Runway 9-27 extension and the Airport development area. The information presented in the Responses to Comments C-1 and C-3 and in the Biological Study confirm the conclusion stated in the Supplement.

Response to Comment C-5

Please see Responses to Comments C-1 and C-3. A well test was conducted at the request of Lahontan Regional Water Quality Control Board (RWQCB) on one of the Airport wells using the other Airport wells and surrounding wells as monitoring wells. These tests were conducted continuously for a period of four days. The methodology, location, duration, and type of testing were all coordinated with the Victorville Office of the RWQCB Lahontan Region, and the tests were conducted in strict accordance with the agreed methodology. (See Attachment B to these Response to Comments.) The results of these tests corroborate previously available data and show that the Airport wells draw from the middle aquifer and transmissivity values are high and the quantity of water available in this aquifer is very large compared to the withdrawal, as was previously understood to be the case.

Response to Comment C-6

Please see Responses to Comments G-1, G-3, and G-5. There would be no effect of groundwater pumping and surface water diversion on wetlands at the project site because there are no wetlands on or near the proposed Airport improvements site. There is no surface storm water runoff from the site. There is minimal surface runoff diversion on the runway/taxiway complex – for a distance of approximately 100 feet. There is some diversion of runoff water from the apron and roadway section in that this water is collected in a storm drain system and discharged through an oil/water separator into a storm water leach field – approximate diversion of 2,000 feet. All of the storm water that drains off from the runways and taxiways and into the storm water leaching facility infiltrates the pervious sand, gravel and cobble layer and does not run off the site.

A series of percolation tests were conducted in 1999 for a study done for Hot Creek Aviation development project. These tests were done on the infield of both east and west end of the runway at Mammoth Yosemite Airport. These tests showed a high percolation rate at these sites ranging from 1 to 4 minute per inch (min/inch).

The following is a list of critical Best Management Practices control measures incorporated as part of the proposed project.

- a. No oil changes or car maintenance would be allowed on-site.
- b. No wastewater disposal system would be within 100 feet of a stream or in areas where ground water is believed to be less than five feet below the surface of the ground.
- c. The discharge of either treated or untreated wastewater to streams would be prohibited.
- d. Wells to sample groundwater would be provided to monitor both performance of the subterranean wastewater disposal and to access adverse water quality impacts.
- e. Sewage effluent will be treated by a package plant that would provide secondary treatment with supplemental nitrate reduction.
- f. All new pavements for the commercial aircraft parking apron, automobile parking lot, and terminal roadway will be designed such that all the drain water from these areas would be collected in inlets and pipe structures.
- g. These drainwaters would be carried through an oil/water separator to separate any oils from the stormwater.
- h. The discharge from the oil/water separator would be tested on a routine basis to determine the continuing effectiveness of this type of treatment.
- i. To address accidental spills of fluids, such as aviation fuel the Town has adopted a Spill Prevention, Control and Countermeasure Plan for the Airport.

Response to Comment C-7

Permanent drop inlets proposed for the project would be shallow and are not expected to be deeper than eight feet, which would place all of the inlet structures in the upper gravel layer. The inlet structures would be watertight, as would the underground piping system in the apron and roadway, so that storm waters collected in these areas would be diverted to the oil/water separator before they are discharged into the leach field. The oil/water separator would be monitored and maintained in such a manner as to prevent hydrocarbon build up. The excavation for the inlet structures would be geologically logged if required. As discussed in Response to Comment C-6, percolation tests conducted on the soils in this area showed a high percolation rate, which is consistent with the lack of surface runoff of storm waters at this site.

Facilities would be available at the Airport for deicing aircraft. Fifty percent (50%) diluted glycol would be used for this purpose. The glycol breaks down readily and rapidly when exposed to the atmosphere, but to protect against any glycol contamination an area would be set aside on the apron for deicing aircraft. This area would drain to a central inlet structure. Piping from this inlet structure would be valved such that when deicing operations are taking place all of the glycol and drain water from the deicing area would be drained into a holding tank and at all other times the drain water would discharge directly into the oil/water separator and leach field. The glycol collected in the holding tanks would be trucked off site and properly disposed of or recycled at an approved location.

There would only be a few deicing operations at the Airport since most aircraft operations occur in Visual Flight Rule (VFR) weather, in which deicing is generally not required. During the past 8 to 10 years, there have only been three or four aircraft per year that required deicing. It is not expected that deicing requirements would increase, and the large airline aircraft proposed to use this Airport would generally operate in good weather conditions and would have short turnaround times, which would further minimize the requirement for deicing the air carrier aircraft.

Response to Comment C-8

As specified on Page I-9 of the Supplement, the Airport would file a Notice of Intent (NOI) and obtain coverage under the National Pollution Discharge Elimination System (NPDES) *General Permit to Discharge Stormwater Associated With Construction Activities*. This notice will be filed with the State Water Resources Control Board Division of Water Quality, Storm Water Unit, Sacramento, California. The project will be designed and constructed to include both temporary (during construction) and permanent measures to insure compliance with *General Permit* requirements.

Response to Comment C-9

Please see Response to Comment C-1. There would be no storm water runoff from the Airport in the future and there is no storm water runoff occurring today because of the high infiltration rate of the surface gravelly stratum. All water pumped from the groundwater, except that used for landscaping, would be recharged into the existing groundwater.

There would be little risk of contributing nutrients along with petroleum products via storm water runoff to Crowley Lake or the Upper Owens River since there would be no storm water runoff that reaches these water bodies.

Response to Comment C-10

Please see Response to Comment G-1. The pumping tests on the Airport well conducted in January of 2002, at the request of the Regional Water Quality Control Board, Lahontan Region, showed that the water from the wells is pumped from the middle aquifer, that this pumping does not affect the water table in the upper aquifer from which most other wells in the area draw, and that when pumped at the average water demand for full build-out of the Airport and the Sierra Business Park, only a small local draw down of water is realized. When pumping stops, the recovery is rapid. These data show high transmissivity values, a large supply of water available, and little or no effect on the groundwater in surrounding regions.

Response to Comment C-11

Regional Geological Maps and Geological Cross Sections for the area have been prepared by Triad/Holmes & Associates and are included in Attachment C to Response to Comments. These sections show the extent of the pervious layers in the region. The results of well tests conducted in January 2002 indicate the upper soils are separated into two aquifers by a relatively impervious cobbly clay layer. All water pumped from the Airport wells would be taken from the middle aquifer. Water recharge would be into the upper aquifer. Other wells in the area draw from the upper aquifer.

Response to Comment C-12

Please see Responses to Comments C-1 and C-11.

Response to Comment C-13

Please see Response to Comments G-1. The new well test conducted in January 2002 corroborate previously available data and clearly shows adequate supply of groundwater to satisfy Airport demands at full build-out, as well as the demands for the Sierra Business Park, without affecting wells on surrounding properties or groundwater characteristics in either the upper or middle aquifers.

Response to Comment C-14

The comment asserts that the existing Spill Prevention Control and Countermeasures Plan is not adequate. The comment fails to state, however, in what respects the Plan is not adequate or what it would need to include to become adequate. In any case, the Town has prepared a new plan, the draft of which is attached as Attachment D to Response to Comments. A Professional Engineer would certify this draft plan, once all the design elements of the proposed project at Mammoth Yosemite Airport have been finalized.

Response to Comment C-15

The lead agency believes that the information obtained from the tests conducted in January 2002 corroborates previously available data, which formed the basis of the analysis in the Supplement.

The Supplement analyzes the following items to determine whether there are potentially significant impacts on water from the proposed project.

- Creates or contributes runoff which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff;
- Violates applicable water quality standards or water discharge requirements;
- Substantially depletes groundwater resources or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level;
- Substantially alters the existing drainage network;
- Place within a 100-year flood hazard area, structures which would impede or redirect flood flows.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

The information presented in the Supplement and in this response to comments clearly show that the proposed project does not have any significant environmental impacts Hydrology, Water Supply and Water Quality and do not meet any of the above items. Please see Section 3.6 of the Supplement for more details.

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS - M.S.#40

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*Flex your power!
Be energy efficient!*

Mr. William Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

November 21, 2001

Dear Mr. Taylor:

Re: *Town of Mammoth Lakes' SDEIR (Prior SCH# 96112089) for the
Mammoth Yosemite Airport Expansion Project; SCH# 2000034005*

The California Department of Transportation, Division of Aeronautics, reviewed the above-referenced document with respect to airport-related noise and safety impacts pursuant to CEQA. The following comments are offered for your consideration.

According to the SDEIR, the proposed improvements at Mammoth Lakes Airport are needed to allow the airport to support air carrier service. Since the improvements will include a runway extension, the Division of Aeronautics will require an amended State Airport Permit. The airport will not be allowed to have commercial service until the Division of Aeronautics has issued an amended permit. Please **amend** the EIR to include language stating the need for an amended airport-operating permit by the Division of Aeronautics. For assistance with the permit requirements, the applicant should also be advised to contact our Aviation Consultant for Mono County, Mr. Jim Michel, at (916) 654-5253. The plans to lengthen, strengthen and widen the runway and extend the taxiways should also be submitted to Mr. Michel for review.

D-1

As part of the amended permit process, we must ensure that the proposal is in full compliance with CEQA. In addition to reviewing the draft EIR, we will also require copies of the Final EIR and the Notice of Determination should the project be approved. The proposal should also be submitted to the Mono County Airport Land Use Commission (ALUC).

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Planner

c: State Clearinghouse, Mono County ALUC, Mammoth Yosemite Airport

D. Caltrans Division of Aeronautics

Response to Comment D-1

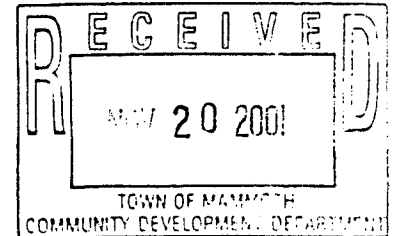
A new State Airport Operating Permit would be obtained from Caltrans Division of Aeronautics before resumption of commercial air service at Mammoth Yosemite Airport. The Final Supplement will be provided to the Division of Aeronautics as will a Notice of Determination upon the Town of Mammoth Lakes action on the Project. The Mono County Airport Land Use Commission (“ALUC”) is on the mailing list for all of the CEQA documentation made available to the public.

DEPARTMENT OF FISH AND GAME

Eastern Sierra-Inland Deserts Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
(760) 872-1171



November 16, 2001



Mr. Bill Taylor
Senior Planner
Town of Mammoth Lakes
Community Development Department
P.O. Box 1609
Mammoth Lakes, CA 93546

**Mammoth Yosemite Airport Expansion Project
Mammoth Yosemite Airport
Draft Supplement to Subsequent Environmental Impact Report
SCH # 2000034005
Mono County**

Dear Mr. Taylor:

The Department of Fish and Game has reviewed the Draft Supplement to Subsequent Environmental Impact Report (SSEIR) for the Mammoth Yosemite Airport Expansion Project, SCH #2000034005. The revisions to the proposed project that are the subject of this SSEIR include four components: extension of the runway by 1,200 feet (rather than 2,000 feet); increase in runway width from 100 feet to 150 feet; replacement of an existing 4.8 foot barbed wire fence with an 8-foot chain link security fence, and construction of a new package wastewater treatment plant (instead of a leach field).

The Department is providing comments on this SSEIR as the state agency having the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish & Game Code section 711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish & Game Code section 1802). The

Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish & Game Code Section 702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. Sec. 15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

The Department has written comment letters addressing the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) prepared by the Federal Aviation Administration for this project dated March 16, 2000, November 14, 2000, January 8, 2001, and April 19, 2001. We responded to the Notice of Preparation for this project on May 11, 2001. These letters are hereby incorporated by reference into this letter.

E-1

Potential environmental impacts include, but are not necessarily limited to, increased noise and adjacent use impacts to Department hatchery operations and residences at the Hot Creek Fish Hatchery; direct loss of important wildlife habitat for mule deer, sage grouse, and mountain lion; indirect impacts to sage grouse foraging and nesting habitat and leks; increased mortality to sage grouse as a result of project fencing; disturbance to deer migration areas and increased road kills from project-related facilities and operation; disruption of seasonal foraging areas and patterns for raptors including bald and golden eagle, northern harrier, American peregrine falcon, Swainson's hawk, prairie falcon, American kestrel, red-tailed hawk, ferruginous hawk, rough-legged hawk, and other raptors; disturbance to nesting waterfowl and other aquatic and riparian birds; alteration in the quantity or quality of surface or ground water, including impacts to spring flow, habitat for Owens tui chub, and domestic water supply for Fish Hatchery residences.

The document discusses earlier environmental documents prepared for the project, and states that the only project changes which need to be discussed in this SSEIR include those mentioned in the opening paragraph above. However, CEQA Guidelines 15162 also provides that "no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:.....3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete.....shows any of the following.....a) the project will have one or more significant effects not discussed in the previous EIR or negative declaration...". The Department believes that the new information of substantial importance which was not known and could not have been known at the time the 1986 EIR and 1997 Subsequent EIR were certified includes recent genetic investigations conducted by University of Denver indicating

E-2

that the Mono County/Lyons County population of sage grouse is genetically distinct from other populations of sage grouse throughout its range, and therefore, is a small, isolated population which deserves careful management attention. This was not known at the time the 1986 and 1997 documents were certified. The awareness of the decline of sage grouse throughout its range, necessitating petitions to list the Gunnison sage grouse in Colorado and eastern Washington population of sage grouse, has also increased since the 1986 and 1997 documents were certified. Therefore, the Department believes the entire Mammoth Yosemite Airport Development Project Master Plan as described in the 1986 EIR and 1997 Supplement, including hotel, condominiums, roads, and any other associated infrastructure, should be analyzed to evaluate potential significant impacts to this small, genetically distinct and isolated population of sage grouse.

E-2

The Department has brought up our concerns regarding the unique status of this sage grouse population in all of our previous correspondence. The current SSEIR does not address this issue. The Department believes the final document should more fully discuss this issue, as the current SSEIR appears to minimize the importance of this unique resource.

The Department also disagrees with conclusions in the SSEIR that "no significant impact to sage grouse or their habitat is expected to occur as a result of the introduction of commercial aircraft service at Mammoth Yosemite Airport". As the document states on Page 111-40, nest initiation rates and distances females move to establish nests could play a role in the long-term viability of the Long Valley sage grouse population. No conclusions have been reached at Jackson Hole Airport regarding nest initiation rates and distances females move to nest. Therefore, one cannot logically make the assumption that the proposed Mammoth Airport improvements will not impact nest initiation rates and distances moved to nest, thereby impacting long-term viability of the Long Valley population. The fact that two nests were located outside the airport security fence at Jackson Airport tells us nothing about whether those young were successfully fledged into the population.

E-3

The Department believes that statements attributed to sage grouse researchers and data collected by these researchers should be accurately characterized in the final document. The Department is concerned that statements attributed to Dr. Robert Gibson may have been misinterpreted in the SSEIR. Any misunderstandings regarding data used in the SSEIR should be clarified in the final document. The Department continues to believe that indirect, cumulative, and growth-inducing impacts to sage grouse in Long Valley could be significant, and the final document should be revised to include mitigation measures to address this impact. The SSEIR acknowledges that cumulative, range-wide impacts such as habitat loss and drought, are likely contributing to the range-wide decline of sage grouse. This argues for careful analysis of additional developments producing additional habitat loss and disturbance.

E-4

The SSEIR does not adequately analyze the cumulative impacts of the proposed project on the mule deer migration corridor or the Long Valley sage grouse population. Only two projects, the Sierra Business Park and Airport Commercial Development Plan, are acknowledged to have potential for cumulative impacts to wildlife resources. This does not make sense when one is analyzing the impacts to a migratory species that moves many miles between winter and summer range, such as the Round Valley and Casa Diablo deer herds. These deer are absolutely dependent on the maintenance of the migration corridor for the maintenance of the herd. All of the projects along the migration corridor impact the ability of the deer to move along the corridor between winter and summer ranges.

E-5

In particular, SSEIR is misleading in its summary of impacts associated with the Rimrock Ranch project. As we stated in our letter to Mono County on the DEIR for Rimrock Ranch, the 100-acre parcel that the Department purchased several years ago was purchased as a project in and of itself, and was not considered as part of any development project at the time, or as mitigation for the development of the remaining 80 acres. When the DEIR for Rimrock Ranch was released, the Department commented to Mono County that the loss of another 80 acres within the migration corridor was a significant impact and mitigation for those acres should be required. As stated in our September 8, 2000 letter to Mono County:

"The Department also disagrees with the statement on Page 72 of the Draft EIR that implementation of the Rimrock Ranch Specific Plan will not produce cumulative impacts because the subject property has been identified for development in the Wheeler Crest Area Plan and is adjacent to existing developed areas. The Department believes any and all additional development within the Round Valley Deer Herd migration corridor and winter range will likely have cumulative impacts which should be addressed in any environmental document produced for the area. Some of these developments include Pine Creek Communities at Rovana (Inyo County), Sierra Business Park, Mammoth Airport Expansion, Lakeridge Ranch, and developments within the Town of Mammoth Lakes."

E-6

The Department also disagrees that the Sierra Business Park will not contribute to significant cumulative impacts. Although the DEIR for Sierra Business Park was approved, the Department does not agree with its conclusions. As stated in our September 5, 2000, letter to Mono County:

"The document also does not address potential impacts to the deer herd migration corridor that roughly parallels Highway 395 from Mammoth south to Round Valley. The EIR should contain an analysis of the cumulative impact to the Round Valley Deer Herd of developing additional land located within this herd's migration corridor. In summary, we believe the document as written is

incomplete and should be revised and recirculated to include discussions of the above items, plus proposed mitigation measures to offset impacts identified above."

"The statement made on Page 60 that the impact to the sage grouse lek that is ½ mile away is less than significant because the site is located in an excavated basin that is not used by this lek for nesting or breeding, is unsubstantiated by the evidence presented in Appendix D, Biological Assessment. Information presented on Page 3-1 of the Biological Assessment states that the Western States Sage Grouse Committee established a set of guidelines regarding vegetation manipulation of sage grouse habitat. The guidelines state that the area within 1.8 miles of a lek is important for nesting. Although the vegetation on the project site is unsuitable for nesting, increased activity and human use of the site could nevertheless disrupt nesting activity around the project site. The speculation that the proposed project's impacts on the sage grouse lek are less than significant should be verified by a qualified biologist familiar with sage grouse biology and impact analysis.

E-6

The Department also had the following comments regarding cumulative impacts of the Crowley Lake Estates project in our comment letter of September 12, 2001, to Mono County:

"The Department believes the Cumulative Impact analysis found on page 113 of the DEIR does not adequately address the cumulative impacts to the Round Valley herd of the proposed development. As stated above, the incremental loss of habitat along the migration corridor, increased harassment of deer by dogs, vehicles, noise, lighting, and human presence, continues to negatively impact the deer resource. The Department believes that mitigation for the incremental loss of deer habitat is required."

In summary, the Department believes that the proposed project, when analyzed in the context of all of the other proposed and approved projects within the deer migration corridor, will have a significant cumulative impact on the mule deer resource. The final document should contain a more thorough analysis of the cumulative impact of the proposed project on the Round Valley and Casa Diablo deer herds, and offer potential mitigation measures to offset the impact. Potential mitigation measures could include purchase of habitat within the migration corridor, contribution to a land trust or other entity to purchase habitat within the migration corridor, or other measures. A regional, multi-agency approach will be necessary to address these impacts.

E-7

The mitigation measures on Page III-57 call for the security fence to be monitored for the effectiveness of the fence design for reducing raptor and raven perching. The fence design is also proposed to be monitored to determine its

effectiveness in preventing deer from funneling out onto Highway 395. These mitigation measures should also include a mechanism to modify the fence design and location based on the results of the monitoring.

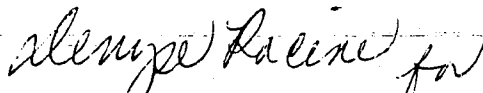
E-8

The SSEIR also states that a colony of bank swallow, a State listed Threatened species, has been observed nesting in the gravel pit, which is proposed for revegetation as mitigation for the loss of deer and sage grouse habitat. Other sites are also proposed in the SSEIR as revegetation sites. The Department recommends that additional sites be evaluated as revegetation sites. If the gravel pit is used as mitigation for the loss of deer habitat, it is likely that the site will no longer be suitable for bank swallow nesting. This impact should be addressed in the final document, or an alternate site found. Disturbance to the bank swallow colony will require an Incidental Take Permit pursuant to Fish and Game Code Section 2081 from the Department.

E-9

The Department may be providing additional detailed comments relative to impacts to sage grouse and mule deer. Thank you for the opportunity to comment on the SSEIR. If you have any questions, please contact Ms. Denyse Racine, Environmental Scientist, at (760)872-1158.

Sincerely,



Darrell M. Wong, Supervisor
Habitat Conservation Program

cc: Brian Grattidge, State Clearinghouse
Carolyn Yee, Caltrans
Steve Addington, BLM
Kathleen Morse, Inyo National Forest
Janill Richards, Deputy Attorney General

E. Department of Fish and Game

Response to Comment E-1

The Town of Mammoth Lakes acknowledges that the commentor has the statutory and common law responsibility with regard to fish and wildlife resources and habitat. Prior comments by the commentor were considered during the scoping process for the Supplement and are addressed in the Supplement, or earlier environmental documents.

Response to Comment E-2

With respect to legal requirements for preparing a supplemental EIR, please see Response to Comment B-4.

The genetic distinction of the Mono/Lyons Counties sage grouse populations has not been formally recognized by any agency with management authority over the species and, therefore, is still speculative. Petitions to list the sage grouse in Colorado and Washington state, both a thousand miles from the project site, are irrelevant to this analysis. Further, the commentor's web site itself states that Mono County, along with Lassen County, has the most stable sage grouse population in California. (See <http://www.dfg.ca.gov/licensing/sagegrse/sagegrouse.html>.) This discussion plainly does not indicate that there are problems with the sage grouse population, contrary to this comment.

The Supplement fully analyzes potential impacts to the sage grouse from changes in the project since the 1997 Subsequent EIR/EA. (See Supplement at Section 3.3.1.2 and Section 3.3.2.2.)

Response to Comment E-3

Researcher Matt Holloran, Wyoming Cooperative Research Unit, University of Wyoming, provided an update on the two sage grouse nests that were located directly outside the Jackson Hole Airport security fence (within 300 yards of the fence), in a location where aircrafts fly as low as 160 feet above ground. The two nests were from one female, and the one nest that contained eggs was predated.

According to Mr. Holloran, if nest initiation rates are declining at the Jackson Hole Airport, one would expect to see a gradual decline in recruitment of male sage grouse. However, the general trend at the Jackson Hole Airport, as elsewhere, is a decline that cannot be attributed to one factor, rather the decline is likely the result of cumulative, long-term impacts including drought and habitat loss and conversion.

Information on nest initiation rates and distances females move to nest for sage grouse at the Jackson Hole Airport is available in the 2001 Annual Report prepared by the Wyoming Cooperative Research Unit on sage grouse seasonal habitat use and survival in Jackson Hole, Wyoming. (The information is presented as a progress report. The project has not been completed; therefore the information presented is not complete. Any speculation is the author's and is not peer-reviewed or published.)

The following demographic results are present in the report:

1. 37 potential nesting (radio-tagged) females
2. 30/37 (87 percent) initiated nests
3. [7/8 (88 percent) in 1999; 11/13 (85 percent) in 2000; 12/16 (75 percent) in 2001]
4. 15/32 (47 percent) successfully hatched
5. [4/7 (57 percent) in 1999; 5/11 (45 percent) in 2000; 6/14 (43 percent) in 2001]
6. 8/15 (53 percent) successful through early brood-rearing (chicks lost $\leq$ 14 days post hatch)
7. 3/4 (75 percent) in 1999; 1/5 (20 percent) in 2000; 4/6 (67 percent) in 2001]
8. 6/8 (75 percent) successful through late brood-rearing (fledged $\geq$ 1 chick on August 15)
9. 3/3 (100 percent) in 1999; 0/1 (0 percent) in 2000; 3 /4 (75 percent) in 2001]
10. 15 chicks fledged (15/37 = 0.41 chicks per potential hen; 2.5 chicks per brood)

At Jackson Hole Airport, the majority of females nested within six kilometers of the Airport lek site. Approximately ten to fifteen percent of hens move a much greater distance than six kilometers before nesting. In sum, it does not appear that the Jackson Hole Airport adversely impacts nest initiation rates and distances females move to nest. Being a comparable airport it is unlikely that the proposed project at Mammoth Yosemite Airport would affect sage grouse by causing a disturbance that would lead to a reduction in the local population. (See Supplement at Section 3.3.2.) Therefore, no significant impact to sage grouse or their habitat is expected to occur as a result of the introduction of commercial aircraft service at Mammoth Yosemite Airport.

Dr. Gibson has been contacted. The reference to the statement of Dr. Gibson regarding the relationship of the proximity of aircraft to sage grouse flushing has been removed from the Supplement at Page III-40. The removal of this information does not change the conclusion of the analysis.

Response to Comment E-4

Please see Response to Comment A-2 regarding cumulative impacts.

Response to Comment E-5

Please see Response to Comment A-2.

Response to Comment E-6

Please see Response to Comment A-2.

Response to Comment E-7

The majority of deer migration occurs on the west side of U.S. Highway 395, away from the Airport. The proposed project would result in the elimination of 9.5 acres of mule deer habitat. This is not a significant impact. The proposed mitigation measure addresses this habitat loss. (See Supplement at Section 3.3.3.2.) Compensation for this habitat loss is provided at a ratio of one acre for every one acre of degraded deer habitat. This habitat loss is insignificant when the overall acreage of publicly owned lands available for use by the deer during their migration is considered. It should be noted

that mule deer are not a threatened or endangered species. Thus this is not considered a significant impact and any mitigation measure undertaken by Town of Mammoth Lakes is voluntary.

Response to Comment E-8

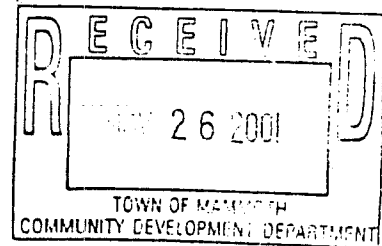
The text of mitigation measure (1) under “Mule Deer” at Section 3.3.3.2 has been modified with inclusion of the following language at the end of the measure;

“The CDFG deer biologist and the Caltrans biologists should work with the project proponent to continue to evaluate the effects of the fence on mule deer. Based on this evaluation, the project proponent shall modify the design of the fence within the parameters of FAA requirements and standards.”

Response to Comment E-9

The text of mitigation measure (2) under “Mule Deer” at Section 3.3.3.2 states that the mitigation at the gravel pit should proceed in a manner such that any bank swallow nest sites are not disturbed, and the habitat is not modified in such a way as to cause future nest failure.

November 28, 2001



Mr. Bill Manning, Airport Manager
Mr. Bill Taylor, Senior Planner
The Town of Mammoth Lakes
Post Office Box 1609
Mammoth Lakes, CA 93546

SPECIAL DELIVERY VIA FACSIMILE

Dear Mr. Manning and Mr. Taylor:

Please accept this letter as my formal support for the Mammoth Yosemite Airport expansion.

F-1

As a full-time Mammoth Lakes resident of twenty-two years, and professional businesswomen, I strongly support commercial air service to the Mammoth Yosemite Airport and would like to have my thoughts and opinions noted. There are four very viable reasons why airport service to Mammoth Lakes should be implemented.

1. Air service from Mammoth Lakes to elsewhere helps and assists the local travelling community. I personally depend on air travel for business, and pleasure, as does statistically 1/2 of the local population.
2. Air service will provide our visitors with a convenient, customer service level of satisfaction which supports the very concept of a truly world renowned Destination Resort. Our customers are world wide, and not just from Southern California, the San Francisco Bay Area, and Las Vegas. People who spend their hard-earned dollars to enjoy first class accommodations expect air service.
3. Air service holds the potential for increasing the "job creation model" which is the foundation upon which our economic vitality is based. Small businesses create and add to our Eastern Sierra communities, i.e., Lone Pine Film Festival; rock climbing in Bishop; fishing Twin Lakes west of Bridgeport, and of course our beautiful mountain with its own four seasons.
4. Lastly, the marketing program that our lodging industry instituted after the tragic events of September 11, 2001 was exemplary with their banners stating, "Thanks for Traveling & Visiting". As well as the President's message to get back to our lives; complemented with a renewed pride in our country; time spent with family and friends, and the appreciation for the natural beauty of our Eastern Sierra. These are reasons enough for moving forward to enhance, and thus improve the infrastructure of our community, which will support and benefit our children in years ahead.

Respectfully,

A handwritten signature in cursive script that reads "Tammy Teachout".

Tammy Teachout, Partner
MAMMOTH PROPERTIES
3310 Main Street
Post Office Box 424
Mammoth Lakes, CA 93546

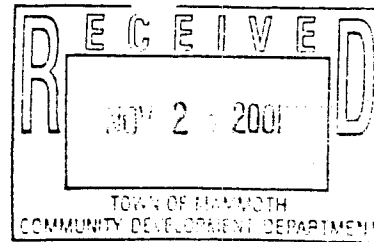
Cc: Wally Hofmann, Publisher
Mammoth Times

F. Tammy Teachout, Mammoth Properties, Mammoth Lakes, California

Response to Comment F-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

To:
Town Offices
C/O Bill Taylor
Senior Planner
PO Box 1609 Mammoth
Lakes, CA 93546-1609



Hello Bill:

I know my e-mail is up against the "mid-night hour," but I want my thoughts and opinions noted in support of The Mammoth Lake's Airport expansion. My succinct bullet points follow, along with my phone numbers if further questions about my position are necessary.

G-1

- 1) Air service from Mammoth Lakes to elsewhere helps and assists the local traveling community. No 171-plus mile drives for flights to the Bay Area, LAX, Dallas, Atlanta, London, Frankfurt, Rio, or visits to family on the North Shore of Oahu.
- 2) Air service will provide our visitors with a convenient, customer service level of satisfaction which supports the very concept of a truly world renowned "Destination Resort." Our customers are world-wide, and not just those from Southern California, the Bay Area, and Las Vegas. They travel, and expect to be treated well, will spend time and their hard earned dollars to enjoy their vacation and time with family, etc.
- 3) Air service holds the potential for increasing the "job creation model" which is the foundation upon which our economic vitality is based. Small businesses create and add to our communities. (i.e.. Communities of the Eastern Sierra like Lone Pine and their Film Festival, bouldering in Bishop, fishing up at Twin Lakes west of Bridgeport, and of course our beautiful mountain with its own four seasons).
- 4) Lastly, the marketing program that our lodging industry instituted after the tragic events of September 11, ,2001 with their banners stating, "Thanks For Traveling & Visiting;" the President's message to get back to our lives; complimented with a renewed pride in our country, time spent with family and friends, and an appreciation for the natural beauty of our Eastern Sierra. These are reasons enough for moving forward, enhancing, and thus improving the infrastructure which will support and benefit our children in the years ahead.

Sincerely,
Tony Fryer
Managing Editor
The Real Estate Book of the Eastern Sierra
760/934-3614

G. Tony Fryer, The Real Estate Book of the Eastern Sierra

Response to Comment G-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



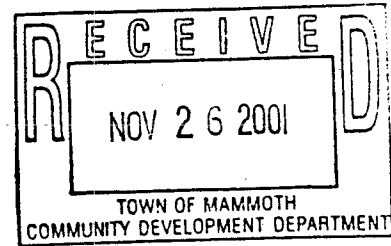
SANTA BARBARA • SANTA CRUZ

SIERRA NEVADA AQUATIC RESEARCH LABORATORY (SNARL)

ROUTE 1, BOX 198
1016 MT. MORRISON ROAD
MAMMOTH LAKES, CA 93546
<http://nrs.ucop.edu/reserves/snarl.html>

November 26, 2001

Mr. William Taylor
Community Development Department
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546



RE: DSSEIR, MAMMOTH YOSEMITE AIRPORT EXPANSION

Dear Bill:

Please accept the following comments on the above mentioned EIR. On March 15, 2001 there was a meeting attended by representatives from the Town, Hot Creek Aviation, Mammoth Mountain Ski Area, and myself. At that meeting, we agreed upon several mitigation measures that were to be included in the revised project description. These must be included in this document. Furthermore, in a conversation with you, you agreed that a memo from me to you regarding that meeting would be included as part of the scoping of this document. These mitigation measures are:

1. The agreement to move the "engine run-up" area to a midfield location in order to mitigate run-up noise impact to SNARL. This is completely absent from the DSSEIR and is critical to the mitigation of noise impact.
2. Development of a comprehensive water quality assurance plan. Although such a plan is mentioned peripherally on page III-81 of the DSSEIR the elements of the plan are not included. The elements include:
 - prohibitions on industrial waste from the hangers
 - putting all airport waste systems on the proposed package plant
 - developing a fail-safe system for preventing contamination of the stormwater system by de-icing fluid
 - an analysis of risk of catastrophic fuel or oil spills at the airport or on US 395
 - plans to clean-up such a spill
3. A time schedule for replacement of all non-compliant outside lighting.

H-1

H-2

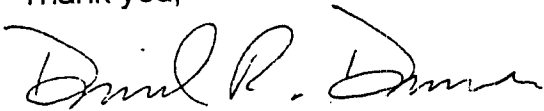
H-3

Finally, the DSSEIR does not accurately detail the current situation of the Green Church. We have determined, by consultation with professional house movers, that the church

cannot be relocated. Therefore, the Town will be required to fund the construction of a suitable replacement building at the main SNARL campus. Because of the constraints of the existing infrastructure at SNARL, the Town will be required to fund the replacement of a new water line, a power line to the new building, an extension of a LP gas line to the new building, a new leach field, and new parking. The document should also recognize that funds have already been provided to the University for planning, engineering, and architecture. The document should also indicate that in order for the replacement to mitigate the impact, the new building must be constructed before commercial air traffic uses the airport. Last, the DSSEIR should indicate that the existing Green Church will remain in its current location and be used for storage or some other purpose consistent with the restriction on public assembly.

H-4

Thank you,

A handwritten signature in cursive script, appearing to read "Daniel R. Dawson".

Daniel R. Dawson
Director

H. University of California, Santa Barbara, Sierra Nevada Aquatic Research Lab (SNARL)

Response to Comment H-1

As described in Section 3.7.1 of the Supplement, there is an engine runup area located at the eastern end of Runway 9-27. For reduction in existing noise levels, a new mid-field runup area will be constructed in conjunction with the Airport improvements. This runup area will replace the current runup area and would reduce the noise reflection off of Doe Ridge towards the Sierra Nevada Aquatic Research Laboratory (SNARL) facility. This is a mitigation measure for existing aircraft operations at the Airport. Additionally, Mammoth Yosemite Airport already has a policy that restricts low level flights over both the Hot Creek Fish Hatchery and SNARL facility. This policy will be applied to commercial flights as well.

The commentor should also note that, just as this Supplement only analyzes potential impacts from changes in the project since the prior environmental review, it only proposes mitigation measures for those impacts. The mitigation measures previously identified for impacts determined in the prior review, and imposed as part of the prior approvals, generally remain applicable and will be imposed for this revised project as well. Therefore, even though a particular mitigation measure may not be identified in the Supplement, it may well be part of the project.

Response to Comment H-2

The development of a Water Quality Assurance Plan and a Spill Prevention Control and Countermeasures Plan is included in the Supplement as Mitigation Measures. (See Supplement at Section 3.7.3.) As discussed in Section 3.7 and Responses to Comments G-1 through G-15 where further evaluation was conducted, the proposed project would have no significant environmental impacts on hydrology, water supply, or water quality during either the construction or operation of the proposed project after meeting all the design requirements. This is because it would not create or contribute runoff that would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff. There would be no violation of applicable water quality standards or water discharge requirements and it would not substantially deplete groundwater resources or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level. The project will not impede or redirect flood flows or place housing within a 100-year flood hazard area.

The proposed project would comply with all federal, State and local laws pertaining to storm water runoff and drainage systems.

Industrial waste from the hangars is not within the scope of this CEQA document as the hangars are not part of the changes to the proposed project being analyzed in the Supplement. Nonetheless, the Town and Hot Creek Aviation have agreed to connect the hangars to the wastewater treatment plant to better assure the protection of water quality.

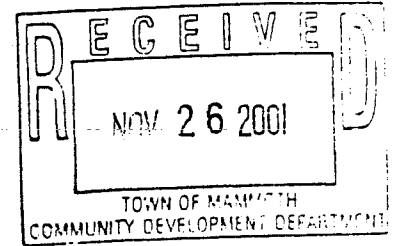
Response to Comment H-3

The existing, non-conforming lighting on the Airport ramp area will be replaced at the time of the terminal apron improvements.

Response to Comment H-4

The Town has agreed to replacement of the "Green Church." Replacement of the Green Church is identified under Section 3.8.4 of the Supplement and in the mitigation measure summary on page E-6. The mitigation description under Section 3.8.4 should have been under Section 3.8.3, Mitigation Measures. The Town will fund the replacement of all utilities to the new building and it is anticipated that the building will be constructed in advance of initiation of air carrier aircraft operations at the Airport.

One Maritime Plaza
20th Floor
San Francisco, CA
94111-3580
Main 415 693-2000
Fax 415 951-3699



November 26, 2001

VIA HAND DELIVERY, EXPRESS MAIL,
& FACSIMILE (760) 934-8608

www.cooley.com

Mr. William T. Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

KATHLEEN H. GOODHART
415 693-2012
kgoodhart@cooley.com

Re: Mammoth Yosemite Airport Expansion Project Draft Supplement to Subsequent Environmental Impact Report

Dear Mr. Taylor:

Cooley Godward LLP and Earthjustice, as co-counsel, write on behalf of the Sierra Club, the California Wilderness Coalition ("CWC"), the Natural Resources Defense Council ("NRDC"), California Trout, Inc. ("Caltrout"), and the National Parks Conservation Association ("NPCA") (collectively the "Commenting Parties") to express their very serious concerns about the environmental review process regarding the proposed major expansion of the Mammoth-Yosemite Airport (the "Airport"). Specifically, we provide in this letter comments in response to the Draft Supplement to the Subsequent Environmental Impact Report (the "DSSEIR") regarding the Mammoth-Yosemite Airport Expansion Project ("Expansion Project") issued by the Town of Mammoth Lakes (the "Town") and dated October 5, 2001.

If completed, the Expansion Project would have profound environmental impacts on the region. While the DSSEIR improperly suggests that the Expansion Project entails little more than the lengthening of a runway, in reality, this project seeks to transform a local airport that currently serves airplanes with a seating capacity of fewer than 30 people into a commercial airport that would serve thousands of Boeing 757-200s (maximum seating capacity 239), Boeing 737-800s (maximum seating capacity 189), and BAE-146s (seating capacity between 82 and 112) per year. (See DSSEIR at III-18, III-19.) These larger jets, along with the construction and expansion necessary to accommodate them, would have a substantial and deleterious impact on the environment. Moreover, the DSSEIR states that this commercial airline service is expected to increase the number of passenger enplanements from zero in 1999 to 159,900 in 2007, and to 333,800 by 2022.¹ (See DSSEIR at I-6.) Moreover, the DSSEIR defines "enplanements" as

I-1

I-2

¹ As discussed more fully in Section III(D) below, the DSSEIR is misleading in defining as a single "enplanement" a passenger's roundtrip usage of the Airport. (DSSEIR at I-6.) In a footnote to Table I-1, the DSSEIR explains that "[t]otal passengers are twice" the number of enplanements, (DSSEIR at I-6), because passengers will use the Airport twice - i.e. to arrive and to depart. The DSSEIR should not focus on the number of enplanements as defined, rather the DSSEIR should focus on the total number of passengers using the Airport.

I-1

Mr. William T. Taylor
Town of Mammoth Lakes
November 26, 2001
Page 2

[roundtrip flights, undercounting by half the number of passengers actually using the Airport, and thus the actual increase in numbers of passengers will be from *zero* in 1999 to 319,000 in 2007, and to 667,660 by 2022. The DSSEIR does not fully take into account the impact that these passengers – many of whom are expected to come from around the country to tour the surrounding area – would have on the environment.]

I-2

In this letter, the Commenting Parties express their serious concerns regarding numerous inadequacies in the DSSEIR, including:

- The DSSEIR misrepresents the background facts relating to the Expansion Project. *See* Section I below.
- The DSSEIR lacks necessary detail regarding numerous aspects of the Expansion Project. *See* Section II below.
- The DSSEIR misleadingly implies that the Expansion Project is smaller than previously approved projects. *See* Section III below.
- The DSSEIR fails to identify and focus on various environmental impacts of the Expansion Project, including increased vehicular and air traffic, water pollution, air pollution, noise, and negative impacts on biological resources. *See* Section IV below.
- The DSSEIR contains a cursory and wildly inaccurate discussion of the growth-inducing impacts on the Expansion Project. *See* Section V below.
- The DSSEIR inadequately addresses the Expansion Project's cumulative impacts. *See* Section VI below.
- Contrary to the requirements of CEQA, the DSSEIR does not propose any alternatives that might attain the project objectives but would lessen the significant effects of the project. *See* Section VII below.
- In light of the substantial impacts of the Expansion Project, the Town must prepare a subsequent EIR, not a mere supplement to an existing EIR. *See* Section VIII below.

L. BACKGROUND

As an initial matter, it is helpful to clarify the background concerning the Expansion Project, particularly because the DSSEIR's description of this background is inaccurate. In July 1986, the Mono County Airport Land Use Commission and the United States Department of Agriculture issued a joint Environmental Impact Report and Environmental Assessment (the "EIR") concerning the Mammoth/June Lake Airport Land Use Plan. The EIR did not contemplate that large commercial jets would operate at the Airport. (See EIR at 35.)

In 1997, the Town sought environmental review of a new and different proposed expansion of the Airport. The Town issued a Subsequent Environmental Impact Report and Environmental Assessment (the "1997 SEIR"). The 1997 SEIR did contemplate some future commercial jet service at the Airport, projecting that: (1) by 2005, 1,460 Boeing 737s would result in 40,000 annual passenger enplanements; and (2) by 2015, a total of 2,920 Boeing 737s and 757s would result in 95,000 enplanements.² (See 1997 SEIR at 5-6.) It should be noted that the 1997 SEIR appears to use the standard definition of "enplanements" – i.e. each passenger using the Airport constitutes one "enplanement" – not the definition used in the DSSEIR, which undercounts by 50% the projected total number of people using the Airport. Ultimately, the plan detailed in the 1997 SEIR never was implemented.

I-2

In October 2000, the Town issued a Draft Environmental Assessment for further development of the Airport (the "Draft EA"). The Draft EA proposed an Airport expansion that would lead to 159,000 enplanements by 2007, growing to 287,500 enplanements by 2017. (See Draft EA at IV-12.) The Draft EA uses the same definition of "enplanements" as is used in the DSSEIR. The Sierra Club and other parties commented on the inadequacies of the Draft EA. In December 2000, the Town issued a Final Environmental Assessment (the "EA"), and the Federal Aviation Administration ("FAA") issued a Finding of No Significant Impact ("FONSI") under the National Environmental Policy Act (42 U.S.C. § 4321 *et seq.*), based on the Draft EA. Ultimately, however, the FAA made no final decision on the FONSI or on approving the Airport Plan.

Thereafter, various interested parties filed comments on the EA and the FONSI, including the United States Department of Interior, the California Department of Justice, the California Department of Fish and Game, Earthjustice, the Sierra Club, CWC, Citizens Against Sprawl, and Yosemite Regional Trust. The Sierra Club, CWC, NRDC, and NPCA then filed a lawsuit to challenge the inadequacies in the EA and FONSI. In July 2001, the lawsuit became unripe when

² Apparently, the 1997 SEIR did not address the issue of the Airport's runway being too narrow to accommodate Boeing 737s or 757s.

Mr. William T. Taylor
Town of Mammoth Lakes
November 26, 2001
Page 4

the FAA responded to the complaint by announcing that it "has not made a final decision under the National Environmental Policy Act or taken final agency action to approve a revised airport layout plan based on the FONSI." (Letter from Richard Laverdure, Special Assistant U.S. Attorney, to Counsel for Sierra Club *et al.* (July 24, 2001)) (copy attached) The DSSEIR is misleading in stating that the "FAA made a Finding of No Significant Impact . . . for the project in December 2000," (DSSEIR at xii), but neglecting to mention that the FAA has made no final determination.

I-3

On April 13, 2001 – during the time when the controversy over the EA/FONSI was ongoing – the Town issued a Notice of Preparation, which notified interested parties that the Town would issue a Subsequent Environmental Impact Report. (See DSSEIR at Appendix B.) On October 5, 2001, the Town issued the DSSEIR, which is a *supplement* to the 1997 SEIR, rather than a *subsequent* EIR as specified in the Notice of Preparation.

I-4

II. THE DSSEIR'S DESCRIPTION OF THE EXPANSION PROJECT LACKS DETAIL AS TO THE SCOPE AND IMPACTS OF THE PROJECT

The DSSEIR fails to "include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised in the proposed project." (*Laurel Heights Improvement Ass'n v. Regents of the University of California*, (1988) 47 Cal.3d 376, 404-05 [253 Cal.Rptr. 426]). As discussed more fully below, the DSSEIR does not provide important details concerning:

- The Town's assumptions concerning future traffic patterns, including the optimistic assumption that 70% of Airport users would use the bus system.
- How jet fuel will be transported to the Airport and stored at the Airport.
- The parking facilities related to the Airport.
- The design, construction, and utilization of the water, storm water, and sewage treatment facilities.
- The Airport's preparedness, if any, to provide contaminant cleanup.
- The current baseline noise level, and how much the Expansion Project would increase noise levels in the area.

- The Expansion Project's effects on biological resources, including, but not limited to, the Sage Grouse, Bald Eagle, Owens Tui Chub, Lahontan Cutthroat Trout, and Sierra Bighorn Sheep.
- The potential growth-inducing effects of the Expansion Project and/or how the Town might seek to control these effects in light of the fact that the Airport is in a non-contiguous portion of the Town and much growth could occur outside the Town's boundaries.
- The increased-visitor impacts on the Town itself, including, but not limited to, impacts on air quality, water usage, and traffic.
- FAA grade and line-of-sight visibility standards, which would require further expansion of the Airport to accommodate the large jets that the Expansion Project seeks to accommodate.
- The specifications, construction, operations, and environmental impacts of the luxury RV park.
- The Town's decision not to analyze other projects that together with the Airport Expansion could have cumulative impacts on the environment.

III. THE DSSEIR IS MISLEADING IN ITS DESCRIPTION OF THE PROJECT

The DSSEIR fails to "[i]nform governmental decision makers and the public about the potential, significant environmental effects of the proposed activities." (14 Cal. Code Regs. § 15002(a).)

A. The DSSEIR's Discussion of the Size of the Expansion Project Is Misleading

The DSSEIR misleadingly implies that the Expansion Project is smaller in scope than the project referenced in the 1997 SEIR. (*See, e.g.*, DSSEIR at ES-1, i, vi, viii, xi-xii, I-1, I-6 to I-8, III-2.) The DSSEIR also repeatedly emphasizes that the Expansion Project seeks to lengthen the runway from 7,000 feet to 8,200 feet, instead of the proposed expansion from 7,000 feet to 9,000 feet contemplated in the 1997 SEIR. (*See id.*) Indeed, the DSSEIR inaccurately states that the current proposal "calls for less land disturbance" than the 1997 SEIR. (DSSEIR at xii.)

The DSSEIR, however, understates the fact that under the Expansion Project, the *entire* 8,200 foot runway would be widened by 50 feet, and the DSSEIR fails to mention land disturbance caused by expansion of the taxiways. (See DSSEIR at xii.) Thus, the Expansion Project in fact contemplates an additional 530,000 square feet of runway (see, e.g., DSSEIR at ES-1) as compared to the 200,000 square foot expansion approved in 1997. (See DSSEIR at ii; SEIR at 7.) Moreover, the DSSEIR contemplates expansion of parallel taxiways by 265,000 square feet and expansion of cross taxiways by 20,625 square feet – both of which are substantial increases over the 1997 plan. (See DSSEIR at ii; SEIR at 7.)

I-5

In total, the DSSEIR proposes an additional 815,625 square feet – nearly 19 acres – of pavement, as opposed to 311,250 square feet in the 1997 SEIR. (See DSSEIR at ii; SEIR at 7.) Rather than hide this increase, the DSSEIR should make clear to the public that the Town is proposing a project that is more than two-and-a-half times as large as the 1997 plan. The public should understand that the Expansion Project requires the Town to pave an additional 504,375 square feet of land – *over ten football fields* – beyond the pavement proposed in the 1997 plan.

The DSSEIR is misleading in implying that only the added runway and taxiways would cause land disturbance. The DSSEIR fails to discuss the grading necessary to provide the required object-free areas, runway safety zones, the required shoulders and slopes along the sides and ends of the runway, the maximum 0.8% runway slope at the east end, and the required line-of-sight visibility and the effects of runway grade on runway length.

I-6

The DSSEIR also is misleading in its minimal discussion of the runway paving needed. The requirements for strengthening the existing runway must be discussed. The addition of strengthening elements would require paving over the entire area of the existing runway. If regrading is required to meet visibility standards, then part or all of the existing runway would have to be replaced.

I-7

B. The DSSEIR Does Not Adequately Address Future Phases of the Expansion Project

The DSSEIR also fails to include discussion of both contemplated and reasonably foreseeable future phases of project. “An EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion of action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.” (*Laurel Heights*, 47 Cal.3d at 396.) The DSSEIR describes the 8,200 foot runway as the “first stage runway length.” (DSSEIR at I-8.) This statement suggests an ultimate intention to extend the runway, likely to 9,000 feet or beyond. The DSSEIR never fully considers such a runway expansion, but rather,

I-8

rejects such an expansion as an *alternative* because (1) it would require a special use permit from USFS and (2) it "would have environmental impacts that are greater than the [Expansion Project]." (DSSEIR at IV-5.)

The DSSEIR inadequately addresses the issue of future expansion related to increased passenger visits. The DSSEIR projects that by 2022 an additional 667,600 passengers would travel through the Airport each year. (See DSSEIR at I-6.) These additional people surely would require an increase in airport facilities, including, for example, parking and retail facilities, as well as water-treatment capacity. Moreover, as discussed more fully in Section V below, the DSSEIR does not adequately address the significant growth-inducing impacts that these additional passengers would have.

I-8

C. The DSSEIR's Discussion of Annual Aircraft Operations Is Misleading

The DSSEIR is misleading in its summary of the total number of annual aircraft operations at the Airport. The DSSEIR forecasts that the number of aircraft operations would decrease and cites comparable annual aircraft operations numbers in the 1986 EIR and the 1997 SEIR. (DSSEIR at iii.) This summary fails to point out that the Expansion Project fundamentally would alter the *type* of aircraft using the Airport, understating the fact that the Expansion Project seeks to bring thousands of large commercial jets to the Airport. Indeed, it is undisputed that under the Federal Aviation Regulations, the Airport is currently prohibited from receiving airplanes with a seating capacity of more than 30 passengers. (DSSEIR at I-8.) Thus, the Expansion Project is specifically designed to bring the Airport into compliance with Federal Aviation Regulations that would permit the Airport to receive Boeing 757-200s and 737-800s – commercial jets that can carry up to 239 and 189 passengers respectively. It is therefore extremely misleading to purport to compare, for example, the 30,000 forecast annual aircraft operations in the 1986 EIR – which projected operations of small airplanes – with the 23,650 aircraft operations in the DSSEIR. (See DSSEIR at iii, I-6.)

I-9

D. The DSSEIR's Definition of Enplanements Is Misleading

The DSSEIR's discussion of the number of enplaned passengers is misleading because it conceals the fact that the DSSEIR represents a substantial increase in passenger "enplanements" over the "enplanements" contemplated in the SEIR. The DSSEIR explains that "[e]nplanements represent passengers boarding an aircraft. Total passengers are twice that number."³ (DSSEIR at I-6.) This definition not only is inconsistent with the standard dictionary definition, it is inconsistent with the definition used in the SEIR. In its common usage, the word "enplane"

³ Also troubling is the DSSEIR's attempt to obscure the definition in smaller font size in a table. (See DSSEIR at I-6.)

means to "go or put on board an aircraft," and therefore, an "enplanement" is one *boarding*, rather than one *round-trip* flight. (THE NEW OXFORD AMERICAN DICTIONARY 565 (2001).) The Town nowhere indicates in the 1997 SEIR that it might be using any definition other than the standard dictionary definition (*see* SEIR at 4-6), as the Town now indicates that it is doing in the DSSEIR.

The result of the DSSEIR's use of a non-standard definition of "enplanements" is that the DSSEIR does not clearly or adequately explain that the Expansion Project represents a dramatic increase in the number of airplane passengers over current usage levels and over the levels contemplated in the 1997 SEIR. For example, the SEIR projects 95,000 "enplanements" by 2015, and the DSSEIR projects 287,500 "enplanements" by 2017. Yet, these two documents use different definitions of "enplanement." If the DSSEIR used the SEIR's (and the dictionary's) definition, the number of "enplanements" by 2017 would be 575,000. Thus, by failing to provide an apples-to-apples comparison, the DSSEIR conceals the fact that the Expansion Project proposes approximately a *sixfold increase* in the number of passengers using the airport contemplated in the SEIR. The number of passengers using the Airport is the appropriate figure to be considered because: (1) it clearly indicates to the public the increased number of people who will travel through the Airport, which in turn shows the full environmental impact of operating the Airport; (2) it reflects the traffic impacts of the total number of people who will have to travel both *to and from* the Airport; and (3) it indicates the increased number of airplane operations needed to take these passengers *to and from* the Airport. The DSSEIR should be revised and should use the standard definition of "enplanements" so that the public will understand the full scope of the Expansion Project.

I-10

E. The DSSEIR's Discussion of the Number of Passengers Using the Airport Is Based on Unsupported Assumptions

The DSSEIR calculates the number of projected enplanements by using a formula based on the number of "skier days."⁴ Yet, the data that the DSSEIR provides from other airports that are near skiing destinations show *no correlation* between the number of skier days and the number of passengers arriving at the airport. (*See* DSSEIR at Appendix H.) Accordingly, the DSSEIR's passenger projections are based entirely on speculation, and the actual number of passengers using the Airport could be substantially higher than the DSSEIR projects. An increase in the number of passengers using the Airport would, of course, increase the environmental impacts of the Expansion Project.

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⁴ The DSSEIR defines "skier days" as "the number of days multiplied by the number of skiers visiting the ski resort." (DSSEIR at I-5.)

IV. THE DSSEIR FAILS TO DISCUSS SEVERAL SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE EXPANSION PROJECT

Under CEQA, "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project." (CEQA Guidelines § 15126.2(a).) The DSSEIR, however, fails to address significant environmental effects on air quality, water quality, noise pollution, and biological resources.

A. The DSSEIR's Analysis of the Expansion Project's Effects on Traffic Falls Far Short of Meeting CEQA Requirements

The DSSEIR's traffic analysis fails to comply with CEQA because: (1) the analysis ignores the increased number of people who would visit the area; (2) the analysis relies on unsupported assumptions; (3) the analysis fails to explain mitigation measures; and (4) the studies on which the analysis is predicated are flawed.

1. The DSSEIR's Traffic Analysis Improperly Ignores the Increased Number of People Who Will Visit the Area

The Town has represented that the Expansion Project would result in thousands of commercial flights from large cities such as Chicago and Dallas. (See DSSEIR at ES-1, ES-2.) Because Californians currently represent nearly ninety percent of the region's visitors (see DSSEIR at H-28), this influx of passengers from out of state would produce a substantial increase in traffic.

The DSSEIR largely ignores this serious traffic problem, assuming that upon arriving in Mammoth Lakes, 70% of visitors will rely solely on public transportation. (See DSSEIR at III-64) It is much more likely, however, that tourists would rent cars at the Airport in order to have increased mobility and tour the numerous attractions in the North Inyo County/South Mono County area. The DSSEIR, however, does not entertain this possibility, and does not examine the environmental impacts thereof, including (without limitation) the impacts from increased traffic.

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The Town also has failed to consider the number of fuel trucks needed to service the Airport. The fuel tanks proposed to support the Airport are relatively small. (See DSSEIR at I-12.) As such, once the number of flights increases, fuel trucks would need to service the Airport in greater numbers. This increased fuel truck service poses a severe threat to drivers in the area, especially considering Highway 395's condition during the winter months. Indeed, the DSSEIR states that "U.S. Highway 395 between Bishop and Mammoth Lakes has a steep grade making

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for difficult driving during periods of inclement winter weather. . . ." (DSSEIR at IV-26.) The DSSEIR should therefore consider the impact of the large number of fuel trucks on vehicular traffic and safety.

2. The DSSEIR's Traffic Analysis Improperly Relies on Unsupported Assumptions

Although the DSSEIR states "[i]t is anticipated that 70% of Airport users would use the bus system," (DSSEIR at III-64), the DSSEIR offers little evidence or analysis beyond "discussions" with other airport managers to support this optimistic view regarding use of public transportation. (*See id.*) Nor does the DSSEIR provide figures regarding current bus usage at the Airport or in the Mammoth Lakes area generally.

The DSSEIR also attaches a report from a hired traffic consultant that contains other unexplained assumptions. (*See* DSSEIR at Appendix L.) For example, although the consultant utilizes average daily traffic numbers from the Institute of Transportation Engineers ("ITE") Handbook, the averages in the handbook vary considerably, and the DSSEIR fails to explain whether the numbers used in the analysis are a minimum, average, or something in between. Likewise, the study makes substantial "trip reductions" due to "pass-by trips," often with no indication why such reductions are being made. (*See, e.g.*, DSSEIR at Appendix L, 8 ("It should be noted that 100 percent of the restaurant trips were removed from the overall trip generation.")) Because of these reductions, the study's traffic projections could be significantly lower than those realized under the airport expansion.

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3. The DSSEIR's Fails To Explain Mitigation Efforts

According to Appendix G of the CEQA guidelines, a project is considered to have a significant impact regarding traffic/transportation if it: (1) causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of street system (*i.e.* results in substantial increase in either the number of vehicle trips, the volume of capacity ration on roads, or congestion at intersections); or (2) exceeds, either individually or cumulatively, a level of service [LOS] standard established by the county congestion management agency for designated roads of highways.

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Here, the studies submitted with the DSSEIR clearly indicate a significant traffic impact and cannot support the finding of no significant impact in the DSSEIR. For example, the current LOS for the intersection of Hot Creek Road and Highway 395 is LOS B (10.8 seconds). (*See* DSSEIR at Appendix L, Table A, at 6.) If the Expansion Project were implemented, the LOS could be as high as LOS F (58.7 seconds). (*See* DSSEIR at Appendix L, Table C, at 20.)

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Apparently, the Town relies on mitigation measures to conclude that the LOS would not increase. However, the DSSEIR does not describe or analyze those mitigation measures.

Additionally, Table III-13 indicates that even with a connection to Benton Crossing Rd., the cumulative impacts of airport and other traffic would still cause LOS D conditions at the 395-Hot Creek intersection. (See DSSEIR at III-66.) Elsewhere, the DSSEIR states that the connection to Benton Crossing would mitigate the cumulative traffic problem. (See DSSEIR at III-70.) The DSSEIR, however, does not explain how LOS D might be avoided. In short there is no actual analysis of mitigation, which should be included regardless of the level of LOS based on the influx of passengers of commercial jets. Also missing from the DSSEIR is any actual analysis of proposed mitigation, which should be included regardless of whether the LOS would be C, D, E, or F.

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4. The DSSEIR Relies on Traffic Studies That Are Flawed

The traffic studies on which the DSSEIR relies are flawed in several respects. For example, the traffic count the DSSEIR relies upon was performed by a two-hour hand count. (See DSSEIR at Appendix L, at 26-27) To obtain accurate information regarding traffic conditions, a traffic count through mechanical means should be performed for at least a week-long period. Furthermore, the study was performed from 4 p.m. to 6 p.m. on November 16, 2000, well before the height of the winter ski season. (See *id.*) A study done prior to the busy part of the ski season to determine whether the roads are able to handle the increased traffic is meaningless. The DSSEIR cannot be considered for approval absent analysis of traffic impacts during the height of the ski season, which is clearly not November 16.

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The study also fails to provide analysis of traffic impacts in summer. Although highest volumes may be seen in winter, traffic patterns are different in summer based on the numerous tourist destinations, including Yosemite, Mono Lake, and Devil's Postpile National Monument, and analysis of the variable traffic patterns to reach those remarkable destinations must be assessed.

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Furthermore, while the DSSEIR provides some information regarding vehicular traffic on Highway 395 near the airport, the DSSEIR provides little information regarding traffic impacts within the Town of Mammoth Lakes. The DSSEIR only provides that congestion in the Town would be reduced by bus service and fewer tourists driving due to the Airport Expansion, but provides no data or analysis in support. (See DSSEIR at III-64.) Such traffic impacts could be significant considering the increased number of enplanements the DSSEIR projects, regardless of whether such passengers utilize the Town's proposed shuttle service. Thus, the DSSEIR should assess traffic impacts within the Town.

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B. The DSSEIR Discussion of Potential Water Pollution Is Inadequate

The DSSEIR also states that the Mammoth Lakes airport expansion would include the construction and utilization of the water treatment plant. (See, e.g., DSSEIR at ES-1.) The DSSEIR, however, provides little information regarding the plant. Indeed, the DSSEIR contains no information regarding the specifications of the water treatment plant, the use of the water treatment plant, or what the construction of a water treatment plant would entail. There is also no indication regarding how much sewage the water treatment plant would have the capacity to handle, and whether this plant would be sufficient to handle the roughly 8,000 gallons of sewage envisioned by the DSSEIR. (See DSSEIR at III-79.) The DSSEIR also makes no mention of where or how the Town would dispose of the sewage. The DSSEIR provides only that the disposal would be "subterranean," but this conclusory statement fails to comply with CEQA's requirement that the DSSEIR disclose the significant effects that this sizeable treatment facility would have on the environment. Moreover, the water and sewer demands utilized in the DSSEIR are derived from the 1997 SEIR. (See DSSEIR at III-96.) Because the number of projected passengers using the Airport would increase from 125,000 in 1997 to more than 333,000 in the DSSEIR, the 1997 figures do not adequately reflect the demands that would be created under the Expansion Project. New calculations regarding the plant are therefore necessary.

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The DSSEIR is also inadequate because it contains no specific information regarding how the Town would monitor ground water for potential hazardous contamination. Although hazardous materials contamination could have a devastating effect on the waters of the Hot Creek springs, and thus, have a devastating effect on the Owens tui chub, the DSSEIR merely states that the FAA and the Town have "proposed *some measures* to monitor contamination. . . ." (DSSEIR at III-54 (emphasis added).) The DSSEIR makes no attempt to explain what these measures might be, whether these measures would be adequate, or the types of hazardous contamination that these measures would monitor. Also, while the DSSEIR vaguely mentions *monitoring*, it presents no plan for *cleaning up* hazardous contamination.

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The DSSEIR's discussion of potential water pollution also is flawed because the DSSEIR relies on an analysis regarding the aquifer reliability that was performed using data from a 1986 study. (See SEIR Appendix E, 3.) That data is stale, and the DSSEIR must provide current information and research on aquifer reliability.

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In addition, although the DSSEIR proposes collecting and filtering storm water from aircraft aprons, tie downs, and automobile parking areas, the DSSEIR fails to address how storm water from runways and taxiways would be handled. The Lahontan Regional Water Quality Control Board has stated that the facility must handle water from more than a 20-year storm, which is a storm that produces an inch of rain in one hour. Such a storm could generate an

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estimated 1 million gallons per hour of storm-water runoff from the expanded portions of the runways and taxiways contemplated in the Expansion Project. The DSSEIR, however, makes no mention of this storm water or how this storm water might be collected or filtered. Nor does the DSSEIR address the impacts of this additional storm-water runoff on the environment.

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C. The DSSEIR Mistakenly Concludes that the Airport Expansion's Impact on Noise in the Area Would Not Be Significant

An overall increase in noise would result from the Expansion Project's introduction of large commercial jet traffic at the Airport. Although local residents, businesses, and tourists would suffer increased noise from thousands of Boeing 757-200s and 737-800s flying overhead, the DSSEIR presumes without sufficient analysis that the noise would be within acceptable levels. The DSSEIR bases its noise analysis on figures showing that aircraft roughly one mile from runway end on takeoff will be similar to the noise produced by an alarm clock. (See DSSEIR at F-2.) The DSSEIR then purports to justify this increased noise by claiming that under CEQA Guidelines, Appendix G, a project has a significant environmental impact to noise if "the project results in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other regulatory agencies." (DSSEIR at III-86.)

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The DSSEIR cites an erroneously narrow legal standard. Under CEQA, the issue is not just whether the Expansion Project generates noise that violates a local ordinance, but also, whether the Expansion Project would substantially increase ambient noise levels. Indeed, CEQA specifies five separate categories of noise that create a significant impact, including: "[A] substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project" and "a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project." (See CEQA Guidelines, App. G.) The DSSEIR improperly ignores these standards, fails to set forth what current ambient noise levels are, and fails to explain whether the Expansion Project would substantially increase these noise levels (which seems likely given the noise generated by large jet engines). (See DSSEIR at III-84 to III-94.)

In addition, the DSSEIR fails to address the impacts of noise on the surrounding National Parks, National Forests, and Wilderness Areas surrounding Mammoth Airport. As the National Park Service pointed out in their letters to the FAA dated May 24, 2001, (see Appendix C), the noise caused by large jets flying into the Airport could disrupt and possibly compromise the geologic formation in Devils Postpile National Monument and also negatively impact wildlife in nearby Yosemite National Park. Moreover, the DSSEIR fails to discuss the increased noise

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within the Town itself. The DSSEIR inadequately addresses the impact of noise by failing to address these concerns.

D. The DSSEIR Provides No Analysis of the Impact of Certain Expansion Features on Biological Resources

The DSSEIR fails to analyze the impact of various components of the Expansion Project on the area's biological resources, including the impact that vastly increased numbers of visitors would have on threatened or endangered species and their habitat.

1. Sage Grouse (CA Dep't of Fish & Game Species of Concern)

The DSSEIR states that "[o]ne of Long Valley's largest sage grouse lek sites is located approximately three miles east of the Airport along the flight path to Runway 27."⁵ (DSSEIR at III-32.) The DSSEIR, however, in a conclusory fashion, finds that the Expansion Project would have no significant impact upon the sage grouse lek sites. The DSSEIR makes this conclusion without addressing many of the facts contained within the document. For example, the DSSEIR notes that a dry meadow at the east end of the runway may be a lek site, and this area "might be removed or disturbed by construction" (See DSSEIR at III-37.) Yet, the DSSEIR fails to explain whether the Expansion Project's proposal to pave over some of the potential lek site, disturb the potential lek site with construction activities, and restrict access to the potential lek site by erecting a fence would be significant. (See *id.*) The DSSEIR also states that proposed wire fencing might have an adverse effect on the sage grouse, causing deaths due to the sage grouse's low flight levels, and interfering with sage grouse strutting grounds. (See *id.*) The DSSEIR speculates that the 8-foot chain link fence contemplated in the Expansion Project might somehow *reduce* Sage Grouse mortality because it would provide "greater visibility" than the existing 4.8-foot barbed wire fence. (*Id.*) This unsupported speculation not only ignores the reality that a larger fence likely would have a greater impact on the Sage Grouse, but also ignores the DSSEIR's prior statement that the larger fence would be designed to blend in with the environment, (DSSEIR at III-8), which suggests that the fence would be less visible and potentially more dangerous to the Sage Grouse.

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Contrary to CEQA, the DSSEIR does not examine reasonable mitigation measures that would lessen the impact of the Expansion Project on the Sage Grouse. (See Cal. Pub. Res. Code § 21003(c).) Among other things, the DSSEIR does not adequately discuss whether Airport hours of operation might be restricted during the sage grouse's "display period" (mid-March through

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⁵ A lek is "a patch of ground used for communal display in the breeding season by the males of certain birds and mammals Each male defends a small territory in order to attract females for mating." (THE NEW OXFORD AMERICAN DICTIONARY 975 (2001).)

mid-May).⁶ Indeed, the Town has indicated that there would be “no restrictions” on operations. (See Letter from Darrell M. Wong, California Department of Fish and Game to Herman C. Bliss, Federal Aviation Administration, at 2 (April 19, 2001)) (copy attached).

2. Bald Eagle (Federally Listed Threatened Species)

The DSSEIR contains an inadequate analysis of the environmental impacts that the Expansion Project would have on the Bald Eagle. While the DSSEIR claims without any stated basis that “[n]o indirect effects on the bald eagles, their habitat, or prey are expected to occur as a result of the proposed project,” (DSSEIR at III-55), the DSSEIR fails to examine how growth-inducing impacts could lead to habitat loss. Likewise, the DSSEIR summarily (and improperly) concludes that the possibility that large jet planes might collide with the Bald Eagles would not “adversely affect” the Bald Eagle population, (DSSEIR at III-55), even though the DSSEIR recognizes that Bald Eagles have been seen perching less than a mile from the Airport. (See DSSEIR at III-54.)

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3. Owens Tui Chub (Federally Listed Endangered Species)

The DSSEIR mentions that a large population of Owens Tui Chub is located roughly three-quarters of a mile from the runway at Hot Creek headsprings. (See DSSEIR at III-54.) Without explanation or analysis, the DSSEIR concludes that because ground water flows to the east, and the Owens Tui Chub population is located in the northwest, the Expansion Project would have no significant impact on the Owens Tui Chub population. (See DSSEIR at III-54.) The DSSEIR fails to analyze: (1) whether growth-inducing impacts would damage the Owens Tui Chub’s habitat; or (2) whether the flight emissions from the large jets would pollute the water in which the Owens Tui Chubs live. Moreover, as discussed above in Section IV(B), the DSSEIR does not explain how the Town plans to monitor the Owens Tui Chub’s habitat for potential contaminants, nor does it explain how the Town might respond to hazardous contamination.

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4. Lahontan Cutthroat Trout (Federally Listed Endangered Species)

Hot Creek, located less than one mile from the proposed Expansion Project, is the most productive and popular wild trout stream in the region and in California, with over 15,000 angler days per year. In addition, the California Department of Fish and Game Hot Creek Hatchery is

⁶ The DSSEIR merely states that “[o]bservations of sage grouse at the Jackson Hole Airport indicate that males are not easily disturbed by aircraft noise while on the lek.” (See DSSEIR at III-41.) The DSSEIR, however, cites no other support for this conclusion, nor does it state how such “observations” were made, or who made them.

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also visited by tens of thousands of visitors each year, and the Hatchery is immediately adjacent to the proposed project.

The noise and air quality implications of hundreds of commercial jet takeoffs and landings on these existing attributes are not adequately evaluated in the DSSEIR. This is a serious oversight and deficiencies within the draft DSSEIR should be corrected.

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5. Sierra Bighorn Sheep (Federally Listed Endangered Species)

The DSSEIR concedes that a total of only 125 Sierra bighorn sheep currently survive. (See DSSEIR at III-36.) Two populations of Sierra bighorns exist roughly twelve and twenty miles, respectively, from the Airport. (See *id.*) The DSSEIR fails to analyze whether the Expansion Project would have a significant impact on the Sierra bighorns through increased noise or through habitat destruction resulting from growth-inducing impacts and increased tourism. Rather, the DSSEIR simply concludes that although large jets would fly at low altitude within three miles of sheep habitat, these jets would not affect the sheep. (See DSSEIR at III-55, III-56.) The DSSEIR contains no analysis of how noise affects Sierra bighorn behavior, nor does it state what the ambient noise level is in the two areas where the sheep live, nor does it explain how the Expansion Project might affect this noise level. The DSSEIR also concludes, without any factual support, that "[t]he potential increase in the number of tourists arriving at the Mammoth Lakes area would have no effect on the quota of back-country use permits issued by [the United States Forest Service]." (DSSEIR at III-56.) The DSSEIR, however, completely fails to consider the fact that greatly increased visitation would produce considerable pressure to increase backcountry quotas. Moreover, some visitors inevitably would engage in unpermitted backpacking and camping within the area. An EIR, therefore, must consider the degree to which the Expansion Project could damage the Sierra bighorn's habitat.

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6. Other Species

The DSSEIR also fails to analyze several significant effects that the Expansion Project would have on various animal species. The DSSEIR, for example, does not adequately consider the potential impact of the fence plan on deer migration or whether the Expansion Plan should include migration corridors for the deer.⁷ The DSSEIR also fails to adequately consider the Expansion Project's effects on raptors (including, but not limited to, bald eagles, golden eagles,

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⁷ The DSSEIR only speculates that (1) Caltrans plans on constructing an undercross for the deer under Highway 395 and (2) the Town would post warning signs requiring motorists along Highway 395 to slow down for the deer. The DSSEIR, however, does not consider the impact of such an undercross, nor does it consider the impacts on traffic that would result from lower highway speeds or construction of an undercross. (See DSSEIR at III-58.)

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[northern harriers, American peregrine falcons, Swainson's hawks, and rough-legged hawks). Rather, the DSSEIR summarily concludes that the Expansion Plan would have no significant impact on nesting raptors because the tree nesting habitats are over a mile away from the proposed flight patterns. (See DSSEIR at III-54, III-55.) This finding, however, is entirely based on the unsupported (and faulty) assumption that raptors would not fly outside of their nesting area.]

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Accordingly, given the absence of analysis regarding these species, the DSSEIR is invalid under CEQA because it fails to fully consider reasonably foreseeable impacts on the area's biological resources. (See *Laurel Heights Improvement Ass'n v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376, 396 [253 Cal. Rptr. 426, 433]; see also *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438 [263 Cal. Rptr. 340].)

E. The DSSEIR Mistakenly Concludes that the Airport Expansion's Impact on Air Quality in the Area Would Not Be Significant

[The DSSEIR also improperly concludes that because emissions associated with the airport expansion would fall below a certain "de minimis" level, such emissions are not significant *per se*, even though the airport is within a non-attainment zone for particulate matter (PM-10) and within a ozone transport region for volatile organic compounds ("VOCs") and nitrogen oxides (NO_x). (See DSSEIR at III-22.) This reasoning, however, has been rejected by *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 2d 692, 718 [270 Cal. Rptr. 650]. Indeed, "[t]he relevant question to be addressed . . . [is] whether any additional amount of . . . emissions should be considered significant in light of the serious nature of the ozone [and PM-10] problems in this air basin." *Id.* Accordingly, "the information and analysis regarding the significance of increases in ozone levels [and PM-10s] is inadequate." *Id.*]

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[The DSSEIR also improperly fails to examine the effects of the Expansion Project on the air quality of the Town, itself. Not only does the DSSEIR ignore the issue of how jet emissions might effect the Town's air quality, but also, the DSSEIR ignores how increased vehicular traffic in Town would impact air quality.]

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V. THE DSSEIR'S DISCUSSION OF GROWTH-INDUCING IMPACTS OF THE EXPANSION PROJECT IS INADEQUATE

An EIR must "[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly, or indirectly, in the surrounding environment." (14 Cal. Code Regs. § 15126.2(d).) Despite this requirement, the DSSEIR fails to adequately consider the growth-inducing impacts of the Expansion Project.

A. Although the Proposed Airport Expansion Would Inevitably Induce Sprawl in the Area, the DSSEIR Provides Little or No Discussion of the Issue

The Expansion Project forecasts that hundreds of thousands of passengers would use the Airport annually. This dramatic increase in visitors likely would lead to substantially increased property development in the region, which would, in turn, inevitably induce significant sprawl in the Mammoth Lakes area. Yet, contrary to CEQA's mandate, the DSSEIR provides no discussion regarding the scope and mitigation of such sprawl. Rather, the DSSEIR summarily concludes that the Town's "urban limits policy" would restrict growth to high density development within the Town. (See DSSEIR at V-4, V-5.) As to growth outside of the Town's jurisdiction, the DSSEIR essentially assumes that there would be no such growth because various governmental bodies own most of the land. (*Id.*)

CEQA cases, however, make clear that existing plans and zoning do not set the bounds for CEQA impacts analysis because the Town obviously can amend such plans and zoning in the future. (See, e.g., *Stanislaus Audubon Soc'y v. County of Stanislaus* (1995) 33 Cal.App.4th 144.) In the *Stanislaus* case, the court held that the EIR required for a golf course project had to look at its potential to induce nearby residential development. Not only was there no current plan for such development of any land adjacent to the proposed course, that acreage was zoned for agricultural use. Nonetheless, the court held that potential residential development had to be explored because "[z]oning is subject to change and amendment of a general plan is not a rare occurrence." (*Id.* at 157.)

Thus, the DSSEIR fails to comply with CEQA because it provides no analysis of where growth might occur, how such growth might impact the environment, or how such impacts could be mitigated. In addition, it should be noted that the Airport is located within a non-contiguous part of the Town. Thus, the Town has *no control* over sprawl that may occur near the Airport or in other areas outside its borders. As such, the Town's "urban limits policy" is insufficient either to (1) mitigate for the impact of sprawl caused by the expansion, or (2) to provide a valid basis for the conclusion that the expansion would not have a substantial impact on the environment. (See DSSEIR at V-4, V-5.)

B. The Growth-Inducement Analysis in the DSSEIR Is Faulty

The DSSEIR fails to analyze the growth-inducing impacts that the Expansion Project would have on the environment. Rather, the DSSEIR merely concludes, without any evidentiary support, that "[o]ther than the direct and indirect jobs related to employment at the airport, . . . growth is expected with or without the improvement of the airport." (DSSEIR at V-4.) It is disingenuous for the DSSEIR to assert on the one hand that hundreds of thousands of passengers

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would use the Airport, while claiming on the other hand that the related increase in tourism would have no secondary growth-inducing impacts. Indeed, the DSSEIR projects that there would be an increase in tourism that would "stimulate secondary economic growth in services offered by the community, such as additional hotels and restaurants." (DSSEIR at V-4.) The DSSEIR claims (again with no evidentiary support), however, that this tourism increase would occur with or without the jet service promised in the Expansion Plan. (*See id.*) Thus, the DSSEIR does not comply with CEQA because, rather than discussing how the Expansion Project could foster economic or population growth, and how the environmental impacts of this growth could be mitigated, the DSSEIR nonsensically concludes that such growth would not be attributable to the Expansion Project.

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C. The DSSEIR Provides No Information Regarding the Proposed Luxury RV Park

The DSSEIR states that the Mammoth Lakes airport expansion would include the construction of a luxury RV Park. (*See* DSSEIR at iii, xii.) The DSSEIR, however, provides no information regarding the specifications, construction, or use of the RV park. Nor does the DSSEIR assess how the RV park could foster further secondary growth.

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VI. THE DSSEIR'S DISCUSSION OF CUMULATIVE IMPACTS OF THE EXPANSION PROJECT IS INADEQUATE

If the project's incremental effect is cumulatively considerable, when viewed in conjunction with other developments in the area, an EIR must discuss the project's cumulative impacts. (*See* 14 Cal. Code Regs. §15130(a).) Under CEQA, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." (*Id.* §15130(a)(1).)

The DSSEIR incompletely details some potential impacts caused by increased population resulting from the airport expansion, including increased fire danger, habitat loss, increased numbers of dogs and cats, tourists camping away from established campsites, and overdraft of water. The DSSEIR, however, remarkably concludes that these impacts would not be significant.

While the DSSEIR states that nine other projects are currently proposed in the region, the Town only considers two of those projects to have cumulative impacts with the airport expansion project. (*See* DSSEIR at II-9.) The DSSEIR fails to comply with CEQA because it does not explain why the seven other projects raise no issues concerning cumulative impacts.

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Moreover, the DSSEIR improperly fails to define the relevant geographic area for cumulative-impacts analysis, as required by 14 Cal. Code Regs. §15130(b)(1)(B)(3). Rather, the DSSEIR merely states that there are nine other potential projects in the region that could have cumulative impacts, without identifying what the relevant region is, or how the DSSEIR defines this region. Moreover, the DSSEIR fails to consider the cumulative impacts of any projects outside the undefined region.

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VII THE DSSEIR DOES NOT CONSIDER THE PROPER RANGE OF ALTERNATIVES

The DSSEIR's analysis of alternatives violates CEQA. The CEQA Guidelines provide that EIRs shall "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project" (Pub. Res. Code § 15126.6(a).) All of the alternatives considered by the DSSEIR, with the exception of "No Project," would have greater impacts than the proposed project, in direct contravention of the Guidelines.⁸ Because the DSSEIR does not consider *any* expansion feature that would have a less significant impact upon the environment than the Project, the DSSEIR misleadingly suggests that the Project is the most desirable alternative from an environmental perspective. Accordingly, the DSSEIR's "alternatives" analysis is invalid under Publ. Res. Code § 15126.6(a).

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The DSSEIR's summary rejection of all alternatives that would have a less significant impact upon the environment is improper. (See Pub. Res. Code § 21003; 14 Cal. Code Regs. § 15126.6.) Most notably, the DSSEIR rejects the possibility of constructing an airport elsewhere. (See DSSEIR at IV-26 to IV-29.) For example, the DSSEIR declines to consider development at nearby Bishop, arguing that Bishop is too far from the attractions in the Mammoth Lakes area. (See *id.*) In reality, Bishop offers a viable alternative that the Town must consider because: (a) Bishop is only about 40 miles away; (b) Bishop is the largest community in the North Inyo/South Mono county area; (c) Bishop provides a central location to many local attractions; (d) Bishop provides a more central and convenient hub for the larger area's attractions; (e) Bishop's airport is at a lower altitude, resulting in lower payload penalties; (f) Bishop offers fewer obstructions and better weather; and (g) Bishop currently has several existing runways, and improvements already funded and in progress. All of these factors indicate that a potential expansion of Bishop offers a feasible alternative to the Expansion Project, and under CEQA this alternative warrants consideration and review. (See *Laurel Heights*, 47 Cal.3d at 403.)

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⁸ Of course, the "No Project" alternative makes no attempt to attain any of the Expansion Project's basic objectives as is required by CEQA.

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VIII. BECAUSE THE EXPANSION PROJECT WOULD HAVE SUBSTANTIAL IMPACTS ON THE ENVIRONMENT, THE TOWN MUST FILE AN EIR RATHER THAN A SUPPLEMENT TO AN EIR

As discussed briefly above, the DSSEIR is styled as a mere supplement to the 1997 SEIR. Under CEQA Guidelines § 15163, a lead agency "may choose to prepare a supplement to an EIR rather than a subsequent EIR" if, *inter alia*, "[o]nly minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation." The DSSEIR does not, however, propose "minor additions or changes" to the 1997 SEIR/EA, but rather sets forth a new development plan that will have substantial impacts on the environment as discussed above. Indeed, the DSSEIR consists of more than 450 pages (including attachments), which confirms the fact that it does not set forth minor changes or additions to the 1997 SEIR. Such extensive changes require the filing of a complete EIR for the Expansion Project.

I-49

If the Town wishes to pursue the Expansion Project, then we respectfully submit that the Town should combine a future Environmental Impact Report with an Environmental Impact Statement, so that the NEPA and CEQA aspects of the Expansion Project can be considered together. Both NEPA and CEQA strongly recommend such coordination. (See 40 C.F.R. § 1506.2 (2001); 14 Cal. Code Regs. § 15222.) Coordination of the CEQA and NEPA processes would not only serve to eliminate duplicative procedures, but would also create much needed clarity, which would help the public to review and understand impacts of the Expansion Project. As it stands, the public must not only sift through the DSSEIR, but also cross-reference it with the 1986 EIR, the 1997 SEIR, and the 2000 EA/FONSI. This cumbersome process should be streamlined.

I-50

IX. CONCLUSION

In light of the overwhelming number of legal deficiencies in the DSSEIR discussed above, the DSSEIR clearly does not provide an adequate basis under CEQA upon which to approve the Expansion Project. Before any final approval can be given to the Expansion Project, a significantly revised subsequent EIR must be prepared. Such a document must correct the informational and analytical gaps in the DSSEIR and must present and analyze a range of environmentally superior alternatives that can be compared to the Expansion Project. Moreover a subsequent EIR must be circulated in draft form for full public comment because it would

I-51

Cooley Godward LLP

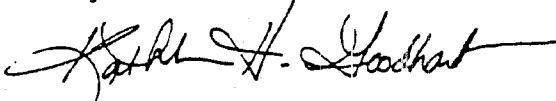
Mr. William T. Taylor
Town of Mammoth Lakes
November 26, 2001
Page Twenty-Two

present new data and analysis that are essential in analyzing the environmental impacts of the Expansion Project.

Thank you for this opportunity to comment on the DSSEIR.

Very truly yours,

Cooley Godward LLP



Kathleen H. Goodhart
James C. Maroulis
John Kinsey

Attachments

706189 v1/SF
F4WD011.DOC
112601/1340

STATE OF CALIFORNIA - THE RESOURCES AGENCY

GRAY DAVIS, Governor

DEPARTMENT OF FISH AND GAME

Eastern Sierra-Inland Deserts Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
(760) 872-1171



April 19, 2001

Mr. Herman C. Bliss
Manager, Airports Division, AWP-600
Federal Aviation Administration
P.O. Box 92007, Worldway Postal Center
Los Angeles, CA 90009

Dear Mr. Bliss:

The Department of Fish and Game (Department) has reviewed the Supplemental Information to the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Mammoth Yosemite Airport Expansion Project, SCH #200102045, dated March 19, 2001. The Department continues to believe that the EA does not contain the necessary supporting data and references to convincingly demonstrate that there would be no significant effects on the environment. The Department believes that the proposed project has the potential to have significant impacts on biological resources. We believe that either the EA should be rewritten to include mitigation measures, or an Environmental Impact Statement (EIS) should be prepared.

The Department is providing comments on this Supplemental Information as the state agency which has the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish & Game Code section 711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish & Game Code section 1802). The Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish & Game Code Section 702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. Sec. 15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

The Department provided comments on the proposed project on January 8,

Mr. Herman C. Bliss
Mammoth Yosemite Airport Expansion Project
April 19, 2001

The Department provided comments on the proposed project on January 8, 2001, November 14, 2000, and March 16, 2000. The Department continues to believe that impacts to sage grouse could be significant. The Department had proposed earlier that an effective mitigation measure could be to restrict the use of the flight corridor during the display period (mid-March through mid-May) to between the hours of mid-morning to late afternoon. We were told at a meeting on November 29, 2000, that the Town of Mammoth Lakes would not restrict the air carriers' hours of operations. However, the Supplemental Information currently under review states that disturbance to grouse is not likely if flights are at mid-day when birds would be away from the leks. The Department continues to believe that disturbance to sage grouse resulting in significant impacts to the Long Valley population could occur without these restrictions on operating hours.

The Supplemental Information also cites information collected from a sage grouse lek located at the Jackson Hole Airport. The two situations may not be comparable because the information provided does not indicate the level of use of the Jackson Hole Airport, the type of aircraft, the hours of operation, the effects on female sage grouse, or long-term effects on the population. Additionally, as stated in our November 14, 2000 letter, the Long Valley sage grouse population is a small, genetically distinct population of sage grouse. As such, it is more vulnerable to disturbance and potential population decline.

The growth-inducing impacts of the project have not been addressed in the Supplemental Information. The Department continues to believe that the proposed project could have significant, growth-inducing impacts to sage grouse, mule deer, Sierra Nevada bighorn sheep, raptors, and other wildlife species in the area. Recent news broadcasts report that the Town of Mammoth Lakes Strategic Marketing Plan projects that one million additional skier visits per season are necessary in order to keep existing lodging profitable. The airport expansion project will undoubtedly play a key role in providing these additional visitor use days. Additional visitation will result in increased human presence and disturbance in backcountry and front country areas, and additional pressures to adjacent public lands and biological resources on those lands.

We continue to believe that the cumulative and growth-inducing impacts of the Airport Master Plan need to be revisited and updated. Recent changes in the habitat capability of sage grouse and resulting population declines have occurred throughout the range of the sage grouse, necessitating listing of one population, and increasing concern on the part of biologists and land managers for the remaining populations. Additional information regarding the genetic isolation of the Long Valley population has also come to light within the last year. The analysis conducted in the 1997 Airport Master Plan EIR is out of date should be updated. We believe that a thorough analysis of the developments proposed for the Long Valley area, and their impacts to sage grouse, should be conducted. Direct, indirect, growth-inducing and cumulative impacts

Mr. Herman C. Bliss
Mammoth Yosemite Airport Expansion Project
April 19, 2001

impact analysis of the Long Valley population as a whole, as well as impacts to individual leks. The analysis should include impacts at full build-out and maximum operational level of the airport. A comprehensive mitigation plan for these impacts should be prepared. This analysis and mitigation plan should include lands owned, managed, or administered by the Town, Mono County, USFS, BLM, DWP and private lands. Potential mitigation measures could include relocation of the county landfill, to reduce raven predation on sage grouse eggs and chicks, closing roads into sage grouse habitat, or purchase of grazing leases.

The information on bird strikes in the Supplemental Information does not address potential impacts to bald eagle, a state and federal listed species. As we have stated in our earlier comments, the Hot Creek, Crowley, and Laurel Pond areas surrounding the airport support concentrations of wintering bald and golden eagles. At a meeting on January 19, 2001, consultants for the project discussed a study which investigated the effects of jet aircraft on bald eagles. Our understanding was that this study would be presented in the Supplemental Information. Although the Supplemental Information contains a fairly thorough discussion of the risk of bird strikes by passerines, the use of the airport area by bald eagles is not mentioned. No studies investigating impacts of jet aircraft on bald eagles are mentioned in the Supplemental Information. We believe that this issue deserves a thorough analysis.

FW S
has been
BA

We have not received a copy of the Biological Assessment (BA) addressing impacts to bald eagle, Owens tui chub, Sierra Nevada bighorn sheep, and Lahontan cutthroat trout. The information in the BA should be presented in the EA as well. Since these species are state-listed as well as federally-listed, the Department will need to review the BA in order to determine if take could occur, and if an Incidental Take Permit under the California Endangered Species Act will be required. According to the USFWS, consultation pursuant to Section 7 of the Endangered Species Act had not yet occurred as of April 14, 2001.

The fence design and location should also be coordinated with Caltrans, as well as with the Department and the U.S. Forest Service. Analysis of deer migration corridors indicates that it may be necessary to construct one or more underpasses for migrating deer under Highway 395. Fencing along both sides of Highway 395 to funnel deer to the underpasses may also be necessary. A solution to the problem of deer crossing Highway 395 at Hot Creek Road must also be developed. This deer fencing and mitigation plan should be developed by the responsible agencies and included in the EA.

In summary, the Department believes that the Supplemental Information provided has not demonstrated that there will be no significant effect on the environment, and therefore, a FONSI is inadequate for this project. Either an EIS should be prepared for the project, or the IEA and FONSI should be rewritten to include mitigation capable of reducing impacts below the level of significance.

Mr. Herman C. ...
Mammoth Yosemite Airport Expansion Project
April 19, 2001

Thank you for the opportunity to comment on the proposed project. If you have any questions, you may contact me at the letterhead address, or call Ms. Denyse Racine, Environmental Specialist III, at (760)872-1158.

Sincerely,

Denyse Racine
Darrell M. Wong, Supervisor
Habitat Conservation Program

cc: Mr. Brian Grattidge, State Clearinghouse
Mr. Bill Taylor, Town of Mammoth Lakes
Dr. Elisha Novak, FA
Mr. George Walker, USFWS
Mr. Steve Addington, BLM
Ms. Kathleen Morse, USFS
Mr. Jeff Bailey, USFS
Mr. Bill Manning, Town of Mammoth Lakes
Ms. Janiff Richards, DAG, Environment Section, DOJ
Ms. Katy Walton, Caltrans



U.S. Department of Justice

United States Attorney
Northern District of California

10th Floor, Federal Building
450 Golden Gate Avenue, Box 36033
San Francisco, California 94102

(415) 436-6352
FAX: (415) 436-6740

July 24, 2001

Susan Britton
Earthjustice Legal Defense Fund
180 Montgomery Street, Suite 1725
San Francisco, CA 94101

Trent W. Orr
96 Manchester Street
San Francisco, CA 94110

Dear Susan and Trent:

As we discussed on July 11, the Federal Aviation Administration (FAA) is currently responding to comments received after the Finding of No Significant Impact (FONSI) was issued and is engaged in consultation with various agencies. At this time the FAA has not made a final decision under the National Environmental Policy Act or taken final agency action to approve a revised airport layout plan (ALP) based on the FONSI. At a future date, FAA will determine whether to approve the proposed airport expansion and will issue a separate record of decision (ROD) to document the agency's final, reviewable action. As you requested, for purposes of this litigation, if the ALP is approved the FAA agrees to identify the statutory bases for its decision in the ROD.

In light of the foregoing, we ask that you voluntarily dismiss the complaint without prejudice, as we believe the claims therein are not ripe for judicial review. Defendants are amenable to a stipulation and order to that effect, thereby allowing plaintiffs to petition for fees at a future date; however, defendants make no representations, nor should any be inferred, about plaintiffs' entitlement to fees in this action.

I look forward to your favorable response, and appreciate your cooperation in this regard.

Very truly yours,

ROBERT S. MUELLER, III
United States Attorney


RICHARD P. LAVERDURE
Special Assistant United States Attorney

cc (via e-mail):

Daphne Fuller, FAA
Paul Smith, DOT

1 ROBERT S. MUELLER, III (SBN 59775)
United States Attorney
2 CHARLES M. O'CONNOR (SBN 56320)
Assistant United States Attorney
3 Chief, Environmental & Natural Resources Unit
RICHARD P. LAVERDURE (SBN 197369)
4 Special Assistant United States Attorney
450 Golden Gate Avenue - P.O. Box 36055
5 San Francisco, California 94102
Telephone (415) 436-6852
6 Facsimile (415) 436-6748

7 Attorneys for Defendants

8 IN THE UNITED STATES DISTRICT COURT
9 NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

10 SIERRA CLUB; NATIONAL PARKS
CONSERVATION ASSOCIATION;
11 CALIFORNIA WILDERNESS COALITION;
and NATURAL RESOURCES DEFENSE
12 COUNCIL,

13 Plaintiffs,

14 v.

15 UNITED STATES DEPARTMENT OF
TRANSPORTATION; NORMAN Y.
16 MINETA, Secretary of Transportation;
FEDERAL AVIATION ADMIN-
17 ISTRATION; and JANE S. GARVEY,
Administrator, Federal Aviation
18 Administration,

19 Defendants.
20

FILED

AUG 10 2001

RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

NO. C 01-01892 MEJ

STIPULATION AND [PROPOSED]
ORDER OF DISMISSAL WITHOUT
PREJUDICE

21 By and through their respective counsel, and pursuant to F.R.Civ.P. 41, the parties hereby
22 stipulate that the complaint be dismissed without prejudice in light of the following:

23 Defendants represent that with respect to the subject matter of this action, they have made no
24 final decision nor taken final agency action under the National Environmental Policy Act (NEPA)
25 based on the Finding of No Significant Impact (FONSI) dated December 21, 2000. The Federal
26 Aviation Administration (FAA) intends to issue a separate Record of Decision (ROD) to document
27 any final action that approves a revised airport layout plan. Thus, the parties stipulate and agree that
28 this matter should be dismissed without prejudice.

AUG-08-01 11:10 From:US ATTORNEYS OFF CIV DIV

(154)JES21

T-SUE P 03/03 Job-ATT

1 *Aug 5*
 2 Dated: *July*, 2001

Respectfully submitted,

ROBERT S. MUELLER, III
 United States Attorney

[Signature]
 RICHARD P. LAVERDURE
 Attorneys for Defendants

8 *August 9*
 9 Dated: *July*, 2001

[Signature]
 TRENT W. ORR
 96 Manchester St.
 San Francisco, CA 94110

DEBORAH S. REAMERS
 SUSAN BRITTON
 Earthjustice Legal Defense Fund
 180 Montgomery St.
 San Francisco, CA 94104
 Attorneys for Plaintiff

15 PURSUANT TO STIPULATION, IT IS SO ORDERED.

17 Dated: *8-10-01*

[Signature]
 MARIA ELENA JAMES
 UNITED STATES MAGISTRATE JUDGE

24
 25
 26
 27
 28 STIPULATION AND (PROPOSED) ORDER
 OF DISMISSAL WITHOUT PREJUDICE
 C 01-01290 MBL

PRIVATE INDIVIDUAL COMMENTS

I. Sierra Club, California Wilderness Coalition, Natural Resources Defense Council, California Trout, Inc., National Parks Conservation Association (represented by Cooley Godward and Earthjustice)

Response to Comment I-1

The commentor incorrectly suggests that the proposed project seeks to transform a local Airport. This comment ignores the critical facts that air carrier service at the Airport has already been approved and evaluated under CEQA, that such air carrier service with jet aircraft has already been provided at the Airport in the past, and that this Supplemental EIR is evaluating changes to the previously approved expansion plan. . These jet aircraft that would provide the proposed commercial service would be only a part of the total number of aircraft operations at the Airport (5,000 out of a total of 23,450 in the year 2022). This translates into less than fifteen operations per day for the future year 2022.

The use of enplanements (an enplanement represents one passenger boarding an aircraft) as a unit for analyzing passenger counts is standard FAA methodology, and is consistent with the dictionary definition provided in the comment. Airport operators and airlines frequently plan and manage air passenger service by tracking, on a monthly and annual basis, enplanements per airline, per destination, and so forth. Enplanement is, therefore, a common data point used in the air passenger service industry. Passengers are assumed to make a round-trip through an airport, therefore this definition of enplanements accurately reflects passengers and their impacts because an enplanement captures each “visit” to an airport by a passenger – coming and going. This definition is clearly explained in the document on Page I-6 of the Supplement

Response to Comment I-2

The Supplement has analyzed the environmental impact of forecast passengers using the Airport if the proposed project is built. Please also see Response to Comment I1 for the validity of use of enplanements as the unit for passenger counts and Responses to Comments B-7, B-11 and B-12 for discussion on cumulative analysis and growth inducing impacts of the proposed project. The commentor incorrectly states that the 1986 EIR/EA does not contemplate jet service. The forecasts of aircraft operations on Page 35 of the document envision large turbo prop and jet aircraft operations.

Response to Comment I-3

Although the FAA has not yet issued a Decision regarding its December 2000 Finding of No Significant Impact, the report and its conclusions are in the public record and are accurately reflected in the Supplement. (See CEQA Guidelines 15150 (a).)

Response to Comment I-4

Despite the error pointed out by the commentor, the Notice of Preparation informed the public that an environmental review would be conducted and available for public review and comment. As explained in the Response to Comment B-4, a subsequent and a supplemental EIR require fundamentally the same level of analysis and public review. Therefore notice of one is functionally equivalent to notice of the other. As best illustrated by these very comments on the Supplement, the Notice of Preparation issued by the Town served the purposes intended by CEQA.

Response to Comment I-5

While the comment asserts that the Supplement "misleadingly" implies that the Expansion Project is smaller in scope than the project referenced in the 1997 Subsequent EIR/EA, the comment itself in fact seriously mischaracterizes the true extent of the project. The facts are as follows:

- Because the currently proposed expansion only lengthens the runway by 1,200 feet instead of 2,000 feet as evaluated in the 1997 Subsequent EIR/EA, the expansion will take place entirely within already disturbed lands and almost entirely within existing Airport property. Widening the existing runway, therefore, has far less severe impacts than lengthening the runway by another 800 feet because under the current project there will be no disturbance of previously undisturbed land. Indeed, the current proposal would impact thirteen fewer acres of land than the prior proposal. (See Supplement at Exhibit III-14 and III-15.)
- The comment's claim that the currently proposed project is "nearly two-and-a-half times as large as the 1997 plan" is itself misleading. Again, while the current proposal would add more paved surface in total than the prior proposal, the current proposal takes place within a more compact area and within an already disturbed area. Therefore, from an environmental impact perspective, it is in fact "smaller" than the prior proposal, not many times larger as the commentor claims.
- The comment's claim that the Supplement "is misleading in implying that only the added runway and taxiways would cause land disturbance" is itself misleading. Again, most of the additional pavement would be within the already graded, already disturbed Airport area. The runway extension area (already disturbed) requires little grading because it is already flat since it is at the end of an existing, operating runway. The comment speculates without support about additional grading being required, but that speculation is not consistent with the facts. Moreover, under the prior proposal, fills up to 12 feet high would have been required. This is avoided under the current proposal.

In sum, this comment largely consists of mischaracterizations of the facts and unsupported speculation. The correct facts are set forth above and in the Supplement.

Response to Comment I-6

The calculated areas of pavement and of land disturbance analyzed in Section 3.5 (See Exhibit III-14 and III-15) of the Supplement takes into account all design requirements for line of site, shoulders, safety areas, object free areas, and runway grade. The regrading of the runway and the impact of the final project have been evaluated in the Supplement.

Please also see Response to Comment I-5.

Response to Comment I-7

Strengthening the pavements and other improvements to the runway needed for use of the Airport by jet aircrafts has already been analyzed in the 1997 Subsequent EIR/EA.

Please also see Response to Comment I-5.

Response to Comment I-8

The currently proposed project will be constructed in phases. That is what the Supplement refers to when discussing project phases. All currently planned phases of the project are analyzed in the Supplement. No future expansion projects are planned nor are reasonably foreseeable at this time because the currently proposed expansion will fully accommodate commercial airline traffic as intended. A runway length analysis evaluating specific aircraft and markets was conducted and is included as Appendix E of the Supplement. This study concluded that an 8,200-foot runway was adequate for the aircraft service anticipated in the foreseeable future, including aircraft that are common in the current U.S. fleet of aircraft and those being purchased by aircraft operators. This analysis was also reviewed and concurred with by the FAA and American Airlines, the initial service provider anticipated at the Airport. Projections of future expansion beyond those serving the passengers contemplated under the marketing analysis would be speculative and therefore, counterproductive to the environmental analysis at hand. Accordingly, no description or analysis of a “future expansion project” is required or appropriate here. If any additional improvement to the Airport takes place in the future, those projects will be reviewed to calculate their impacts on the environment.

The environmental analysis of the proposed project includes future air passengers at the Airport, and facilities have been sized and designed to accommodate them. Public services and utilities demands and all other environmental effects evaluated in the Supplement include the passengers for which the Airport is being designed for as explained in Section 3.8.2.2. Please also see Response to Comment B-12.

Response to Comment I-9

The Supplement gives a detailed description of the fleet mix for the proposed project in the year 2022 in Table III-4 of the Supplement. It is important to note in the comparison of these forecasts that the final forecast year is 2015 in the 1997 Subsequent EIR/EA and 2022 in the Supplement. In the 1997 Subsequent EIR/EA the forecast number of operations was 34,430 in 2015 with 2,920 air carrier operations. In the 2001 Supplement the total number of aircraft operations forecast has decreased to 23,650 in 2022 with 5,000 air carrier aircraft operations.

As described on Page xi of the Supplement, there have been commuter service flights at the Airport as late as 1994, therefore it is not a new proposal to develop air service at Mammoth Yosemite Airport to regain skier numbers from prior years. Also, the projects analyzed in 1986 and 1997 contemplated commercial are service.

The typical seating capacities for Boeing 757-200 and Boeing 737-800 for American Airlines are 188 and 156 respectively with typical two class seating arrangement used by American Airlines. The comment incorrectly provides these numbers.

Response to Comment I-10

The commentor incorrectly states that (1) the Supplement used a non-standard definition of enplanements and (2) the Airport would generate a six-fold increase in the number of passengers using the Airport over what was reported in the Supplement. As stated in Response to Comment I-1, the Supplement uses enplanements as a unit for passengers as prescribed by the FAA. The 1997 Subsequent EIR/EA also uses the same definition of enplanements, hence the two forecasts are comparable. Any analysis in the Supplement that required the total number of people using the Airport, both enplaning and deplaning, was done by doubling the number of enplanements (adding the number of enplaning and deplaning passengers), which is consistent with the definition of the term enplanement. It should also be noted that the term enplanement is the standard industry terminology used in such analyses and evaluations.

Response to Comment I-11

The research done in preparing the Supplement demonstrated that there is a clear correlation between the number of skier days experienced at nearby ski resorts and the enplanement levels at the airports serving the region. When examining the correlation between skier days and enplanement levels at Yampa Valley Regional, Vail/Eagle County, and Aspen-Pitkin County airports, the following correlation factors were calculated:

A correlation factor of 100 percent indicates that the independent variable (e.g., skier days) completely explains the variations in the dependent variable (e.g., enplanements). As demonstrated by the correlation factors (0.63, 0.86, and 0.77) produced by the Yampa Valley Regional, Vail/Eagle County and Aspen-Pitkin County airports respectively, a relatively high correlation exists between skier days and airport enplanements.

YAMPA VALLEY REGIONAL AIRPORT

Year	Estimated Winter Enplanements (100%)	Skier Days
1994	69,299	1,037,320
1995	93,173	1,027,701
1996	97,975	1,035,110
1997	110,170	1,121,487
1998	110,621	1,068,091

Correlation Factor = 0.6272

VAIL/EAGLE COUNTY AIRPORT

Year	Estimated Winter Enplanements (100%)	Skier Days
1994	52,039	4,667,635
1995	70,094	5,476,402
1996	99,057	5,896,743
1997	143,887	6,136,048
1998	152,766	5,935,018

Correlation Factor = 0.8581

ASPEN-PITKIN COUNTY AIRPORT

Year	Estimated Winter Enplanements (100%)	Skier Days
1994	143,430	1,542,094
1995	120,411	1,518,723
1996	126,403	1,433,187
1997	134,889	1,536,309
1998	149,106	1,661,775

Correlation Factor = 0.7687

As presented in the study, for the Base Case Scenario, an enplanement per skier day ratio of 0.085 was assumed. (See Appendix H of the Supplement.) This ratio was based on the following factors:

- The five-year average ratio of enplanements per skier days at Vail/Eagle County Airport of 0.018 is influenced greatly by the fact that the region is served by a very high number of ski resorts. In addition, the Vail/Eagle County Airport's close proximity to Denver International Airport with direct highway access, creates competition for visitors to the region. As a result, the ratio of enplanements per skier days at Vail/Eagle County Airport were considered too low for enplanements at Mammoth Lakes to be modeled after.
- Due to the comparable size and number of ski resorts in Vail and Aspen, the five-year average ratio of enplanements per skier days at Vail/Eagle County, Yampa Valley, and Aspen-Pitkin County airports (0.097, 0.091 and 0.087, respectively) were considered to be more inline with what might be experienced at Mammoth Lakes. In addition, similar to Mammoth Lakes, these airports are generally not in close proximity to nearby competing airports. As such, the ratio of 0.085 enplanements per skier day was considered to be reasonable, and was based on the levels experienced at Aspen-Pitkin County Airport as it was found to be most similar to the Mammoth Yosemite Airport.

Historical skier day figures were not available for the ski resorts in the vicinity of Jackson Hole and Glacier Park International airports, and as such could not be used to develop comparable enplanement to skier day ratios.

Please also see Response to Comment B-7.

Response to Comment I-12

The comment incorrectly states that the proposed project would result in thousands of air carrier flights from large cities such as Chicago and Dallas. As explained in Appendix H of the Supplement, the initial service provided by American Airlines would be from the airlines two major hubs located at Chicago and Dallas. But it is anticipated that in the future the air service would be provided from other cities such as Los Angeles, San Francisco, and Las Vegas where the majority of the visitors to the Mammoth Lakes area originate.

The Supplement concludes on the basis of evidence from other comparable airports at other ski resorts that approximately 70 percent of arriving passengers on commercial airline flights allowed by the expansion project will use public transit or private shuttle buses. Private shuttles are already available to serve the airport and the Town is working to upgrade the public transportation system. This conclusion, and the related traffic analysis contained in the Supplement, as well as that contained in the 1997 Subsequent EIR/EA, demonstrate that the project will not have significant secondary traffic impacts.

As discussed in Section 3.4.2 of the Supplement, the estimate that 70 percent of commercial airline travelers will use transit is based on the following data sources:

- For the purposes of the analysis, it was assumed that all general aviation users would continue to use private vehicles. This is a conservative assumption in that some general aviation users may elect to use transit.
- Discussions with airport managers at comparable airports indicate that shuttle bus services capture 60 to 90 percent of visitors destined for hotel/resort/ski area:
 - Yampa Valley Regional Airport serving the Steamboat Springs ski area in Colorado reports that 90 percent of visitors are shuttled by bus to the hotel/resort/ski area.
 - Gunnison County Airport serving Crested Butte and Monarch ski areas in Colorado reports that 60 to 65 percent of visitors are shuttled by bus to the hotel/resort/ski areas.

The traffic analysis in the Supplement is based on enplanements, which is based on demand (skier days), and supply (number of flights and the capacity of Airport). The origin of the passengers is irrelevant to the traffic analysis. The traffic study addresses an increased number of automobile travelers from Southern California who would visit the area, by incorporating a one percent annual increase in traffic on U.S. Highway 395 compounded for 20 years, even though the Town anticipates that the Airport expansion project will result in a reduced rate of increase in car trips from Southern California. This annual increase data was supplied by Caltrans.

For analysis purposes, visitors arriving at Mammoth Yosemite Airport have been spread amongst buses, shuttle vans, rental cars, private vehicles, and private vehicle pick-up and drop-off modes. The modal split applied is 60 percent to buses, 10 percent to shuttles, 12.75 percent to rental cars, 4.5 percent to private parking, and 12.75 percent to private pick-up and drop-off. This is based on existing modal split at comparable airports.

The transportation consultant has reviewed the trip generation characteristics and the allocation of passengers to different modes (buses, vans, rental cars, etc.) for reasonableness and concurs with the data.

Please also see Response to Comment B-12.

Response to Comment I-13

The number of fuel trucks serving the Airport is provided on Page I-10 of the Supplement. It is expected that one or two fuel trucks per day would service the Airport for the 2022 forecast aircraft operations. This number represents a negligible fraction of the traffic that uses U.S. Highway 395, which includes fuel and other types of trucks serving Town of Mammoth Lakes and other communities in that area. It should also be noted that a similar number of trucks also served the Airport in the early 1980s, when there were greater number of operations, without any problems. Therefore, it is anticipated that these fuel truck operations would have no impact on traffic on U.S. Highway 395.

Response to Comment I-14

The traffic study utilizes Institute of Transportation Engineers (ITE) trip rates for the gasoline service station, hotel, campground, and high turnover sit-down restaurant. The specific rates are from the ITE Trip Generation 6th Edition, land use codes 845, 310, 416, and 332, respectively. All these rates were “averages” from the ITE trip generation data. Use of the ITE average rates is commonly done and it is especially conservative in this analysis because both the service station and restaurant rates are reflective of urban locations, not remote rural conditions, which will be lower. The trip rates for the residential high density (seasonal) land use were based on approved rates from the Town of Mammoth Lakes for application in traffic impact studies.

Please also see Response to Comment I-12 for more information regarding modal split of passengers used in the Supplement’s traffic analysis.

Response to Comment I-15

For explanation of the application of pass-by trips, please see Responses to Comments L-21, L-22, and L-24. Project pass-by trips are never eliminated or removed. Instead, they are simply diverted from U.S. Highway 395 into the project and back out again onto U.S. Highway 395. The percentage assigned to pass-by character for each land use is reflective of the remote location of these uses. For example, the service station, due to its remote location, is likely to attract the vast majority of its trips (90 percent) from the existing traffic stream on U.S. Highway 395. Very few trips (10 percent) are projected to be single purpose, meaning they stop only at the service station and return in the opposite direction.

The restaurant trips are not removed, but rather 75 percent are assumed to come from the hotel, gas station, residential development, and campground, and the balance (25 percent) as pass-by trips from traffic already on U.S. Highway 395, which will stop at the restaurant, eat, and then continue on in the same direction on U.S. Highway 395. Because of its common type and remote location, it is not anticipated that the restaurant would draw single purpose visitors, for example from Bishop or Mammoth Lakes, who would drive there, eat, and return in the opposite direction.

Response to Comment I-16

If the proposed project were implemented, the Level of Service (LOS) at the intersection of U.S. Highway 395 and Hot Creek Road could be as high as LOS F without the mitigation measures explained on pages III-67 through III-70 of the Supplement. After the implementation of these mitigation measures, LOS D would be obtained, which is acceptable under Caltrans specifications. Avoidance measures are not required at LOS D, because it is the upper level of acceptable conditions.

Response to Comment I-17

The purpose of the traffic counts taken on November 16, 2000, was to determine ambient turning movement traffic levels for Hot Creek Road only. Traffic volumes on Hot Creek Road would not be affected by the winter ski season. The attractions served by this road are the fish hatchery, Hot Creek Ranch fly fishing camp, Hot Creek (closed in the winter), and a geologic site. Traffic to these sites would not be increased in the winter ski season. Turning movements are always taken manually (i.e., by hand) and cannot be accurately counted mechanically. The hand counts reflect very low volumes of less than 20 vehicles per hour per direction.

The traffic volumes for U.S. Highway 395 were provided by Caltrans for purposes of analysis in this traffic impact study (See Page 4 of Appendix L of the Supplement.) The peak-hour traffic volumes were obtained from the Caltrans Annual Traffic Count data (1999) for U.S Highway 395 between McGee Creek Road and the junction of Route 203. The traffic volumes represent a peak month. On roads with large seasonal fluctuations in traffic such as U.S. Highway 395, the peak hour is the hour near the maximum for the year but excluding a few hours (30 to 50) that are exceedingly high and are not typical of the frequency of the peak hours occurring during the season. This is standard Caltrans practice.

Response to Comment I-18

Peak levels are an important part of the traffic analysis. Peak levels occur in the winter; therefore it is an appropriate time to look at winter traffic volumes for a traffic analysis, as done in Section 3.4 of the Supplement. In the past year, bus shuttle service has been started from various gateway towns including Mammoth Lakes to Yosemite National Park. This bus service, in conjunction with other initiatives to reduce vehicular traffic in the region, would result in an improvement in traffic conditions. Summer traffic peak hour volumes are less than those in winter, therefore, winter peak hour volumes are the most appropriate to analyze.

The p.m. peak hour typical winter weekend condition was identified for traffic impact analysis purposes based on previous work conducted for the Town of Mammoth Lakes and Caltrans, which determined that it was representative of the 30th highest hour during the year. (See Appendix K of the Supplement.) This previous work involved an analysis of daily traffic volumes on Route 203 entering the Town of Mammoth Lakes. Caltrans has a continuous count station on Route 203 east of Old Mammoth Road. An examination of each day's traffic volume for a two-year period was performed. This analysis resulted in the conclusion that a typical winter weekend p.m. peak hour (i.e., Saturday) represented an appropriate design (i.e., 30th highest hour of the year) and environmental condition. This concept of the 30th highest hour is used by Caltrans for impact analysis and highway design purposes. The winter weekend peak hour also has the most pronounced

directional split of traffic resulting from the closing of the mountain skiing activities at the end of the day. This again represents the most severe traffic condition compared to non-winter months.

The peak tourist months at the other destinations/resorts in the area like Yosemite National Park would be in summer months, or off-peak from the Mammoth winter ski months. It should also be noted that the east entrance of Yosemite National Park through Tioga Pass the entrance most accessible from Mammoth Lakes, is closed during winter months.

Response to Comment I-19

The traffic modeling for the Town Transportation and Circulation Element is based upon full development of the community and includes arrival trips by private automobile. To the extent that Airport patrons utilize transit to a greater degree than visitors arriving by private vehicle, there will be a reduction in vehicle trips from that anticipated in the General Plan and Air Quality Management Plan. Please also see Response to Comment I-12 regarding the validity of the assumption that a majority of Airport patrons will use public transit or shuttles. These bus shuttles would work in conjunction with the existing bus service in the Town of Mammoth Lakes hence decreasing the traffic impacts. The proposed project will improve existing and future traffic conditions by providing an alternative mode of transportation to people who are presently forced to drive to Mammoth Lakes.

An analysis of short term and long range (Town build out) traffic conditions within the Town has been completed by the Town in the recently certified Final Subsequent Program EIR for North Village 1999 Specific Plan Amendment. The Town of Mammoth Lakes level of service (LOS) standard for roadway segments and intersections is LOS D, which correlates to a volume-to-capacity (v/c) ratio of 0.90 or better. Additionally, the Town accepts worse than LOS D roadway segment operation if all intersections along such a roadway segment are demonstrated to operate at an acceptable LOS (LOS D or better) for a typical winter Saturday p.m. peak hour condition, or other time frames as deemed necessary by the Town. Currently, all roadway segments studied in the Specific Plan were operating at an acceptable LOS for typical winter Saturday conditions. The full buildout of the proposed project would generate approximately 15,419 additional typical Saturday daily trips in the Town. Implementation of recommended mitigation measures included in the Specific Plan EIR would reduce potentially significant impacts to a less than significant level. Collectively, at buildout, the 1999 Specific Plan Amendment, as proposed, is forecast to generate 20,200 daily trips, of which approximately 1,876 trips are forecast to occur within the peak hour for a peak winter Saturday condition assuming implementation of the proposed 1999 Specific Plan Amendment. All roadway segments studied in the EIR are forecast to operate at an acceptable LOS assuming buildout of the Town General Plan with the proposed 1999 Specific Plan Amendment.

Response to Comment I-20

The package treatment plant is designed to handle the expected sewage (8,000 gallons/day) produced at the Airport with the implementation of the proposed improvements at full buildout in 2022. (See Supplement at Page III-80.) Sludge from the sewage treatment plant will be disposed of at the Benton Crossing Land Fill. This facility already accepts sludge from the Mammoth Community Water District.

Response to Comment I-21

Please see Responses to Comments C-1 and C-14.

Response to Comment I-22

Please see Response to Comment C-1.

Response to Comment I-23

Please see Response to Comment G-1. No storm water runoff infiltrates the ground at the edge of paved surfaces. Maximum displacement of point of infiltration will be 100 feet. Fuel spills from possible accident will be handled as set forth under Emergency Response Plan.

Response to Comment I-24

This comment is beyond the scope of the Supplement because the introduction of commercial jet air carrier service has already been analyzed in the previously certified 1997 Subsequent EIR/EA and the 1986 EIR/EA. The changes in the proposed project since the certification of these environmental documents would not result in significant noise impacts. Nonetheless, the Town provides the following response.

The comment starts from an incorrect premise that "[a]n overall increase in noise would result from the [project's] introduction of large commercial jet traffic at the [A]irport." As discussed in Response to Comment B-9, a noise analysis was also done to compare single-event noise analysis for sage grouse lek site 2. (See Supplement at Section 3.3.2.2.) This analysis showed that the B-757 aircraft would produce less single event noise than aircraft in the existing fleet and flight patterns at the Airport. Also, the adjacent highway contributes to a high level of ambient noise at the Airport. (See Supplement at pages III-84 - III-94.) The Airport is not a pristine, quiet environment as the comment implies. Instead, it is an existing, operating airport alongside a busy highway.

Furthermore, there are very few sensitive receptors in the vicinity of the Airport. The comment's claim that "local residents, businesses, and tourists would suffer increased noise from thousands of Boeing 757-200s and 737-800s flying overhead" contains multiple inaccuracies. First, local residents, businesses and tourists would "suffer" no increased noise from the project because the Airport is sufficiently far from the Town and other local residences that the noise has been attenuated to a level that is not significant. The noise contour maps in the Supplement graphically demonstrate this point. (See Supplement at pages III-88 through III-91.) The flight path diagrams in the Supplement also demonstrate that few planes would actually fly over the Town or other residential areas. (Supplement at Exhibits III-6 and III-7.) Second, citing "thousands" of aircraft overstates the fact that the actual number of commercial aircraft operations (landings and takeoffs) at the Airport in 20 years will be less than 15 per day, and initially will be only four or six per day.

The comment also refers to CEQA Guidelines Appendix G and its list of five categories of noise that may constitute a significant impact. The proposed project does not satisfy any of these criteria.

- First, the proposed project would not expose persons to noise levels in excess of standards established in the Town of Mammoth General Plan or noise ordinance or any other applicable

standard. (See Town of Mammoth Lakes General Plan, Noise Section.). The General Plan recognizes that there is an existing, operating airport at this site. Also, as previously stated, existing aircraft operating at the Airport that are louder than the jets that the project would accommodate. Further, at its peak, the proposed jet service would be about one-fifth of the total annual operations at the Airport. Thus, the proposed jet service will add little, if any, to the existing noise generated by the Airport.

- Second, the proposed project would not result in the exposure of persons to excessive groundborne vibration or groundborne noise levels. Again, the project site is an existing, operating airport used by aircraft that are louder than those proposed to be introduced. Also, the persons closest to the primary areas of groundborne noise or vibration on take off and landing of commercial air carrier aircraft would be persons driving by at high speed on U.S. Highway 395. U.S. Highway 395 is more than 400 feet from the runway centerline, and noise generated by planes taking off and landing would not be directed at the highway. Thus, the proposed project will not subject persons to excessive groundborne noise or vibration.
- Third, the project will not result in a substantial permanent increase in ambient noise levels in the project vicinity. The primary generator of ambient noise at the Airport is U.S Highway 395. The project site is not a pristine, quiet environment. Rather it is an existing, operating airport alongside a busy highway, which generates constant traffic noise. Those existing characteristics contribute far more to the ambient noise levels than the commercial air carrier service.
- Fourth, the project will not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Again, the project site is an existing, operating airport. The proposed project would add approximately one-fifth to the total number of annual operations. Some planes already operating at the Airport are louder than those that would be introduced under the proposed project. These conditions exist without the project. Thus, this criterion is also not satisfied.
- Finally, the project is not "within the vicinity of a private airstrip." The Mammoth Yosemite Airport is owned and operated by the Town of Mammoth Lakes. Thus, it is not a private airstrip. Accordingly, this criterion is not applicable here.

The comment ignores the fact that the Supplement is limited to impacts from changes in the project since the previously certified EIRs. The noise analysis in the Supplement is more than adequate when the appropriate scope of the document is recognized. In any case, the criteria for a significant noise impact in Appendix G of the CEQA Guidelines are not satisfied here.

The analysis in the Supplement follows standard noise analysis practices as well as CEQA Guidelines Appendix G. Please also see Response to Comment B-9.

Response to Comment I-25

Devils Postpile National Monument and Yosemite National Park are too far from the Airport to be directly impacted by the project. Exhibits II-6 and III-7 in the Supplement show the arrival and departure flight paths for air carrier operations from Runway 927 in relation to the Devils Postpile National Monument. The topography completely blocks the Devils Postpile from aircraft activity to the east. The closest that air carrier aircraft would come to the Devils Postpile National Monument would be approximately 12 miles. As described in Section 3.7.2 of the Supplement, there would be procedures in place, for aircraft operating under specified air traffic procedures, to ensure separation from the high terrain in the area around the Airport. Such procedures are common at high altitude

airport. In this case, these procedures would route aircraft to the east, away from Yosemite National Park, the Town of Mammoth Lakes and Devil's Postpile. Aircraft must stay on this easterly routing to ensure terrain clearance until the aircraft is above 16,000' MSL. Commercial flights already fly at high altitudes over these areas many times each day. Flights from the Mammoth Airport will be at sufficient enroute altitudes, along with other existing air carrier overflights, by the time they reach these areas, if they are routed by air traffic control towards these general areas, so as not to pose an additional noticeable impact.

Response to Comment I-26

The text under Section 3.3.2.2, "Habitat Loss", page III-37 in the Supplement, has been revised as follows in response to this comment.

Habitat Loss

The dry meadow east of the approach end of Runway 9-27 is suitable habitat for sage grouse winter use and summer foraging. (See Appendix I, Figure 2 of the Supplement.) It could not be determined during the Biological survey if sage grouse were using this area as a lek site. [*Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000.] A small portion of the dry meadow might be removed or disturbed by construction activities for the proposed project. This small area of the dry meadow would also be disturbed by construction of the proposed security fencing.

Although the dry meadow site could potentially be used as a lek, data on lek locations collected for more than 30 years by agency personnel (e.g., BLM, CDFG) and university researchers (e.g., Dr. Robert Gibson, University of Nebraska) indicates that the dry meadow has never been used as a lek. Therefore, the removal or disturbance of a small portion of the dry meadow habitat is not considered a significant impact.

For the proposed project, an eight-foot high security fence would be constructed around the airfield. Although sage grouse could fly over the fence to use the enclosed sagebrush scrub habitat, the fence could inhibit their use of this habitat. However, data from sage grouse at the Jackson Hole Airport indicates that the chain link fence is unlikely to inhibit grouse use of the habitat. During the summer, sage grouse at the Jackson Hole Airport regularly fly over the chain link fence that surrounds the airport to forage in the meadow habitat at the end of the runway. [Personal communication, Matt Holloran, University of Wyoming, January 9, 2002.]

Response to Comment I-27

The text under Section 3.3.2.2, "Fencing", page III-37 in the Supplement has been revised as follows to reflect this comment.

Fencing

Wire fences may adversely affect sage grouse. Sage grouse mortality from colliding into wire strand fences has been documented by BLM biologists. Sage grouse often fly low when moving short distances, and most likely collide into fences in the dark or at low light levels. Thirty-seven sage grouse mortalities were recorded along the

cattle fence located north of Lek 2 between April 1997 and February 1999 [Personal Communication with Terry Russi.] In the Bodie Hills, sage grouse abandoned a lek after construction of a five-strand wire fence adjacent to the lek site in 1995. Sage grouse returned to the lek in fewer numbers after the fence was relocated, but continued to use other areas as strutting grounds. [Personal Communication with Terry Russi.]

The eight-foot high security fence that would be constructed for the proposed project would create a barrier with greater visibility to sage grouse than the existing barbed wire fence. The new fence would likely reduce potential mortality to sage grouse from bird-fence collisions. Since 1998, no radio-collared sage grouse (there are 61 collared birds) have collided with the eight-foot high security fence that surrounds the Jackson Hole Airport, nor have any non-collared birds been found next to the fence [Personal communication, Matt Holloran, University of Wyoming, January 9, 2002.] It should be noted that four collared roosters have collided with overhead power lines, two of these collisions occurred near the Town of Jackson. As noted above, sage grouse regularly fly in and out of the fenced area that surrounds the Jackson Hole Airport.

Response to Comment I-28

CEQA does not require mitigation measures for impacts that are not found to be significant. (CEQA Guideline 15126.4(a)(3).) The Supplement concluded that potential impacts to the sage grouse from the changes in the project since the previously certified 1997 Subsequent EIR/EA would be less-than-significant. Thus, legally, the mitigation measure suggested by the comment is not required. Also, factually, since the Supplement concluded there would be no significant impact to the sage grouse, there is no reason to adopt such a mitigation measure.

Response to Comment I-29

Support for this conclusion that male sage grouse are not easily disturbed by aircraft noise while on the lek is based on phone conversations with the following two individuals: (1) Joe Bohne, Wyoming Department of Game and Fish, Jackson, Wyoming. (A 25-year employee of the Department and member of the Western Association Fish and Wildlife Agency Interstate Sage Grouse Working Group Conservation Team), and (2) Mr. Matt Holloran, (a PhD candidate, University of Wyoming, who, with his colleagues has been studying sage grouse seasonal habitat use and survival in Jackson Hole, Wyoming since 1998.)

Response to Comment I-30

Any growth-inducing impacts are unlikely to lead to habitat loss for the bald eagle because the overwhelming majority of land in the vicinity of the project and in the region is controlled by two federal agencies, the Bureau of Land Management (BLM) and the United States Forest Service (USFS), and one municipal agency, the Los Angeles Department of Water and Power (LADWP). In order for any growth to occur, development would have to take place on lands now owned or managed by one of these agencies. This would require major changes to the policies of the subject agencies.

Response to Comment I-31

Based on FAA data collected over a ten-year period (FAA 2000), the likelihood of bald eagle-aircraft strikes is remote. Bald eagles represented only 23 of 27,433 bird strikes (0.2 percent) recorded in ten years in the whole country. Airports that are located where bald eagles are year-round residents, such as the Jackson Hole Airport, have never recorded any strikes, even though the eagles forage in the vicinity of the airport. [Personal communication, Doug Johnston, Director of Operations, Jackson Hole Airport, January 11, 2001.] The possibility of a strike cannot be ruled out, but is considered remote for the reasons listed on page III-55 of the Supplement. Therefore, the proposed project may affect, but is unlikely to adversely affect, the bald eagle. (See also, Appendices I “Biological Assessment of Mammoth Yosemite Airport Project” and Appendix J “Biological Opinion” of the Supplement.)

Response to Comment I-32

Based on the assessment of water quality impacts set forth in Response to Comment G-1, project activities would not impact the Owens tui chub. As outlined in the CEQA guidelines Section 15126.2 the discussion of growth inducing impacts relates primarily to a description of the way the project may affect economic and population growth. Environmental impacts from other projects are addressed under cumulative impacts. Please see Response to Comment A-2 regarding cumulative impacts. Please also see Response to Comment C-2 regarding impacts on Owens tui chub.

Response to Comment I-33

Please see Response to Comment I-32.

Response to Comment I-34

The environmental impacts of the changes to the proposed project with regards to air quality and aircraft noise have been analyzed in Section III of the Supplement. It was found that these changes would have no significant environmental impacts. (See Supplement at Sections 3.2 and 3.7.)

Response to Comment I-35

The impacts on Sierra Nevada Bighorn Sheep have been adequately addressed in the Supplement on page III-55 and III-56. The Airport is located over 12 miles from the nearest bighorn sheep habitat and the flight path is over three miles from the closest sheep habitat. No impacts to sheep from noise are expected, nor will the project cause habitat destruction. The USFS manages the backcountry (i.e., sheep habitat) to minimize habitat alteration and destruction and emphasizes a “leave no trace” ethic. Since there are no impacts, no cumulative analysis is necessary.

Response to Comment I-36

The comment starts from an incorrect assumption that the project would result in "greatly increased visitation." As demonstrated in the Supplement and throughout these responses, the project analyzed in the Supplement, changes in the project since the previously certified EIR, will not in themselves result in substantial additional visitation. Instead it will accommodate the restoration of lost visitor numbers and other development currently underway or anticipated in the General Plan. (See

Responses to Comments B-7 and B-12.) Because the project analyzed here will not result in the assumed increase in visitation, there is no basis for analyzing the speculative impacts suggested by the comment such as pressure on the USFS to increase backcountry quotas, unpermitted camping and backpacking, or impacts to the habitat of the Sierra bighorn. Nonetheless, potential impacts to the Sierra bighorn are analyzed at Section 3.3.1.3 of the Supplement, which states that no Sierra bighorn are known to reside within 12 miles of the project site.

The recently adopted Wilderness Management Plan for the Ansel Adams, John Muir, and Dinkey Lakes Wilderness Areas established quotas for the affected wildernesses. This plan is predicated on the Inyo National Forest Land and Resource Management Plan (LRMP). The population projections in the LRMP are consistent with the projections used by the Town of Mammoth Lakes in evaluating the impacts of the project. CEQA does not require speculation regarding changes to regulations unless those changes are reasonably foreseeable. Given the recent date of the adoption of the LRMP, changes are not reasonable foreseeable.

Response to Comment I-37

The effectiveness of the mitigation measure for deer migration will be assessed through a monitoring program and will include a mechanism to modify the fence design and location based on the results of the monitoring. The measure will be developed, approved, and implemented with federal, State, and local agency coordination and consultation. Please also see Response to Comment E-7.

Response to Comment I-38

As explained in Response to Comment I-31, most bird strikes occur at low altitudes during takeoffs and landings (FAA 2000). The mitigation measure to minimize raptor perching opportunities in the project vicinity will help to reduce the likelihood of birdstrikes. A lack of perch and nest sites already limits raptor use of the project area.

Disturbance to nesting raptors that causes the birds to abandon their nests and fail to reproduce could reduce recruitment to the area's population and would adversely affect a species population. The only potential nesting habitat for raptors in the project's vicinity, however, is for tree-nesting species, hence those are the species discussed in the document. A literature review indicates that the most significant effects to raptors appear to be at close distances (less than 500 feet above ground level) with almost no effect at 2,000 feet or more. Therefore, the project would not be expected to adversely affect nesting raptors.

As noted in the Supplement at Section 3.3.2.2, "Disturbance to Nesting Raptors," page III-51, raptors could forage in and near the project area. However, the Airport and its immediate surroundings do not contain key foraging habitat for any raptor species, and given the elevation the air carrier aircraft would be flying, the project is not likely to adversely affect foraging habitat for raptors. Text has been added to Section 3.3.2.2 of the Supplement as follows to address this comment further.

Suitable nesting habitat for prairie falcons is protected cliff ledges. No suitable habitat for this species is present in or immediately adjacent to the project area. The nearest suitable habitat is located in Hot Creek, approximately two miles north of the Airport and in the Owen River Gorge, more than ten miles southeast of the Airport. Red-tailed hawks and golden eagles use similar nesting habitat, although they will

also nest on crags and in trees. Potential crag nesting habitat is located in the Owen River Gorge and in Hot Creek. Potential tree nesting habitat is located east on Doe Ridge, two miles west in the forest hills, and south of the project area along the Sierra escarpment. The proposed air carrier flight paths do not pass over these habitats, although the existing flight paths do pass over some of these locations. Therefore, the proposed project is unlikely to adversely affect nesting prairie falcons, red-tailed hawks, and golden eagles. These three species could potentially forage in and near the project area. However, the Airport and its immediate surroundings do not contain key foraging habitat for any raptor species, and given the elevation the air carrier aircraft would be flying, the project is not likely to adversely affect foraging habitat for raptors.

Response to Comment I-39

Refer to the Response to Comment I-28 regarding the need for mitigation measures. The project proponent has proposed to work with Caltrans should the undercrossing be constructed. However as referred to in the comment, there are no significant impacts to the mule deer therefore no mitigation measures are required. Refer to the Response to Comment A-2 regarding cumulative impacts.

Response to Comment I-40

The statement from Kings County Farm Bureau v. City of Hanford quoted in the comment is preceded in the court's opinion by the following statement: "The significance of an activity depends upon the setting." (Kings County, 221 Cal.App.3d at 718 citing CEQA Guideline 15064 (b).) The court also states that "the EIR's analysis uses the magnitude of the current ozone problem in the air basin in order to trivialize the project's impact." In simple terms, the Hanford EIR reasons the air is already bad, so even though emissions from the project will make it worse, the impact is insignificant." (Id.) This is not the case here. Instead, as demonstrated below, the Supplement recognizes the existing air quality in the area, and bases its conclusions on that as well as the specific "setting" of the proposed project. This setting has these significant components.

The project is located approximately seven miles downwind from the closest population center, the Town of Mammoth Lakes. As discussed in the air quality management plan for the Town of Mammoth Lakes, particulate emissions in the Mammoth Lakes region are predominantly caused by wood burning stoves and motor vehicle traffic. The introduction of commercial air service to Mammoth Lakes Yosemite Airport is expected to reduce particulate emissions in the region when compared to the no project alternative by reducing visitor vehicle miles traveled (VMT) as more people are accommodated in higher occupancy vehicles. (See Supplement at Table III-10.) Reduction/control of VMT in and around the Town of Mammoth Lakes is a stated goal in the State Implementation Plan (SIP).

As discussed in the Supplement at page III-25, the Great Basin Valleys Air Basin including Mono County is an ozone transport region. According to Great Basin Unified Air Pollution Control District (GBUAPCD) staff, all historic exceedence events in the Basin have been caused by pollutants coming in from the western cities like Los Angeles through the San Joaquin Valley. [Personal communication with Duane Ono at GBUAPCD.] As discussed in the report *Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentration in California* prepared by the California Air Resources Board, historical exceedence events/extreme

concentrations measured at the Mammoth Lakes air monitoring site occurred in July and August. Project related operational emissions of NO_x and VOC are expected to be highest during winter months when visitor demand to the region is the highest. Project related emissions would not contribute cumulatively to exceedence events in summer. The report also states, "based on the time of day that the violations occurred, the characteristics of the violations, the predominantly westerly wind patterns, and the comparatively small emissions in the Great Basin Valley Air Basin (GBVAB), the staff considers these violations to be the result of overwhelming transport from the San Joaquin Valley". In light of these findings it is assumed that the proposed project will not contribute to new violations of the ambient air quality standard for Ozone precursors as the current violations are overwhelmingly the result of transport from the San Joaquin Valley by westerly winds. It is important to note that the Airport is located east of the Town of Mammoth Lakes and therefore Airport related emissions would not contribute to pollutant concentrations in the Town during a typical exceedence event. This conclusion is supported by discussions with the GBUAPCD staff. [Personal communication with Duane Uno at GBUAPCD.]

Even with the lack of a significant air quality impact, because the proposed project is located in a non-attainment area, approval of the proposed project is subject to an evaluation of the project's conformity with the air quality management plan for the Great Basin Unified Air District. In accordance with the General Conformity requirements, an air quality evaluation was performed for the proposed project. In this evaluation, total direct and indirect emissions associated with the project were compared to annual de minimis emissions levels as specified in 40 CFR 93.153. The results of this analysis indicated that no de minimis thresholds would be exceeded as a result of the project, nor would the project be considered regionally significant. Project-related emissions represent a very small fraction of basin-wide emissions of NO_x and VOC and would not constitute a large percentage increase in emissions as stated in the comment.

In summation, the proposed project will have a beneficial impact to air quality in the region by reducing total vehicle miles traveled (in effect reducing the PM 10 emissions). Moreover, the project is at the downwind edge of the non-attainment area. Thus, any additional air pollution generated by the project will be dispersed away from populated areas and away from the non-attainment area. These are the key facts of the "setting," which relate directly to the potential impacts of the project on the environment, not just its contribution to the general air quality situation in the area.

For all these reasons, the Supplement's analysis of potential air quality impacts from the changes in the project since the previously-certified EIR complies with CEQA's requirements, including those set forth in the Kings County case.

Response to Comment I-41

The proposed project would result in a reduction in the projected number of vehicle miles traveled (VMT) in the region by providing an alternate mode of transport (air service) to and from the Town of Mammoth Lakes. The reduction in VMT that would result from the implementation of the proposed project would improve air quality in the Town and in the surrounding region. As discussed in Response to Comment I-40, the air quality management plan for the Town of Mammoth Lakes, indicates that the particulate emissions in the Mammoth Lakes region are predominantly caused by wood burning stoves and resuspended road dust. This is due to the fact that most homes and rental units in the vicinity of Mammoth Lakes have wood stoves or fireplaces. Temperature inversions during the winter season cause a buildup of wood smoke in the stagnant valley air. Particulate

emissions from resuspended road dust and cinders add significantly to the particulate emissions problem in the area. The proposed project supports a reduction in future VMT's and a corresponding reduction in the amount of resuspended road dust and cinders.

The effect of aircraft emissions on air quality in the Town of Mammoth Lakes would not be significant due to; (1) the distance between the Town and the Airport and, (2) prevailing westerly winds in the region, and (3) the mountainous geography in the Mammoth Lakes area. The Town is west of the Airport and aircraft emissions would be dispersed by the prevailing westerly winds (i.e. concentrations in the Town would be negligible).

Response to Comment I-42

Please see Responses to Comments B-7 and B-12. Further, the Supplement's conclusion that there would be little or no growth in the vicinity of the Airport that is attributable to the project "because various governmental bodies own most of the land" outside of the Town's jurisdiction is supported by the evidence as shown on Exhibit II-2 in the Supplement. It is reasonable for the Town to assume that these agencies will not permit private development on that land in the foreseeable future. Also, much of the public land in the area is subject to various federal land and resource management plans that are required by federal law to protect open space and natural resources, and which the Town of Mammoth cannot modify. Thus, the Supplement's reliance on existing planning and zoning documents to support its conclusion is well justified, but there is no conflict with the *Stanislaus Audubon Society* case cited by the commentor because there is other evidence in the record to support the Town's conclusion as well.

The *Stanislaus* court also viewed growth inducement as more of an economic, rather than political or planning phenomena. Here, the Airport project is serving the economic development of the Mammoth Lakes area that is driven by private investment in resort, hotel and recreational properties. The Airport itself is not an economic driver or an inducing agent of economic development. Instead, the Airport improvements would only provide an alternate arrival mode consistent with the long-term plans of the Town of Mammoth Lakes as established in the Town's adopted General Plan. That relationship has not changed since the 1997 Subsequent EIR/EA was certified.

Response to Comment I-43

Please see Responses to Comments B-7 and B-12. Further, while the comment asserts that the Supplement does not identify secondary impacts, the comment itself describes the Supplement's analysis of secondary impacts. Also, the recently certified Final Subsequent Program EIR for North Village 1999 Specific Plan Amendment analyzed the impacts of the full buildout of the Town and found that it did not have significant environmental impacts. This, combined with the lack of availability of additional land for private development as explained in Response to Comment I-30, demonstrates that there would be no significant growth inducing impacts due to the changes in the proposed project.

Response to Comment I-44

The designation of land for development of RV parking was first set forth in the 1986 Mammoth June Lake Airport Land Use Plan with an EIR certified by Mono County and re-evaluated in the 1997 Subsequent EIR/EA. The cumulative effects of this project and the development of the

adjoining projects were evaluated in those two documents. A final design for the park has not been submitted, however, the RV park is a conditional use and final project design and approval is subject to further discretionary and environmental review.

Response to Comment I-45

Please see Responses to Comments A-2 and B-11.

Response to Comment I-46

CEQA Guideline 15130(b)(1)(A) provides a lead agency with the option of providing a “list of past, present, and probable future projects” for its cumulative impacts analysis. If that list is provided, which it is in this case (Supplement at Page II-9, Exhibit II-4), then no definition of the geographic scope for cumulative impacts analysis is required, contrary to the comment. Nonetheless, the Supplement also defines the relevant geographic scope of the cumulative impacts analysis by Exhibit II-4, which contains a map of the area surrounding the project site and shows the location of projects initially considered as part of the cumulative impacts analysis and shows those projects in relation to the Airport project. Please also see Response to Comment B-11.

Response to Comment I-47

The Supplement’s selection of alternatives is reasonable and complies with CEQA and the CEQA Guidelines. (See Supplement at pages IV-I, *et seq.*) The commentor is correct in reciting Guideline 15162.6(a), which generally requires an EIR to consider a range of alternatives that would reduce significant effects of the project. However, where there are no alternatives, except the no project alternative, that meet the project’s objectives of providing commercial air service convenient to the Mammoth Lakes area and reduce significant impacts, CEQA case law permits an exception to the general rule. (See *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704.) That is the situation here — the no project alternative is the only feasible alternative, besides the proposed project, that reduces potential impacts versus the proposed project. The no project alternative, however, does not meet the project’s objectives, therefore it is appropriately rejected on that basis pursuant to CEQA Guideline 15126.6. As CEQA requires, the EIR analyzes other alternatives as well, but ultimately those are rejected because they are environmentally inferior, they fail to meet the project’s objectives, or both. (See CEQA Guideline 15126.6.)

In fact, the Supplement contains an extensive alternatives analysis, which started with eight alternatives to the entire project, even though as a Supplement its analysis is potentially limited to changes in the project since the prior proposal. Four of the eight alternatives were eliminated because they failed to meet the detailed performance criteria for an FAA certified commercial airport set forth in Appendix E of the Supplement. Meeting these performance criteria is an obvious project objective, since a project that fails to meet these criteria will not serve the purpose for which it is proposed. The Supplement then analyzed the four remaining alternatives plus the no project alternative and an off-site alternative (expanding the Bishop Airport) for each of the potential impact areas in which the proposed changes in the project were analyzed.

From this analysis, the Supplement identified the environmentally superior alternative, which, in part due to the reduction in the runway extension required for the project since the 1997 Subsequent EIR/EA, is the proposed project. (See Section IV of the Supplement.) Thus, CEQA’s purposes have

been fulfilled, albeit through selection of the original project, rather than selection of an alternative after the EIR has been prepared.

Response to Comment I-48

Please see Response to Comment I-47. Further, according to CEQA Guideline 15126.6(a), an EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR need not consider every conceivable alternative to a project. In particular, an EIR is not required to consider alternatives that are infeasible. The factors that may be taken into account when determining the feasibility of alternatives includes whether the proponent can reasonably acquire, control or otherwise have access to the alternative site or the site is already owned by the proponent. Here, the project proponent, Town of Mammoth Lakes, does not own and cannot reasonably acquire, control or otherwise have access to the Bishop Airport. Instead, Inyo County owns the Bishop Airport. Thus, the potential expansion of the Bishop Airport does not offer a feasible alternative to the proposed project and as such it need not be evaluated further in the Supplement.

Response to Comment I-49

Please see Response to Comment B-4. Further, the commentator notes that the Supplement consists of more than 450 pages, including attachments. While this may be true, it only indicates that the Town has prepared a thorough and complete document. The CEQA Guidelines do not set page limits for supplemental or subsequent EIRs, nor do they distinguish one from the other by the number of pages. Also, in the case of a supplemental or subsequent EIR, CEQA Guideline 15088.5(c) permits the lead agency to recirculate only those chapters or portions of the EIR that have been modified.

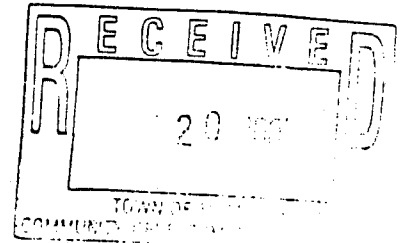
Response to Comment I-50

Please see Response to Comment B-5. The commentator overstates the level of recommendation in NEPA and CEQA that joint documents should be prepared where possible. Rather than “strongly” recommending such coordination, CEQA Guidelines section 15222 states only that a lead agency “should try” to prepare a combined document.

Response to Comment I-51

The Supplement complies with CEQA in all respects and fully and objectively analyzes all potential environmental impacts from the changes in the project since the proposal analyzed in the Subsequent EIR certified by the Town in 1997.

Pasadena Casting Club
P.O. Box 6
Pasadena, CA 91102
November 14, 2001



Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Re: Mammoth Yosemite
Airport Expansion

Town of Mammoth Lakes:

The Pasadena Casting Club is a 50+ year old organization located in Pasadena, CA and composed of people interested in fishing and conservation. Most of our approximately 300 members live in Southern California. As a result, a prime location for our fishing activities is the Eastern Sierra/Owens Valley north of Bishop, CA.

We are greatly concerned about the proposed Mammoth Yosemite Airport expansion development described in the Draft Supplement to Subsequent EIR (SSEIR), dated October 5, 2001. Although the Draft SSEIR is impressive in length, it does not address all of the significant negative environmental impacts of the proposed expansion, including the possible, and in fact likely, harm to the fisheries in Hot Creek, Convict Creek and the upper Owens River. In addition, the proposed airport expansion should be analyzed in connection with other development in the Mammoth Lakes area so that all of the cumulative negative impacts of such projects can be assessed together.

J-1

The airport expansion SSEIR describes a storm water runoff collection system for certain portions of the airport. However, there is no collection or treatment proposed for storm water runoff from the greatly expanded runways. Not only will oil and rubber residue be washed off such runways, but during winter months Type II and IV Anti-icer and De-icer Fluids will most probably be used, be blown off during take-off and be left on the runway to be washed eventually into either Hot Creek or Convict Creek and downstream into the Owens River. The treatment plans for Type I De-icers will do nothing to reduce the toxic impacts of the longer-

J-2

[lasting Type II and Type IV anti-icers. To ignore the potential damage of such runway runoff, contaminated with oil and toxic chemicals, is a glaring deficiency in the project and the Draft SSEIR.]

J-3

[Although the Draft SSEIR attempts to address concerns about the Owens Tui Chub and the Hot Creek Fish Hatchery, it does not address the impacts on the very important trout fisheries downstream of the hatchery in Hot Creek or in Convict Creek and the Owens River. The water flow studies included do not convincingly describe the storm water runoff flows from the greatly expanded runway surfaces. Since all water in the area eventually flows towards the Owens River, to assert that such runway storm water runoff, especially in heavy storms, will not migrate towards Hot Creek or Convict Creek is not believable.]

J-4

[Hot Creek and the Owens River are world-famous destination trout streams. The need for, and the wisdom of, the proposed Mammoth Yosemite Airport expansion is highly questionable. To allow such an over-developed expansion to destroy the important fisheries in the area would be inexcusable. The Mammoth Yosemite Airport project should not be approved or funded until and unless it is proven that no negative environmental impacts, including those on the Hot Creek, Convict Creek and Owens River fisheries, will result from its construction or operation. In addition, since there is much other development underway or proposed for the Mammoth Lakes area, all cumulative impacts of such development, including the airport expansion, should be analyzed and considered together prior to approval of the Mammoth Yosemite Airport expansion.]

J-5

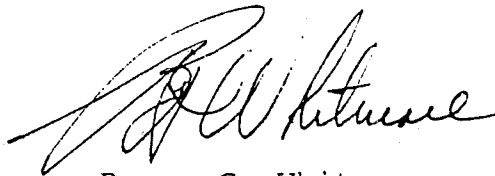
J-6

Thank you for your attention to our concerns. Please contact Bruce G. Whitmore (626-799-8683) if there are any questions about this letter.

Yours truly,



Eric Callow
President



Bruce G. Whitmore
Conservation Chairman

cc:

Elisha Novak
Federal Aviation Administration
831 Mitten Road
Burlingame, CA 94818-1301

Forest Supervisor
Inyo National Forest
873 N. Main Street
Bishop, Ca 93514

William Manning
Mammoth Yosemite Airport
Box 209
Mammoth Lakes, CA 93546

California Trout, Inc.
870 Market Street, #1185
San Francisco, CA 94102

J. Pasadena Casting Club

Response to Comment J-1

Please see Response to Comment I-32.

Response to Comment J-2

Please see Response to Comment A-2.

Response to Comment J-3

Please see Responses to Comments C-1 and C-7. Further stormwater runoff pollution will be prevented by the following methods:

- All deicing will occur in special controlled deicing area.
- Very few aircraft will require deicing since they will not operate into the Airport during a snowstorm or if one is forecast and will only be on the ground for one to three hours during the daytime. High visibility minimums during IFR conditions dictate no operations during snowstorm.
- When an aircraft is deiced, very little deicing fluid is left on any pavement outside the deicing area and they will infiltrate the gravel soils at the edge of the pavement and will soon lose toxicity.
- There will be no surface water discharge from the Airport.
- Deicing is a standard procedure at commercial airports throughout the country. Protocols for protection of the environment are well established.

Response to Comment J-4

Please see Response to Comment C-1.

Response to Comment J-5

Please see the Supplement at pages III-34, III-35, and III-54 for an analysis and conclusions demonstrating that the changes in the proposed project will not result in significant impacts to area fisheries or fish. Please also see Response to Comment C-2 on the same topic.

Response to Comment J-6

Please see Responses to Comments B-7, B-11, and B-12.

November 20, 2001

C/O Bill Taylor
Senior Planner
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Sir,

[I am writing this letter in support bringing daily air service to the Mammoth Yosemite Airport.] K-1

This community has needed air service for a long time. Service is vital to providing continued development for the community of Mammoth Lakes. In addition, it is imperative that daily air service be in place for our hospital to be able to bring medical specialists to our community to meet the needs of the populace. Without air service, people in our community must either drive to Reno or Los Angeles to receive any specialty medical services.

I have been a board member of the Southern Mono Health Care District for over 17 years and it is our hope on the board that with the advent of daily air service, we can finally bring medical specialists to our community so the people of our community will not have to leave our area to get the medical attention they so vitally need.

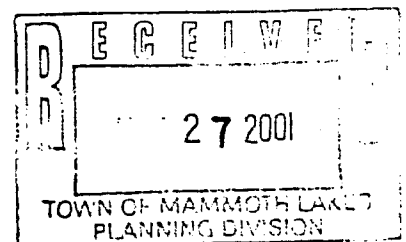
I strongly request you do what ever necessary to bring daily air service to the Mammoth Yosemite Airport.

Thank you for your attention to this matter.

Sincerely,



Phil Hamilton
P.O. Box 133
Mammoth Lakes, CA 93546
1-760-934-7102



K. Phil Hamilton, Mammoth Lakes, California

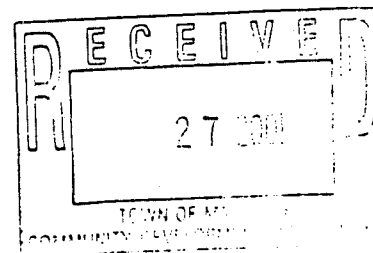
Response to Comment K-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

WILLIAM J. ROBENS
40 Estambre Road Santa Fe, NM 87508
Ph: (505)466-6274 Fax: (505)466-6284 Email: billrobens@earthlink.net

November 19, 2001

William T. Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546-1609



Subj: SSEIR for Mammoth Lakes Airport Expansion Project

Dear Sir:

Following are my comments on subject SSEIR.

I am limiting my comments only to my major objections. It is my expectation that other reviewers will cover the details that I do not submit here. It is my belief that the entire document needs to be rewritten as it falls far short of CEQA requirements.

General

To begin with, the SSEIR is a seriously flawed document. CEQA requires that a good faith effort be made to address environmental issues and to determine environmental significance. The subject document does not fulfill, even in the remotest sense, this obligation. It appears to have been written primarily and specifically to support the project, which is clearly in violation of CEQA.

The document is misleading, and I believe, because of the unremitting pattern, purposely so. It repeatedly understates the environmental damage caused by the project and repeatedly overstates the beneficial aspects of the project. It also repeatedly makes assumptions which lessen the impacts of the project. An example follows.

[Reliance on 1986 EIR. The SSEIR repeatedly references and relies upon the 1986 EIR. As anyone who has ever worked with CEQA and EIR's knows, and as common sense will reveal, 15 year old EIR's are far too old to be reliable. In this case not only is the time period for reliance extreme, but the project itself was much smaller, and a different agency, the County of Mono, was the lead agency. The willingness to rely on the 1986 document indicates the lack of sincerity of the Town in preparing a competent, unbiased, and relevant EIR.]

L-1

[Misleading statement on land disturbance. On page xii, the SSEIR states that "This development differs in certain respects from development plans analyzed in the past, principally because it calls for less land disturbance." It goes on to mention the 800' decrease in proposed runway length and the 50' increase in proposed width—seemingly this is the reason for less land disturbance. However, in spite of the decrease in length, a quick calculation of the new 8200']

L-2

runway shows runway acreage going from 20.67 acres to 28.24 acres, a 7.60 *increase* in acreage, not a decrease. Furthermore, the taxiway increases in acreage by 3.80 acres. If, in fact, the grading plan calls for less land disturbance, and if that is somehow significant, then the total increase in concrete, the 7.60 plus 3.80 acres, should also be mentioned, because it assuredly is equally, if not more significant. This is just one of many examples of the dishonesty of the EIR. (Please note that the quoted statement does not say how much less land disturbance there is. Later in the SSEIR, it is stated that the land disturbance decreases from 44 to 37 acres, this 7 acres, which is not a large amount, is still considerably less than the total increase in pavement of 11.4 acres.)

L-2

Impact of increased aviation demand on the airport facilities (as well as in some other areas of the EIR). The increase in aviation demand is substantial, but its impacts are generally ignored or understated throughout the SSEIR. For example, the forecast is for approximately double the number of aircraft operations, and for increasing the enplanements by 208,000 people, almost a three-fold increase. It is highly unlikely that the airport facilities outlined in the 1997 EIR will accommodate these increases without themselves being increased. In previous work with airport EIRs, I have seen a clear correlation between number of passengers and number of air operations, with facility size, parking lot size, number of employees, etc. This has not been addressed, and it needs to be addressed.

L-3

Section I — Project Description

Table 1 indicates that taxiways will be widened from 50 feet to 75 feet, yet that fact is never mentioned in the several project descriptions in the text. This is misleading as it understates the amount of concrete to be added to the 1997 forecast.

L-4

On page I-1 the project is described in detail, except for the size of the updated version of the aviation demand forecast. The increase in the updated forecast is substantial and the consistent omission of these details (increase in air operations from 13,000 to 23,650 and increase in enplanements from 125,000 to 333,000) is misleading in that one might conclude their omission means that the increase is not significant. In itself, this is not a big issue, but as part of an overall pattern of understating significant issues and impacts, it is meaningful. This data should be included in all the project descriptions, as was done for the change in the runway length and change in fence height.

L-5

Page I-8 mentions the reduction of the projected runway length from 9000' to 8200', yet it calls the 8200' runway "the first stage runway length." It would seem to me that the SSEIR should be prepared for the 9000' runway, which is the ultimate projected runway length.

L-6

Page I-12 discusses the delivery of fuel to the airport. The number of deliveries increases from 2 times a month to once or twice daily. The impact of this increase is never discussed. Possible impacts include construction of larger (much larger?) fuel tanks on-site and increased chances for accidents and fuel spills, plus a potential for increased road maintenance. This item needs to be addressed.

L-7

Section II — Brief Overview of the Project's Environmental Setting

On page II-9 there is a list of other projects currently proposed in the region. Following the list is a statement that the Town decided that there are only two projects from this list that need to be considered part of the cumulative impact. That is an extremely narrow decision, and inadequate in addressing environmental impacts. The airport expansion, and the dramatic increase in air operations and enplanements is part and parcel of the overall growth program for the Town. A vast majority of these passengers will end up in town. At a minimum, both the Intrawest Development and the Sherwin Bowl Ski Area should be considered along with the Sierra Business Park for consideration in cumulative impacts.

L-8

Section III — Environmental Impacts of Proposed Project

Pages III-2 and III-3. Regardless of the Town's previous determination on potential areas of impact, there are several areas not addressed, that should be addressed. These areas should be added to the list on III-2 and, where appropriate, removed from the list on III-3.

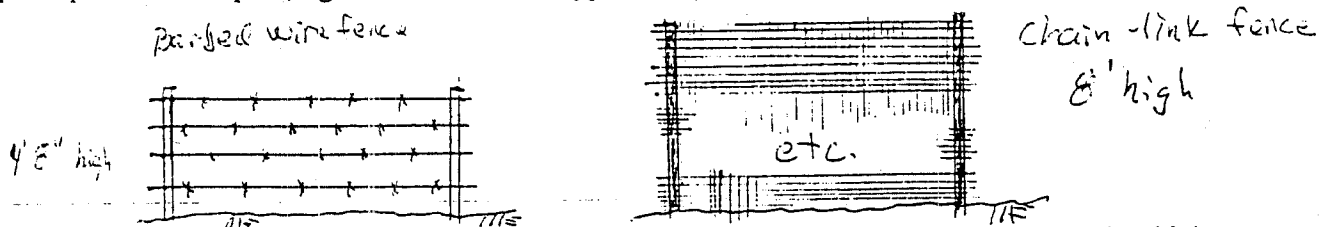
- Growth Inducing potential — the near tripling of enplanements from 125,000 to 333,000 requires the need to address this issue
- Hazards and Hazardous Materials — my comments on the increase in fuel trucks applies
- Population and Housing — the near tripling of enplanements from 125,000 to 333,000 requires the need to address this issue
- Recreation — the near tripling of enplanements from 125,000 to 333,000 requires the need to address this issue

L-9

L-10

L-9

The miracle fence. Pages III-6, III-9, and III-37 apply. A 4'-8" barbed wire fence is to be replaced with an 8' high chain link fence. Since they are not otherwise described, I assume the barbed wire fence has 3 or 4 horizontal strands of barbed wire, approximately equidistant apart. This would be typical. I also assume the chain link fence has a pattern of horizontal and vertical wires, perhaps 2" to 4" apart; again this would be typical. They will look something like this:



The project's 8' high fence is described as similar in nature to the existing fence, through which, according to the SSEIR views are "unobstructed." As can be seen by the above drawings, while they may be similar in nature, they are very different in construction. The project fence is nearly twice the height of the existing fence, and has several times more wire over any extended unit length. It is, in fact a very different fence. The conclusion of "less than significant impact" on aesthetics and views on page III-8 may still be appropriate, but depending on the actual design of the chain link fence, may well also be questionable. More detail here, and an accurate drawing of each fence is needed. In the meantime, the bias of the author should be noted and the text revised to eliminate the bias.

L-11

On page III-9, a miracle happens. This new fence, which offers "unobstructed" views when aesthetics and views were the issue, now "...will partially block the vision to the existing and relocated runway lights for all small angle views from the normal straight ahead vision of the driver..." While literally true, the impact of these "blocked" views is almost nil. The overwhelming view of the runway lights for the driver will be unblocked for the entire duration of the drive approaching and adjacent to the runway. To cite this minuscule area of "blocking" is absolutely absurd, and again shows the lengths to which the authors go to minimize all impacts.

L-11

Potential effects to the sage grouse due to the fence. On page III-37, it states that sage grouse may be adversely affected by wire fences. The grouse have shown a proclivity for colliding with fences, and especially "...in the dark and at low light levels." Thirty-seven mortalities were recorded along a nearby cattle fence over a recent period of about 20 months. In regard to the sage grouse, this 8' fence, which previously offered unobstructed views "...would create a barrier with greater visibility to sage grouse than the existing barbed wire fence." Therefore, according to the SSEIR, "The new fence would likely reduce potential mortality to sage grouse from bird-fence collisions." It is likely that this conclusion is wrong. It is wrong for several reasons.

L-12

- If the fence offers unobstructed views, as maintained in the section where unobstructed views fits the author's needs to minimize impacts, it offers unobstructed views to sage grouse as well. You simply cannot have it both ways.
- Sage grouse collisions most likely occur at low light levels and/or in the dark. The chances of seeing a see-through chain link fence diminish dramatically in these conditions.
- The chain link fence is 3'-4" higher than the existing fence, presenting therefore a considerably larger barrier, and one which it is more difficult to fly over to make last second adjustments (which is more than likely when the sage grouse will see the fence, if in fact, it sees it at all.)
- The chain link fence will be impossible to fly through, due to the closeness of its horizontal and vertical wires. The grouse will have a much better chance, however, of passing through the barbed wire fence.

For all the above reasons, it appears that the mortality to sage grouses will increase with the construction of the 8' high chain link fence. Given the high mortality rate already chronicled, this should be an item of Significant Impact.

Aircraft operations. Table 1 indicates that there are 34,000 existing aircraft operations in both the 1997 EIR and in this report. However, page III-18 shows 6000 annual operations. What is the truth? Since III-18 seems more reasonable, I will assume it for my next discussion.

L-13

Bird strikes. The conclusion on III-50 is that no significant effects to local or migratory birds are expected due to bird strikes. However, the reasons given do not lead to that conclusion. First reason, "the small increase in flight operations" is false. The annual increase is 4-fold over present, and twice that projected formerly. The error apparently comes from the third para. on III-48 which states that there are 14 daily air operations in 2022. Incorrect. The number of daily air operations should be correctly stated as an average of 65 for 2022 (23,650 annual ops. divided by 365 days). The increase in air operations is significant, and the EIR should so reflect. Second is the "overall low bird densities at the proposed project site and project vicinity." Again false. No evidence is offered to support this assertion. It is apparently derived from a statement

L-14

on III-48 that reads: "...the site is generally not considered to have high bird density for an airport in California." Where does this come from? "...generally not considered..." by whom? The authors? This statement is entirely reprehensible in an EIR. Furthermore, I believe it to be wrong. With Laurel Pond, Crowley Lake, and the nearby alkali ponds, it is a great place for birds and for bird watching, as I have done many times. Furthermore, nearby Mono Lake is the temporary home to more than a million migratory birds. Many gulls are frequently seen nearby.

L-14

The two reasons cited above provide much of the evidence for no significant impact. As seen, the reasons are not supportable and are therefore false. The conclusion of no significant impacts must be reconsidered.

Nesting Raptors. See the section beginning on page III-50. It reads like raptors never fly anywhere. Example. "Potential tree nesting habitat is located east on Doe Ridge, two miles west...Proposed carrier flight paths do not pass over these habitats...Therefore, the proposed project is unlikely to adversely affect....." Various raptors are then listed. The conclusion seems insupportable to me. This is a wonderful place to see circling hawks and eagles. The flight patterns of the nearby raptors should be indicated and the proximity of their flights to the flight paths should be examined. Findings of impacts should occur after this examination.

L-15

Page III-60, Cumulative Impacts. Re cumulative impacts, the idea is that multiple projects may individually have no significant impacts, but taken together, they may contribute to significant impacts. However, the SSEIR takes an opposite position, contrary to the intent of CEQA. In the 4th paragraph in section 3.3.4.2 is the sentence: "However, the EIR for the Sierra Business Park concluded that the project would not impact existing deer habitat and therefore, would not contribute to cumulative impacts." The question in regard to cumulative impacts that must be answered, but is not, is: How does the combined development of the Sierra Business Park and the Airport Expansion Project impact the deer? This question is not answered in the SSEIR.

L-16

Traffic and Transportation. This entire section minimizes traffic generation and impacts. The study says traffic generated by the project has no significant impacts. I strongly disagree.

- Level of Service. Contrary to the opinion rendered in the first paragraph on III-64, I believe mitigation must be considered at LOS C. It is especially true for this intersection, which has high speed traffic and can be slippery and difficult in the winter. Traffic problems start occurring at LOS C and get much bigger at LOS D.

L-17

- Page III-66, Table III-13. This table and all similar tables are absolutely useless, because the assumptions made by the traffic engineers (LSA Associates, Inc.) provide results that drastically understate the true traffic conditions in the future. They need to be redone with better projections.

L-18

The next references are from Appendix L, Traffic Impact Analysis.

Table B, Trip Generation Table, Appendix L, page 7. Most of my problems are on the data in this table. Let's look first at trip generation (the middle box).

The Airport. Trip generation due to air flights were provided by the airport staff, according to page 8. From a procedural standpoint this information should be supported, no such support is given. How was it derived? It certainly should have been checked by LSA, and apparently was not. There is no reason to accept it. The table says 898 daily trips should be expected due to flight operations, and 158 at peak hour. My analysis does not confirm this number. Using average data from the ITE Handbook, I derive 2475 ADT due to commercial flights, and 390 trips due to general aviation flights, for a total of 2865 trips. This is 1967 more trips than in the SSEIR. LSA projects 158 peak hour trips, I project 303, or nearly twice as many. *LSA made the assumption most advantageous to a low traffic projection.*

L-19

Occupancy Reduction. The residential component of the mixed-use development, the hotel, and the campsites, were all reduced by 20%, since the typical winter occupancy rate is 80% (see note 4). That is not an unreasonable assumption, but it is not a good one, either. A better assumption would be to use the typical *weekend* winter occupancy rate. The study should have used the higher of the two rates, because what you should be looking for is a condition that has a good chance of reasonably frequent repetition, even if it is not "typical." *LSA made the assumption most advantageous to a low traffic projection.*

L-20

Sierra Business Park. LSA used the data from the Sierra Business Park traffic study done by TSE Inc. My separate calculations agree very closely except for the 15% reduction applied due to "pass-by trips" and trips that no longer need to go into town. Table A in Appendix D refers. I don't agree with this reduction. There are basically 2 kinds of trips for developments, internal trips and external trips. Internal trips do not add to the vehicle trips generated by a development, external trips *do* add to the trips. The pass-by trips are external trips. They use Highway 395 then turn into and out of the Business Park. They use the intersection. Therefore, they count. Forty peak hour trips were subtracted from the total, and 262 daily traffic trips. These figures should be added back into the total. The final peak hour volume should be 269, and the final ADT should be 1749. *LSA made the assumption most advantageous to a low traffic projection.*

L-21

Table B, Trips Reductions. Appendix L, page 7. This is the lower of the three boxes in this table.

Service Station w/Convenience Market. I have no quarrel with the total trip generation as shown in the second box, 3907 ADT. The trip reduction table, however indicates that this number should be reduced by 90%, or 3516 trips. This is an incredible assertion. The culprit is "pass-by trips" (see note 5). The explanation is give in the first paragraph on p. 10: "...a pass-by trip is a through trip that is diverted into the project via a southbound left or northbound right turn and then reassigned to US-395 via another right or left turn back onto US-395." LSA subtracts these trips into and out of the project from the ADT and peak hour figures. This is a serious mistake. The goal of the study is to determine levels of service, and for that ADT and peak hour trips on the road system is required. If vehicles use a road to get to the market, which the pass-by trips do, they add to the trips on that road. They are not "trip-ends" but they are trips generated by the development that use the road system to get to and from the development. They simply must be counted. They turn at the intersections, they use the Fish Hatchery Road, they use the Airport Road. These 3500+ trips must be added

L-22

back in. There may be some internal trips here that could be subtracted, maybe 5%, but no more. *LSA once again made the assumption most advantageous to a low traffic projection.*

Residential and Hotel Developments. LSA reduced the trip counts here due to shuttle service to be provided between the development and Mammoth and the ski area. They subtracted 60% of all trips for the residential units and 75% for the hotel rooms (notes 6 and 7). I believe these numbers are at the extreme high end of potential reductions. Mammoth Lakes, even with an above average shuttle system, is not a good shuttle town. Businesses are spread out, the airport is 15 minutes from town and the ski area an hour or more away. I don't know what the reduction should be, but 25 to 50% might be reasonable. In any case, *LSA again made the assumption most advantageous to a low traffic projection.*

L-23

Restaurant. Two problems. First, the engineers subtracted 100%, or all trips to the restaurant. Again, this is absurd. They assumed 75% internal trips, and 25% external pass-by trips. The 75% internal trips is questionable and is probably high. The pass-by trips, here, as for the market, must be counted. Second, page II-11 indicates that the restaurant is to have 300 seats, not 100 seats as used for calculations by the traffic consultant. This will triple the trip generation. At a minimum, 362 pass-by trips must be added in. *Once again LSA made the assumption most advantageous to a low traffic projection.*

L-24

Trip Addition. This is my addition, as LSA did not include additions in his report. The trip addition is for seasonal variation, in this case, for winter trips. The daily trips used in this study due to airline activity is the daily average based on a year's projected total. We know, however, that trips fluctuate by season. Mammoth Lakes has very low activity during the shoulder seasons, and much higher activity during the summer and winter. Airline flights will reflect this change in activity. The daily trips used for this study should be increased by, maybe, 50% for winter activity. Using my airport calculations, that would add 1238 ADT and 152 peak hour trips. By ignoring the weekend and winter increases over the averages, *LSA again made the assumption most advantageous to a low traffic projection.*

L-25

Fish Hatchery Road, and airport road extension to the Benton Crossing Road. The traffic engineer shows no calculations for traffic on the roads leading into and within the Mixed Use Development. This data needs to be shown, along with pertinent intersection and turning data. It may well be that mitigation is required. For example, reconstruction to accommodate the traffic, widening at intersections, etc.

L-26

(Note: I have completed my own trip generation study. A summary of that study is appended to this letter. I have sent it to people in Mammoth Lakes who have forwarded it to Caltrans for comment. My study shows over 3 times more ADT than the SSEIR study, and more than twice the peak hour traffic. I did not calculate levels of service. But it must be recalculated using data much more realistic than that used by LSA.)

L-27

The findings on page III-67 that "The proposed project would not cause a substantial increase in existing traffic..." is wrong. The finding that this traffic would not cause "...the level of service to deteriorate beyond standards established by Caltrans" is more than likely, incorrect. As is the finding of no adverse significant impact on transportation/traffic.

Instead these are likely findings:

- Traffic increases are substantial.
- LOS may be significantly altered.
- Substantive street modifications may need to be made to make the project workable.
- A traffic signal may be indicated at the intersection of 395 with the Fish Hatchery Road.
- Mitigation may be required on the roads leading to the project.
- The extension to the Benton Crossing Road is probably indicated.

This is the end of the Traffic Study analysis.

Water and sewer demand. On page III-79, last full paragraph, it appears that water and sewer demands are derived from the 1997 report. Since the number of passengers and flight operations are much higher, the estimated demands for both water and sewage are low. New calculations are necessary, based on the new flight and enplanement figures.

L-28

Wastewater facility What demand will the package wastewater facility handle? There is woeful little discussion anywhere in the EIR regarding the proposed package treatment plant. A whole lot more information is needed. What is its size? How is the effluent handled? Where will it be located? Page III-97. It would appear that the package waste treatment plant is designed for an average day. We know that there will be significant seasonal variations. Are they accommodated in the design? Or will spillage result, which could have significant impacts.

L-29

Aquifer reliability is derived from a 1986 study. Too much time has passed to rely for water availability on a 15 year old study. This absolutely must be re-done. Page III-79. On page III-82, from where will the Sierra Business Park get its water? If from the same source as the airport, calculations for both should be done and compared against availability. Multiple non-significant impacts do not always add up to cumulative non-significant impacts. That is why this section exists.

L-30

Public Service and Utilities, page III-95. The increase in air operations is significant and should also be included as a consideration, as it effects: police and fire protection, roadway maintenance, waste generation and disposal, and utility and water use.

L-31

Section IV — Project Alternatives

Two things. First the alternative of an airport at Bishop is discounted. It is the most obvious alternative. It is not within the purview of the Town to remove the discussion of the most obvious alternative from this EIR. Common sense, and probably CEQA as well, require that obvious alternatives, where they exist, be explored.

L-32

Second, a full range of alternative must be explored. No alternative which met the project objectives was considered which had environmental impacts less than the proposed project. CEQA requires a full range of alternatives, including one of more alternatives which have less

L-33

environmental impact than the proposed project. Otherwise, the proposed project becomes automatically the project with least impacts and the obvious choice for approval.

Section V— Long Term Implications of Proposed Project

Growth Inducing Impacts, beginning V-2. The conclusion in the SSEIR is that the Airport will accommodate planned growth and will provide beneficial environmental effects by accommodating forecast growth in accordance with the Town's plans. In other words, the airport expansion accommodates, but does not induce growth, and that accommodation is consistent with existing plans, therefore it is beneficial

Two big problems.

The *purpose* of the airport expansion is to encourage growth. It is part and parcel of a Town policy to induce growth. Due to this expansion, 208,000 more passengers are projected, and it is highly likely that a majority of them will be *new* visitors (from Texas, Chicago, etc. as early as 2003).

Furthermore, CEQA clearly requires that environmental impacts be considered against present conditions. Throughout Section 5.3 the impacts are compared to a future envisioned condition (see the first paragraph under this heading). This is absolutely inappropriate.

The proposed airport expansion is growth inducing and the SSEIR must be changed to so reflect.

Page V-5, Transportation Facilities. "Because the project will not induce growth in the region beyond that already expected..." is the first sentence. As seen in the above section, this is not true.

In fact, the entire sentence is incorrect. My traffic study indicates a dramatic increase in traffic between the Town and the airport. Even without my study, there is good reason to believe that traffic, due to growth, will *increase*, between Southern California and Mammoth Lakes, further burdening the highway system—a system, I might add that in some places, such as between Kramer's Junction and Adelanto—is inadequate for present traffic volumes. I believe it is fair to say that it is the Town's growth policy to induce new trips from Southern California to Mammoth Lakes, and it is fair to say that only a small portion of that added inducement will be by air craft. Which means they will travel by road. If the author's of the SSEIR have evidence it should be presented.

WJR
11/19/01

William J. Roberts
11/19/01

L-34

L-35

TABLE 1 — Revised Traffic Projections

	ADT			PEAK HOUR				
	Gen'd	Decr	Incr	Tot	Gen'd	Decr	Incr	Tot
Airport								
Commercial	2475		1238	3713	273		137	410
Gen'l Aviation	390		195	585	30		15	45
Total				4298				455
Mixed-Use Development								
Ser Sta w/Mkt	3907	391		3516	321	32		289
High Dens Resid	1504	526		978	141	49		92
Hotel	651	326		325	56	28		28
RV Park	400			400	40			40
Restaurant	1449	1087		362	126	96		30
Total				5581				479
Sierra Business Park				1487				229
Increases:	airport trips from ITE Handbook added with 50% increase due to account for winter variation							
Decreases:	10% reduction to service sta w/market due to internal trips							
	35% reduction for high density residential for shuttle trips							
	50% reduction for hotel trips for shuttle trips							
	75% reduction to restaurant due to internal trips							
No occupancy reduction taken, assume 100% occupancy for weekend conditions								
Grand Totals				11366				1163

Table 2 below compares my traffic projections with those of LSA.

TABLE 2

	Robens		LSA	
	ADT	Pk Hr	ADT	Pk Hr
Airport	4298	455	898	158
Mixed Use Dev't				
Serv Sta w/Mkt	3516	289	391	32
High Dens Resid	978	92	481	45
Hotel	325	28	110	9
RV Park	400	40	320	31
Restaurant	362	30	0	0
Sierra Business Park	1487	229	1004	187
Totals	11,366	1163	3688	504

L. William J. Robens, Santa Fe, New Mexico**Response to Comment L-1**

The 1997 Subsequent EIR/EA and the current document analyze changes in the project since the 1978 and 1986 EIRs were prepared, including differences in the size and/or scope of the project. Reliance on the earlier EIRs is, therefore, appropriate because the background and earlier analysis of the unmodified portions of the project is still valid. As described in the Supplement, the surrounding circumstances have not changed sufficiently to warrant preparation of an entire new EIR. The Supplement refers to the 1986 EIR/EA but doesn't rely on it for analyses for environmental categories where circumstances have changed. The 1997 Subsequent EIR/EA and/or the Supplement provide new or updated analyses as necessary. The change in lead agency from Mono County to the Town of Mammoth Lakes also does not require preparation of an entire new EIR because it is not relevant to physical changes in the environment, and the record of the prior analysis has been transmitted to the Town for the Town's use in preparing the current document and has been made part of the record of this proceeding. Please also refer to pages iv through ix of the Supplement, which explain the relationship of the previously certified EIRs and the current Supplement, including identification of specific issues which are under review in the Supplement.

Response to Comment L-2

Please see Response to Comment I-5.

Response to Comment L-3

The Airport terminal facilities will be designed to handle the forecast passengers and aircraft operations. These facilities have already been certified in the 1978 EIR/EA, and 1997 Subsequent EIR/EA. None of the changes to the proposed project affects these facilities. As explained in Response to Comment I-9, the forecast in the 1997 Subsequent EIR/EA was for a different end year 2015, but it does not mean that the facilities certified under that project would not be sufficient for the forecasted passengers in the Supplement with the end year as 2022 because the increase number of aircraft operations and enplanements would occur at intervals set by airlines scheduling practices. The difference in daily enplanements for the project years is not sufficient to need a new facilities design.

Response to Comment L-4

The widening of the taxiway from 50 feet to 75 feet has been described as part of project throughout the Supplement (See Supplement at Page i) and has been included in the potential environmental impacts analyzed including land disturbance, water quality, and air quality (construction emissions).

Response to Comment L-5

The updated enplanement forecast numbers were included in the analysis of the environmental effects. (Table 2, Page ix of the Supplement.)

Response to Comment L-6

The 9,000-foot runway was analyzed as an alternative to the proposed project in Section IV of the Supplement. Please also see Response to Comment I-8.

Response to Comment L-7

Please see Response to Comment I-13.

Response to Comment L-8

Please see Responses to Comments B-7, B-11, and B-12.

Response to Comment L-9

Please see Response to Comment B-12.

Response to Comment L-10

Please see Response to Comment I-13.

Response to Comment L-11

The thresholds of significance are different for impacts to aesthetics and impacts to wildlife. The coloration, height and location of the fence are such that it will not have a substantial adverse effect on a scenic vista or otherwise substantially impact public views. (See Supplement at Section 3.1.) The concern expressed by the commentor about sage grouse collisions with the fence is unfounded. A barbed wire fence (existing fence at the Airport) is hazardous to the grouse in part because of the difficulty of seeing the strands. A chain link fence (part of the proposed improvements) is more visible than the existing fence and, hence, less of a hazard to the grouse. There is no conflict between the increased visibility of the fence when compared with the existing barbed wire and a determination of no significant adverse visual impact.

Response to Comment L-12

Please see Responses to Comments I-26 and I-27.

Response to Comment L-13

The correct number of existing annual aircraft operations is 6,000. Table I is corrected in the Final Supplement.

Response to Comment L-14

The potential for bird strikes is variable. It is based on an airport's proximity to habitats such as wetlands and wildlife refuges and to land uses, such as waste-disposal facilities that can attract wildlife (FAA 2000). The comparison to other California airports is useful for analyzing bird strike

data. For example, Beale Air Force Base is located in a heavily used portion of the Pacific Flyway, and the City of South Lake Tahoe's airport is sited in a complex, meadow riparian system. As the Supplement states in the first paragraph on page III-48, the proposed project is located in sagebrush scrub habitat. Compared to riparian, wetland, and woodland habitats, sagebrush scrub habitat does not support a high density or diversity of bird species. Please also see Response to Comment I-38.

The majority of bird strikes (70 percent) between birds and aircraft occurred below 1,000 feet above ground level, while the aircraft was on the ground or during takeoff and landing. (FAA 2000.) Features that attract and concentrate birds, such as Mono Lake, Crowley Lake, and the alkali ponds, are not below 1,000 feet of either departing or arriving aircraft. These water bodies are also situated at a considerable distance from the Airport (Mono Lake is greater than 21 miles; Crowley Lake is greater than four miles; alkali ponds are greater than three miles). Furthermore, the birds that use these habitats (e.g., waterfowl) would not be expected to occur in the vicinity of the Airport because suitable habitat is not present. The reasons cited in the last paragraph of Section 3.3.2.2 of the Supplement, "Bird Strikes", page III-50, and the reasons cited above, all demonstrate that the proposed project will not result in a significant effect to local and migratory bird populations. Please also see Responses to Comments I-29, I-31, and I-38 regarding potential impacts to avian species.

Response to Comment L-15

Please see Response to Comment I-38.

Response to Comment L-16

Please see Responses to Comments A-2 and B-11.

Response to Comment L-17

The traffic impact analysis follows the Caltrans Guide for the Preparation of Traffic Impact Studies dated October 4, 2000. The preparers of that analysis consulted with Caltrans on August 28, 2001, during preparation of the analysis to review the specific assumptions, methodology, and variations to trip generation parameters used in the analysis. Caltrans concurred with the methodologies proposed at that time.

The Town of Mammoth Lakes and Caltrans have identified Level of Service (LOS) D as the upper level of acceptable conditions for the intersections on U.S. Highway 395, on Route 203, and within the Town of Mammoth Lakes, even in winter seasons. LOS D is a common and conservative threshold for intersection design and mitigation requirements. Therefore, no mitigation measures are required for intersections at LOS C, contrary to the commentor's suggestion.

Response to Comment L-18

Current traffic volumes and annual growth projections for U.S. Highway 395 were provided by Caltrans. All these numbers were included in the intersection analyses. These projections are commonly accepted and used in all types of traffic analyses. The assumptions leading to the results in Table III-13 (See Supplement at Page III-66) are fully disclosed in the traffic report. These assumptions are specifically oriented toward the project, especially those related to the Hot Creek

Resort. These uses are clearly highway oriented and/or are focused toward the winter recreational uses in Mammoth Lakes.

Highway oriented means that a trip to the service station comes from traffic already on U.S. Highway 395, not a new trip. The vehicle turns off U.S. Highway 395 into the service station and then resumes the original trip and direction. The traffic study accounts for the turn off of and on to U.S Highway 395 but does not add a new through trip to U.S. Highway 395.

Hotel and seasonal residential trips from the Hot Creek development focused toward the winter recreational uses in Mammoth Lakes will have the alternative of using shuttle vans leading directly to recreational portals and/or attractions in Town, which in turn are served by a transit system. Since these lodging uses are located at the Airport, a majority of visitors are projected to arrive by aircraft and therefore be primarily dependent on the shuttle van system.

Please also see Response to Comment I-17.

Response to Comment L-19

The comment correctly notes that trip generation for the Airport was provided by Ricondo & Associates (Appendix C to Traffic Report in the Supplement). Due to the specialized nature of this Airport and its relationship to the Town of Mammoth Lakes and resort characteristics, it is appropriate to use the trip generation information provided by Ricondo rather than data from the Institute of Transportation Engineers (ITE) Handbook, because Ricondo's data is based upon comparable airports. ITE data would reflect an average of small airports across the County, not necessarily resort oriented, which in this case peaks during a particular winter ski season.

Response to Comment L-20

The 80 percent occupancy rate for hotels is used to reflect a typical winter weekend condition, and closely corresponds to Caltrans' policy of designing for the 30th highest hour of the year. This methodology for assessing impacts has been accepted by Caltrans and the Town of Mammoth Lakes on numerous previous traffic impact analyses. It should be noted that this overall analysis is actually conservative because it assumes a combination of the highest weekday peak hour traffic (from the industrial park), coupled with the highest projected weekend traffic from the Airport and adjacent development.

Response to Comment L-21

"Pass-by trips" are well documented in trip generation characteristics (ITE Trip Generation Handbook, October 1998); however, as the comment notes, they were not properly accounted for in the Sierra Business Park traffic study. The pass-by, or intercepted, trips should be accounted for in the turn movements at the intersection. For example, an existing trip now going from Bishop to Mammoth Lakes for employment and returning is intercepted to a new job in Sierra Business Park and would not add any new traffic to U.S. Highway 395. This trip would change a northbound through movement in the morning to a northbound left turn at the Hot Creek Fish Hatchery intersection. The reverse occurs in the evening.

To correctly account for the pass-by (intercepted) trips, the traffic analysis increased the peak hour volumes entering and exiting the Sierra Business Park to 269, as the comment notes. The additional trips do not change the basic conclusions regarding significant impacts or mitigation recommendations.

In summary, mitigation is still only required in the long range (year 2020) and only where all three projects (Airport, Sierra Business Park, and Airport Development Plan) are fully developed. However, both measures, the intersection restriping and Benton Crossing connection, would be required as compared to one or the other in the original analysis. The appropriate sections of the Supplement have been modified to reflect this change. A revised Level of Service table for years 2000 and 2020 is attached as **Exhibit N-10** and **N-11** respectively.

Response to Comment L-22

The pass-by trips for the service station and convenience store are not eliminated from the intersections as the commentor suggests. Again, for example, an existing northbound vehicle already on U.S. Highway 395 is diverted and now turns in to the service station, gets fuel, and returns to northbound U.S. Highway 395. The same pattern is assumed for the convenience store. This is an isolated service station and convenience store that is not attractive for single purpose trips (i.e., to obtain fuel only), returning in the opposite direction after getting fuel. No new traffic has been added to U.S. Highway 395 and the right turn into and out of the service station has been included in the analysis. **Exhibit N-12** graphically illustrates the pass-by trip concept. As illustrated on the exhibit, the trips prior to development are subtracted, while the trips after development are added back in.

Response to Comment L-23

The assignment of trips from the residential and hotel developments reflects the commitment of shuttle service by the project and the expanding community transit service planned by the Town. The modal split of residential and hotel users is “reasonable” based on evidence from other comparable airports at other ski resorts. Please also see Response to Comment I-12.

Response to Comment L-24

The traffic study did not subtract 100 percent of the trips to the restaurant. Instead, it concluded that 25 percent would be pass-by trips. The restaurant pass-by trips have been accounted for in the intersection turn movements as previously noted in Responses to Comments L-21 and L-22. The assumption of 75 percent of the trips coming from the hotel, residential, service station, campground, or Airport is based on professional judgment of the traffic analyst given the isolated character and location of the restaurant.

Response to Comment L-25

The traffic impact analysis is based on a typical winter weekend p.m. peak hour condition (Appendix L, page 8 of the Supplement). Please also see Response to Comment I-18.

Response to Comment L-26

The intersection of Fish Hatchery Road with Airport Road was analyzed in a traffic impact analysis for the Airport Development Plan. [LSA Associates, Inc., April 2, 2001.] That analysis concluded that there would be a Level of Service of not less than B for all future cumulative conditions (including the Airport) without additional improvements. This also included existing Fish Hatchery Road traffic.

The potential future intersection of Benton Crossing with Airport Road was not analyzed because the volumes projected do not conflict with one another, i.e., left turns inbound and right turns outbound. (See Supplement at Exhibit III-11.) This potential intersection would not result in Airport traffic crossing a traffic stream to access the Airport.

Response to Comment L-27

Caltrans (Mr. Jerry Gabriel and Mr. Tom Meyers) reviewed this traffic study on August 28, 2001, and all the assumptions contained therein. They stated at that time that the study methodology and assumptions were acceptable to Caltrans. A copy of the transmittal form sending the revised traffic study incorporating Caltrans requested additions/changes dated September 4, 2001, is attached as Attachment E to the Responses to Comments.

Response to Comment L-28

There will be increased water and sewer demand if number of passengers and employees increases. The demand is approximately five gallons/day/passenger, within the capacities of the water system and sewage treatment plant. All the sewage facilities would be designed to handle the additional demand. As explained in Response to Comment G-1, there would be no impact on water supply and water quality due to additional water demand.

Response to Comment L-29

Please see Response to Comment C-1.

Response to Comment L-30

Please see Response to Comment C-1.

Response to Comment L-31

The increase in aircraft operations at Mammoth Yosemite Airport due to the proposed project is not substantial. The projected number of flight operations is actually reduced from that projected in the 1997 Subsequent EIR/EA. That document contained an estimate of 34,430 annual operations in 2015. More than the current estimate of 23,650 total annual operations in 2022. As discussed in Section 3.8 of the Supplement, the demand for police and fire protection, roadway maintenance and other utilities has been evaluated under the previous environmental documents. (See 1986 EIR/EA and 1997 Subsequent EIR/EA.) Potential impacts from the current project on water use are analyzed

Scenario	US-395/Hot Creek Road ¹					
	Intersection Delay/LOS ax Delay Approach LOS		B/SB Queue Length ax Queueovement		B/WB Queue Length ax Queueovement	
WITH EXISTING CIRCULATION SYSTEM						
Existing Year 1999/2000 Conditions ⁴	10.8 sec.	westbound B	0.04 veh.	SB-L	0.09 veh.	WB-LTR
Existing + Airport	10.9 sec.	westbound B	0.29 veh.	SB-L	0.49 veh.	WB-LTR
Existing + Airport + Hot Creek Resort	18.5 sec.	westbound C	0.65 veh.	SB-L	3.29 veh.	WB-LTR
Existing + Sierra Business Park	14.6 sec.	eastbound B	0.04 veh.	SB-L	1.70 veh.	EB-LTR
Existing + Airport + Hot Creek Resort + Sierra Busi	32.3 sec.	eastbound D	0.65 veh.	SB-L	4.59 veh.	EB-LTR
WITH CONNECTION TO BENTON CROSSING⁵						
Existing + Airport + Hot Creek Resort	11.6 sec.	westbound B	0.57 veh.	SB-L	1.20 veh.	WB-LTR
Existing + Airport + Hot Creek Resort + Sierra Busi	29.9 sec.	eastbound D	0.57 veh.	SB-L	4.22 veh.	EB-LTR

Notes:

¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections. However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored.

² Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis.

Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of

³ SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek R. EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-3

⁴ Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November, 2000.

⁵ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.

Source: LSA Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-10

not to scale

Existing and Existing Plus Project Intersection Level of Service Analysis

Scenario	US-395/Hot Creek Road ¹						
	Intersection Delay/LOS at Delay Approach LOS			B/SB Queue Length at Queue Movement		B/WB Queue Length at Queue Movement	
WITH EXISTING CIRCULATION SYSTEM							
Year 2020 Baseline Conditions ⁴	11.6 sec.	westbound	B	0.04 veh.	SB-L	0.10 veh.	WB-LTR
2020 + Airport	11.6 sec.	westbound	B	0.33 veh.	SB-L	0.54 veh.	WB-LTR
2020 + Airport + Hot Creek Resort	22.2 sec.	westbound	C	0.74 veh.	SB-L	4.13 veh.	WB-LTR
2020 + Sierra Business Park	16.4 sec.	eastbound	C	0.05 veh.	NB-L	2.00 veh.	EB-LTR
2020 + Hot Creek Resort + Airport + Sierra Business - with Mitigation	>50 sec.	eastbound	F	0.74 veh.	SB-L	7.09 veh.	EB-LTR
	37.8 sec.	eastbound	E	0.74 veh.	SB-L	5.07 veh.	EB-L
WITH CONNECTION TO BENTON CROSSING⁵							
2020 + Airport + Hot Creek Resort	12.5 sec.	westbound	B	0.65 veh.	SB-L	1.36 veh.	WB-LTR
2020 + Airport + Hot Creek Resort + Sierra Business - with Mitigation	43.3 sec.	eastbound	E	0.64 veh.	SB-L	6.18 veh.	EB-LTR
	33.6 sec.	eastbound	D	0.64 veh.	SB-L	4.47 veh.	EB-L

Notes:

¹ Due to the current intersection configuration, the northbound and southbound approaches on US-395 are separate intersections.

However, HCS 2000 software allows for analysis of single intersection with a "two-stage" gap acceptance with 3 vehicles stored.

² Intersections are analyzed through the Highway Capacity Manual (HCM) 2000 Operations Analysis.

Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service. Vehicle queues are expressed in numbers of

³ SB-L movement consists of vehicles travelling south on US-395 turning left at Hot Creek Road destined to Airport, Hot Creek R

EB- and WB-LTR movements consists of vehicles on Hot Creek Fish Hatchery Road destined towards its intersection with US-3

⁴ Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

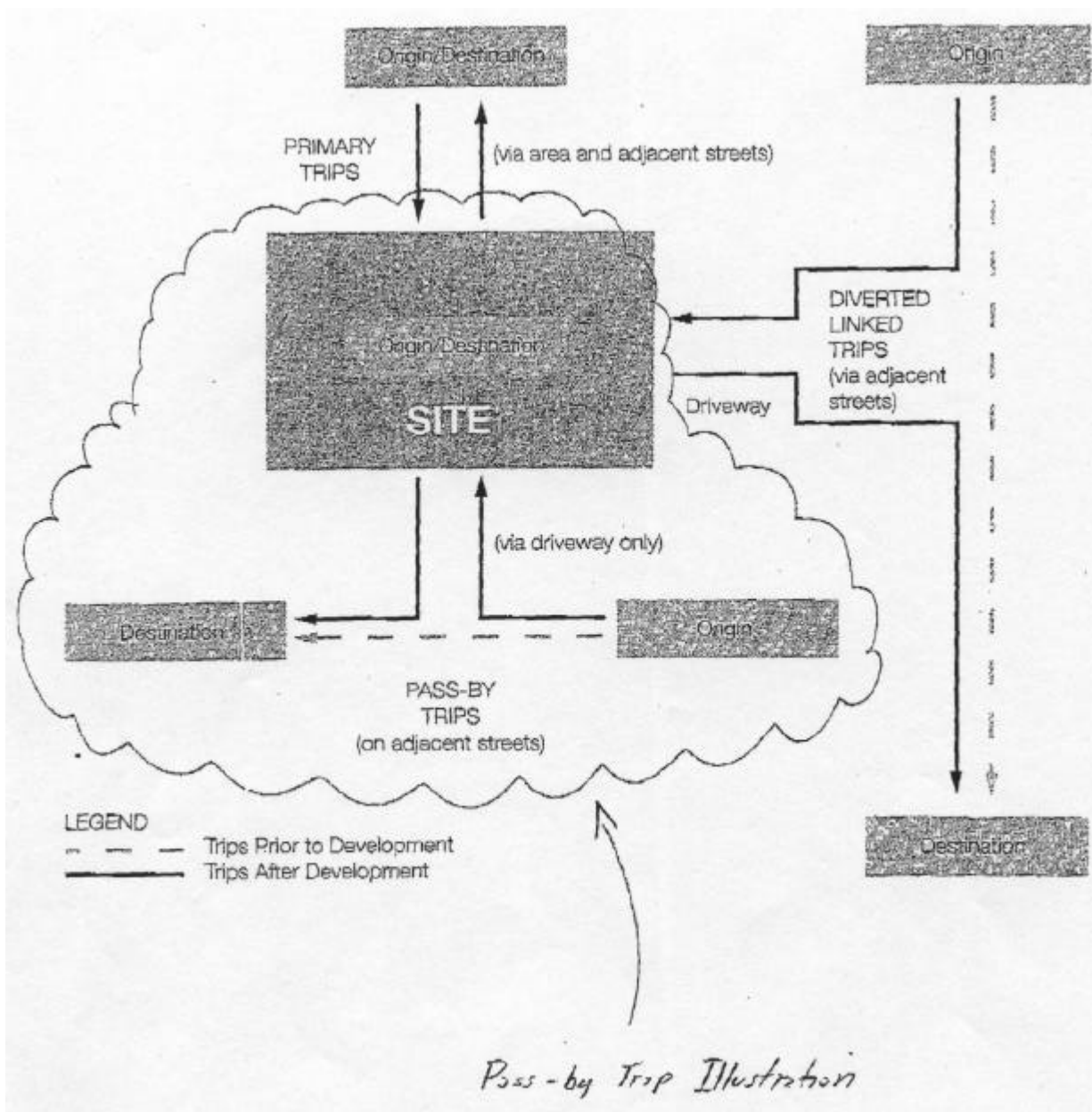
⁵ A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.

Source: LSA Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-11

not to scale

Year 2020 Baseline and Year 2020 Plus Project Intersection Level of Service Analysis



Source: LSA Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit N-12

not to scale

Types of Trips Pass-by Trip Illustration

in the Section 3.6 of the Supplement and found to be less-than-significant. Regarding fire protection, the Airport currently has one Airport Rescue and Fire Fighting (ARFF) Vehicle. The Town of Mammoth Lakes would purchase another ARFF vehicle to support air carrier operations. The Town of Mammoth Lakes may choose to contract with the Long Valley Fire Department for supplemental Crash Fire and Rescue (CFR) services or it may choose to hire locally.

The Town of Mammoth Lakes would develop an emergency response plan to address both the proposed actions and commercial developments currently taking place on Airport property. This plan would meet not only the CFR needs of the Airport but would also the fire protection needs of the hotel-condominium complex, aircraft hangars and retail areas of the commercial development. A facility to house fire apparatus appropriate for these services would be identified. The Town of Mammoth Lakes, in conjunction with area emergency service providers would develop a unified emergency response/disaster plan. The capital improvement plan for the Airport also includes the acquisition of an additional ARFF vehicle to meet FAA Part 139 certification requirements for air carrier operations. The Town would fund the emergency response equipment and training.

Response to Comment L-32

Please see Response to Comment I-48.

Response to Comment L-33

Please see Response to Comment I-47.

Response to Comment L-34

Please see Responses to Comments B-7 and B-12. Further, the comment is incorrect in stating that the Supplement is inadequate because it refers to a future envisioned condition when analyzing growth-inducing impacts. By definition, any analysis of growth-inducing impacts must look at future conditions. Section 5.3 of the Supplement appropriately does that, and in doing so compares that against the current condition in which none of that growth has occurred.

Response to Comment L-35

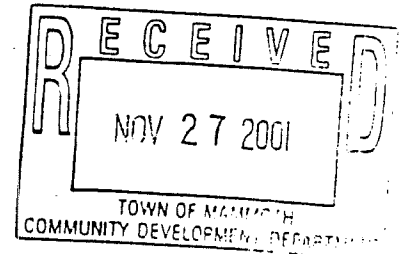
Please see Response to Comment B-12. Further, the Supplement does not conclude that regional traffic, *e.g.*, traffic on U.S. Highway 395 between the Los Angeles area and Mammoth Lakes, will decrease as a result of the project. Instead, it states that “the project has the potential to decrease the rate of trip growth on the regional roadway system.” (See Supplement at Page V-5.) The entire regional roadway system is well beyond the appropriate scope of analysis for this document. Nonetheless, this assumption is consistent with the fact that the Town of Mammoth Lakes appears to be poised to grow regardless of the project and that the project will allow increased numbers of travelers, who would have otherwise driven from Los Angeles or Reno (possibly after flying there from elsewhere) to now fly directly to Mammoth Lakes via regularly scheduled commercial air carrier service. This would slow the rate of traffic growth on U.S. Highway 395, if not reduce traffic, especially between Los Angeles and the Mammoth Lakes area. Caltrans already projects that traffic on U.S. Highway 395 will consistently increase over the foreseeable future. Slowing that rate of traffic increase is a significant benefit.

Jvt

638 dittonwood Dr.
Bishop, CA 93514

11/26/01

Bill Manning
Airport Manager,
Town of Mammoth Lakes
Re: Mammoth Airport SSEIR Comments



Dear Mr. Manning:

I find the Draft Supplemental to the Subsequent Environmental Impact Report for the Town's airport expansion to be inadequate in the following ways:

First, the document does not adequately develop a need for the project. Certainly improved air service will help the Town, but it does not follow that the Project Objective—requiring runway capacity for a specific type of aircraft—is necessary to bring improved service. The document incorrectly dismisses the alternative of building shuttle service from regional hubs like Las Vegas, Los Angeles, Oakland and Reno. This would be the logical step for Mammoth if demand were waiting now, as this could be accomplished with the current runway. In fact, Rusty Gregory, CEO of Mammoth Mountain, said—in comments for the original DEA for this project—that the existing runway could serve quite well. Also, the direct flights from Dallas and Chicago that this project aims for depend on an agreement with American Airlines. The document makes no mention as to whether this agreement is still in place, and since its stated time limit is past, and since the disasters of September and November there is substantial doubt about its viability.

Second, the alternative of using Bishop is still not adequately considered. The document states that approaches to the Bishop airport would bring noise to Bishop on the W-E runway, but most of the time planes will use the S-N runway and this approach will be some distance from the town. More importantly, the document does not address the tremendously more favorable weather conditions in Bishop. The document makes no estimates as to how many days the weather will allow large jets to land at Mammoth, even though there is significant doubt that planes can land even 50% of the time during the peak Jan.-March ski season. The document falsely states that Bishop would create more of a problem during foul weather because the drive up US 395 would be difficult in bad weather, but certainly driving during a storm would be better than trying to land a plane at Mammoth. The letter from your office to the FAA in Appendix D in fact supports this, for you say, "The improvements at the Bishop airport would benefit the entire region. If the

M-1

M-2

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Andy Selters

+ 760-935-4033

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09:55 PM

12/2

Bishop airport were improved to FAR Part 139 Standards, the airport could be available for use as an alternate airport should the Mammoth Lakes Airport be impacted by adverse weather conditions." Moreover, the FAA Part 139 requirements do not apply to alternate airports, and so Bishop can already serve for any jets here. As of 1997, Intrawest spokespersons favored using developing the Bishop airport instead of Mammoth, and the fact that Bishop is a more reliable and safer site remains.

M-3

The document also is inadequate for failing to even attempt to present the cumulative growth impacts that greatly expanded visitation would have. The impacts on population and housing and recreation were omitted with no reasonable justification (III-3). The document simply assumes that growth will occur, and admits that it doesn't know how much of this growth might be attributed to greater air travel induced by the project. Most blatantly, the document fails to disclose cumulative impacts, that other projects depend entirely on the airport expansion. Most notably, these are the Hot Creek Resort development, and the particulars of the Sierra Business Park also depends on this project. The document denies that the airport expansion will have any impact on the town, yet the whole purpose and goal of the project is to dramatically increase visitation.

M-4

Sincerely,

Andy Selters

M. Andy Selters, Bishop, California**Response to Comment M-1**

Based on the comparisons with the case study airports presented in Appendix H of the Supplement, future service is anticipated to develop from other hub airports, such as Los Angeles, San Francisco, Las Vegas and/or Denver by other air carrier/commuter operators that have hubs at these airports. As discussed in Response to Comment I-2 almost two-thirds (64%) of Mammoth Lakes visitors said that they would utilize commercial air service of major carriers offered direct flights to Mammoth. [Personal communication with Rob Perlman, Executive Director Marketing, Mammoth Mountain.] Sixty-nine percent of visitors would like the service offered from Los Angeles. This supports the conclusion that once the Airport begins service to nearby cities like Los Angeles, San Francisco, and Reno, there would be a gradual shift from people driving to Mammoth Lakes to people flying into Mammoth Lakes.

Airline operations in the national airspace system largely operate using a “hub and spoke” system. Major air carriers establish central hub airports where passengers can arrive from outlying or spoke airports, transfer or connect with another flight, and continue to their destination airport. In the case of the proposed service by American Airlines to and from Mammoth Yosemite Airport, initial service would be provided from two of American Airlines’ hubs: Chicago and Dallas/Fort Worth. Service from these two airports would carry passengers that connect from locations throughout the eastern, southern, and midwest United States. As discussed in the Supplement, many of the current visitors traveling from these locations to or from the Mammoth Lakes area use Los Angeles or Reno airports and drive between the Mammoth Lakes area and these airports. Additionally, international passengers from Asia, Europe, South America, Canada, and Mexico that now fly to Los Angeles and drive to Mammoth Lakes would be accommodated by using these cities to fly directly to Mammoth Lakes. Therefore, this initial service is anticipated to reduce vehicle use while continuing to accommodate existing visitor levels.

Response to Comment M-2

This comment raises issues outside of the scope of CEQA. (American Airlines agreement and terrorist attacks of September 11th, 2001.) The events of September 11 have not changed the long-term need for the project, or the viability of the project.

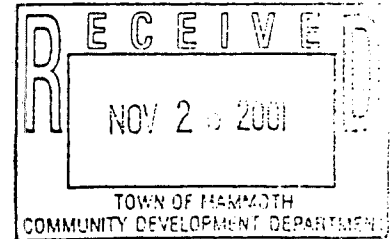
Response to Comment M-3

Please see Response to Comment I-48. Although it is true that Part 139 of the FAA regulations (14 C.F.R. § 139.1) does not apply to “alternate” airports that does not mean that the Bishop Airport could substitute for the Mammoth Yosemite Airport on a permanent basis without Part 139 certification. If it did, it would then no longer be an alternate airport, thereby making it subject to Part 139. Any air carrier aircraft operating under FAR 121, (Operating Requirements: Domestic, Flag, and Supplemental Operations) diverted from Mammoth Yosemite Airport would probably land in Reno, Los Angeles, or Las Vegas depending on the airline operating the flight.

Response to Comment M-4

Please see Responses to Comments A-2, B-11, and B-12. The purpose of the project is to serve the existing and planned population growth and development in the Mammoth Lakes area. Contrary to the comment, neither the Sierra Business Park nor the Hot Creek Resort (part of the Airport Development Plan certified in the 1997 Subsequent EIR/EA) are in any way dependant on the Airport expansion project. Those are separate projects, which have undergone separate environmental analyses. Nonetheless, the Supplement also discusses potential cumulative impacts from the Sierra Business Park and the Hot Creek Resort that was evaluated and certified as part of the proposed project in 1997 Subsequent EIR/EA.

Rob Perlman
P.O. Box 1932
61 St. Anton Circle
Mammoth Lakes, CA 93546



November 24, 2001

Mr. Bill Taylor
Senior Planner
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Taylor:

Please include this letter and the accompanying attachments as part of the public comments on the Draft Supplement to the Subsequent Environmental Impact Report of the Mammoth Yosemite Airport Expansion Project.

N-1

The first attachment is some information and commentary that I wrote about the Mammoth Yosemite Airport project entitled "Nothing to Hide."

The second attachment that I would like to submit into the public record is a copy of a script that was used in a story about the issues and differing of opinions between Inyo County and the Los Angeles Department of Water and Power (LADWP). The stories aired on November 12, 2001 and were broadcasted on the radio station KDAY-FM and the television station KDAY-TV channel 33. This script and story highlights the current problems and animosity between Inyo County, the county that owns the Bishop Airport, and the LADWP, owners of the land on which the Bishop airport sits. To quote the story "...LA will force Inyo into arbitration over just about everything..." and "The implication—no cooperation on projects like expansion of the Bishop Airport..." This attachment and story is one of many underlying reasons and speaks to the issue of why the Bishop Airport is not a preferable alternative for the Mammoth Yosemite Airport.

Additional support of why the Bishop Airport is not a preferable alternative is that it is located almost 50 miles away from the Mammoth Lakes Community thus requiring additional transportation to be provided when the goal is to reduce vehicular and bus traffic. Also, the Town of Bishop (which doesn't own the airport) and the Bishop community have not indicated a desire increase the town's cost structure to provide additional infrastructure and support services so that the Mammoth Lakes community can realize the majority of guest expenditures and sales tax benefits.

Regards,

A handwritten signature in dark ink, appearing to read "Rob Perlman", with a long, sweeping horizontal line extending to the right.

Rob Perlman

Encl. Nothing to Hide article and KDAY news script

Nothing to Hide
By Rob Perlman

The Mammoth/Yosemite Airport is a project that continues to be the subject of scrutiny. Speculation about the process and scope of airport development is rampant; opinions are as varied as the rumors feeding them. My intent in this forum is to restate the facts and the history of the airport, and to assure the people of Mammoth that this project is very much alive and that it continues to progress. It is important to realize the airport has been decades in the making, long before I began my tenure as Mammoth Mountain's Executive Director of Marketing, as well as the Chairman of the Mammoth Lakes Tourism Commission, and even before Intrawest got involved in the community. Mammoth is a very special place for too many reasons to count. One of the unique things about Mammoth as a resort town is that this community had the opportunity to define its future at a point in time when, unlike the resorts of Vail and Aspen, it still had the chance.

In the mid-eighties Mammoth was North America's most popular mountain playground, doing upwards of 1.5 million skier visits a winter. Mammoth was the industry leader and had air service shuttling thousands of Southern Californians to the slopes of Mammoth Mountain on a regular basis. That success was short lived, and 600,000 skiers went elsewhere in the late 1980s. The community realized that they needed to act in order to preserve Mammoth's future. The town needed a plan.

The town staff worked countless hours to put together a "General Plan" in 1987. Then, following some even rougher periods of time which culminated in 1991, the community needed to create not only a plan, but a "vision" to guide Mammoth toward achieving the desired quality of life for the resort town before it was too late.

With a tremendous amount of input from the community, town leaders crafted a vision statement in 1992. Public meetings were held, input was solicited, the community worked together and ideas were garnered from other mountain communities resulting in a road map to Mammoth's future.

Things began to move a little faster when Intrawest came to town in 1996. With Intrawest, whose only reputation was and still is based on building and operating a selection of the world's finest and most well-run mountain resorts, came the possibility of realizing the town's vision.

The citizens and leaders of Mammoth saw that with Intrawest investing \$800 million to help Mammoth achieve its vision, they had better make sure that the vision was spot-on. More meetings were held, more public input was solicited, more experts got involved, and more workshops were conducted. The result of countless hours, days, months and years of dialogue by stakeholders and the townspeople of Mammoth Lakes was a refined sense of purpose that identified the critical and crucial ingredients necessary to better focus a collective vision for the community.

One of those critical elements was to bring back commercial air service, a large component of having an effective transportation system that would create a pedestrian-friendly town that is less reliant on automobiles, all the while helping reach Mammoth's goal (in the vision statement) of achieving financial sustainability.

Mammoth Mountain contacted me because of my experience with airport development in Vail. When I arrived on the scene, my first step was to find an airline partner—not just

work. The past, present and future of the Mammoth/Yosemite Airport is clearly a community effort, following a exhaustive public process with absolutely nothing to hide.

Please contact me personally with any questions regarding our efforts to bring back commercial air service to Mammoth at rperlman@mammoth-mtn.com.

Water Issue (Aired on KDAY-FM and TV)

Many citizens of Inyo County now ask, what next? Their questions are prompted by evidence that LADWP has no plan to deal with the Owens Valley to help protect the environment and no plan to maintain a cooperative relationship on several projects. That was the content of a memo that described a private meeting between Inyo and LA officials.

Even those who supported the water agreement now admit that it looks like LA will force Inyo into arbitration over just about everything. That means a delay in help for the dried up plantlife and a heavy cost to Inyo County Government.

The memo, apparently written by Inyo Water Director Greg James, quotes LA Water and Power Commissioner Domonique Rubalcava and DWP Manager Jerry Gewe as saying that Inyo has no power under the water agreement to control groundwater pumping. Rubalcava is quoted as saying that LADWP will "seek to get every drop of water it can from the valley without killing any "weeds." Rubalcava is also quoted as saying that since Inyo is "doing everything it can to prevent LaDWP from pumping groundwater...he has instructed DWP to not provide anything to the County that it is not absolutely required to provide under the agreement."

The implication - no cooperation on projects like expansion of the Bishop Airport and development of Big Pine water ditches. In fact, discussions with DWP

over airport development have dragged on for several years with no amendment to the airport lease.

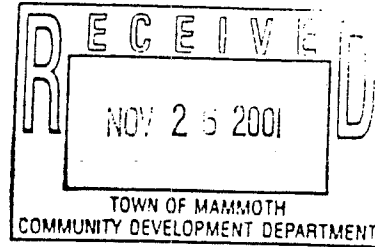
Asked how Inyo will respond to problems with LADWP, County Counsel Paul Bruce said that the county "has been examining a number of options in view of ongoing difficulties."

N. Rob Perlman, Mammoth Lakes, California

Response to Comment N-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

Mr. Bill Taylor, Senior Planner
Mammoth Lakes Town Offices
P. O. Box 1609
Mammoth Lakes, CA 93546-1609



Dear Mr. Taylor:

I have reviewed the Draft Supplement to Subsequent Environmental Impact Report (SSEIR) for the Mammoth Yosemite Airport Expansion Project, and would like to present my comments.

First, I feel the SSEIR is very complete and very good. Much additional information is presented which makes this document better than the already good previous efforts. It reinforces the choice of "our" airport as the best one for this area.

O-1

The Mammoth Yosemite Airport is an existing airport, and has been there since the World War II time. Only improvements to it are proposed, not any large and new developments. The area has been used as an airport for nearly 50 years; other nearby uses have gone on at least as long, if not longer. In no way is the area or its environment "pristine" or "untouched".

These improvements are nothing new. The need for air travel was incorporated in the Town General Plan in 1986, after much discussion and many meetings. More discussion ensued when the Town proposed purchasing the airport, which was done in 1991 after passage of a referendum of Mammoth Lakes voters. Expanded air service from an expanded airport was included in the Town Vision Statement in 1992. During this time, there was scheduled air service at various times and levels. A hearing on the Airport Environmental Assessment was held on 14 November 2000. Airport and air service improvements have been goals of Mammoth Lakes for a long time.

It would be more convenient, and less polluting, for guests to come to Mammoth by short air flights, rather than by long drives in their cars. Many of these guests would probably come from other parts of our country, thereby broadening our market base. These guests would probably stay for a week, and "fill up" the town midweek, when it is now usually empty. They would stay in new and improved facilities that already exist or are being constructed. Statistics from Vail Resorts Inc. annual reports suggest that about 25% of snowsport visitor days at their resorts come from guests arriving and departing from Vail/Eagle County airport. A similar percentage could be expected for Mammoth from the Mammoth Yosemite Airport.

The recreational activities that Mammoth area guests want are overwhelmingly done in areas far from the airport. Few are done nearby, and it is unlikely that they would be disturbed by airport activities, since airplanes like the 757 and 737 are extremely quiet.

Safety issues are not really a concern. The proposed partner, American Airlines, has examined the airport carefully; they are not going to risk \$130,000,000 airplanes in marginal situations! A personal examination of FAA/NTSB Accident Reports from 1992 to early 1999 suggests that the present Mammoth Airport is no more "unsafe" than similar airports used by other Western wintersports resorts. Furthermore, when there was air service at the Mammoth Airport, it is understood that flight cancellations due to weather were relatively infrequent.

Please include these comments in the records of these proceedings.

Rick Jali
P. O. Box 1717
Mammoth Lakes, CA 93546

O. Rick Jali, Mammoth Lakes, California

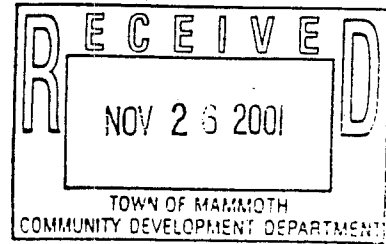
Response to Comment O-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

ALLAN DAY SAPP
850 SHERIDAN LANE
GARDNERVILLE, NEVADA 89410

November 26, 2001

Mr. Bill Taylor
Senior Planner
Mammoth Lakes Town Offices
PO Box 1609
Mammoth Lakes, CA 93546-1609



Dear Mr. Taylor:

[In connection with the CEQA comment period for the Mammoth Yosemite Airport expansion, I would like to offer the following comments. As an avid skier and proponent of Mammoth, it has pained me to watch Mammoth's competitive position slip over the last two decades, relative to the Utah and Colorado resorts, as scheduled air service disappeared from the Eastern Sierra.]

P-1

In recent years, I have been unable to attract any of my California friends to visit the Mammoth area because of the difficulty and time required by the winter drive. Most find it easier, quicker and more cost effective to simply hop a plane to Salt Lake City or Colorado.

I have witnessed small, vocal minorities in several other California resorts oppose growth and economic development. This "I've got mine, screw you" attitude can seriously handicap the silent majority working to live in a vibrant, scenic, prosperous community.

The planned improvements to the Mammoth Yosemite Airport would allow Mammoth to rebuild the economic foundation of the region. The return of scheduled air service, along with the real estate and ski area developments currently going on, will enable Mammoth to once again gain its share of the resort and tourism market.

Sincerely,

A handwritten signature in black ink, appearing to be "AS", written over a horizontal line.

Allan D. Sapp

cc: Mammoth Times

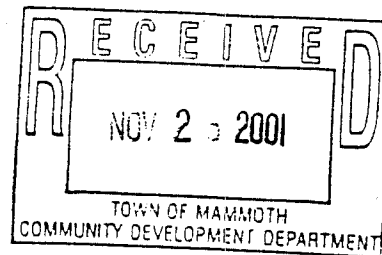
P. Allan D. Sapp, Garnerville, Nevada

Response to Comment P-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

November 20, 2001

Bill Taylor
PO Box 1609
Mammoth Lakes, CA 93546-1609



Dear Bill:

[The expansion of the Mammoth Yosemite airport is a tremendous benefit to the region. Expansion of the airport will not only help alleviate traffic congestion in the Eastern Sierra corridor, it will greatly benefit the surrounding communities by providing a much needed link in regional transit services.]

Q-1

After reviewing the supplementary Environmental Impact Report, I am fully convinced that there will be no negative impact on the flora and fauna in the region. The research was done in a thorough, precise manner with great attention paid to potentially threatened species.

There is no reason to further delay the process. All guidelines were followed correctly, it is now time to move forward with the expansion of the Mammoth Yosemite airport.

Sincerely,

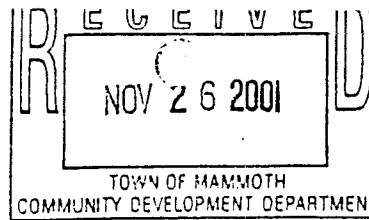
A handwritten signature in cursive script, appearing to read "Karen McGillis".

Karen McGillis

Q. Karen McGillis

Response to Comment Q-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.



To Whom It May Concern:

My wife and I have been full time homeowner residents of Mammoth Lakes since 1989. We have watched and listened carefully to the Pro Development supporters and the Anti Growth proponents. We have listened carefully while our Town Counsel struggled with the many proposals submitted by the representatives of the Mountain, Real Estate Developers, Permanent and Second home owner Residents. We have found ourselves agreeing at times with the position of each of the participants.

R-1

My five grandson's ages 10 TO 14 have convinced us that the development of Mammoth Lakes as an All Season's recreational area is the correct decision. They live in southern California in big city environments and have come to cherish their time spent in the rural, safe and relaxed atmosphere of Mammoth Lakes. They know every ski run by name and spend a great amount of time persuading their parents to bring them here.

In my younger years Arrowhead, Big Bear, Crestline Yosemite, Tahoe were the area of choice when looking for rural mountain winter and summer sports. These, except for Yosemite which is filled to capacity annually, are now bedroom communities to larger cities.

The Forest's and the mountains belong to the people and the responsibilities of the people are to use their skills to develop the best community possible. I believe that the Development Plan crafted over the past 20 years by the Mammoth Lake community, to reduce automobile traffic, create a safe and efficient Air Transportation system, to open the forest and mountain's to their rightful owners, the people, is sound, well thought out and meets Environmental Standards.

Need's for development and change will always be a demand on society, it is incumbent on the people to do their best as Guardians of The Environment.

Fred Howley
P.O. Box 3038
Mammoth Lakes, CA 93546

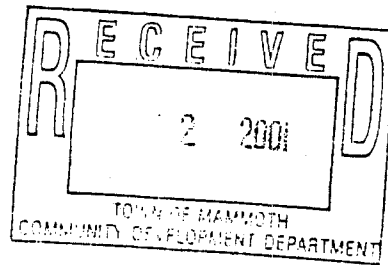
R. Fred Howley, Mammoth Lakes, California

Response to Comment R-1

The commentor expresses support for the development plans crafted by the Mammoth Lake community. The Town acknowledges these comments and has made them part of the official record for this project.

November 22, 2001

Bill Taylor, Senior Planner
Mammoth Lakes Town Office
P O Box 1609
Mammoth Lakes, CA 93546-1609



Re: Mammoth Lakes Airport CEQA

Dear Mr Taylor:

[We submit the following comments in support of the much needed improvements for the Mammoth Lakes Airport.]

S-1

- As residents of the Mammoth Lakes/June Lake communities for over 30 years, we were here in the 80's to enjoy the air service run by the ski area and others. We very much look forward again to the convenience of having a commercial airline service to use when weather does not allow us to fly our own private plane.
- We have visited several other ski towns that have commercial air service, such as Sun Valley, Aspen, and Vail and have seen how it creates a more pedestrian friendly town. With air service, Mammoth could become less reliant on the automobile, resulting in fewer cars in town and reduced pollution and congestion.
- The airport could be, and has been, used for commercial service as it is today. With the future expansion and demand, it is very probable that a commercial airline service with frequent flights of small and noisy airplanes would step in to fill this need. American Airlines which requires the proposed safety upgrades is planning to use the Boeing 757 -- one of the quietest and most efficient aircraft in service today.
- As private pilots, we look forward to the upgrades to the existing airport facilities, for ourselves and other private pilots. Those who oppose this project are really prohibiting the Town in making safety improvements at the airport.

Our understanding of the FAA's EA is that the airport project has no significant adverse impacts and, in fact, has positive impacts which will enhance the economy and living conditions of those of us who live in this isolated area of California. We, therefore, urge you to recommend approval of this project.

Sincerely,

Don & Pam Rake
P O Box 571
June Lake, CA 93529

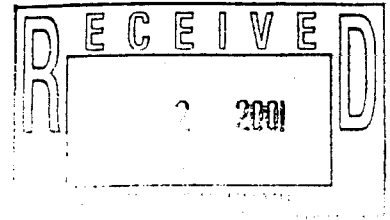
S. Don & Pam Rake, June Lake, California

Response to Comment S-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

from the desk of:

Philip R. Jobe
21115 Banlynn Court
Topanga, CA 90290
818-883-5507
818-883-6538 Fax



Mammoth Mountain Town Offices
C/O Bill Taylor
Senior Planner
PO Box 1609
Mammoth Lakes, CA 93546-1609

[Subject: In Favor of Mammoth Yosemite Airport Safety Improvements and Resuming
Commercial Air Service]

T-1

Dear Mr. Taylor:

I am a native Californian and frequent Eastern Sierra Nevada traveler, visitor, and user. My parents are retired in Minden, Nevada and still have property in Kirkwood Meadows, Ca. I learned to ski in Yosemite's Badger Pass and have spent many summers and vacations there and other areas of the Sierra. I have also encouraged my children to use and appreciate the Sierra Nevada Mountains, forests, and recreational areas. I believe that the Eastern Sierra is one of the most beautiful areas of the country and should be seen and enjoyed by all who are willing to make the trip. Furthermore, unlike other areas of the Sierra, Yosemite in particular, I believe Mammoth Lakes is uniquely capable of accommodating the planned commercial airport without negative impact to the surrounding area. I believe that it will benefit the very sensitive Yosemite National Park by enabling more travelers to go in from the east by bus and reduce the number of personal vehicles and related negative impacts. And, as a Los Angeles resident that looks forward to spending more time skiing than driving, I believe that commercial air travel to Mammoth will help reduce the vehicles going to and crowding the streets of Mammoth! Though air travel will increase the numbers of people going to the Eastern Sierra and using Mammoth Mountain ski area, I very strongly believe that the appreciation that they take home with them will further help protect and improve the beautiful treasures of Mammoth and the Eastern Sierra!

Sincerely,

A handwritten signature in black ink, appearing to be "P. Jobe", with a long horizontal line extending to the right.

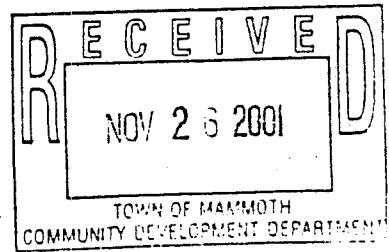
Philip R. Jobe

cc: Letters to the editor
PO Box 3929
Mammoth Lakes, CA 93546

T. Philip R. Jobe, Topanga, California

Response to Comment T-1

The commentor expresses support for the project. The Town acknowledges these comments and has made them part of the official record for the project.



November 21, 2001

Town Offices,
C/O Bill Taylor, Senior Planner,
PO Box 1609
Mammoth Lakes, CA 93546-1609

Dear Mr. Taylor:

[This letter is to support commercial air service into Yosemite/Mammoth airport. The CEQA process provides a complete environmental review. I want to highlight some of the benefits of enhanced commercial air service.]

U-1

- Greater exposure of citizens to the environmental wonders of the Owens Valley and Yosemite region.
- Reduced traffic on US highway 395 and a corresponding reduction in auto emissions, traffic, and automobile accidents.
- The ability for injured hikers and skiers to fly out rather than to take long cars trips.

On a more personal note, I work with at San Diego State University and we have are conducting a major cancer prevention project funded by the National Cancer Institute. We are attempting to institute a sun-safety program at Mammoth Mountain that will reduce the epidemic of skin cancer at high altitudes. A commercial airport would greatly facilitate this project and assist in our battle against skin cancer.

I know there are some environmental concerns about such a project. Please consider the health and environmental benefits that I have suggested will accrue from such a project.

Sincerely yours

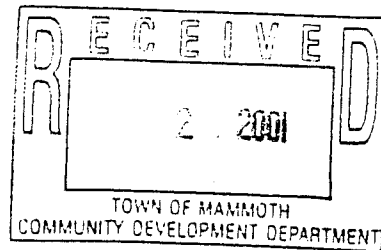
Dr. Peter Andersen
3897 Hidden Trail Drive
Jamul, CA 91935

U. Dr. Peter Anderson, Jamul, California

Response to Comment U-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

MARY WALKER
Post Office Box 1382
Mammoth Lakes, California 93546
760.934.2362



November 23, 2001

Mr. Bill Taylor
Senior Planner
Town of Mammoth Lakes
Post Office Box 1609
Mammoth Lakes, California 93546-1609

Dear Bill:

[This letter is written in support of the Mammoth Yosemite Airport expansion project. After review of the Draft Supplement to Subsequent Environmental Impact Report (SSEIR) for the Mammoth Yosemite Airport Expansion Project, I feel the environmental document to be complete and supports the location of the already existing airport as the logically best one for the Eastern Sierra.]

V-1

As the existing airport, the Mammoth Yosemite Airport has stood the test of time. The proposed improvements for the airport would only enhance an already existing infrastructure and thus support the planned expansion and developments.

~~The improvements are nothing new and have been in the plans for two decades. The need for air travel was clearly established and incorporated in The Town General Plan in 1986. Years of meetings with community support were held and the issue were addressed and a town referendum of the Mammoth Lakes voters. Airport and air service improvements have been goals of Mammoth Lakes for a long time.~~

Air service is the environmental choice for Mammoth Lakes and the surrounding communities. It would be far less polluting for guests to come to Mammoth by short air flights, rather than by long drives in their cars. Air service would also help to provide economic stability to the area and increase mid-week visits by guests reducing the huge impact of the weekend tourist season.

~~I am a long time supporter of the expansion of the Mammoth Yosemite Airport and cannot wait until scheduled commercial air service returns to the Mammoth area.~~

Please include these comments in the records of these proceedings.

Very truly yours,

A handwritten signature in cursive script that reads "Mary Walker".

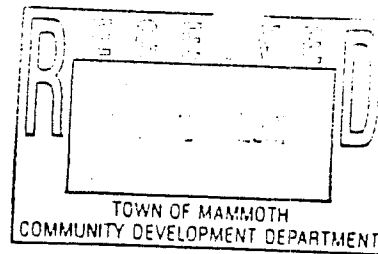
Mary Walker

V. Mary Walker, Mammoth Lakes, California

Response to Comment V-1

The commentor expresses support for the project and the adequacy of the EIR. The Town acknowledges these comments and has made them part of the official record for the project.

November 26, 2001



To Whom It May Concern:

I live in Los Angeles and am looking forward to the upcoming season. Knowing several Intrawest employees, I have been educated on the several phases of their involvement. I have been going to Whistler for 20 years and have seen what Intrawest can do for a ski resort. But the key element is the AIRPORT!

W-1

We in the southern part of California are looking very forward to being able to get to Mammoth by jet.. To people who are reluctant to do the drive (min.5.5hrs), I have been spreading the word of this fabulous new airport and how there will be flights from other part of the U.S. whom didn't have access before now do to the jewel of California. "Great idea".

Maybe I'll start going back to Mammoth. This airport is essential to the whole picture of success in creating a world-class resort. Mammoth has the potential the same way Whistler did 20yrs ago. There are always myopic people who just can't grasp a vision. Let's hope they are the minority. Last note, is that Bishop is nice and all but it is not the attraction. The airport is already there; it's a no brainer.

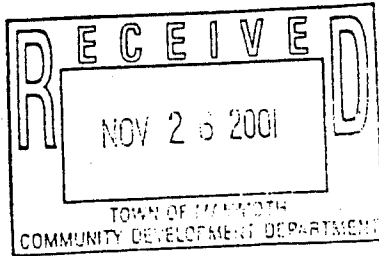
Thanks avid skier,

James Laing (jlbank@aol.com)

W. James Laing

Response to Comment W-1

The commentor expresses support for the project. The Town acknowledges these comments and has made them part of the official record for the project.



November 26, 200

Town of Mammoth Lakes
Attn: Bill Taylor, Senior Planner

Re: Mammoth Yosemite Airport (CEQA)

Dear Mr. Taylor:

I read in the Mammoth Times that the public comment period for the CEQA process closes this afternoon.

[I support the effort to bring commercial air service to the Mammoth Yosemite Airport. As a 25 year Mammoth resident who has been active in community affairs for many years, I know that there are numerous reasons to support this project. I would like to briefly discuss the one reason, which has always been of paramount importance to me.]

X-1

Looking back over Mammoth's economic health for the last 25 years, I am always mindful of the ebb and flow of economic prosperity in this community. We have sometimes come close to achieving a local economy that provides income and job stability, but we have never quite made the grade. I have seen first hand the flight of individuals and small business from our town when the financial future seemed bleak and reasonable goals of steady jobs and providing for the future seemed unattainable. It seems that, now, that we have a rare opportunity to achieve long term financial health and stability. The further development of the airport is a vital part of the community wide effort to bring the benefits of financial prosperity to Mammoth Lakes.

Sincerely,

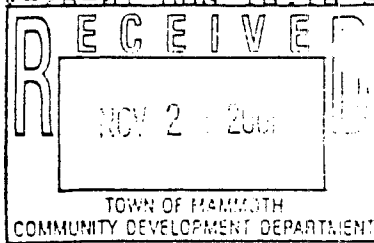
A handwritten signature in dark ink, appearing to read "Rick Bramble".

Rick Bramble

X. Rick Bramble

Response to Comment X-1

The commentor expresses support for the project. The Town acknowledges these comments and has made them part of the official record for the project.



Stephen Kalish
 892 Rimrock Drive
 Swall Meadows, CA 93514

26 November 2001

Bill Manning, Airport Manager
 Town of Mammoth Lakes
 P.O. Box 1609
 Mammoth Lakes, CA 93546
 Sent via telefax to: 760.934.8608 and 760.934.7493

Re: Draft SSEIR for expansion of the Mammoth-Yosemite Airport

Dear Mr. Manning:

I offer the following comments in response to the Draft SSEIR for the proposed Mammoth-Yosemite Airport expansion. I am a full-time resident of Mono County, and have a number of concerns regarding the proposal to bring Boeing 757 aircraft to the local airport, and specific questions regarding the quality, character and adequacy of analysis provided in Section IV: Alternatives.

1. Safety. The Draft SSEIR minimizes safety issues related to bringing large commercial jets in to the local airport. The specific consideration of safety, and the relative safety of using the Mammoth-Yosemite Airport (in either its present configuration or "upgraded") *vis-a-vis* other area airports is not adequately evaluated or addressed, in either the Draft SSEIR or the previously circulated EA for the FAA completed last year and selectively incorporated into the Draft SSEIR. Topography immediately adjacent to the airport, close proximity to Highway 395, high elevation, winter weather conditions, and lack of a cross-wind runway all downgrade the safety of upgrading the airport to accommodate local 757 service. Occasional strong winds and turbulence, frequent cross-winds, possible wind shear and hostile winter flying conditions are not evaluated as a negative environmental impact on the flying- and flight-path-located- public. These are, I would argue, serious and substantial issues that require impartial analysis and discussion prior to adoption of a final SSEIR.

Y-1

2. Aircraft Diversion. How often are planes diverted away from, or unable to depart from, the Mammoth-Yosemite Airport? (Last Wednesday was a classic example: cross-winds steady at 39, gusting to 65 knots.) Are the records of the frequency of Alpha Air diversions available—certainly there must be local records of how many times a bus was sent to the Bishop Airport to drop-off or pick-up Mammoth-bound skiers who could not be flown into the Mammoth Airport due to hazardous flying conditions that were non-existent at Bishop? This current and historic pattern of aircraft diversion cannot be mitigated under the "preferred alternative" and speaks to the need to adopt an alternative that does not attempt to bring Boeing 757s to Mammoth.

Y-2

3. A Safer Alternative, Unreasonably Rejected. Section IV of the Draft SSEIR, Alternatives, purports to evaluate reasonable alternatives to the expansion of the Mammoth-Yosemite Airport, and yet the alternatives evaluated all come down to variations on a single theme: a long runway, a longer runway, or the longest runway. Other alternatives are summarily rejected (more on this below). This is certainly not the kind of analysis required by CEQA Sec. 15126. Most egregious is rejection of the off site alternative, the Bishop Airport, as an infeasible alternative, and stated "Reasons for Eliminating Alternative 8 —Develop Another Airport in the Region" (4.4.3). The following six subparagraphs refer to, quote from, and raise questions about, the seven paragraphs of 4.4.3 in the Draft SSEIR.

Y-3

- "Access from Bishop Airport...would require drivers to pass through downtown Bishop along a two-lane residential street and through a major downtown intersection. This would generate neighborhood compatibility...issues in Bishop..." (4.4.3) This argument is specious at best, suggesting that the only access to the Bishop Airport is via East Line Drive. The fact is that Wye Road connects with the north end of Bishop, does not encounter any residential neighborhood, and with a minor pavement extension to the Airport terminal would provide quicker and shorter access to Mammoth than does East Line Drive. Won't the Town of Mammoth Lakes here admit the obvious, that this first and primary objection to Alternative 8 is overblown and not insurmountable?
- "The primary population center of Bishop, California is located within one to five miles of the Bishop Airport and directly under the flight path for the east-west runway." (4.4.3) Another specious argument: Bishop's east-west runway (7-25) is neither the primary nor secondary runway, neither the longest nor second-longest runway, neither the greatest load-bearing nor second-greatest load bearing runway at the Bishop Airport. The east-west runway is the shortest, least developed, and by far the least used runway at the Bishop Airport (except for the 4th of July, when the town gathers there for fireworks, with many exiting via Wye Road). The fact is that runway 7-25 is almost never used as a runway at all, and neither the primary runway (12-30, 7948 ft.), nor the secondary runway (16/34, 5600 ft.) has a flight path over the center of Bishop. Won't the Town of Mammoth Lakes here admit the obvious, that this second objection to Alternative 8 is a red-herring, hardly worth mentioning, and certainly no reason to declare Alternative 8 infeasible?
- "Moreover U.S. Highway 395 between Bishop and Mammoth Lakes has a steep grade making for difficult driving during periods of inclement winter weather.." (4.4.3) This is for all intents and purposes another specious argument, as it is most unlikely that any commercial planes would be landing or taking-off from Mammoth-Yosemite Airport if Highway 395 was impassable (not to mention that the same highway continues north to Mammoth Lakes, and would most likely be in worse shape the farther north one drives towards Mammoth.) Won't the Town admit the obvious, that during periods of inclement winter weather it would be less hazardous to fly to Bishop and drive from there to Mammoth Lakes than to try landing at Mammoth-Yosemite Airport? And that in fact diverted planes would in all likelihood most likely land in Bishop anyway, and the Mountain will be happy to send a bus down Sherwin Grade to pick up its passengers and bring them and their money to Mammoth?
- "The airfield at Bishop Airport is currently not certified for FAR Part 139..." (4.4.3) Another self-defeating argument: if Alternative 8 were seriously evaluated/considered/adopted and funded obtaining Part 139 status for the Bishop Airport would be essentially a mere formality, mostly a matter of paperwork. Does the Town of Mammoth Lakes really believe that given a choice of landing at the (relatively safe) Bishop Airport or landing at the (relatively unsafe) Mammoth-Yosemite Airport, that "...it is uncertain as to whether the air carriers would opt to serve the Mammoth Lakes market from Bishop airport" (4.4.3)?
- "Representatives from Bishop indicated their potential plans to attract commuter service to Bishop Airport." (4.4.3, paragraph 5) "However, they are not planning on obtaining an FAR Part 139 certification because of the high costs of upgrading the facilities to meet the requirements for commuter operations." (4.4.3, paragraph 6) Is it the Town of Mammoth's position that if the money being requested for Mammoth-Yosemite Airport upgrades were diverted to Bishop Airport that Bishop would not be interested in the money, and would decline to upgrade to a Regional Airport, complete with FAR Part 139

Y-3

certification? Isn't the real issue that there can be at most one commercial airport in the Eastern Sierra, and that Bishop Airport (Alternative 8) is deemed infeasible primarily because Mammoth Lakes is trying to grab all available funds for themselves?

- "Based upon all of the above reasons, this alternative was considered to be infeasible and would not meet project objectives and was eliminated from further consideration." (4.4.3) If the reasons are bad, false, and spurious, can the Town reasonably conclude that Alternative 8 should be eliminated from further consideration?

I live closer to the Mammoth-Yosemite Airport than to the Bishop Airport. It would be nice, if environmental issues could be resolved, to be able to fly on a commercial flight in to and out of the Eastern Sierra. But it is obvious to me, having used both airports, that Bishop offers by far the safest alternative for air travel to and from our area.

The alternative of improving the Bishop Airport is preferable on safety and feasibility grounds, as it has multiple long runways eminently suitable for safe takeoffs and landings by aircraft even larger than 757s. It is not subject to heavy snowfall, severe cross-winds, or dangerous local topography, and is located away from the Highway and in better proximity to sources of jet fuel.

Now that Bishop is moving forward with airport improvements, I believe that the Town of Mammoth Lakes, the City of Bishop, the FAA and the airlines should work together to develop a single regional airport, and for the reasons cited above the regional airport should be in Bishop. The Town, and commercial airlines, should place the safety and well-being of the public ahead of this "shoe-box" approach to use the Mammoth-Yosemite Airport for large jet takeoffs and landings. This Draft SSEIR should be rejected as insufficient under CEQA. Alternative 8 should be revived, and should receive a thorough and detailed analysis and environmental review before any significant airport expansion plan is adopted.

Thank-you for the opportunity to comment on this Draft SSEIR for the Mammoth-Yosemite Airport.

Sincerely,



Stephen Kalish

Y. Stephen Kalish, Swall Meadows, California**Response to Comment Y-1**

Mammoth Yosemite Airport currently is certificated for air carrier charter operations by the FAA under 14 CFR Part 139. The proposed project would enable the Airport to be certified for scheduled air carrier operations under 14 CFR Part 139. A 14 CFR Part 139 certification is a determination from the FAA that the Town of Mammoth Lakes operates the Airport in a manner consistent with FAA requirements. The FAA conducts annual on-site certification reviews of the Airport to maintain its Part 139 status. The last review of Mammoth Yosemite Airport was done in June 2001.

Any air carrier operating under 14 CFR Part 121 would require FAA approval to fly into Mammoth Yosemite Airport. This approval would take the form of Mammoth Yosemite Airport being added to the air carrier's Operating Specifications. Operating Specifications are FAA approved documents that clearly state what airfields the FAR 121 air carrier may operate into with any restrictions if necessary. Inclusion of an airport into a FAR 121 air carrier operation specifications is a determination from the FAA that FAR 121 air carrier operations may be conducted in an Airport in a safe manner.

The existing terrain around the Airport has been assessed for hazards to air navigation. While it is acknowledged that some terrain features, such as Doe Ridge, penetrate FAR Part 77 imaginary surfaces, aeronautical studies have determined these obstructions are not a hazard to air navigation. The Global Positioning System (GPS) Standard Instrument Approach Procedure (SIAP) to Runway 27 has FAA-certified descent and visibility requirements designed to avoid surrounding terrain.

The variable wind conditions at the Airport are noted in the Airport/Facility Directory published by the U.S. Department of Commerce and this document is available to pilots. Hourly wind and weather data has been provided to American Airlines to help them develop flight plans and schedules which would enable them to avoid the times with high probability of inclement weather when aircraft are likely to hold at their originating airports until the storm has subsided as with any other air carrier airport.

Response to Comment Y-2

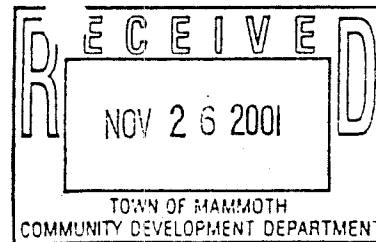
Any air carrier aircraft operating under FAR 121 diverted from Mammoth Yosemite Airport would probably land in Reno, Los Angeles, or Las Vegas depending on the airline operating the flight where air carrier passenger and aircraft servicing are readily available. It is likely that larger air carrier aircraft would divert to airports with sufficient runway strength and passenger processing facilities. Bishop is an unlikely destination for diverted air carrier flights. Please also see Response to Comment M-3.

Response to Comment Y-3

Please see Response to Comment I-48.

November 26, 2001

Mr. William T. Taylor
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546



Subject: Mammoth Yosemite Airport Expansion Project
Draft Supplement to Subsequent Environmental Impact Report

Dear Mr. Taylor:

Please accept my comments on the subject documents. I have many concerns with the document, some of which are mentioned below.

Sage Grouse: in the discussion of the impacts on the biological resources, the document concludes a reduced mortality for sage grouse in the "Fencing" section on page III-37. The discussion in the preceding paragraph makes this conclusion inaccurate. The sage grouse have shown a proclivity for colliding with fences ".....especially in the dark and in low light levels." Yet the SSEIR claims the new chain link fence, which is 4 feet higher than the existing fence will reduce mortality because it will have greater visibility. This chain link fence, as claimed elsewhere, offers "unobstructed views." If that is so, how could the grouse see the new fence better and since it is 4 feet higher, they will have more opportunity to collide with it. Also, Lek 2, is close enough to the runway to disturb the grouse using it. There is no evidence presented that supports the claim of no significant impacts.

Z-1

Mule Deer: Page III-45. It seems that more traffic from increased air travel would likely cause many more deaths to mule deer which already suffer high mortality on Highway 395. Is the proposed mitigation sufficient to prevent this?

Z-2

Raptors: Pages III-47, 48. A sentence indicates a potential increase in the hazards to raptors due to airports. The last sentence states that the proposed mitigation would reduce the potential impacts. No evidence is presented nor is it stated what the reduction would be related to. Paragraph on III-48 talks about low bird densities in the area. There is no evidence to support this. I expect bird densities are high because of Laurel Pond, Crowley Lake, Hot Creek, other ponds and Mono Lake's migratory birds. Birds do fly and therefore would leave their potential nesting areas and perhaps fly over and to the airport.

Z-3

Page III-60, Cumulative Impacts. Cumulative impacts are not adequately addressed. Many projects taken together may have significant impacts.

Z-4

Traffic Volumes on Hatchery Road. This number was determined by a two-hour hand count on Nov. 16, 2000. A traffic count should be done by a mechanical counter (with a hose across the street) for a longer period of time. This could have been at a low-volume time, before Thanksgiving holiday, when few people visit Mammoth and would not have been representative of traffic during the winter. Also, a summer study is needed. Additional traffic created by airport expansion would most likely require a much larger parking lot. This is not addressed.

Z-5

Water. Page III-82. Will Sierra Business Park get its water from the same source as the airport? If so, calculations should be done for both and compared against availability. Page III-79: Are the water and sewer demands from the 1997 report? Since the number of passengers and flight operations are much higher, the estimated demands for both water and sewage are low. New calculations should be made based on the projected flight and enplanement figures.

Z-6

Public Services and Utilities, Page III-95. This section is inadequate as it considers only the construction of a package treatment plant and the relocation of the Green Church. As the increase in air operations is significant, police and fire protection, roadway maintenance, waste generation and disposal, and utility and water use should be considered. The increase in air operations will lead to a greater potential of fires and spills, requiring

Z-7

increased fire protection. More traffic will lead to quicker deterioration of roadways and parking lots, requiring increased maintenance.

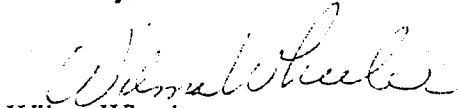
[Section IV, Project Alternatives, IV-1. The alternative of an airport in Bishop is discounted. It needs to be considered as a viable alternative. The difference in weather conditions between Mammoth and Bishop needs to be addressed.]

Z-8

[Growth Inducing Impacts, Page V-2. The purpose of the airport expansion is to encourage growth as it will permit more people to visit than now do. CEQA requires environmental impacts be considered against present conditions. Throughout Section 5.3 the impacts are compared to a future envisioned condition. Growth-inducing impacts are not adequately addressed.]

Z-9

Sincerely,



Wilma Wheeler
P.O. Box 3802
Mammoth Lakes, CA 93546

Z. Wilma Wheeler, Mammoth Lakes, California

Response to Comment Z-1

Please see Responses to Comments I-26, I-27, and I-29. Please refer to page III-41, Section 3.3.2.2, “Noise”, in the Supplement. In addition, this section has been revised to address the comment as stated in Response to Comment I-26.

Response to Comment Z-2

Impacts to mule deer from project related traffic are discussed under Section 3.3.2.2, “Wildlife”, subsection “Mule Deer”. Such potential impacts were determined to be less-than-significant. Refer to Response to Comment I-28 concerning the requirements for mitigation measures. Please also see Response to Comment I-37.

Response to Comment Z-3

Please see Response to Comment I-38.

Response to Comment Z-4

Please see Responses to Comments B-11 and B-12.

Response to Comment Z-5

Please see Response to Comment I-17.

Response to Comment Z-6

Sierra Business Park will get water from the same source. The location and depth of the well and selection of the groundwater aquifer would depend on water chemistry analysis done for project independently. Please see Response to Comment C-1.

Response to Comment Z-7

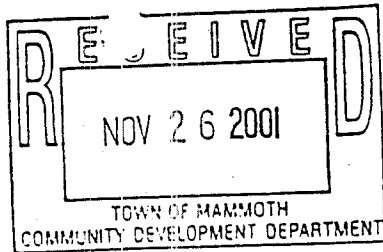
Please see Response to Comment L-31.

Response to Comment Z-8

Please see Response to Comment I-48. The Airport, and the Airport expansion project, meet FAA requirements for safe airport operations. (See Supplement at Appendix E.) The rejection of expanding the Bishop Airport as an alternative is discussed in the Supplement and in Response to Comment I-48.

Response to Comment Z-9

Please see Responses to Comments B-11, B-12 and L-34.



John and Nancy Walter
PO Box 2383
Mammoth Lakes
CA 93546

Town of Mammoth Lakes
Community Development Department Nov.26, 2001

Atn: William Taylor Subject: Draft Supplemental EIR
Mammoth Yosemite Airport Expansion Project

Thank you for the opportunity to comment on the Draft Supplemental EIR for the proposed expansion of the Mammoth Lakes Yosemite Airport. The document as currently done raises many questions and leaves others unanswered. It is recommended that if you decide to proceed with this project, you prepare a full EIR incorporating all up to date data and evaluations for the complete project. A complete new EIR is required because the huge expansion in expected traffic over previous estimates completely changes the scope of the project. A major difficulty with the document is its failure to deal in any substantial manor with the tremendous potential impacts of this project in its mature phases. The magnitude of the problems are highlighted in the base case estimates of 200,300 winter emplacements and 133,500 summer emplacements in 2022. The high case estimate of 449,800 emplanements in 2202 is never addressed. Common sense alone indicates that almost a million passengers passing through a small airport in a relatively pristine area will have huge impacts that must be fully analyzed in detail and mitigated as require.

AA-1

Most of the winter emplanements would occur during the 112 day peak winter ski season. with about 30 takeoffs and 30 landings per day by commercial aircraft. If most of the summer traffic occurs between mid June and Labor day, about 75 days, one comes up with similar numbers, about 30 in and 30 out per day in the summer time. The estimates presented do not give the peak traffic but do allow that at least some of the commercial flights will be concentrated on weekends. It seems reasonable to assume that the peak departures will be over 40 per day. Most of this air traffic will peak between 11am and 3 PM since the FAA correctly discourages commercial night flights and night comes early in the winter at Mammoth. The need to be at an airport over 2 hours before departure limits the practicality of early arrivals at Mammoth. Who wants to start a vacation getting up at 2 in the morning to catch a flight out of Chicago or Dallas? The peak traffic would then be about 10 takeoffs and 10 landings/hour. The corresponding peak passenger flow would be about 750 coming and 750 going each hour. This assumes that the planes will be about 90% loaded at peak holiday times. The estimated 12000 general aviation departures is not discussed in detail but allowing for peaks at holidays and a preference for daylight flying a peak of 10 departures per hour seems reasonable. This high a commercial traffic density both in terms of commercial aircraft flights and

AA-2

commercial passengers raises many serious questions. Mixing in the general aviation use only makes the potential problem worse as would the high case estimates of flights and passengers. These year 2022 problems, need to be analyzed in detail, particularly with respect to the following problem areas.

1. Can 10 commercial landings and 10 commercial takeoffs mixed with an equal number of general aviation operations be safely handled each hour on a single runway mountain airport subject to extreme weather conditions with NO AIRCRAFT CONTROL SYSTEM? It doesn't seem reasonable, much less safe. If further traffic control systems and ground support facilities will be needed to handle this traffic, then these additional requirements should be detailed and analysed in the EIR

AA-3

2. Can the terminal, tarmac, baggage handling, number of terminal employees, parking, car rental operations, access roads, buses to Yosemite, turning lanes on and off 395 etc, handle a peak of 750 passengers per hour? This situation is not analyzed but it seems doubtful if this level of passenger traffic could be handled. If the airport scales up to handle this peak load, where will the employees come from? where will they live? and what will they do during the approximately 170 day slack season? A proper analysis should also include the effect of about 1000 passengers stranded at the airport when a blizzard closes both the airport and the highway. The DSEIR does not give sufficient detail to allow the reasonableness of the proposed terminal and support facilities to handle the proposed peak traffic. The cost, manpower, equipment and facilities to handle the security requirements brought on by the unfortunate Sept 11 events should be included in the proposed project. As an example will the increased emphasis on security allow only an eight foot chain link fence with a gate left open as suggested by the Long Valley Fire Department?

AA-4

AA-5

AA-6

AA-7

AA-8

3. If the facility and infrastructure can't handle this level of traffic, and it seems on the surface at least that they can't, then these levels will never be allowed from a safety standpoint at the proposed airport. Then the financial analysis which apparently assumes these high levels of traffic and supports the FAA, the Town of Mammoth Lakes, and MMSA investing in this airport are flawed and should be reconsidered. The project seems to have a catch 22 in that to justify the project very high passenger levels were assumed. If in fact these levels are unachievable, and or are undesirable from a safety or environmental impact standpoint then investing over \$40 million would mean financial disaster to the Town and Airport and a financial waste to the FAA

AA-9

Other issues that are either not discussed or are discussed in such a summery fashion that they can not be properly evaluated are:

A. Flight Safety: It is incredible that when discussing a very large increase in traffic into an at least somewhat questionable airport, little or no mention is made of flight safety. We had expected extensive analysis of weather, winds and wind shear, obstacles, and

AA-10

[off normal conditions. Surely this issue requires extensive evaluation before proceeding with a major airport expansion.]

[B. Fuel use, availability, and storage. The current 12000 gallon airport jet fuel tank is about one fill up of a 757. The report estimates 18000 gallons per day in 2007. What about 2022? How much fuel will be required? What will be the peak demand in the winter when the weather is the worse. A peak daily estimate of 80,000 to 100,000 gallons seems to be the range that must be analyzed for 2022. How will it be stored? How will potential spills, particularly in inclement weather, be handled? and how many truck loads of jet fuel will have to come up and turn on and off 395? Please do not neglect that his fuel storage is occurring close to the area of peak earthquake activity in recent years.]

AA-11

[C. How will fire, medical and other emergencies be handled? Even if the Town or Mammoth Lakes buys equipment and stores it at the airport, there is no certainty that one of the volunteer firemen (the only kind we have) will be available. The problem like many at Mammoth would certainly be compounded by blizzard conditions.]

AA-12

[D. Vehicle traffic. The DSEIR contains an incomplete traffic analysis. The situation to analyze is how to get the peak traffic which will include a mixture of autos, buses (many if 113,000 / year are to be bused to Yosemite) and trucks on and off the highway. As discussed above the nature of the airport and the expected service should result in a very large peak in the vehicular traffic near midday. Today a full little league schedule can make turns on and off 395 difficult..]

AA-13

[E. Employee housing: The major expansion proposed has to call for a large increase in employees. Where will they live?]

AA-14

[F. Sage Grouse, Sierra Nevada Big Horn Sheep and Deer. A major airport operation like the one proposed will certainly have major impacts on the extensive deer herd and the probably soon to be listed Sage Grouse and potentially effect the recently listed Sierra Nevada Big Horn Sheep. Detailed analyze of the effects of the airport on deer migrations and the effect of the airport noise, air pollution, traffic etc beyond the fence of the proposed airport should be conducted and mitigated as necessary. This analysis should be based on the peak air traffic and passenger conditions expected in 2022. The Sage Grouse are a serious situation because so little is know about them in this area. It is known that they are here and the area around the airport is what they like the most. Detailed field studies over several years and extensive analyses are probably required just to properly define the problem. As discussed below commuter aircraft will probably use the canyons through the Sierra as they did in the past. These unanalyzed flights will potentially have a negative impact on the largest remaining herd of Sierra Nevada Bighorn Sheep (Wheeler Crest herd)]

AA-15

AA-16

AA-17

[G. Noise: The noise section seems to ignore the local situation. The generic discussion does not take into account altitude, local atmospheric effects, reflection off mountains and ridges, the low ambient noise that our very nearby wilderness areas demand, and the]

potential negative impacts of noise on our tourist industry. Actual data should be taken from not only 757, but from 737 and other aircraft operating out of this airport. In the past the sparse commuter flights used the canyons extenuating from the Sierra peaks through the Wilderness areas to approach the airfield coming either from the north or south. The increased traffic from these unanalyzed flights will probably have negative impacts on the Wilderness Areas and Devils Postpile National Monument. The analyses of noise must include the peak 2022 conditions with a mix of aircraft going to and from a variety of locations. The airport already seems to be trying to pacify the residents of the Community of Crowley Lake by saying it will direct traffic away from the community and out to the east over Crowley Lake. Such a path would put aircraft right over the largest Sage Grouse lek.

AA-18

AA-19

AA-20

H. Sprawl and conformance to regional planning. It is not clear how much of the current thinking on sprawl and land use by the local communities and County are factored into the analysis. It is clear that the airport expansion, if approved, will continue to grow beyond that approved in previous planning documents like the 97 airport EIR. The only way to make sure these growth issues are properly addressed is to do a new complete EIR addressing all aspects of the airport expansion.

AA-21

I. Potential effects of over 55 tons of NOX per year on air quality and water quality. The effects on our pristine environment particularly with respect to the water quality at the fish hatchery and the Tui Chub spring locations must be analyzed.

AA-22

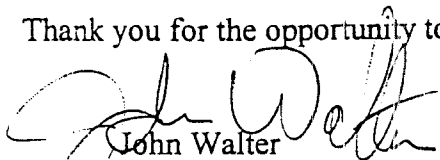
Another major flaw in the document is the failure to fully evaluate what is considered by many residents and pilots as the preferred alternative, the development of Bishop airport as the regional airport center. I'm sure others will go into great detail on why this should be the preferred alternative. Another alternative that should be considered is to only upgrade the airport to the extent necessary to handle commuter type aircraft. This alternative would only require minor airstrip, terminal and infrastructure upgrading. The investment, number of daily flights, and number of passengers would be less, which is probably fitting if our carrying capacity and our needs are realistically considered.

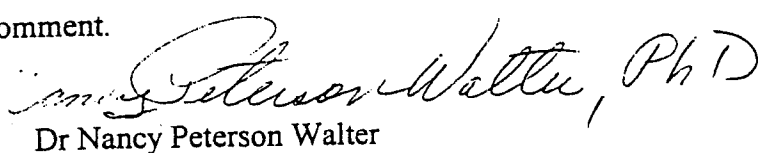
AA-23

AA-24

In summery please do not accept this DSEIR. If you decide to precede please do a full EIR with the required detailed studies, analyses, public review and peer review on the entire project, with particular reference to the reasonableness and desirability of a third of a million air visitors. The Alternatives in the EIR should include Bishop airport and a less ambitious approach at Mammoth Yosemite airport. The DSEIR does not give these alternatives serious consideration.

Thank you for the opportunity to comment.


John Walter


Dr Nancy Peterson Walter

AA. John and Nancy Walter, Mammoth Lakes, California**Response to Comment AA-1**

Please see Response to Comment B-1.

Response to Comment AA-2

The majority of the air carrier/commuter operations coming to Mammoth Yosemite Airport would likely be from regional markets and these operations would be spread throughout the day. The commentor's assertion that all operations (10 landings and 10 takeoffs) would occur in one hour is contrary to the forecasts. Air carrier traffic would be spread throughout a reasonable daylight time period. The forecast number of aircraft operations at Mammoth Yosemite Airport (23,650 in 2022) is well below the capacity of a single runway, non-towered airport as stated in the FAA Capacity Handbook. [FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay*.]

Under the current airfield design being evaluated in the Supplement, there would be up to six apron parking positions. Hence it is not reasonable for 20 aircraft operations (10 takeoffs and 10 landings) to occur in an hour. Please also see Response to Comment B-1.

Response to Comment AA-3

The Airport has handled significantly greater number of aircraft operations in the past than its current level. (40,000 aircraft operations in 1979, FAA Terminal Area Forecasts.) The fleet mix in the forecast included in the Supplement contains air carrier aircraft operations, which comprise of only 6,000 operations out of a total of 23,650 in the year 2022.

The level of forecast aircraft traffic is well below the FAA criteria for the need for an Air Traffic Control Tower (ATCT) at the Airport. (See FAA Order 7031.2C *Airway Planning Standard Number One – Terminal Air Navigation Facilities and Air Traffic Control Services*.)

Procedures for the operation of aircraft at non-towered airports are described in FAA Advisory Circular (AC) 90-42F, *Traffic Advisory Practices at Airports Without Operating Control Towers*, and AC 90-66A *Operations at Airports Without Operating Control Towers*. AC 90-42F states that “the key to communicating at an airport without an operating control tower is the selection of the correct common frequency.” This common frequency is called a Common Traffic Advisory Frequency (CTAF). The Mammoth Yosemite Airport CTAF is 122.8. Personnel employed by the local Fixed Based Operator (FBO - Hot Creek Aviation), monitor this frequency. This type of operation is called a UNICOM and provides airport information.

AC 90-66A states that “the FAA believes that observance of standard traffic patterns and CTAF procedures as detailed in AC 90-42F will improve the safety and efficiency of aeronautical operations at airports without operating control towers.” The traffic patterns at Mammoth Yosemite Airport are published in the Airport Facility Directory and the Airport has a CTAF. The Airport is operated in accordance with all applicable FAA recommendations for operations at non-towered airports.

Should aircraft traffic demand dictate, the Town of Mammoth Lakes could consider the construction of an ATCT in the future. This ATCT would probably not be a FAA-staffed tower but rather would be staffed by FAA certified air traffic control specialists employed by private companies. The Airport has appropriate sites available for an ATCT if one was required in the future. However, construction of an ATCT is not foreseen at this time and would require further environmental analysis if ever proposed.

Response to Comment AA-4

All Airport facilities will be designed based upon the forecasted number of passengers and the employees required to serve those passengers. Please also see Responses to Comments L-18 through L-24.

Response to Comment AA-5

In 2000, the Town of Mammoth Lakes adopted Affordable Housing Mitigation regulations. These regulations require the construction or acquisition of affordable housing for new development projects. The regulations are triggered at time of application for a building permit. Upon application for a building permit for the project, the Town will submit to the Planning Commission a Housing Mitigation Development Plan for approval prior to issuance of the permit.

Response to Comment AA-6

Weather forecasting would provide sufficient time to adjust airline schedules or notify passengers to keep them from coming to the Airport if most or all flights were cancelled. Thus it is not likely that a large number of passengers would be stranded overnight at the Airport. Operations during blizzard conditions would not occur, and either would be delayed or rescheduled. This would be coordinated between the Airport operator, airlines, bus service (since the Airport Manager is responsible for the Town bus transportation system), and resort/hotel operators to avoid inconvenience to the passengers to the extent possible. Also closures or delays would be less of an inconvenience at a non-hub airport like Mammoth Yosemite Airport because passengers can stay where they are or leave the airport rather than in a hub airport where they have arrived by plane and remain stranded at the airport. Because of the coordinated activities of the transportation systems and visitor operations at the Town, it would likely be easier to manage such situations at Mammoth Yosemite Airport than at many other airports.

Response to Comment AA-7

Appendix L in the Supplement contains a detailed traffic impact analysis study, which was conducted to calculate the impacts of the proposed project. Appropriate mitigation measures were incorporated into the project to accommodate traffic/transportation in and around the Airport. (See Supplement at Page III-67.)

Response to Comment AA-8

All Airport facilities will be designed and constructed to conform with current FAA security requirements. 14 CFR Part 107 "Airport Security," section 107.3, requires the operator of an airport serving scheduled passenger operations of carriers required to have a security program, and to

produce a written security program to be approved by the Director of Civil Aviation Security that provides for “the safety of persons and property traveling in air transportation and intrastate air transportation against acts of criminal violence and aircraft piracy.” The security program must include a detailed description of each air operations area, any areas on or adjacent to the airport affecting security of any air operations area, and each exclusive area and its pertinent establishing agreement. The security program must also delineate security procedures, facilities and equipment used by both the airport operator and by each air carrier in its exclusive area, and the notification procedures by which air carriers would alert the airport operator to any inadequacies. Any alternate emergency or unusual condition-procedures the airport operator intends to use must be outlined in the security program and law enforcement requirements and training must also be reviewed. Finally, the program must clearly describe a records maintenance system for security purposes.

All questions of security, personnel, training, screening, access control, security jurisdiction in specific airport areas, and unusual situations requiring security would be covered under such a security program. Section 107.5 of CFR Part 107 details the approval of such a security program and the timeframe necessary to obtain such approval. This section requires the submittal of the proposed program to the Director of Civil Aviation Security at least 90 days before any scheduled passenger operations requiring the security program are expected to begin. The design of airfield access, security fencing, terminal design, and all other facilities at the Airport would comply with the requirements of FAR Part 107. The Town of Mammoth Lakes will complete all activities necessary to comply with these requirements prior to re-initiating passenger air carrier service.

Response to Comment AA-9

This comment addresses issues outside the scope of CEQA (fiscal effects), therefore, no response is required.

Response to Comment AA-10

Please see Responses to Comments Y-1 and AA-3.

Response to Comment AA-11

Please see Response to Comment I-13.

Response to Comment AA-12

The Town currently provides for Crash Fire Rescue (“CFR”) training for Airport employees. A Long Valley Fire Protection District (“LVFPD”) fire truck is located at the Airport to help fight structural fires. The capital improvement plan for the Airport also includes the acquisition of an additional Aircraft Rescue & Fire Fighting Vehicle (“ARFF”) vehicle to meet FAA Part 139 certification requirements for air carrier operations. The Town would fund the emergency response equipment and training. There would not be any aircraft operation in severe weather conditions like blizzards.

Response to Comment AA-13

Please see Response to Comment I-18.

Response to Comment AA-14

Please see Response to Comment AA-5.

Response to Comment AA-15

Please see Response to Comment I-37.

Response to Comment AA-16

The Supplement relies on long-term sage grouse studies conducted in Long Valley by agency biologists (e.g., Bureau of Land Management (“BLM”), and California Department of Fish & Game (“DFG”).) and university researchers (e.g., Dr. Robert Gibson, University of Nebraska), as well as on studies conducted in other regions (e.g., Jackson Hole, Wyoming).

Response to Comment AA-17

The analysis of potential impact in the Supplement is sufficient since aircraft would use the flight paths as documented in the Supplement.

Response to Comment AA-18

Please see Response to Comment B-9.

Response to Comment AA-19

Please see Response to Comment I-25.

Response to Comment AA-20

There would be no significant impacts on any sage grouse lek sites due to aircraft over flights as described in detail in Section 3.3 of the Supplement.

Response to Comment AA-21

Please see Responses to Comments B-11 and B-12.

Response to Comment AA-22

Please see Response to Comment I-40.

Response to Comment AA-23

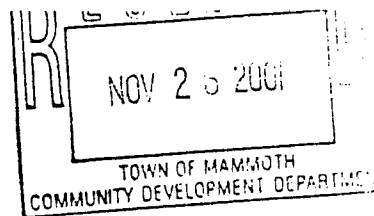
Please see Response to Comment I-48.

Response to Comment AA-24

The proposed project would enable the Airport to accommodate air carrier, regional jet, and commuter turboprop aircraft. Under current operational and facility constraints and assuming the projected 20-year growth of general aviation to 12,000 annual operations, the Airport could accommodate approximately 35,000 charter aircraft operations of commuter or smaller jets and nearly 500,000 commercial enplanements annually. Improving the Airport to accommodate only commuter turboprop aircraft would not meet the purpose and need of the project. A primary reason for improving the Airport to accommodate air carrier turbojet aircraft is the demonstrated demand for such operations per the agreement with American Airlines to provide such service at Mammoth Yosemite Airport. Many of the major national commuter airlines are transitioning a large percentage of their fleets to regional jets, which would require the Airport improvements indicated. The development of the proposed project would also provide facilities to support regional/commuter service as well as air carrier service. As stated in Appendix H of the Supplement, it is anticipated that, as has been the case at other similar airports initiating commercial service, both air carrier and commuter service would develop. Most of the Airport improvements required for the air carrier service would also be required for regional/commuter service. These improvements include the terminal building facilities for passenger processing associated with larger commuter or regional jet aircraft operations typically used by the nationwide commuter operators, ticketing, passenger and baggage processing security requirements, and concessions. The terminal building developed as part of the Airport improvement program is consistent with these requirements.

American Eagle, a national commuter operator, has also specified that, as a company policy, they would require the same 150-foot wide runway width as the air carrier operators, although they may initiate service at an airport with only a 100-foot wide runway if there are near-term plans to widen the runway to 150 feet.

The FAA has published a notice of proposed rulemaking for changes in the 14 CFR Part 139 airport certification requirements. Under the existing 14 CFR Part 139, the FAA requires airport operators to comply with certain safety requirements prior to serving operations of air carrier aircraft with more than 30 seats. Recent changes in the FAA Part 139 certification requirements have also specified that the eight-foot high security fencing, or six-foot with three strand barbed wire on top, around the perimeter of the airfield is required to accommodate scheduled turboprop aircraft of more than 30 seats. (CFR 139.335.)



Pat Eckart
P.O. Box 7525
Mammoth Lakes, CA 93546

Phone/Fax: (760) 934-3726
E-mail: paeckart@qnet.com

November 26, 2001

To: Bill Taylor, Senior Planner
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Re: Draft of Subsequent Environmental Impact Report (SSEIR), Mammoth Yosemite Airport Expansion Project (Project)

Dear Bill:

"CEQA requires that the EIR discuss ways in which the proposed project could foster economic and *population growth* or directly or indirectly lead to the construction of new housing." [V-1-2 SSEIR 15126.2(d); italics mine]

The above-referenced SSEIR, including referenced documents, fails to address the long-term implications of the proposed Project, specifically the Project's growth-inducing impacts on the Town of Mammoth Lakes and surrounding region. The Project's major objective (by bringing in American Airlines and 757s) is to fill Intrawest's yet-to-be-built beds, achieve Mammoth Mountain Ski Area's goal of a million additional skiers, and compete with U.S. ski resorts whose success is attributed to direct, scheduled flights. [See the Town/Intrawest/MMSA's MOU, May, 2000, Air Services Agreement (Appendix M), and SSEIR, p. I-2.]

BB-1

This latest Airport Expansion Project is an integral component in the creation of a "competitive world-class destination resort." Not all visitors will arrive via 757s, but the Project's underlying purpose and effect is to increase visitor numbers, notwithstanding the statement that "... this growth is expected with or without the improvements at the airport [SSEIR, v-4, 5.3.2].

How much growth are we talking about? Recent town "buildout" figures (11,000 permanent residents) exceed those found in the Town's 1987 General Plan (8,400 permanent residents). Mammoth Community Water District's October 2000 Urban Water Management Plan also relies on the 8,400 figure. In the last census, Mammoth Lakes' permanent resident population experienced rapid growth, increasing 48.2% (from 4,785 to 7,093). Will the proposed airport expansion contribute to visitor and resident increases beyond those already planned for? In that event, what would be the impact, for example, on the town's water supply? (Not to mention housing, traffic, services, etc.)

BB-2

Do town officials know the carrying capacity of our resources? In the case of water, will supply meet future demand? At a recent (11/6/01) joint meeting of the Town/MCWD

liaison committees, Kathy Cage, mayor and town councilmember, raised the specter of the Town changing its zoning to higher densities, and she questioned whether or not there would be sufficient water to meet the increased demand.

Water availability near the top of a watershed (as in our case) has severe limitations, as evidenced by a building moratorium (1970s), drought (1986-1992), State Water Resources Control Board's 1991 Cease & Desist Order (to eliminate "chronic demand/supply deficiency"), water restrictions, and 1994 Assessment District. Lack of coordination (and knowledge) can have serious consequences. For example, "...[MCWD], in letters to the Town of Mammoth Lakes issued in March 1991, indicated that the District would not be able to serve the proposed large North Village, 'Lodestar,' and 'Juniper Ridge' developments until other firm supplies are developed" [Boyle Engineering Feasibility Study, 1992, p. 2-5]. According to MCWD, the town's current water supply does not meet demand during a multi-year drought.

The groundwater basin is not well understood and surface water (Lake Mary) is dependent upon annual snowfall. Mammoth Lakes' is once again in another drought, and MCWD is looking at drilling a new well in town (bell-shaped parcel) next summer. (Dry Creek appears to still be on hold). In addition to visitor and resident growth, other factors could increase demand. MMSA has, in the past, sought water from MCWD for snowmaking. More recently, the ski area, which is outside the water district, was included in a "change in place of use" petition to the SWRCB. Sierra Star Golf Course (Lodestar) is required to use reclaimed water, which has yet to become available. Both MMSA and Sierra Star are excluded from the water calculations ("demand" figures) in MCWD's Urban Water Management Plan.

Reasonably accurate projections for maximum PAOT are absolutely essential to avoid future shortfalls in water. Beyond drilling new wells in town and Dry Creek, alternative water sources are few, very expensive, and problematic (importing and storage). According to the Boyle Study, the best apparent alternative water source is the Convict Creek wellfield (the identified source for the airport's expansion and development). Construction costs were estimated at \$16.5M and annual O&M \$781,000 (electricity over \$0.5M) in 1992 prices.

The SSEIR does not address the cumulative impacts and unintended consequences that the creation of a major destination airport will have on the region's natural and human environment. Specifically, the SSEIR and its referenced documents do not address the airport's contribution to population growth (through tourism) in the region, and particularly in Mammoth Lakes. Intrawest, MMSA, and the Airport are dependent on each other for future economic success, measured by visitor numbers. Nowhere in the SSEIR have the Project's growth-inducing impacts been addressed.


Pat Eckart

BB-3

BB-4

BB-5

BB. Pat Eckart, Mammoth Lakes, California**Response to Comment BB-1**

Please see Responses to Comments B-11 and B-12. The commentor misinterprets Figure 3 on page 11 of the Town of Mammoth Lakes General Plan. The future 8,400 permanent residents is a 20-year projection as is stated in paragraph one on page 14 of the General Plan. This is further described on pages 57 and 77 through 79 of the EIR for the General Plan, where it is stated that the 8,400 permanent population projection is based upon 80 percent development of the Town during the 20-year planning horizon (beginning in 1986). The 11,000 resident population estimate referred to by the commentor is for full build out of the community under the existing General Plan and zoning, which includes the proposed Airport improvements.

The Commentor also refers to the Mammoth Community Water District Urban Water Management Plan ("UWMP"). The UWMP does refer to the 8,400 population figure, however, the UWMP also includes a total build out number of 15,600 units, which is in line with the projections in the EIR for the General Plan (page 79). Further, the UWMP was not adjusted for the 2000 census as those figures were not available at the time of its adoption.

In any case, the most relevant projections for this analysis are the projections of future tourist visits and the planned and in-progress expansions of tourist attractions and accommodations. Those projections demonstrate that the proposed Airport expansion is appropriately sized to serve the demand for air travel that the expanded tourist base will create. The residents of the Mammoth Lakes area will contribute to the demand for air travel as well, but that contribution will be small in relation to the tourist demand.

Response to Comment BB-2

Please see Responses to Comments BB-1.

Response to Comment BB-3

Please see Responses to Comments B-11 and B-12.

Response to Comment BB-4

Please see responses to comments B-7 and B-11. The number of paid skiers went from 1.5 million during the winter of 1985-86 to 463,987 in 1990-01. The downturn in visitation was a result of several factors including: the economic situation in Southern California, poor snowpack conditions for several consecutive winter seasons, the lack of snowmaking at the ski area, the ease of travel to other ski areas in the west via air service from Southern California, and the outdated facilities at MMSA. With the upturn in the economy, a reinvestment in facilities at MMSA (including an extensive snowmaking effort), and the revitalization of facilities within the Town of Mammoth Lakes, the number of visitors to the ski area has shown a steady increase since the early 1990's. Even though the number of skiers is not yet back to the high of 1985-86, the 1.1 million of the 2000-01 season has given a good indication that the improvement in facilities is leading to increased visitation, even without the airport improvements.

Response to Comment BB-5

See Section V of the Supplement for a discussion of growth inducing impacts of the proposed project. Please also see Responses to Comments B-7 and B-12.

To: Airport Manager
Town of Mammoth Lakes

Nov. 25, 2001

I wish to express my full support for the Airport Expansion project in Mammoth Lakes. I have been to several previous Planning Commission/FAA meetings and stood up to voice my support for scheduled air service to Mammoth Lakes.

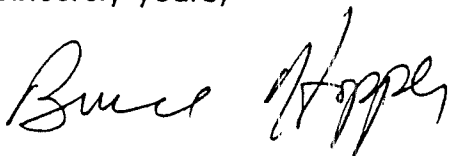
CC-1

I am sorry the project has already been delayed by lawsuits. With Mammoth offering so many resort and natural amenities, I think the community will be well served to have additional visitors come see and enjoy our area and spend their money.

I could have used the Mammoth airport connection last month when my family flew to New England for a trip. Instead, I had to drive 3 hours each way to Reno and spend money at a Reno airport hotel on each end of the trip. It would have been a lot easier and cheaper to fly out of Mammoth. The same with another upcoming trip to Atlanta. It is risky to drive to Reno in the middle of winter for any reason. It would be safer to fly out of Mammoth.

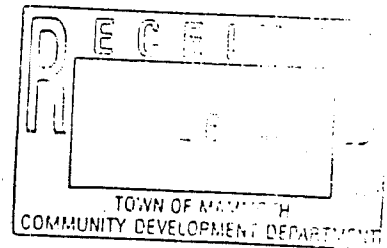
Please add my strong support to this ongoing development at the airport. Mammoth needs to grow and prosper and can do so harmoniously with Mother Nature. The new, upgraded, expanded Airport is a vital piece of our prosperity puzzle.

Sincerely yours,



Bruce Hopper

P.O. Box 374, ML, CA. 8 year resident of Mammoth.
Office 924-0235

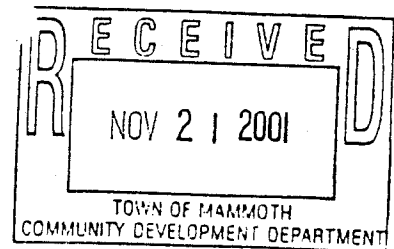


CC. Bruce Hopper, Mammoth Lakes, California

Response to Comment CC-1

The commentor expresses support for the project. The Town acknowledges these comments and has made them part of the official record for the project.

Steve Miesel
PO Box 7383
Mammoth Lakes, CA 93546



Town of Mammoth Lakes
Planing and Community Development

Dear Town of Mammoth Lakes,

These comments pertain to the Draft Supplement to Subsequent Environmental Impact Report (SSEIR) Mammoth Yosemite Airport Expansion Project Mammoth Yosemite Airport dated Oct 5, 2001.

1. The difference between the construction of twelve 3-bedroom rental units and the creation of 108 new jobs found on page A-5 now has a substantially more sever effect on housing than when the 1997 SEIR/EA was prepared. This is due to the increased severity of the shortage of housing in the area. Thus the mitigation measures should be updated.
2. The indirect impacts on housing from the increased tourism sought by the Mammoth Yosemite Airport Expansion Project are substantially more sever than when the 1997 SEIR/EA was prepared and should now be addressed in the SSEIR.

DD-1

DD-2

Thank you,
Steve Miesel

A handwritten signature in cursive script that reads "Steve Miesel".

11-21-2001

DD. Steve Miesel**Response to Comment DD-1**

Indirect employee growth in the Town is evaluated at the time of development of new projects in the community. Mitigation of these impacts is required of new development pursuant to the Affordable Housing Mitigation Regulations of the Town of Mammoth Lakes as explained in Response to Comment AA-5. New employees will be addressed in the employee housing mitigation plan required to be submitted to and approved by the Town Planning Commission prior to issuance of a building permit for the terminal. The housing plan addresses the needs of those households in the median income or lower categories. The analysis leading to the adoption of the Affordable Housing Mitigation Regulations showed that above median income households have housing opportunities and mitigation is not required for those employees.

Response to Comment DD-2

Please see Response to Comment DD-1.

OCTOBER 30, 2001

SUBMITTED FOR INCLUSION IN THE MAMMOTH AIRPORT EXPANSION
EIR PROCESS % MR. BILL TAYLOR, SENIOR PLANNER, CITY OF MAMMOTH
LAKES, CALIFORNIA.

DEAR MR. TAYLOR,

SINCE THE E.I.R. COMMENT PERIOD FOR THE PROPOSED MAMMOTH
AIRPORT EXPANSION HAS BEEN EXTENDED, MAY I PLEASE PRESENT MY
CONCERNS?

AFTER SEPTEMBER 11, IT COMES TO MIND THAT THE CRASH OF A
LARGE JET INTO THE MOUNTAIN AT THE NORTH END OF THE RUNWAY
WOULD CAUSE A HUGE AND IMMEDIATE WILDFIRE IN THAT AREA OF
EXTREME SUMMER FIRE HAZARD. WHILE THIS IS NOT PARTICULARLY
LIKELY, THE MAMMOTH AIRPORT IS INFAMOUS FOR ITS HIGH ELEVATION,
WIND SHEAR, ITS RUNWAYS' DISORIENTATION TO THE ELEMENTS, AND FOR
THE NORTH END OBSTACLE JUST MENTIONED.

EE-1

THE PROPOSED PROJECT IS BEING PROMOTED AS THE "MAMMOTH YOSEMITE"
AIRPORT. AS SUCH, A FULL AND FORMAL OPINION/RESPONSE FROM THE
PARK MUST BE INCLUDED IN ANY THOROUGH AND VALID IMPACT
ANALYSIS, IF IT IS NOT ALREADY SO.

EE-2

SOMEWHAT MORE GENERALLY SPEAKING, I'M SURE THE WHOLE CITY
OF MAMMOTH IS UNDER PRESSURE FROM INTRAWEST CORP TO GET THIS AND
OTHER FAVORS DONE. IMPARTIALLY CONSIDERED THOUGH, IS IT REALLY THE
WISEST CHOICE OF LOCATIONS AND WILL THE TOWN BE ABLE TO COMFORTABLY
HANDLE AND RECOUP ITS MASSIVE FINANCIAL OBLIGATIONS IN THIS PROJECT?
WILL PEOPLE WANT TO FLY AND ALSO TO FLY THAT FAR AND COME TO MAMMOTH
AS OPPOSED TO WHISTLER OR VAIL, etc? PLEASE REMEMBER THAT YOU ARE
DEALING WITH CORPORATE BILLIONAIRE SPECULATORS TO WHOM MAMMOTH OWES
NOTHING. LIFE WILL GO ON WITHOUT A METROPOLITAN AIRPORT MILES DOWN-
HILL FROM A SNOWY TOWN OF A FEW THOUSAND. CONVERSELY, IF AND WHEN
IT IS CLEARLY NEEDED AND APPROPRIATE IT WILL HAPPEN. IN THE MEANTIME
YOUR TOURIST BASE OF CALIFORNIANS IS HOOKED ON CARS AND NEITHER GREY-
HOUND NOR AIRLINES HAVE MADE A GO OF THIS ROUTE.

EE-3

ANY ENVIRONMENTAL DEGRADATION OR IMPACT WHATSOEVER IS
ADVERSE AND SIGNIFICANT IF IT IS UNNECESSARY,

THANK YOU VERY MUCH

DANIEL BACON

Daniel Bacon

675 MOUNTAIN VIEW
BISHOP, CA 93514

RECEIVED
NOV - 14 2001

EE. Daniel Bacon, Bishop, California**Response to Comment EE-1**

FAA has put in security measures to reduce the potential of aircraft crashes after September 11th incidents. Mammoth Yosemite Airport will comply with all federal and State security regulations to ensure the safety of all passengers. Please also see Responses to Comments Y-1, AA-3, AA-6, and AA-8.

Response to Comment EE-2

Yosemite officials or representatives have been notified of the availability of the Supplement and were sent a copy of the document. (See Supplement at Appendix B.) They were free to comment on the document, but since Yosemite is not a trustee or responsible agency as defined by CEQA, there is no obligation to specifically seek out a response or opinion from park officials or representatives or for park officials or representatives to provide such a response or opinion regarding the project or the Supplement. No comments were received from park officials.

Response to Comment EE-3

EE-3. This comment does not address impacts of the project and no response is required.

Asim Rizwan

Subject: Goner Virus Received and Comments on Mammoth Yosemite Airport SSEIR

From: Jim Lerner [mailto:jlerner@arb.ca.gov]
Sent: Wednesday, December 05, 2001 5:47 PM
To: B Taylor
Cc: James Lerner
Subject: Goner Virus Received and Comments on Mammoth Yosemite Airport SSEIR

Bill:

Yesterday I received an email from you with the subject "Hi!". It was the now infamous Goner Screen Saver virus and I made bad decision to open the attachment to see what "you" had sent me. Bad move. I don't know if you are even aware of this virus infecting your computer and computers of everyone else on your email distribution list, but if not, then this will tell you to get it fixed. Since we hadn't communicated in nearly one year, I was surprised to receive this message. Recall that you and I discussed the potential air quality impacts from the proposed runway extension at the Mammoth Yosemite Airport over a year ago. So, having recently read portions of the Draft SSEIR for the airport project, I assumed you were sending a humorous message to those of us who had been involved one way or the other in the review of the project. That's why I threw caution to the wind and clicked on the Goner screen saver. Once the screen saver appeared and then disappeared, I knew something wasn't right, but wasn't sure I had introduced a virus to my computer. I went home and didn't think about it again until I read the front page story in the Sacramento Bee and realized what had happened. The rest you know. I was concerned about all of the people whose computers would be infected as a result of the virus sending out emails to everyone on the email address book list. Since we use Netscape software, it turns out that I didn't infect other computers, but for Microsoft Outlook users, it's a different story. Just a while ago a 21 year old computer engineer from our information services office came by and ran the new software to delete all of the Goner files. It was an easy fix. I hope restoration of your computer and those of your contacts went equally well.

Regarding the airport draft SSEIR, you may have noticed that ARB did not submit comments on the air quality analysis. We had 45 days for this review, but I was not able to devote time to the review until one week before the deadline, so I was unable to provide my comments to Gary Honcoop with sufficient lead time to enable Gary and his manager to review and edit my comments. In my review I noticed that the air

FF-1

quality analysis was little changed from the revised analysis that was given to us by Ricondo and Associates on December 20, 2000. In fact, the analysis in the SSEIR lacks some of the analysis that was contained in the version I saw last year. My conclusion was that the air quality analysis is inadequate and does not provide an adequate factual basis to support the findings of no significant air quality impacts. You are

FF-2

aware of the issues I raised a year ago. In the current review, I focused more on the impacts relative to fine particulate matter, or PM-10, since that is the pollutant for which the region is in nonattainment of both federal and State air quality standards. The SSEIR analysis does not clearly show the net impacts from vehicle-related PM-10 with and without the proposed project, and doesn't address whether or not the developments will violate the PM-10 control measure that resulted from the PM-10 SIP for Mammoth Lakes. This is the Great Basin APCD rule that limits daily vehicle miles traveled to

FF-3

106,600. That cap is directly related to PM-10 emissions. We discussed this last year and the assumption was that passengers arriving by air would use shuttles and transit so the trips to and from Town would be minimized. In last year's analysis there was an attempt made to estimate the net changes in VMT resulting from the project. The concept was correct, although the assumptions behind the analysis was not presented. The SSEIR does not include such an analysis that would clearly show whether or not the project along with related projects would violate the 106,600 VMT cap. I mention the related projects because the SSEIR shows that there is a planned hotel/condo/restaurant project that would be built on the airport property as well as the Sierra Business Park to be built nearby. The analysis would have to show all of the trips and VMT in the Town of Mammoth Lakes as a result of these and other projects to demonstrate that the VMT cap is not exceeded or if it is exceeded, by how much. Then, you could design mitigation measures to deal with it. Also, we discussed last year the comment that you may get increased VMT in the Town as a result of skiers who are unable to find lodging in Town and who stay overnight in Bishop and drive to Mammoth and return. If the goal of the air service is to attract skiers from distant states to stay in town, then the locals will have to stay somewhere and that could mean additional trips and VMT. These are not all of my comments, but this is the one that I think is perhaps the most significant one and wanted to share with you so that you would have the benefit of my thinking.

FF-4

FF-5

FF-6

FF-7

I believe that a subsequent and more comprehensive air quality analysis is required in order to assess the significance of potential air quality impacts. In addition, I believe that approval of the project could require that the ARB Executive Officer (delegated by the Governor) "certify that there is a reasonable assurance the project will be located, designed, constructed, and operated in compliance with applicable air ... quality standards". We usually defer to the FAA to inform us whether or not an airport project requires this certification. In October 2000 we were told by Bill Manning that the FAA informed him that certification would be required. In November or December 2000 Dr. Elisha Novak of FAA told us that an air quality certification would not be required. On December 7, 2000, and again on May 16, 2001, I asked Dr. Novak to provide me with the FAA's analysis that supported such a decision. I did not receive a response to these requests. I recently asked another FAA staff person to pose the same question to the manager, Mr. Joe Rodriguez, and was told that FAA would not be able to provide me with that information at this time because of a lawsuit that has been filed. So, I am still in the dark about how FAA reached their determination. From my research of FAA's guidelines, I note that a "major runway extension" determination can be based on a finding of a 1.5 dB increase in noise over any noise sensitive area located within the 65 dB CNEL contour, or it can arise if the project is likely to violate the local, state or federal standards for air quality. If the noise analysis in the SSEIR is correct, there are no noise sensitive receptors within the 65 dB contour, so it could be argued that the project doesn't meet the noise threshold. But, I note that the planned condo/hotel/restaurant project will be located very close to the runway centerline, on the order of 500 feet from the runway centerline to the southern boundary of the development. Thus, residents would be exposed to elevated noise from 5,000 jet operations and 6,600 turboprop operations at buildout. I find it hard to believe that for these residents the project would not be considered a "major runway extension", however, I await details from FAA on that topic. ON the other possible condition, violation of air quality standards, the EIR and a subsequent EIS would need to make a convincing case that the 24 hour PM-10 standards are not going to be violated.

FF-8

FF-9

I hope these comments are helpful to you as you evaluate the other comments on the draft SSEIR. These comments are my own professional assessment and do not reflect any official position of the ARB

management. I am submitting them to you as a professional courtesy.

Best Regards,
Jim Lerner, Ph.D.
CARB
Airport Air Quality Team
916.322.6007

FF. Jim Lerner, California

Response to Comment FF-1

The California Air Resources Board did not comment on the Supplement. The comments in this letter, therefore are responded to as an individual commentor.

Response to Comment FF-2

The Town prepared the Supplement to analyze the potential environmental impacts from changes to the proposed project since that certified in the 1997 Subsequent EIR/EA. These changes included extension of the runway by 1,200 feet (rather than 2,000 feet), increasing its width from 100 feet to 150 feet, replacement of an existing 4.8-foot barbed wire fence with an 8-foot chain link security fence, and construction of a new package wastewater treatment plant (instead of a new leach field). The Supplement also analyzed impacts associated with an updated aviation demand forecast, and the relocation or replacement of “Green Church” building formerly used by the High Sierra Community Church.

The Air Quality Analysis for the proposed project in the Supplement did not include a comparison with the no project alternative with regards to total vehicle miles traveled (VMT). Ground vehicle traffic volumes and VMT for the proposed project and no project alternatives are summarized in **Table N-2**. For the ground vehicle emissions inventories it was assumed that all passenger vehicles originating at the Airport would travel a roundtrip distance of approximately 19 miles (i.e., to and from the Town of Mammoth Lakes). The number of vehicle trips modeled for the two alternatives included direct vehicle trips that would originate or terminate at the Airport, and in the case of the no project alternative, trips to the town of Mammoth Lakes by visitors who, if not accommodated by air carrier aircraft, would drive to Mammoth Lakes from Los Angeles and other locations. An average trip length of 19 miles was used to calculate emissions for these “indirect” vehicle trips,⁴ however, it is expected that car trips “replaced” by aircraft service would travel much greater distances and would be responsible for substantially more emissions of criteria pollutants. There is a substantial reduction in VMT with the implementation of the proposed project, which would result in lower PM₁₀ emissions.

The annual emissions inventories for PM₁₀ are presented in **Table N-3**. As shown in Table N-3, the primary source of particulate emissions at the Airport are ground access vehicles (including passenger vehicles, courtesy shuttles, and taxis) on roadways and in parking areas. Re-establishment of air carrier service at the Airport would also increase the number of ground motor vehicle trips originating at the Airport and hence could cause additional particulate emissions. These emissions would be produced by high occupancy vehicles such as buses and vans that will have a net benefit on air quality by replacing single occupancy vehicles and in effect reducing total miles traveled in the area as indicated in Table N-2.

Table N-2

	Total Vehicles by Alternative		Vehicle Miles Traveled	
	No Action	Proposed Project	No Action	Proposed Project
1999				
Buses	0	n.a.	n.a.	0
Shuttle vans	394	n.a.	n.a.	7,335
Rental cars	0	n.a.	n.a.	0
Cabs	3,154	n.a.	n.a.	58,721
Private vehicles, parking	7,886	n.a.	n.a.	146,822
Private vehicles, dropoff/pickup	2,110	n.a.	n.a.	39,284
total	13,545	n.a.	n.a.	252,181
2003				
Buses	0	1,505	0	28,018
Shuttle vans	421	623	7,842	11,594
Rental cars	0	3,736	0	69,563
Cabs	3,370	2,283	62,735	42,511
Private vehicles, parking	8,424	2,076	156,838	38,646
Private vehicles, dropoff/pickup	2,254	1,071	41,970	19,941
Indirect vehicle trips	12,333	0	229,622	0
total	26,802	11,294	499,007	210,273
2007				
Buses	0	4,565	0	84,984
Shuttle vans	483	1,889	8,992	35,166
Rental cars	0	11,333	0	210,995
Cabs	3,864	6,926	71,940	128,941
Private vehicles, parking	9,660	6,296	179,850	117,219
Private vehicles, dropoff/pickup	2,585	3,249	48,128	60,485
Indirect vehicle trips	53,300	0	992,339	0
total	69,892	34,257	1,301,250	637,790
2022				
Buses	0	9,177	0	170,865
Shuttle vans	766	3,798	14,260	70,703
Rental cars	0	22,785	0	424,215
Cabs	6,127	13,924	114,076	259,243
Private vehicles, parking	15,318	12,658	285,191	235,675
Private vehicles, dropoff/pickup	4,099	6,532	76,317	121,608
Indirect vehicle trips	89,867	0	1,673,138	0
total	116,177	68,875	2,162,981	1,282,309

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Table N-3

Airport Emissions Inventories – 1999, 2003, 2007, and 2022

Year and Source	PM-10 (tons/yr)
1999	
Aircraft	0.07
GSE (a)	0.01
Roadways and Parking (b)	10.07
Stationary Sources	0.00
Total	10.15
2003 Proposed Project	
Aircraft	0.12
GSE (a)	0.03
Roadways and Parking (b)	8.40
Stationary Sources	0.00
Total	8.55
2003 No Project	
Aircraft	0.08
GSE (a)	0.01
Roadways and Parking (b)	19.93
Stationary Sources	0.00
Total	20.02
2007 Proposed Project	
Aircraft	0.24
GSE (a)	0.22
Roadways and Parking (b)	25.47
Stationary Sources	0.00
Total	25.93
2007 No Project	
Aircraft	0.09
GSE (a)	0.01
Roadways and Parking (b)	51.96
Stationary Sources	0.00
Total	52.06
2022 Proposed Project	
Aircraft	0.44
GSE (a)	0.38
Roadways and Parking (b)	51.21
Stationary Sources	0.00
Total	52.03
2022 No Project	
Aircraft	0.14
GSE (a)	0.02
Roadways and Parking (b)	86.37
Stationary Sources	0.00
Total	86.53

(a) EDMS default GSE settings used for both alternatives.

(b) PM-10 emissions include exhaust, tire wear, brake wear, and entrained road dust

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Table N-4

Total Project Emissions and De Minimis Criteria (Tons per year)

	PM-10
2002 Construction Impacts	
Alternative 1 (No Project)	0
Alternative 2 (Proposed Project)	58.73
2003 Operational Impacts	
No Project	20.02
Proposed Project	8.55
Change in Emissions	(-11.47)
2007 Operational Impacts	
No Project	52.06
Proposed Project	25.93
Change in Emissions	(-26.13)
2022 Operational Impacts	
No Project	86.53
Proposed Project	52.03
Change in Emissions	(-34.50)
<i>De minimis criteria</i>	100
Total Annual Emissions Great Basin Valleys (a)	20,075
Total Annual Emissions Mono County (c)	9,950

(a) 1996 Estimated Value. Produced by the California Air Resources Board

(b) Estimate is for Reactive Organic Compounds (ROG)

(c) 2000 Estimated Value. Produced by the California Air Resources Board

Source: Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Total project related emissions (construction and operational) for the project and no-project alternative are summarized in **Table N-4**. As discussed in the air quality management plan for the Town of Mammoth Lakes, particulate emissions in the Mammoth Lakes region are predominantly caused by woodburning stoves and motor vehicle traffic. As shown in Table N-4, introduction of commercial air service to Mammoth Lakes Yosemite Airport is expected to reduce particulate emissions in the region when compared to the no project alternative. In summation the proposed project will have a beneficial impact to air quality in the region and will reduce visitor vehicle miles traveled (VMT) as more people are accommodated in higher occupancy vehicles. It is noted that reduction/control of VMT in and around the City of Mammoth Lakes is a stated goal in SIP.

Response to Comment FF-3

Please see Response to Comment FF-2. The 106,600 VMT number mentioned by the commentor is a goal, not a cap. (Town of Mammoth Lakes General Plan at Chapter 8.30) The Town is always evaluating the total particulate load, not just the roadway component. The 106,000 VMT number also relates to the roads within the Town itself. (See State Implementation Plan at Figure 30.) In the traffic modeling for North Village Specific Plan Amendment EIR, the town was evaluated at full build out which included the proposed Airport improvements and it was determined that the Town

will meet the goals of the Air Quality Management Plan (AQMP) at full build out. The VMT goal was based upon specific roadway segments identified in the AQMP.

Vehicle trips in the AQMP include all trips at full development of the Town. These trips include trips originating outside of the Town. Whether they originate at the Airport or in Los Angeles is not relevant. The limiting factors for vehicle trips are accommodations and recreation amenities in Mammoth Lakes, not arrival modes. PM-10 emissions from sources at the Airport (ground service vehicles, aircraft, etc.) do not increase the pollutant levels in the Town. Exceedences of the NAAQS only occur on cold days with inversions leading to stagnant air conditions. During these periods, air is trapped in the community. The Airport is at a lower elevation than the Town and five miles to the east. Emissions from the Airport cannot travel uphill to combine with emissions in Town from woodsmoke and road dust during inversions. Under conditions when particulates from the Airport could reach Town (east wind, no inversion) the PM-10 generated in Town would disperse. As shown in Table N-4, the project, by itself is below de minimus thresholds.

Furthermore, the air quality analysis done for the North Village Specific Plan Amendment EIR assumed only 20 percent transit use by visitors. With the implementation of the proposed project some of these visitors would use shuttle service provided from the Airport to various lodgings within the Town. (70 percent of the travelers using the Airport are expected to use the shuttles, See Supplement at Page III-64.) This supports the Specific Plan EIR conclusion that there would be no significant impacts on the air quality with the full build out of the town.

Response to Comment FF-4

The proposed project would result in a reduction of total vehicle miles traveled as compared to the no-project scenario, therefore it would be in compliance with the Town of Mammoth Lakes Air Quality Management Plan's stated goal of limiting the total VMT to 106,600. Please also see Response to Comment FF-2.

Response to Comment FF-5

Please see Response to Comment FF-4.

Response to Comment FF-6

Please see Response to Comment FF-4.

Response to Comment FF-7

Although the initial service provided by American Airlines is from Chicago and Dallas (American Airlines hubs), it is expected that in the future, the majority of the visitors flying to Mammoth Lakes ski resort would be coming from Los Angeles, Reno, Las Vegas and other nearby airports. They would be flying into Mammoth Lakes through these connecting airports instead of driving. This would result in a substantial decrease of total vehicle miles traveled. Currently most of these potential airport users have no viable option other than driving if they want to come to Mammoth Lakes area. This would result in providing an alternative mode of transport to the people who are part of the projected growth in the visitors to the region.

Currently there are some visitors who stay in Bishop and use Mammoth Mountain ski areas. Therefore, the proposed project will not induce any additional travelers to stay in Bishop and drive to Mammoth Lakes.

Response to Comment FF-8

The FAA has determined that neither the proposed project or any of the alternatives meet the criteria of a major runway extension as they don't exceed de minimis threshold for any of the criteria pollutants and therefore air quality certification is not required. Consequently an assurance letter from the State of California is not required.

Response to Comment FF-9

The proposed project would not exceed, either individually or cumulatively, the 106,600 vehicle miles traveled goal, which is a control measure in the Town of Mammoth Lakes PM-10 SIP as stated in Chapter 8.30 of the Town's General Plan. As shown in Table N-2 the proposed project would result in a reduction of total VMT in the region and hence will not contribute to any increase in VMT.

As described in comment FF-2, the proposed project will not violate 24-hour PM-10 standards.

**Attachment A
Wildlife Management News &
Excerpt from Department of Fish & Game Website**



Wildlife Management News



Sierra Nevada Bighorn Sheep

The Sierra Nevada Bighorn Sheep, a unique race of bighorn found only in this rugged mountain expanse will likely soon join the list of Federally Endangered Wildlife, and also be uplisted to Endangered by the State of California. Currently it is listed as a State of California, Threatened Species but has no designation under the Federal Endangered Species Act. Its population over the last century has declined from probably at least 1,000 animals in the last century, to right around 100 animals in 1998. Why has it declined so precipitously? It all started with the advance of settlers into the Sierra. Prior to their arrival, sheep ranged from Sonora Pass north of Bridgeport clear down to the Olancha Peak country west of Olancha and maybe as far down as Mojave. The sheep population soon was decimated by disease brought in from domestic sheep grazing in the high country, as well as overhunting from market hunters, and the food needs of the 49er's during the Gold Rush days. By the late twentieth century, two remnant populations persisted. The Mt. Baxter herd was found to number 220 animals in 1978, and the Mt. Williamson herd, 30 sheep. Both herds lived relatively close to each other in the high Sierran peaks west of the town of Independence. Wildlife biologists realized all the eggs were in just 2 baskets and if something happened to these remaining populations it would be disastrous for the sheep. A better insurance policy with more coverage was needed. How prophetic this realization would become! So biologists began to establish other populations by transplanting sheep from the Mt. Baxter herd to other locations. The goal was for bighorns at these new sites to establish healthy stable populations and decrease the risk of any event such as bad winters, avalanches, or disease transmission from affecting all sheep. Separate bighorn herds increased in their new habitats in Lee Vining Canyon country west of Mono Lake, Wheeler Ridge northwest of Bishop, and Mt. Langley country west of Lone Pine. By the mid 80's the herds totalled about 300 sheep and the future looked bright. But then something unexpected happened! Wildlife biologists had an interesting and difficult management dilemma to deal with!



The largest population at Mt. Baxter began a precipitous decline. Bighorns were no longer being seen at their low elevation winter ranges. Researchers combed the high peaks and found to their dismay the sheep were wintering up high, very high!... at 12,000 and 13,000 feet on windswept ridges. This was not good news since forage is very scarce at these elevations and weather is extreme. Why was this occurring? The same pattern showed up at the Lee Vining population, and also at Mt. Langley, Wheeler Ridge and Mt. Williamson. Wildlife detectives delved into the mystery and soon the evidence pointed to a management dilemma no one was expecting. The expression "everything is connected to everything else in nature took on a harsh reality".

In the 70's and 80's mule deer populations were at record numbers. At the same time mountain lions were correspondingly increasing to very high numbers since deer prey were abundant. The success of lion populations are intricately linked to deer numbers. When deer numbers are high...so too are mountain lion numbers. Also the lion population was on the increase from the passage in

1990 of the California State ban on killing them for sport or predator control. High deer numbers and the end of predator control spelled a hey day for lions. This increase in their numbers sent an expanding population right into the path of wintering bighorn sheep.

Bighorn through history have coevolved successfully with predation by lion, but this time it was the straw that broke the camels back. Sheep numbers were just too low to cushion the effect of the increased lion population. Over 60 bighorn kills were documented from the late 70's to present from mountain lion. This is just what biologists could locate! The bighorn attempted to use their mountain climbing skills to outwit their feline stalkers! The sheep were being so heavily preyed upon that they abandoned their traditional low elevation winter ranges where food was good and the weather favorable, and headed to the high country where lions could not easily follow. There the false security of the high country refuge was chipped away at by the severity of the winters and the poor quality of the forage found on these high windswept expanses. What sheep were not being killed by lions at low elevations were being decimated by winter losses including poor lamb survival and loss to avalanches. Today, the population numbers are so low that with every new sheep killed, particularly ewes, the probability the population will survive is rapidly diminishing. Field surveys have documented the presence of lion in virtually every portion of the low elevation winter range where sheep need to be.

So now what will Federal listing mean? What can biologists do to help stave off the tide of extinction? First, a Conservation Strategy has been prepared by a group of Federal and State biologists from Sequoia-Kings Canyon and Yosemite National Parks, California Department of Fish and Game, The University of California, and the Inyo National Forest to develop specific proposals to recover the bighorn population back from the brink of extinction to a herd capable of withstanding the natural factors facing any wildlife species.

Proposals are in the works to develop a captive breeding herd where a few sheep will be brought in from the wild and bred in captivity to supplant the dwindling numbers of bighorn in the wild. Captive breeding has been instrumental in recovering a number of high profile endangered species like the eastern bald eagle, the peregrine falcon and the California condor. It is currently in progress to help recover the Peninsular bighorn sheep from southern California.

Secondly, the threat of pneumonia disease transmission from domestic sheep to bighorn must also be addressed. Federal land managers are working hard to insure livestock grazing allotments have a sufficient buffer from known bighorn populations to prevent future interactions. No recent documented cases of disease transmission have occurred in the Sierra, but it is recognized that it only takes one interaction between a domestic sheep and one bighorn to spell doom for an entire bighorn herd.

A third, and most important element of the recovery effort deals with what to do about mountain lion predation, for without addressing this issue the chances of recovering the bighorn are questionable. It is the principal factor in the recent decline of the sheep. State and Federal managers have agreed that some level of mountain lion control will be necessary to remove the high threat of predation of sheep on the winter range and allow bighorns to once again fully utilize their low elevation winter ranges. The placement of the Sierra bighorn on the Federal Endangered Species List will hopefully allow this issue to be adequately addressed. It's a tough one, but biologists believe the predation factor must be reduced and there is not a lot of time left to do something. The sand is sifting through the hour glass!

So look for the headlines in your newspapers concerning the listing of the species and keep your fingers crossed that bighorn can be brought back from the brink and once again be a great part of the high Sierran wildlife legacy!

Mule deer winter range and FIRE

☒ Mule Deer

Natural fires once played a pivotal role in modifying wildlife habitat. What we find today on mule deer winter range is human caused fire is also having a profound effect on mule deer winter range condition. The photo to the left shows mule deer in their shrub habitat winter range principally composed of shrubs and grasses. The most important shrub for deer survival through the winter in the Eastern Sierra, and many other western winter ranges is bitterbrush. Its high in fats and calories and together with sagebrush composes its principal diet through the winter months.

☒ Winter range burned during the Tom Fire



Winter Range after 1998 Tom Fire

Winter Range before 1998 Tom Fire

In the last four years we have had 2 major human caused fires to the west of Bishop on the Round Valley Deer Winter Range. These burns have affected over 8,000 acres of winter range habitat. The photo above is from the 1998 Tom fire which burned 3,000 acres of bitterbrush habitat. Mule deer just do not take kindly to eating charred shrub skeletons as a major part of their winter diet.

Before the Tom fire, 5,000 acres burned in 1995 on Bureau of Land Management land and Forest Service land in the Pole Fire. What does this all mean to the Round Valler deer? Less winter range food to assist a herd on the upswing from a population decline that began in the mid 1980's. The population, previously at record numbers "crashed" (unscientific terminology) from roughly 6,000 animals down to 1,500 in the early 90's. The herd is now bounding back and is now estimated at 2,500 deer. By the way, deer populations naturally go through boom and bust cycles. The Round Valley deer winter range probably could not support record deer numbers forever! High deer populations ultimately experience die-offs from some ecological event, maybe they eat out their winter food supply and starvation takes its toll, maybe a severe winter or a drought finally takes it

toll, or as some biologists believe in this case, high mortality from a very high mountain population that gradually increased as deer numbers increased took its toll. In the end the bell will ultimately toll sooner or later when wildlife populations exceed their carrying capacity with the land. The balance of nature is really more of a dynamic force with wildlife populations never staying static but rather in constant upswings and downturns. But for the moment, back to bitterbrush! To confound the problem of lost bitterbrush food on the winter range, this plant returns very slowly over many years and requires good wet springs and summers for germination and survival of young plants. To add to this, once these young plants come up deer forage heavily on the tasty young and



is to prevent human caused fires on winter range since they generally produce (at least in the short-term) undesirable results. A project is now underway on the 1995 Pole Fire by the Bureau of Land Management in cooperation with California Department of Fish and Game to see how bitterbrush can be replanted successfully. For now deer will have to utilize the remaining bitterbrush. Deer management biologists believe the loss of bitterbrush from those fires will adversely effect the recovering herd. Time will tell!

Now back to the deer population crash? Biologists debate as to whether it was a sustained drought in the Eastern Sierra or increased predation from the steady buildup of the mountain lion population in response to record numbers of deer that caused the deer numbers to ultimately decline. Parts of the winter range were not in good shape to begin with before the wildfires since the bitterbrush was very old and part of its nutritious growth was becoming unavailable to deer. High deer numbers had a dramatic effect on the bitterbrush plants since they can only take so much munchin on. Branches were growing higher than deer could reach and the ones that were available were eaten so heavily that they were dying. The photo above left shows a bitterbrush plant with its twigs heavily eaten, or browsed as biologists say. Notice the short stubby nature of the branches in contrast to the long braches of a lightly eaten bitterbrush on the right. Deer have been making quite a meal of the shrub on the left. But there is only so much eaten on a self-respecting bitterbrush can take! As I said, If branches become to heavily browsed they die. Periodically nature brings in fire to rejuvenate these heavily browsed plants. After a fire, bitterbrush over time either rapidly resprouts a plant from the rootcollar at the base of the burned branches, or it sprouts from seed that in many cases has been buried by rodents. If resprouting is to occur it usually happens the next Spring after the fire and deer food is ready right away. What biologists have noticed on this winter range is bitterbrush is not resprouting back and so the availability of bitterbrush for deer food will take alot longer since it must come back by seed germination primarily, like the photo to the above right. Notice you just do not see many shrubs in that photo. In the short run the loss of bitterbrush to wildfire can be traumatic to deer numbers, but in the big picture assuming one has the patience to wait long enough (maybe decades), bitterbrush will return to the winter range and deer will once

again have good pickins of tasty, healthy bitterbrush plants. In the meantime the spring green-up on these burns can be a good forage supply if deer can find the bitterbrush forage they need to get them through the winter. Biologists know that everything is cyclic in the natural scheme of things. Sometimes the cycles take longer than we would like and in many cases we have little control over such cycles.



Today the Inyo National Forest is beginning to use prescribed fire as a management tool to reduce the chance of large fires occurring. Our goal is to manage important wildlife habitat areas such as key deer winter ranges, bighorn sheep winter ranges, riparian areas, and oak hardwood groves to perpetuate these habitats while still allowing fire to once again play its role on the landscape. Look for prescribed burns to be occurring on several areas of the Forest. The bottom photo is a prescribed burn conducted last October at Division Creek northwest

of Independence in the Sierra foothills. The principal objective was to reduce tall shrub fuels adjacent to a native stand of California Live Oaks to prevent a potentially catastrophic wildfire from burning the oak groves. Secondly it was designed to rejuvenate portions of a key bitterbrush mule deer winter range to determine if and how prescribed fire can be used for long-term deer habitat management. Monitoring of shrub recolonization and deer use will be ongoing for the next several years. Stay tuned to this page for more.

....And by the way did you know the Inyo is in partnership with PRBO and the Bureau of Land Management, California Department of Fish and Game, Mono Lake Committee and Eastern Sierra Audubon Society in a 3 year study of birds in riparian zones of the Eastern Sierra. This study focuses on the collection of baseline bird species



information and relations of these species to their habitats along the streams in the



foothill zone of the Eastern Sierras. Each year crews from PRBO accompanied by volunteers from folks like Audubon and Mono Lake Committee head out in the spring to tally all the species living along survey routes on 28 streams along the Eastern Sierra from Cartago clear north to Bridgeport. Data is collected on what bird species are heard or seen, the sex and age of the birds, dates of nesting, egg laying, hatching of young, survival of young, and information about what types of trees and shrubs the birds are using for nesting. This information will help establish long-term baseline monitoring data and help managers identify important bird areas, what factors affect birds,

and what we need to do when managing the land to insure birds are given a fair consideration.
Tune in for more info as study results are published.

| [Naturewatch Home](#) | [Critter Corner](#) | [Wildlife Management News](#) | [Events of Interest](#) | [Epilogue](#) |

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Photo: ©1996 Don Bucius



Department of Fish & Game

License and Revenue Branch
3211 S Street, Sacramento, CA 95816
(916) 227-2245

 My CA

Sage Grouse Information



Sage Grouse call

[How to apply for 2001 Sage Grouse](#)

Centrocerus urophasianus

A California Species of Special Concern, Harvest Species

Life History

The sage grouse, or "sage hen" as it is commonly called, is the largest native grouse in North America. Among the fowl-like birds, only the turkey is larger than the sage grouse. The sage grouse is a permanent resident in northeastern California, ranging from the Oregon border along the east side of the Cascade Range and Sierra Nevada to northern Inyo County. Lassen and Mono counties have the most stable populations. The greatest abundance of sage grouse are found in a combination of sagebrush, perennial grassland or wet meadow, and water. Bitterbrush and alkali desert scrub are also commonly present. Males from several square miles gather at traditional strutting areas (leks) in late winter and early spring. These leks are located on patches of bare ground surrounded by sagebrush stands of moderate canopy. Some population movements may occur in winter.

Open areas within sagebrush communities are needed for courtship displays. Fairly open stands of sagebrush are needed for nesting. The nest is a shallow scrape with a thin lining of plant material; often placed under sagebrush. Breeding occurs from mid-February to late August. The peak strutting period is March-April. Nesting and brooding period is May-July. All males in a local area gather to display (lek) during the early breeding period. A few dominant males do most of the mating. Clutch size is 5-13; averaging 7-8. The incubation period is 25 days. The female cares for the young. Young sage grouse first fly at 7-14 days.

Adult feed primarily on sagebrush and leafage of green grass, forbs, clover, sunflower and supplement their diet with insects, particularly grasshoppers.



Hunting

Sage grouse when alarmed will emit a sharp cackle, "kek-kek-kek". Sage grouse rise from the ground slowly under labored wing beats, however, they are able to gain speed quickly for such a large bird.

Young sage grouse are excellent eating and are considered a prized game bird by those who hunt them. Older birds may be tough and often have a strong sage flavor as a result of their diet. This flavor can often be prevented by cleaning the bird quickly after they are shot.

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Attachment B
Analysis of 96-hour Aquifer Test Data, Mammoth Yosemite Airport,
Mono County, California. Report dated February 8, 2002, by
Richard C. Slade & Associates.

**ANALYSIS OF 96-HOUR AQUIFER TEST DATA
MAMMOTH YOSEMITE AIRPORT
MONO COUNTY, CALIFORNIA**

BY

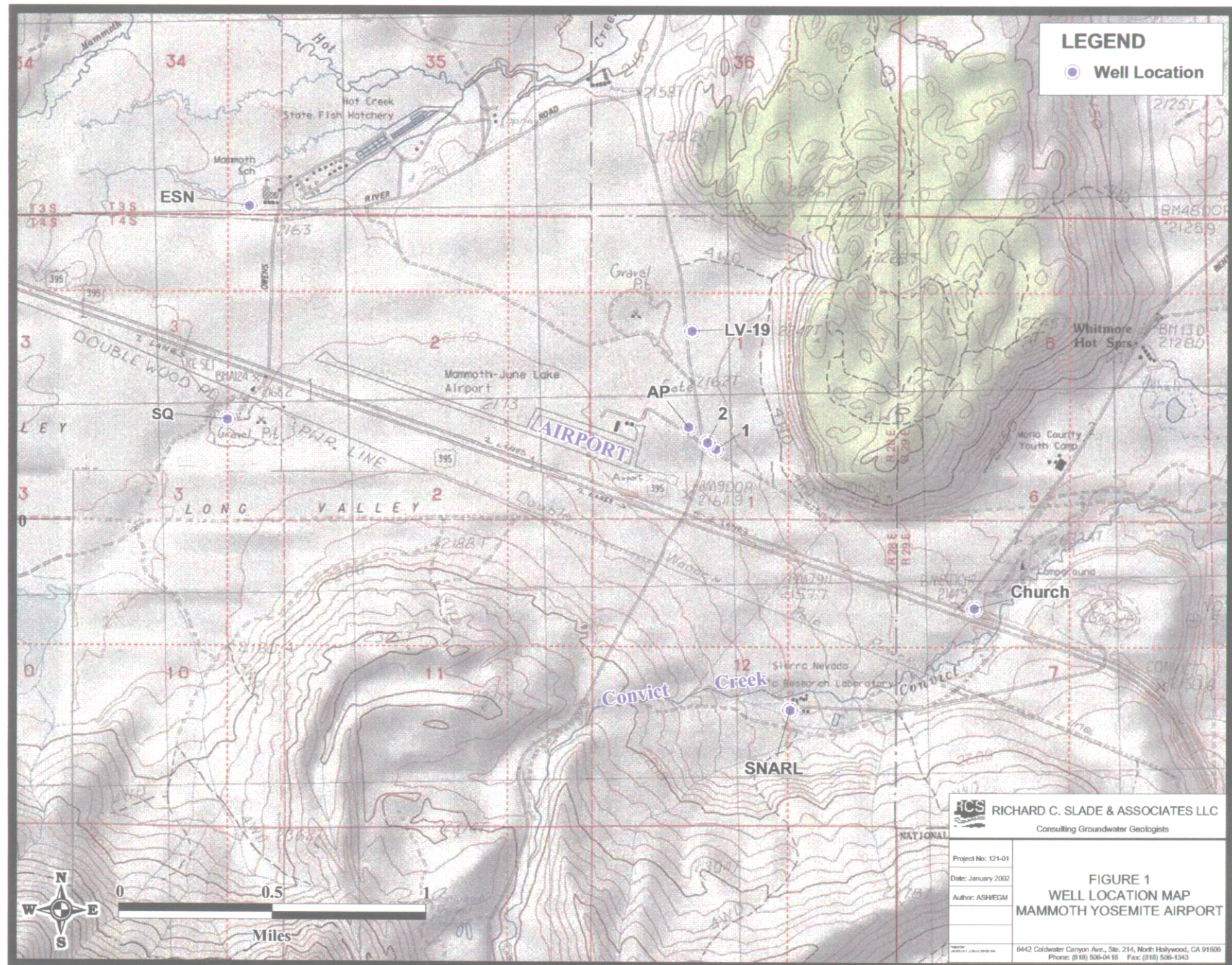
RICHARD C. SLADE & ASSOCIATES

FEBRUARY 8, 2002

This report provides an analysis of a 96-hour aquifer test performed from January 10 through January 14, 2002, on four water-supply wells (Well Nos. 1, 2, AP and LV-19) owned by Mammoth Yosemite Airport (MYA), Mono County, California, and on two other offsite water-supply wells, the Sierra Nevada Aquatic Research Laboratory (SNARL) well and the Mammoth School (ESN) Well.

Figure 1 – Well Location Map – shows the location of the five wells that were monitored during the aquifer test. The Church well, shown on Figure 1, was also monitored during the aquifer test but the collected data were determined to be invalid. However, manual water level data were collected from that well prior to and after the end of the 96-hour aquifer test. One other well that is considered in this report, but was not monitored during the aquifer test, is the Sierra Materials (“Sierra Quarry” or SQ) Well.

Water level monitoring during the 96-hour aquifer test was performed by Triad/Holmes Associates (THA) between January 9 and 16, 2002. Richard C. Slade and Associates LLC (RCS), Consulting Groundwater Geologists was retained by THA to analyze the resulting test data.



BACKGROUND INFORMATION

This letter-report has been prepared to address an issue raised by the California Regional Water Quality Control Board, Lahontan Region (RWQCB) with regard to the potential impact of pumping of MYA's existing well on other nearby water-supply wells. Mr. Reinard W. Brandley (RWB), Consulting Airport Engineer, in a letter dated December 21, 2001 and submitted to THA, requested that THA perform an aquifer test; a copy of that letter is appended to this letter-report. In their letter, the RWQCB directed that the pumping rate to be used during the aquifer test should be equal to the average daily rate of water consumption for MYA. This average daily rate of consumption was determined by RWQCB to be 59,000 gallons per day (gpd). At a 100% operational pumping rate (i.e., 24 hours per day), this amounts to approximately 41 gallons per minute (gpm). Hence, the purpose of the aquifer test was to determine the potential water level effects of pumping of one MYA well, at the above average daily consumption, on the other three MYA wells and on the offsite well(s). In addition, the RWQCB was reported as being "particularly interested" in determining the transmissivity of the aquifer system(s) from which the MYA wells are extracting their groundwater.

AVAILABLE MYA WELL DATA

The attached Figure 1 illustrates the approximate locations of the existing water-supply wells that were used in the aquifer test. Construction data for MYA Well Nos. 1 and 2, the ESN well and the SQ well were obtained from the driller's logs that were supplied to us by THA. Available construction information for the AP, LV-19, SNARL, and Church wells were obtained from U.S. Geological Survey (USGS) Open-File Report (OFR) 00-230.

Key well construction data for MYA Well Nos. 1 and 2 are as follows:

Well No. 1: This well has 8-inch inside diameter (I.D.) by ¼-wall thick wall steel casing that extends to a depth of 143 ft below ground surface (bgs). Casing perforations are set between the depths of 100 and 140 ft bgs; the perforation slot openings are 3/16-inches in width. A cement sanitary seal was set from ground surface to a depth of 55 ft bgs; a minimum 50-foot deep sanitary seal is required in a well if it is to be used for domestic purposes.

Well No. 2: This well is also provided with 8-inch I.D. by ¼-wall thick wall steel well casing to a depth of 143 ft bgs. Casing perforations are set in the depth zones from 100 to 140 ft bgs. The cement sanitary seal extends from ground surface to a depth of 100 ft bgs.

The driller's logs indicate that the aquifer system(s) encountered consist of "cobble rock and sand." Based on those logs, there appears to be possibly two aquifer systems. The first, a shallow aquifer system, may extend from ground surface to a depth of approximately 65 ft bgs. A second, deeper aquifer system appears to occur between the depths of approximately 100 to 136 ft bgs; this deeper system is perforated by the MYA wells. Separating these two systems is a "cobble rock and green clay" that reportedly occurs between the depths of 61 ft and 100 ft bgs. At a depth of 135 to 136 ft bgs, a gray to blue clay was encountered in the MYA wells according to the driller; the pilot holes for these wells were terminated in this clay. Because the lateral extent and continuity of the clay between 100 and 136 ft bgs are not known, it is probable that the lower aquifer system is under semi-confined groundwater conditions.

Well construction data for the remaining wells are as follows:

AP Well: This well has a 10-inch diameter casing set to a depth of 70 bgs. Casing perforations are reported to be between a depth of 52 and 66 ft bgs. There is no other construction information available for this well.

LV-19: This is a 2-inch diameter observation well reportedly installed to a depth of 98.6 ft bgs. Casing perforations are reported to be between the depths of 96.6 and 98.6 ft bgs. There is no other construction information available for this well.

SNARL Well: The SNARL well is reported to consist of 6-inch diameter casing installed to a depth of approximately 70 ft bgs. Casing perforations reportedly extend from 34 ft to 70 ft bgs; no other construction information is available for this well.

Church Well: This well is reported to also consist of 6-inch diameter casing that has been installed to a depth of 45.5 ft bgs. No other construction information is available on this well.

ESN Well: This well is reported to also consist of 6-inch diameter casing that has been installed to a depth of 74 ft bgs. The well has perforations that extend from 50 ft to 74 ft bgs. Based on the driller's log for this well, the perforations appear to have been placed within interbedded clay, sand and gravel lenses.

SQ Well: The SQ well reportedly consists of 6-inch diameter casing that has been installed to a depth of 127 ft bgs. The driller's log notes that perforations extend from 27 ft to 127 ft bgs. The driller's log also shows that the well appears to have

been installed within fractured andesite and basalt between 10 ft and 125 ft bgs. Earth materials in the uppermost 10 ft of the borehole were reported to consist of "large" gravel, boulders and coarse sand.

Based on available construction information, it appears that the AP Well is screened entirely within the upper aquifer system, and thus is isolated from the perforated zones in MYA Well Nos. 1 and 2 by a 30 to 40-foot thick layer of cobble/clay. This clayey unit, if it is laterally extensive, can be interpreted to be a zone of relatively low permeability; in essence, it would tend to serve as an aquitard. However, LV-19, the 2-inch observation well contains 2 ft of perforations just above the top of the lower aquifer system that likely begins at a depth of approximately 100 ft bgs.

The SNARL and Church wells appear to be screened in an upper aquifer system, due to the shallow depths of these wells and/or their reported perforations intervals. However, because the SNARL and Church wells are located at a significant distance (3350 ft and 3775 ft, respectively) south and east of MYA Well No. 1, respectively, it is unlikely that the shallow aquifer systems encountered in those two wells are identical to those encountered in MYA Well Nos. 1 and 2. Finally, the ESN and the SQ wells also appear to be screened in aquifer systems that are not connected to those aquifer systems in MYA Well Nos. 1 and 2, AP, and LV-19. The different type of rock/earth material encountered in those two wells (interbedded clay, sand and gravel in the ESN well, and basalt in the SQ well) suggests that the aquifer systems are different.

It should also be noted that the source of recharge water to the shallow aquifer system in the SNARL and Church wells appears to be derived from the watershed area of Convict Creek (see Figure 1).

TESTING PROTOCOL

Field measurement and recording of water levels in each well during aquifer testing was performed solely by THA geologists. A minor amount of liaison and assistance were provided to THA by an RCS geologist prior to the commencement of the aquifer test.

MYA Well No. 1 was designated as the pumping well and water levels in this well were manually measured (with an electric tape sounder) and recorded by THA geologists on a regular basis during the 96-hour test. In addition, manual measurements of water levels were periodically performed in Well LV-19 during the aquifer test by THA.

Water levels in all five wells were monitored continuously using In-Situ Inc. Mini-Troll pressure transducers, which were installed by THA geologists. Transducer data for the ESN well were obtained from USGS personnel by THA geologists and were used in our analysis. Water levels in the other five wells (Well No. 2, AP, SNARL, ESN and the SQ well) were not manually measured or recorded by THA geologists.

In the AP and Church wells, the data cables in two of the pressure transducers leaked during the test. This leakage caused a failure of the transducers, which did not allow the data to be readily retrieved by THA geologists from each transducer. However, data from the AP Well were subsequently recovered by personnel from In-Situ, Inc. (the manufacturer of the transducers), and these data were then used in our analysis. Data from the Church Well, which was also recovered by In-Situ personnel, appeared to be erratic and, as a result, were deemed invalid and were not used in our analysis.

RESULTS OF THE 96-HOUR AQUIFER TESTING

Pumping in MYA Well No. 1 was performed continuously at a pumping rate of 45 gpm from January 10 through January 14, 2002 for the subject 96-hour (5758 minutes) aquifer test. This pumping rate is slightly greater than the 41 gpm average daily demand rate for water supply at MYA. Pumping was not performed in any of the other wells during this 96-hour period, with the exception of the SNARL Well which was pumped intermittently for very short periods by its owner.

Static Water Levels

Table 1 –Static Water Levels- lists the pre-test static (non-pumping) water levels as measured by THA geologists from an established reference point atop each respective well casing.

Table 1
Static Water Levels

Well Name/No.	Approximate Reference Point Elevation (ft above msl)	Depth to Water (ft brp)	Approximate Water Level Elevation (ft above msl)
No. 1	7086.8	29.2	7057.6
No. 2	7090.5	31.8	7058.7
AP	7092.8	27.4	7065.4
LV-19	7091.6	38.7	7052.9
SNARL	7095.0	34.4	7060.6
Church	7035.1	10.8	7024.3
ESN	7085.8	ND	ND
SQ	7104.4	ND	ND

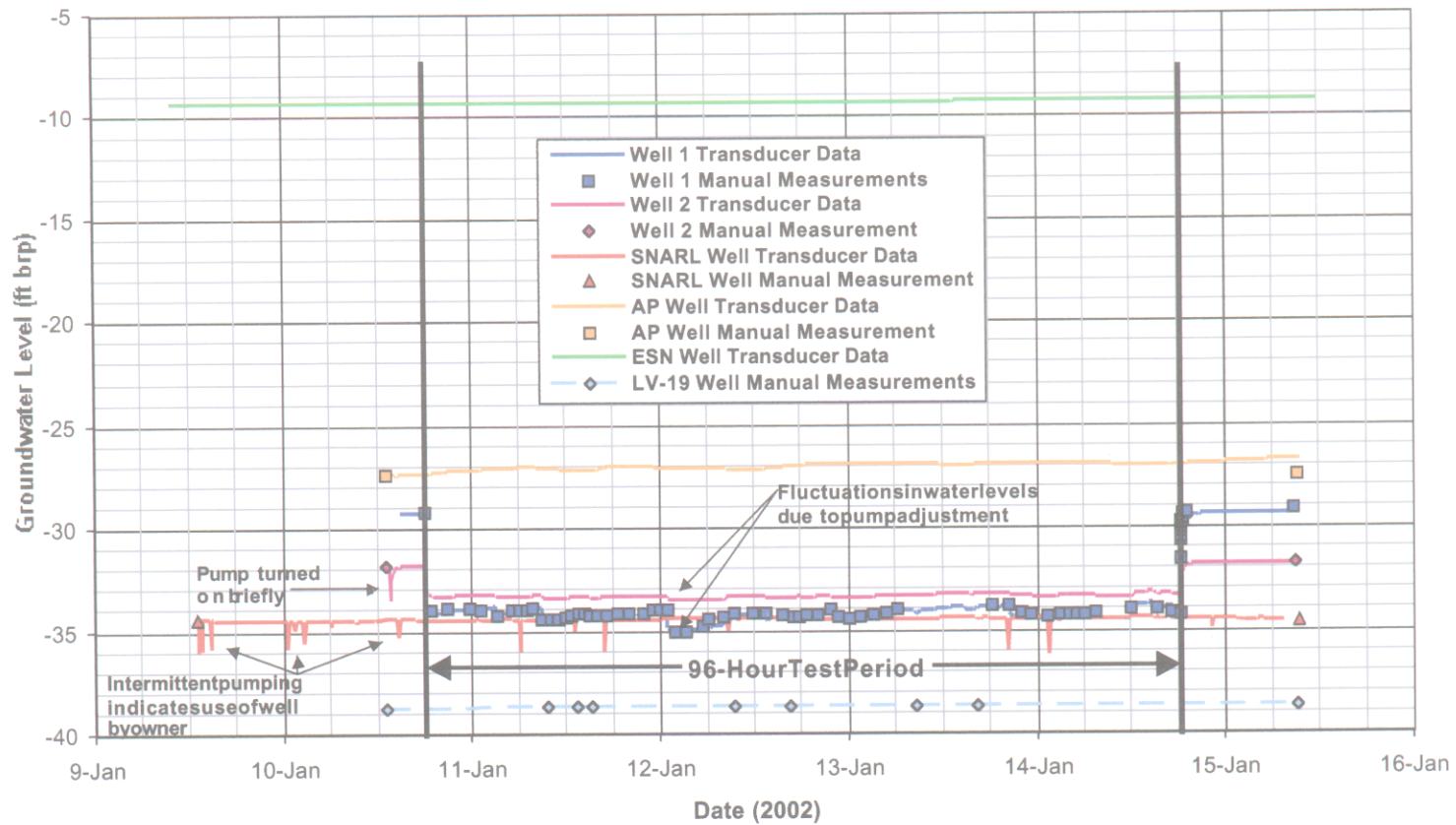
Note: brp = below reference point
msl = mean sea level
ND = No Data

Once corrected to an elevation datum, the above static water levels appear to indicate that the regional groundwater flow is generally flowing in an easterly direction in the vicinity of MYA. However, because the wells are perforated in different aquifer system(s) (e.g., the AP Well is perforated in the upper aquifer system whereas MYA Well Nos. 1 and 2 are perforated in the lower aquifer system), and because recharge to the wells may originate from different sources and directions, then it is not possible to accurately determine the groundwater flow direction for either the upper or lower aquifer system without additional monitoring points and more accurate elevation control.

Water Level Data

Figure 2 –Water Level Data- provides graphs of the available water level data collected before, during, and after the aquifer test for MYA Well Nos. 1 and 2, the AP Well, LV-19, and the SNARL well. Pressure transducer data for Well Nos. 1 and 2, the AP Well, and the SNARL Well have been plotted along with the available manually-collected data for these wells. In addition, only the manually collected data for LV-19 have been plotted. Because the pressure transducer data for the Church Well were considered invalid, they have not been plotted on Figure 2.

Pumping of Well No. 1 created a total water level drawdown in this well of approximately 4.8 ft (from a pre-test static water level of 29.2 ft to a depth of 34 ft bgs). This maximum water level



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FIGURE 2
WATER LEVEL DATA
96 HOUR AQUIFER TESTING
MAMMOTH YOSEMITE AIRPORT

JOB NO. M121-01

JANUARY 2002

drawdown was created shortly following startup of pumping and subsequent water levels during the remainder of the test generally remained at that depth while the well was continuing to pump at the 45 gpm rate. It should be noted, however, that water levels fluctuated somewhat during the test as a result of frequent readjustment of the pump rate during the test by THA geologists in order to maintain the 45-gpm pump rate.

During pumping of Well No. 1, Well No. 2 (located approximately 190 ft to the west), showed a water level drawdown interference of approximately 1.4 ft. Moreover the drawdown pattern in Well No. 2 mimics that of Well No.1 because water levels in Well No. 2 declined relatively quickly to a specific level and then remained more or less at that depth for the duration of the pumping at Well No. 1. However, the pressure transducer data for the AP Well (located approximately 556 ft northwest of Well No. 1), for the SNARL Well (located approximately 3350 ft southeast of Well No. 1), for the ESN Well (located approximately 9080 ft northwest of Well No. 1), and the manual water level measurement data for LV-19 (located approximately 2100 ft north of Well No. 1) showed no significant changes in water levels during the test. This indicates that water level drawdown interference, by virtue of pumping Well No.1, was not occurring in the AP Well, the ESN Well, or in the SNARL Well during this test. The limited number of manual water level measurements in LV-19 suggest that drawdown interference was not occurring in that well either. The lack of response of water levels in the AP Well and in LV-19, to pumping of Well No. 1, indicates those two wells are not in hydraulic communication with Well No. 1 or Well No. 2.

CALCULATED AQUIFER TRANSMISSIVITY

Aquifer Test Drawdown Data

Transmissivity (T) is a measure of the ability of an aquifer to transmit water to a pumping well, and is expressed in units of gallons per day per foot of aquifer width (gpd/ft). Values of T were calculated from measured water level drawdowns that were monitored in Well No. 1 and in Well No. 2, using the software program AQTESOLV™ (vers.3.01). A number of different analytical (curve-fitting) solutions were used, and the Hantush-Jacob Solution for a leaky confined (or semi-confined) aquifer was found to generally provide the best solution for the water level data from the two wells. This analytical solution also assumed there was no groundwater in storage

in the cobble/clay zone of low permeability (the probable aquitard) that lies between the upper and lower aquifer zones in the area.

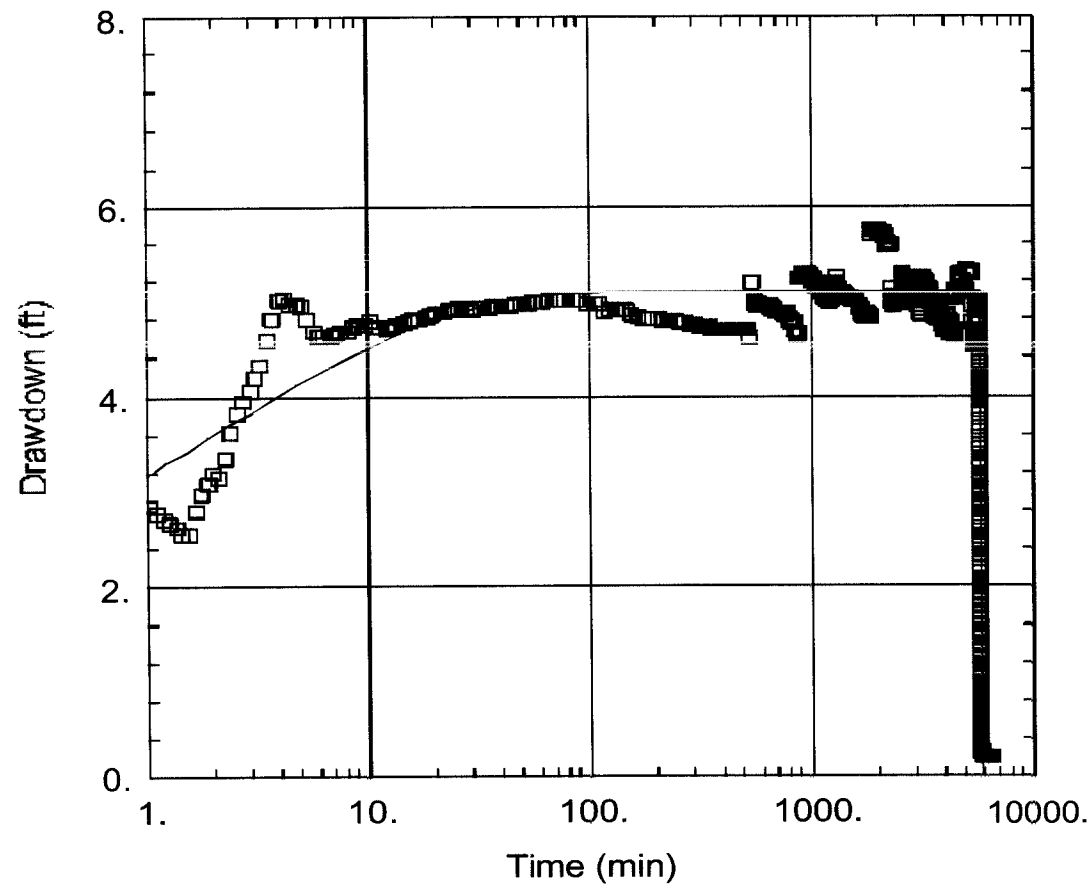
Figure 3 –Analytical Solution for 96-Hour Aquifer Test Data Well No. 1- and Figure 4 –Analytical Solution for 96-Hour Aquifer Test Data Well No. 2- illustrate the results of plotting and applying the Hantush-Jacob Solution to the aquifer test data for each well. Figures 3 and 4 show that the calculated T values were 7,900 gpd/ft for Well No. 1 test data and 10,000 gpd/ft for Well No. 2 test data. In addition, aquifer storativity (symbol, S; a unitless/dimensionless number) was calculated to be 0.0064 for Well No. 1, whereas a value of 0.000083 was calculated for Well No. 2. However, because Well No. 1 is the pumping well, the S value derived from the data for that well is deemed inaccurate and, thus, the S value for Well No. 2, a water level monitoring well for this test, is likely more representative of aquifer storativity for the lower aquifer system penetrated by each well. The magnitude of this S value (0.000083) is indicative of semi-confined groundwater conditions.

Aquifer Test Recovery Data

Values for T were also determined from water level recovery data collected from each well by THA. Figure 5 – Analytical Solution for Recovery Data Well No. 1 and Figure 6 –Analytical Solution for Recovery Data Well No. 2- provide the results of applying the Theis solution to the water level recovery data for the two wells. Figures 5 and 6 show that the calculated T values, based on the recovery data, ranged from 8,000 gpd/ft for Well No. 1 to 9,000 gpd/ft for Well No. 2. Such values are consistent with those generated for these two wells using the water level drawdown data acquired during the pumping portion of the test in Well No. 1.

THEORETICAL DISTANCE-DRAWDOWN CALCULATIONS

Theoretical parameters for the aquifer system in Well Nos. 1 and 2 were simulated (calibrated) using the analytical software program PUMPIT (vers. 4.3) based on the results of aquifer testing in those two wells. Calculation of these parameters was performed by modifying the T value for the aquifer system to obtain the actual amounts of water level drawdown monitored in Well Nos. 1 and 2. Once the calibration of the model was achieved, the calculated aquifer parameters were used to perform additional simulations to obtain theoretical drawdown values at the offsite wells (the AP, SNARL, Church, ESN, and SQ wells), which are likely constructed into the lower



Well Monitored

□ Well 1

Aquifer Model

Leaky

Solution

Hantush-Jacob

Parameters Calculated

$T = 7,900 \text{ gpd/ft}$

$S = 0.0064$

Static Water Level Depth: 29.2 ft brp, measured manually
on 1/10/2002, prior to pumping.
Average Pumping Rate: 45 gpm after 5758 minutes of pumping.

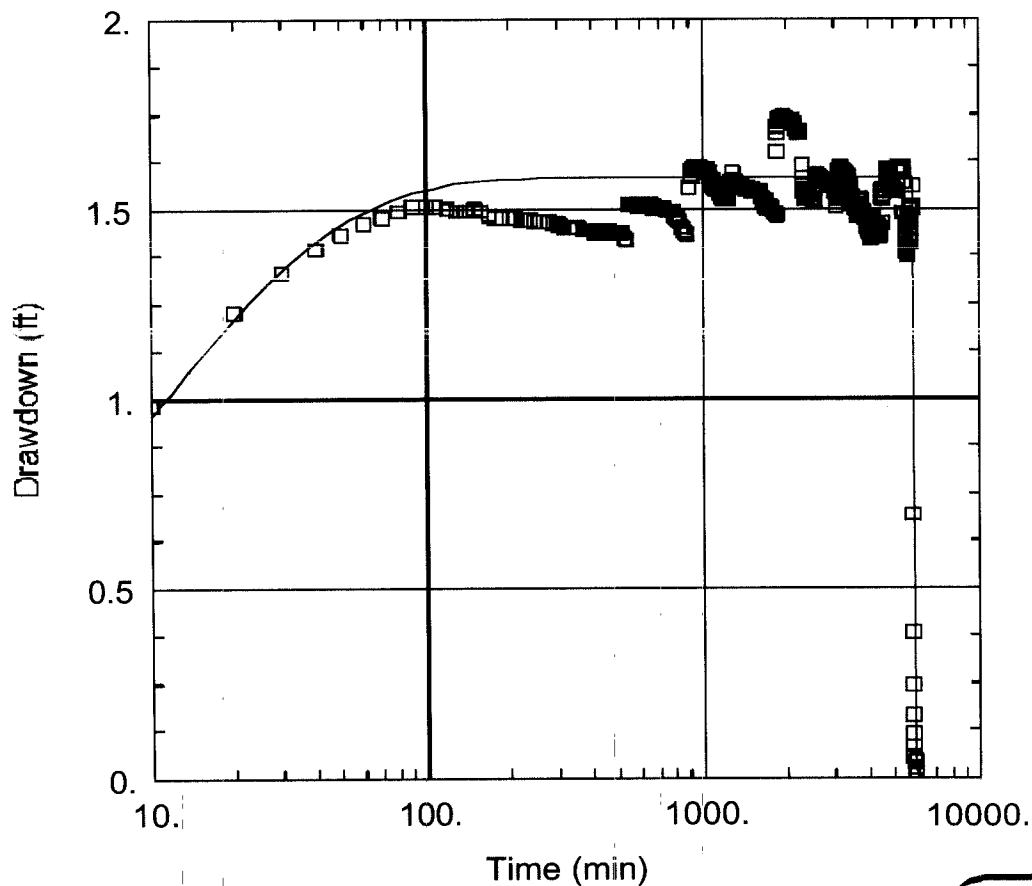
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FIGURE 3
ANALYTICAL SOLUTION FOR
96-HOUR AQUIFER TEST DATA
WELL NO. 1

Graphical Solution by: AQTESOLV Vers. 3.0, by Hydrosolve, Inc.

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Well Monitored

□ Well 2

Aquifer Model

Leaky

Solution

Hantush-Jacob

Parameters Calculated

$T = 10,000 \text{ gpd/ft}$

$S = 0.000083$

Static Water Level Depth: 31.8 ft brp, measured manually
on 1/10/2002, prior to pumping.
Average Pumping Rate: 45 gpm in Well No. 1 after
5758 minutes of pumping.
Well No. 2, located 193 ft from Well No. 1.

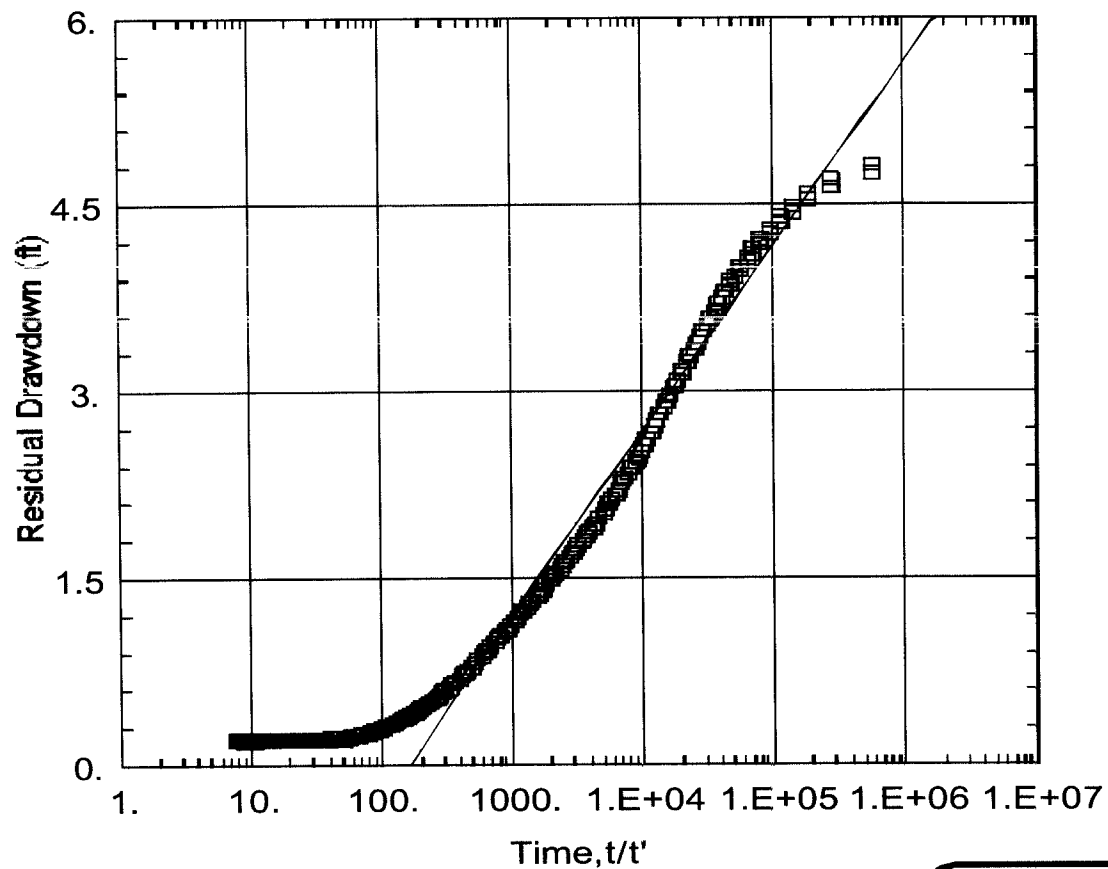
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FIGURE 4
ANALYTICAL SOLUTION FOR
96-HOUR AQUIFER TEST DATA
WELL NO. 2

Graphical Solution by: AQTESOLV Vers. 3.0, by Hydrosolve, Inc.

JOB NO. M121-01

JANUARY 2002

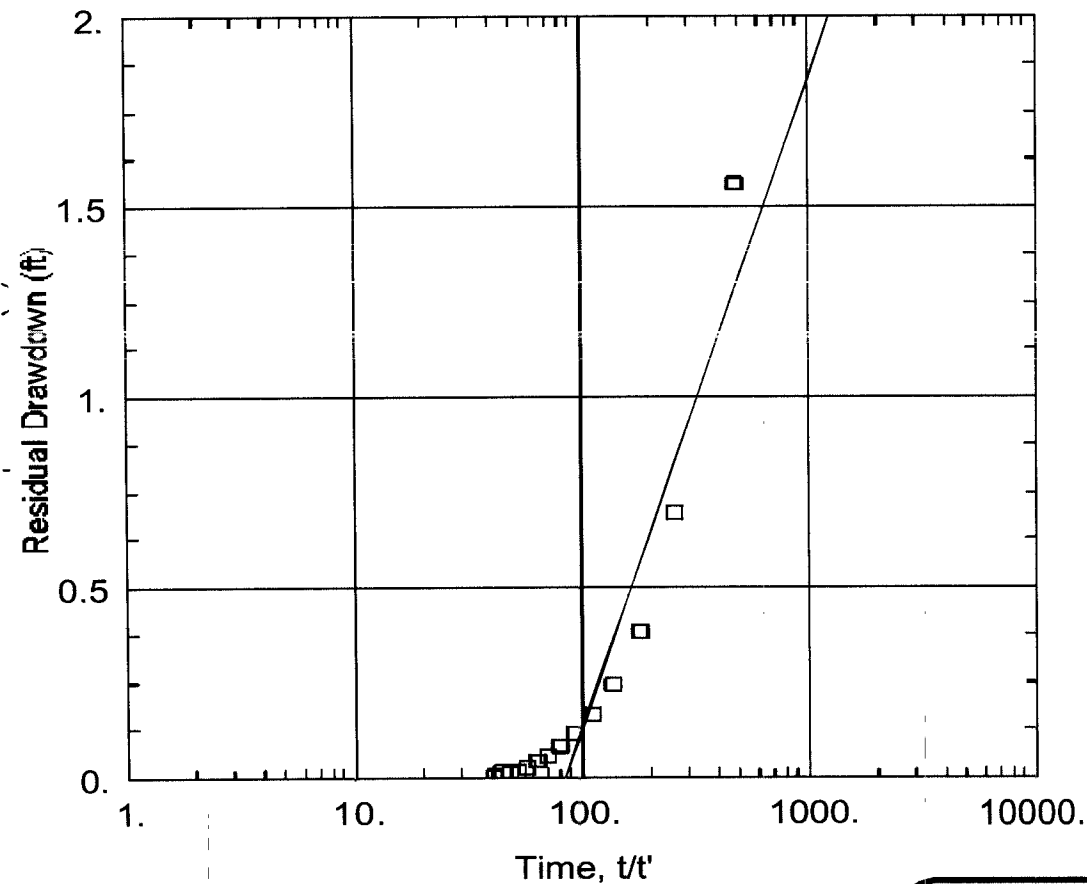


Well Monitored
 □ Well 1
AquiferModel
 Confined
Solution
 Theis (Recovery)
 Parameter Calculated
 $T = 8000 \text{ gpd/ft}$

Residual Drawdowns based on static water level depth of 29.2 ft bwp measured manually prior to start of aquifer test on 1/10/2002.
 Average Pumping Rate: 45 gpm after 5758 minutes of pumping

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FIGURE 5
ANALYTICAL SOLUTION FOR
RECOVERY DATA
WELL NO. 1



Well Monitored
 □ Well 2
Aquifer Model
 Confined
Solution
 Theis (Recovery)
 Parameter Calculated
 $T = 9000 \text{ gpd/ft}$

Residual Drawdowns based on static water level depth of 31.8 ft brp measured manually prior to start of aquifer test on 1/10/2002.
 Average Pumping Rate: 45 gpm after 5758 minutes of pumping in Well No. 1

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FIGURE 6
ANALYTICAL SOLUTION FOR
RECOVERY DATA
WELL NO. 2

aquifer system. It is noteworthy that because each of these wells is not perforated in the lower aquifer system, the pumping of MYA Well Nos. 1 or 2 would not be likely to induce drawdown in those wells. Moreover, the results obtained above are only for corresponding imaginary wells that are assumed to be perforated in the same lower aquifer system as is known to be perforated in the MYA wells.

In using PUMPIT, implicit assumptions are used to simulate conditions for ideal aquifer systems, although the system on which the simulation is performed may not exhibit those ideal conditions. The assumptions used in our simulation for the two wells are:

- The aquifer is homogeneous, isotropic, and of infinite areal extent.
- All wells being evaluated fully penetrate the aquifer systems present.
- Pumping is on a continuous basis (24-hours per day).
- Simulation of drawdown in the aquifer is time dependent. That is, flow to the wells(s) is unsteady and changes with time. Thus, drawdown is considered to be under transient conditions.

Notwithstanding the degree of difference between ideal aquifer systems and the aquifer system penetrated by Well Nos. 1 and 2, the results can be used to determine an approximate range of T values for the lower aquifer system. The following conditions were used in the aquifer simulation for the two wells in order to identify the theoretical distance-drawdown relationships in the area:

1. A pumping rate of 45 gpm was used for Well No. 1 under transient conditions.
2. An aquifer storativity (S) value ranging between 0.00008 for a confined aquifer system, to 0.0005 for a semi-confined aquifer system.
3. A porosity of 0.2.
4. The gradient of the water table surface is flat; i.e., there is no preferred flow direction.
5. Monitored drawdown in Well No. 1 was 4.8 ft whereas in Well No. 2 it was 1.4 ft at the end of the 96-hour aquifer test. Separate simulations were performed for each drawdown value.

6. Well No. 2 is approximately 193 ft from Well No. 1, and the AP Well was located approximately 556 ft from Well No. 1.

Based on the above conditions, our simulation yielded T values ranging from 21,000 gpd/ft to 35,000 gpd/ft. These values are considerably greater than the T values calculated from the aquifer test data. However, typical T values calculated for ideal aquifer systems, and calibrated to actual drawdown values, will differ significantly from T values calculated directly from the aquifer test data.

The next step was to simulate the theoretical amount of drawdown interference that might occur in each of the offsite wells as a result of simulated periods of continuous pumping by MYA Well No. 1. The simulations were based on the above-derived aquifer parameters and using a constant pumping rate of 45 gpm. The simulated drawdown interference values from the pumping of Well No. 1 were calculated for continuous pumping periods of 1 year, 5 years, and 10 years by Well No. 1. Table 2 illustrates the result of those calculations at each offsite well.

TABLE 2
THEORETICAL DRAWDOWN INTERFERENCE VALUES
IN OBSERVATION WELLS

Well No./Name	Distance from Pumping Well (ft)	Theoretical Drawdown Interference (ft)		
		1 year	5 years	10 years
Well No. 2	193	2.1	2.3	2.4
AP Well	556	1.8	2.0	2.1
Church Well	2100	1.4	1.6	1.7
SNARL Well	3350	1.2	1.5	1.6
ESN Well	9080	0.9	1.2	1.3

The results reveal that pumping of Well No. 1 will result in a maximum drawdown interference of 1.3 ft, at a point in the lower aquifer system corresponding to the distance of the ESN well, after 10 years of continuous pumping of Well No. 1 at 45 gpm and under the above listed aquifer conditions. Once again, it should be noted that the values presented above are to be used only as an indication of the possible impact of pumping Well No. 1 or Well No. 2 on water levels in wells at points corresponding to the distances to the existing offsite wells listed above, were they to be perforated in the same lower aquifer system only and under ideal aquifer systems. The drawdown values listed above do not represent the impact of pumping Well No. 1 or No. 2

on the existing wells, because those wells are perforated in aquifer systems that are very likely not in hydraulic continuity with the lower aquifer system in MYA Well Nos. 1 and 2.

PRELIMINARY CONCLUSIONS

Based on the available data from the wells in the vicinity of MYA, on the results of the 96-hour aquifer testing on Well No. 1, and on review of water level data for Well No. 2, the AP Well, LV-19, the SNARL and ESN wells, the following represent our preliminary conclusions:

1. MYA Well Nos. 1 and 2 appear to be perforated in and, thus, are interpreted to be producing their respective water supply from the lower of two, possibly distinct, aquifer systems underlying the airport area. On the other hand, the AP, SNARL, and Church wells appear to be obtaining their water supply from the shallower aquifer system in the area.
2. The aquifer test consisted of pre-test water level monitoring, monitoring of water levels during the pumping of Well No. 1 for 96 continuous hours at a rate of 45 gpm from January 10 through January 14, 2002, and then post-test monitoring of water level recovery.
3. At the beginning of the test on January 10, 2002 water levels in MYA Well Nos. 1 and 2 declined quickly in the first 100 minutes of the pumping test, but once these drawdown levels were attained, they tended to remain relatively stable for the remainder of the test (i.e., the subsequent 5658 minutes of the test).
4. At the end of the 96-hour aquifer test, a total drawdown of approximately 4.8 ft was observed in MYA Well No. 1 at a pumping rate of 45 gpm; a maximum drawdown of 1.4 ft was recorded in MYA Well No. 2. The AP, SNARL, and ESN wells showed essentially no change in water levels during the aquifer test. In addition, water levels in LV-19 (a 2-inch observation well), which appears to be screened in the lower aquifer system, also showed no response to the pumping of Well No. 1.
5. Analytical solutions applied to the monitored aquifer test data revealed that the aquifer system penetrated by MYA Well Nos. 1 and 2 may be a confined to semi-confined, leaky, artesian system. Values of T were calculated from the water level drawdown and recovery data to be on the order of 8,000 to 10,000 gpd/ft.
6. Simulation of drawdown values from pumping of Well No. 1 for periods ranging from 1 to 10 years pumping continuously at a rate of 45 gpm reveals that the maximum amount of drawdown at a point in the lower aquifer system corresponding the most distant monitored well (ESN) would be approximately 1.3 ft.

7. Because the monitoring wells in which the drawdown simulations were performed are perforated in the upper aquifer system, and because that system does not appear to be in hydraulic continuity with the lower aquifer system, then pumping of Well No. 1 and/or Well No. 2 at a rate of 45 gpm will very likely not affect water levels in those other wells.
8. Due to the small amount of drawdown interference observed (1.4 ft.) in close nearby Well No. 2 during pumping of Well No. 1, and the lack of water level drawdown effects from pumping Well No. 1 on water levels in other wells in the area, then pumping of Well Nos. 1 and/or 2 at somewhat higher rates and for longer periods of time (much greater than the 4-day aquifer test) would likely not produce any drawdown in other offsite wells in the vicinity because of their distance from the pumping well and because the other wells have been screened in aquifer systems that appear not to be in hydraulic continuity with Well Nos. 1 and 2.

We are pleased to have had the opportunity to be of service to you with regard to analysis of the 96-hour aquifer test data. If you have any questions regarding this report, please contact us.

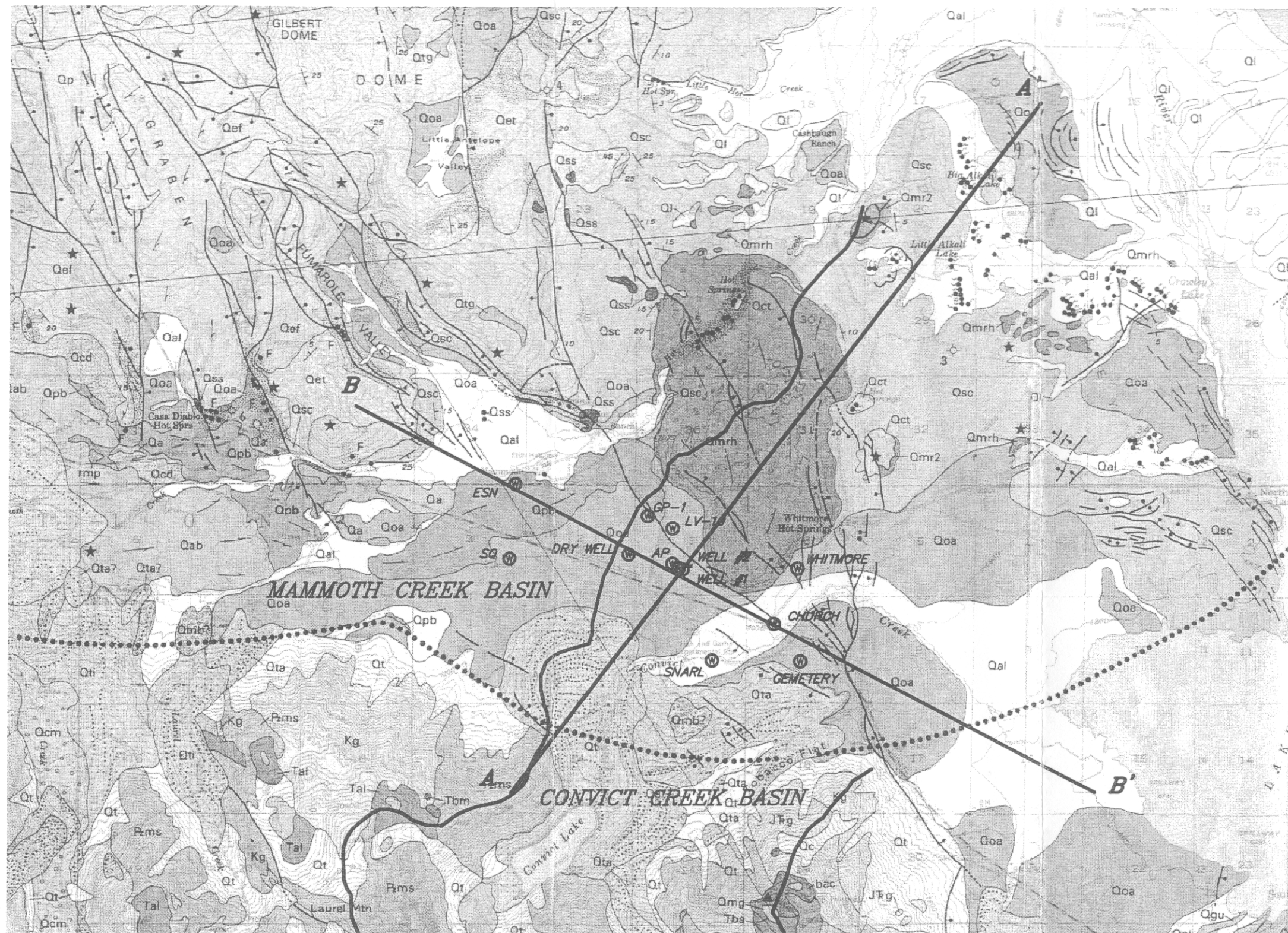
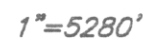
Very truly yours,
RICHARD C. SLADE & ASSOCIATES LLC

Earl F. LaPensee
California Certified Hydrogeologist No. 134

Richard C. Slade
Registered Professional Hydrogeologist
American Institute of Hydrology No. 106

Attachments

Attachment C
Regional Geologic Map and Geologic Cross Sections
from Triad/Holmes Associates



SOURCE: BAILEY, 1989; U.S. GEOLOGICAL SURVEY MISCELLANEOUS INVESTIGATIONS SERIES MAP I-1933

GEOLOGIC CROSS SECTION LINE LOCATION

REGIONAL GEOLOGIC MAP

 triad/holmes associates

FIGURE 1

B

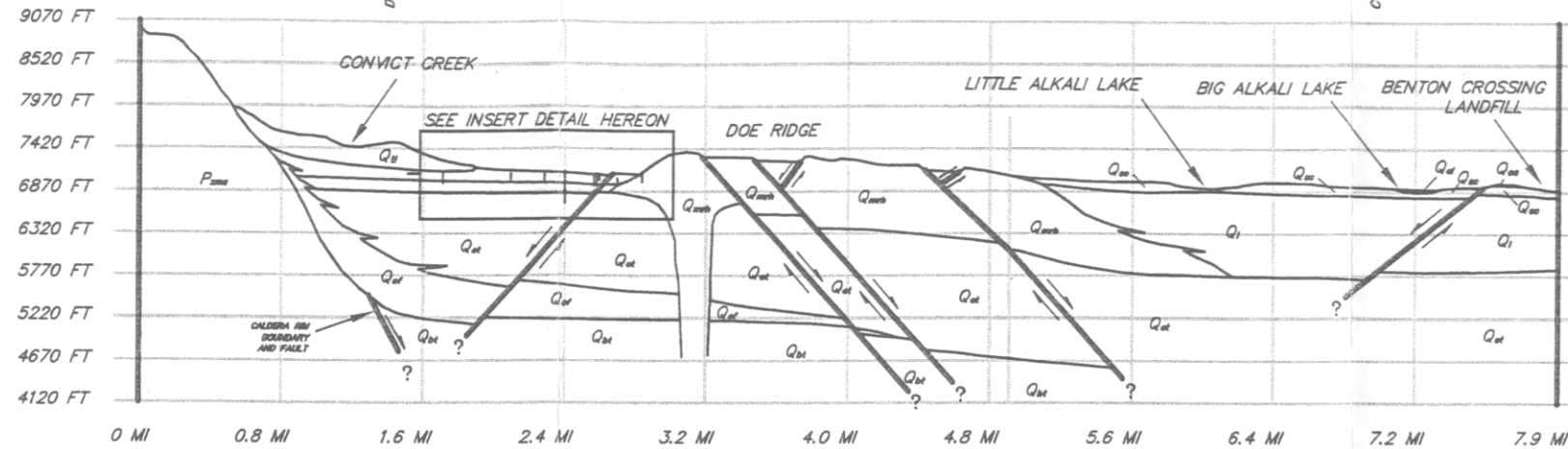
 B^+

LEGEND

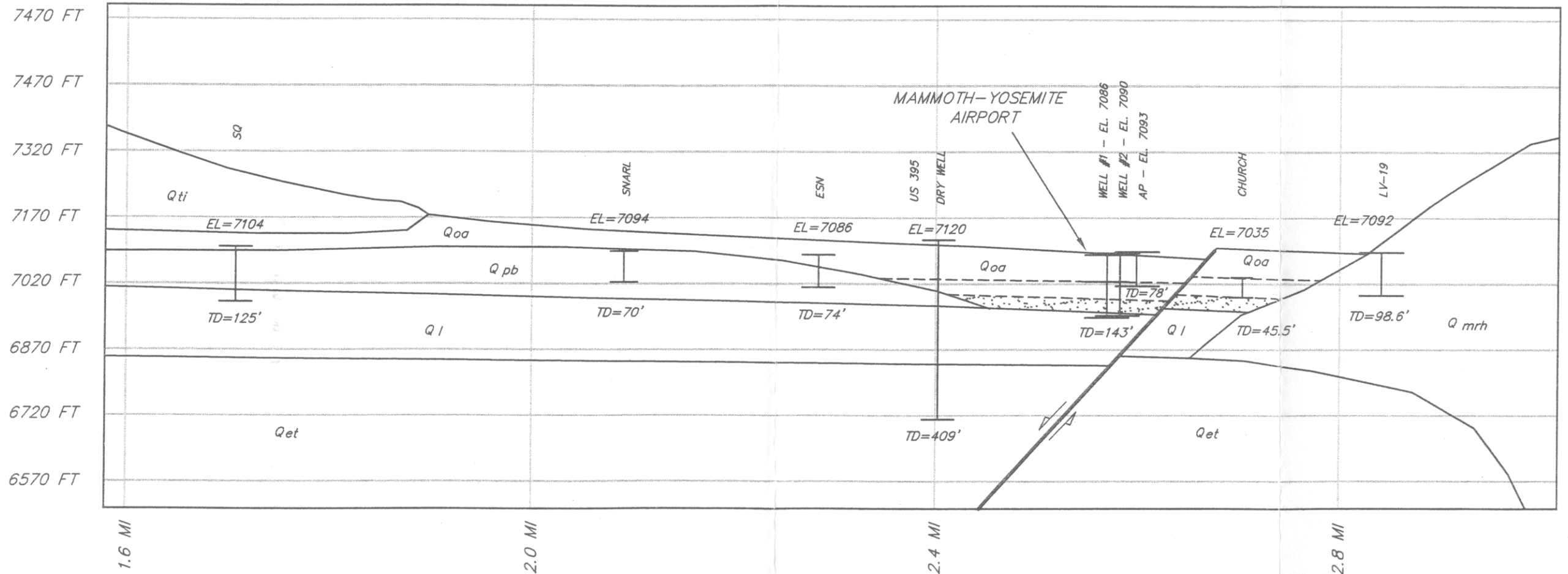
- Qal YOUNGER ALLUVIUM
- Qsc SANDSTONE AND CONGLOMERATE
- Qti GLACIAL TILL (TIOGA STAGE)
- Ql LACUSTRINE (LAKE) SEDIMENTS
- Qoa OLDER ALLUVIUM
- Qmrh RHYOLITE OF HOT CREEK (DOE RIDGE)
- Qpb PORPHYRITIC TRACHYBASALT
- Qet EARLY TUFF (POST CALDERA)
- Qof OLDER ALLUVIAL FAN DEPOSITS
- Qbt BISHOP TUFF
- Pzms PALEOZOIC METASEDIMENTARY MOUNT MORRISON ROOF PENDANT
- HILTON CREEK/INTRA-CALDERA FAULTS (ARROWS INDICATE RELATIVE MOVEMENT)

AQUIFER FOR WELL #1

ELEVATION ABOVE SEA LEVEL



ELEV.



MAMMOTH - YOSEMITE AIRPORT
WELL #1 PUMP TEST STUDY

GEOLOGIC CROSS SECTION A-A'

DCB NO.
469.4
AIRGEO.DWG

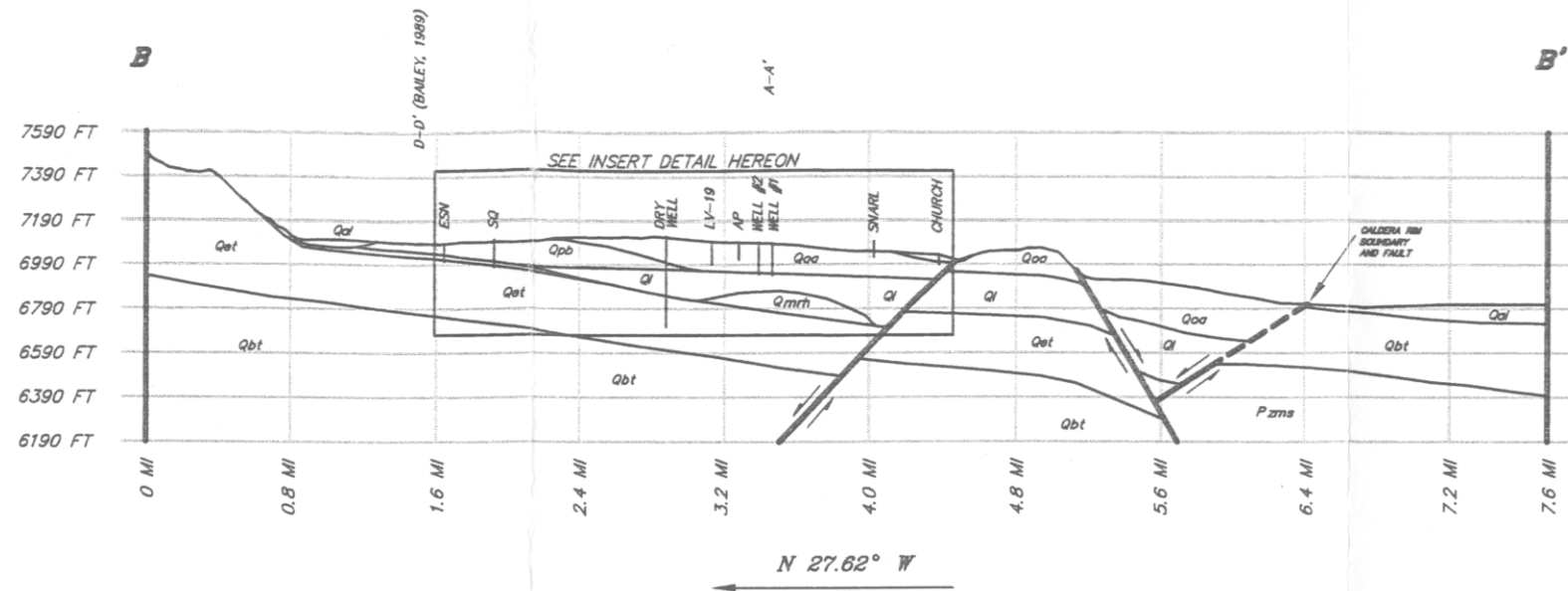
trud/holmes associates

FIGURE 2

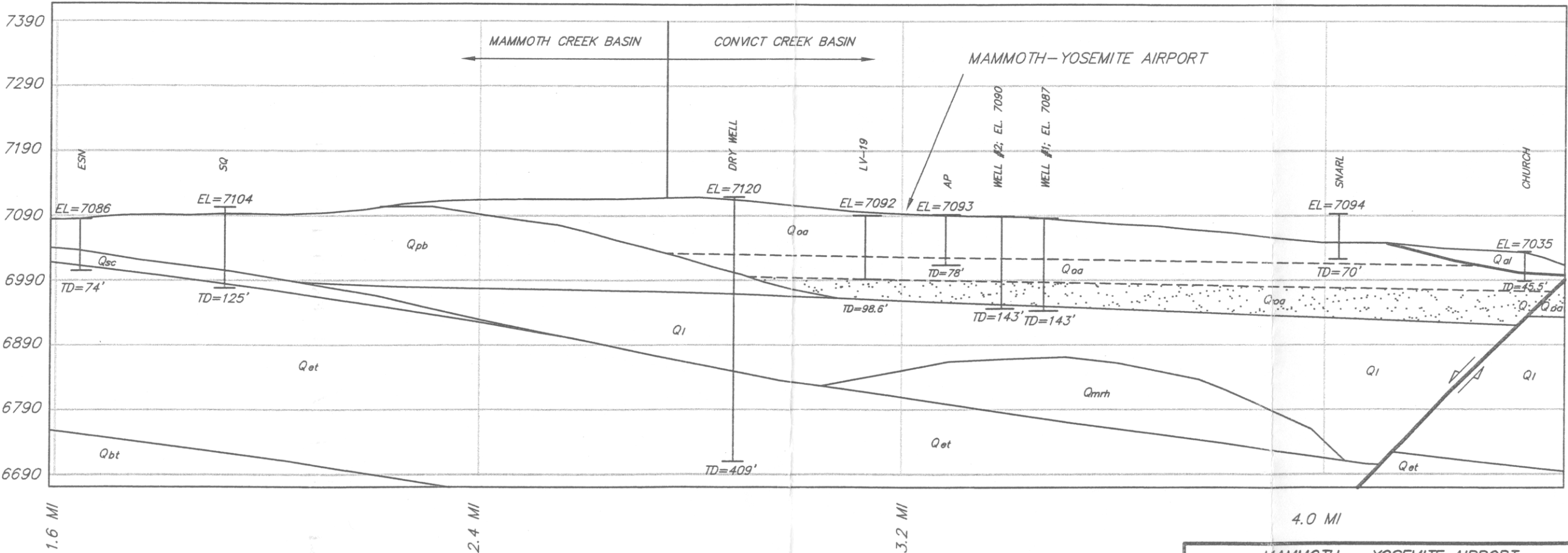
LEGEND

- Qal YOUNGER ALLUVIUM
- Qsc SANDSTONE AND CONGLOMERATE
- Qti GLACIAL TILL (TOGA STAGE)
- Ql LACUSTRINE (LAKE) SEDIMENTS
- Qoa OLDER ALLUVIUM
- Qmrh RHYOLITE OF HOT CREEK (DOE RIDGE)
- Qpb PORPHYRITIC TRACHYBASALT
- Qet EARLY TUFF (POST CALDERA)
- Qof OLDER ALLUVIAL FAN DEPOSITS
- Qbt BISHOP TUFF
- Pzms PALEOZOIC METASEDIMENTARY MOUNT MORRISON ROOF PENDANT
- HILTON CREEK/INTRA-CALDERA FAULTS (ARROWS INDICATE RELATIVE MOVEMENT)

AQUIFER FOR WELL #1



ELEV.
(FT.)



MAMMOTH - YOSEMITE AIRPORT
WELL #1 PUMP TEST STUDY

GEOLOGIC CROSS SECTION B-B'

JOB NO.
469.4
DWG
ARRGEO.DWG

trud/holmes associates

FIGURE 3

Attachment D
Draft Spill Prevention, Control and Countermeasure Plan

Spill Prevention, Control, and Countermeasure Plan

Facility:

Mammoth Yosemite Airport

Physical Location:

6 miles East of MAMMOTH LAKES, CA

Adjacent U.S. Highway 395

Facility Contact and Phone Number:

Bill Manning, Airport Manager

(760)-934-3813

Date:

March 2002

Summary

- | | |
|--|---|
| 1. Name and Location of Facility | Mammoth Yosemite Airport
U.S. Highway 395, North Airport Road
Mammoth Lakes. California 93546 |
| 2. Name of Operator | Town of Mammoth Lakes |
| 3. Name of Person in Charge of Facility | Bill Manning
Airport Manager
Telephone: (760) 934-3813 (daytime)
(760) 924-3326 (home) |
| 4. Name and Telephone of Person for Oil Spill Prevention at facility | Bill Kerns
Telephone: (760) 934-3813 (daytime)
(760) 935-4950 (home) |
| 5. Nearest Navigable Waters | 1. Hot Creek, one half mile north of the Airport.
2. Convict Creek, one half mile south of the Airport. |
| 6. Possible Spill Sources | <p>The possible sources of spills of oil or other hazardous substances are limited at the Mammoth Yosemite Airport. The Fixed Base Operator maintains above ground aviation fuel on the field. There is a possibility of a fuel spill of aviation and automobile gasoline. The location of these fuel tanks is shown on the attached Exhibit.</p> <p>There is also mechanical work done to aircraft on the field that could result in the spillage of a small amount of engine motor oil.</p> <p>No other use of fuel or other hazardous materials occurs on the Airport.</p> |
| 7. Distances from Mammoth Yosemite Airport | 1. Nearest Hospital: Mammoth Hospital, six miles
2. Nearest Fire Department: Mammoth Lakes Fire Protection District, six miles. Long Valley Fire Protection District, seven miles.
3. Nearest Hazmat Team: No Team in area, contact Long Valley Fire Protection District. |
| 8. Spill Prevention and Control Equipment available at the Airport. | 1. Shovels: 8
2. Loaders: 2 |

SPCC PLAN REVIEW - 40 CFR 112.5(b)

A review and evaluation of the SPCC plan is completed at least once every three years. All substantive amendments to the plan are certified by a registered professional engineer in accordance with §112.3(d). Evidence of these reviews and applicable certifications is recorded in the table below. [Note: Administrative modifications are made, as appropriate, to ensure the accuracy of plan information in response to modifications in the assignment of personnel or contact information (e.g., telephone numbers).]

Date	Reason for Review	SPCC Coordinator's Name and Initials	Professional Engineer Name and Initials

MANAGEMENT APPROVAL - 40 CFR 112.7

This SPCC plan is fully approved by the management of the Airport, which will provide all the necessary funds and man-power to fully implement the plan as it is described in this document.

NAME**DATE**

1. Introduction

This section provides background information, presents the objectives of the plan, explains when amendments/updates to the plan need to be performed, lists the Plan Coordinator, states the location of the Plan and provides for Plan certifications.

1.1 Background

This document presents the Spill Prevention, Control, and Countermeasure (SPCC) Plan for the Mammoth Yosemite Airport. The Airport is owned and operated by Town of Mammoth Lakes. The SPCC Plan (the plan) is a requirement of the Oil Pollution Act of 1990 (OPA), which mandates a spill response system for the proper handling, storage, and transportation of oil in the event a discharge occurs. OPA is authorized under Section 311 of the Clean Water Act (CWA). The regulations pertaining to preparing a SPCC Plan are found at Title 40 Code of Federal Regulations (CFR), Part 110 and 112 (40 CFR § 112). (See **Appendix A** for a copy of the regulations.)

A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States. This plan establishes procedures, methods, and equipment and other requirements to prevent discharge of oil from onshore facilities into or upon the navigable water of the United States. Owners or operators of facilities that, due to their location, could reasonably be expected to discharge oil in harmful quantities into or upon the navigable waters of the United States must prepare a SPCC Plan. Oil is defined as oil of any kind or in any form including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil. Oil in harmful quantities results when the discharge causes: (40 CFR § 110.3.)

- Violations of applicable water quality standards. The water quality standards are discussed in Section 2.2, “NPDES Permit” of this Plan.
- A film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

The Town of Mammoth Lakes has prepared this Spill Prevention, Control, and Countermeasure Plan as part of the environmental analysis done for the improvements at the Airport. Mammoth Yosemite Airport is not required to prepare a Facility Response Plan. (see Appendix B - Determination of Substantial Harm).

Two 12,000 gallons above ground fuels tanks are presently located at the Airport as shown on **Exhibit 1**. Existing Airport facilities were designed to accommodate an additional 12,000 gallons tank at the Airport. This would result in a total fuel storage capacity of 36,000 gallons.

Section 3, “Spill Prevention and Containment” explains the spill prevention procedures employed by the Airport, and Section 4, “Spill Response” explains the Town’s response procedures in the event of a spill and discusses when federal and State agencies need to be informed in the event of a spill.

1.2 Objectives of the Plan

This SPCC Plan is intended to meet or exceed the OPA requirements for the preparation of an SPCC Plan for the facilities at the Airport.

1.3 Plan Amendments and Updates

The SPCC Plan needs to be amended whenever there is a change in facility design, construction, operation or maintenance, which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States. Also, a complete review and evaluation of the SPCC Plan must be performed once every three years. (40 CFR § 112.5.)

Also, if the facility discharges more than 1,000 gallons of oil into the surrounding waters in a single spill event, or discharges oil in harmful quantities, as defined in 40 CFR Part 110, in two spill events reportable under Section 311 (b)(5) of the CWA within a 12 month period, the facility must submit within 60 days of the event to the Lahontan Regional Water Quality Control Board (RWQCB) and U.S. Environmental Protection Agency detailed information about the nature and cause of the spill. (40 CFR § 112.4.)

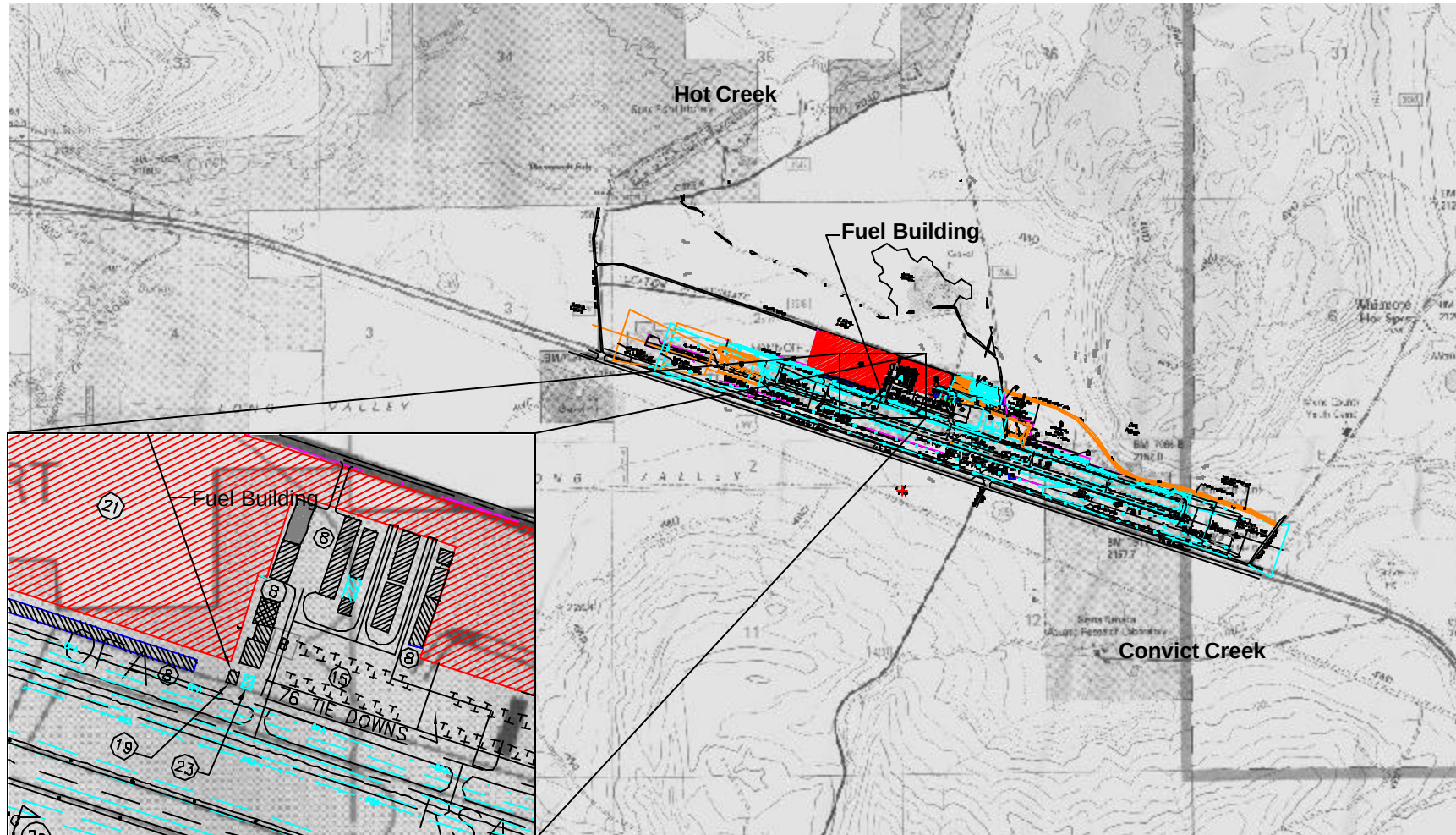
1.4 Plan Coordination

A person needs to be designated who is accountable for oil spill prevention. The Airport Manager of Mammoth Yosemite Airport will be the Spill Coordinator. The Spill Coordinator has the following responsibilities as part of the SPCC Plan implementation:

- prevent the willful discharge of oil from any facilities or vehicle onto the land or into surrounding waterways;
- keep an adequate amount of absorbent materials at potential spill sites for containment purposes;
- ensure that all waste materials from spills are disposed in compliance with local, State, and federal regulations;
- ensure compliance with federal SPCC Plan requirements;
- ensure that any hazardous substance spill from the Airport that exceeds reportable quantities (RQ) is reported to the appropriate State and federal authorities;
- ensure that contractors are available that can support the Long Valley Fire Protection District, if needed, during any spill that may occur at the Airport; and
- conduct personnel briefing twice a year to review spill events or failures.

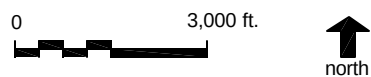
1.5 Plan Locations

The SPCC Plan is located at the office of the Airport Manager and Fixed Base Operator (FBO) facilities.



Source: U.S. Geological Survey; Mammoth Lakes Airport Expansion Subsequent EIR and Updated EA, March 1997.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1



Mammoth Yosemite Airport Area Fuel Storage Locations

2. Facility Description

The purpose of this section is to explain drainage systems at Mammoth Yosemite Airport, determine potential sources of spills and discuss how a spill might be transferred to a surrounding waterway. A review of historical spills is also provided.

2.1 Site Drainage

There are no bodies of water on Airport property. There are, however, three surface drainage systems in the vicinity of the Airport. These drainage systems are depicted in **Exhibit 2**. The area west of the Airport is within the western portion of the Mammoth Creek/Hot Creek watershed of the Mammoth Basin drainage system. The area south of the Airport is within the Convict Creek watershed. The drainage divide between the Mammoth Basin and Convict Creek watersheds passes through the westerly portion of the Airport. The third drainage divide lies east of Doe Ridge and flows into Crowley Lake.

The lower reaches of the Mammoth Basin drainage system are significantly affected by rising geothermal ground waters, which include mixed hot-cold spring discharges at the Hot Creek Fish Hatchery and numerous hot springs within the Hot Creek Gorge. The Convict Creek drainage system appears to contain only cold groundwater elements. Studies conducted by the California State Department of Water Resources and U.S. Geological Service (USGS) indicate that geological formations located north of the Airport confine a relatively extensive cold groundwater basin.

The two nearest navigable waters to the Airport as shown on Exhibit 1 are the following:

1. Hot Creek, one half mile north of the Airport.
2. Convict Creek, one half mile south of the Airport.

2.2 NPDES Permit

Mammoth Yosemite Airport operates under NPDES Permit Number 6B26S003690 granted by Regional Water Quality Board. A new permit would be needed for the planned improvements at the Airport.

2.3 On-Site Activities of Concern

Following are some of the activities, which can be the cause of a potential spill.

- aircraft fuel storage, transport, transfer and fueling operations
- non-aircraft fuel handling and storage
- runway deicer/anti-icer storage, handling, and transport
- used oil collection and storage from maintenance activities
- waste oil storage handling

The potential impacts of spills generated by the activities described above vary significantly. The potential impacts determined by factors such as the types and quantities of materials involved and the location of spills.

2.4 Potential Sources of Spills

2.4.1 Storage Tanks

Currently, there are two above ground 12,000 gallons fuel tanks at Mammoth Yosemite Airport as shown in **Exhibit 3** and **4**. One additional 12,000 gallons tank can be accommodated at the existing fuel tank enclosure.

The Aboveground Storage Tanks (AST) are situated on a concrete pad located to the east of the six existing hangars. The ASTs are of double wall design/construction, and surrounded by a secondary containment system and a spill prevention system that exceeds all permit requirements.

2.4.2 Hazardous Substances

The storage and use of hazardous substances can present instances when spills can occur that could be released into the surrounding waterways.

2.4.3 Transfer Operations

The transfer of oil and fuel may create a situation where a spill could occur. Currently, the fuel supplier to the Airport utilizes an 8,000-gallon transport that makes deliveries to the Airport approximately two times a month. After the implementation of the proposed project a 14,000 gallon transport is expected to make 1 to 2 daily round trips in the future to satisfy the daily fuel uplift requirements. The current aircraft fueling plan calls for a capacity of 20,000 to 24,000 gallons stored in a combination of existing above ground storage tanks and trucks. Airfield fuel trucks would deliver fuel from the storage areas to the aircraft.

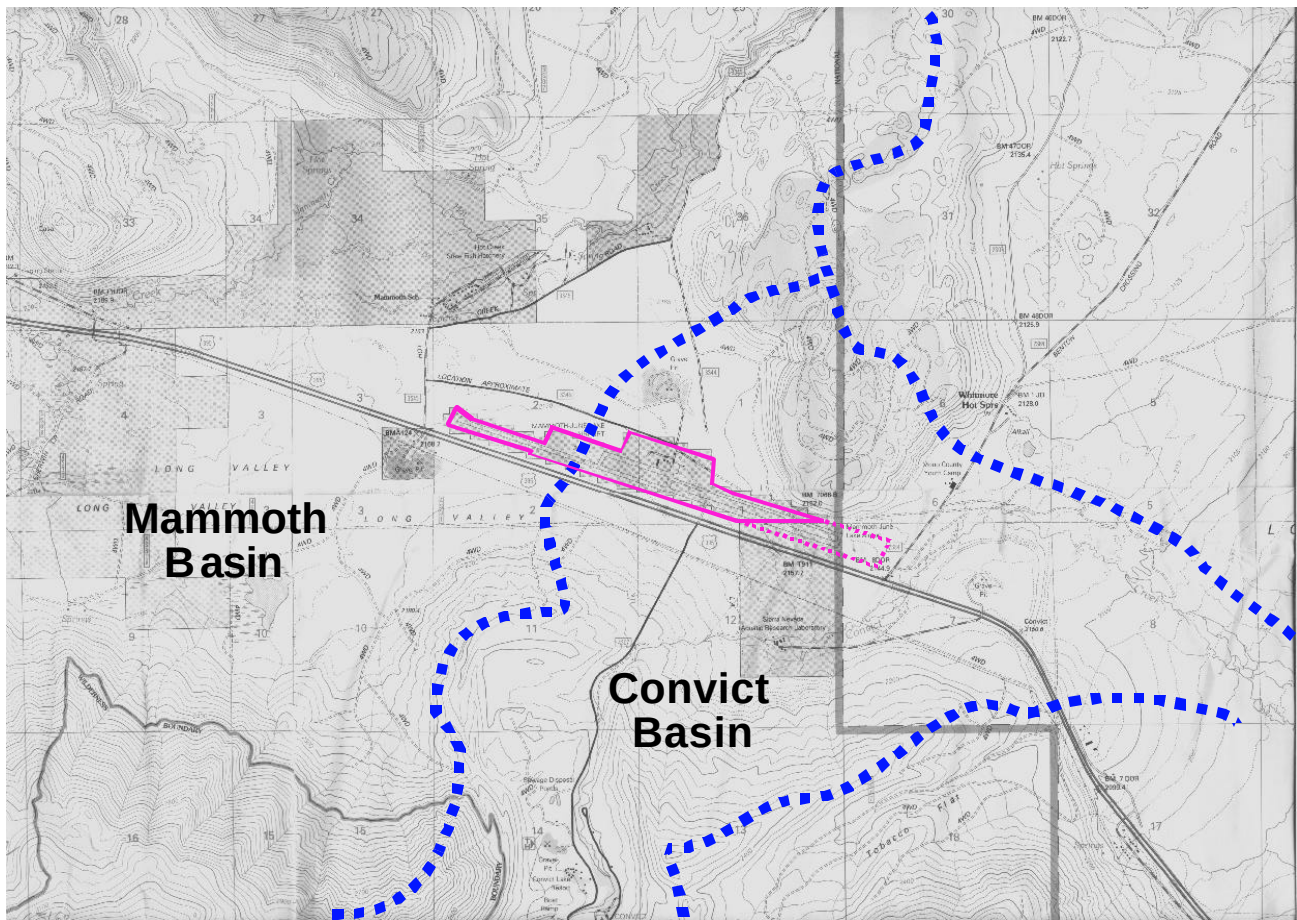
2.5 Spill Pathways & Scenarios

Scenarios were developed as part of this plan to suggest how oil might be released into the surrounding waterways and also to develop a spill response plan. The drainage system in the vicinity of the Airport was described in Section 2.1 “Site Drainage”. The various scenarios that could result in spills are described as: Storage Tank Operations, Airplane Accident, Vehicle Accident, or Hazardous Substance Storage or Transfer. These scenarios are more fully discussed below:

2.5.1 Storage Tank Operations

Storage tank operations include filling or removing fuel or hazardous substances to or from a storage tank. It is during these operations that a spill may occur. Tanks could also rupture or the associated equipment and piping could be subject to failure, which can result in a release. All aboveground storage tanks at the Airport are within double walls therefore a spill or release from these tanks would not reach the water bodies near the Airport. The fuel farm is surrounded by a modern secondary containment system that reduces the chances of any potential spill reaching the navigable waters of United States.

Table 1 shows various potential spill volumes and rates from the fuel storage tanks.



Legend

- ■ ■ ■ Drainage Divide
- Existing Airport Property Line
- Proposed Airport Property Line

Source: Mammoth Lakes Airport Expansion, Subsequent EIR and Updated EA, March, 1997.
Prepared by: Ricondo & Associates, Inc.

Exhibit 2



Scale 1"=5,000'

Mammoth Yosemite Airport Area Drainage System

Table 1**Potential Spill Volumes and Rates for Above Ground Storage Tanks**

Type of Major Failure	Max. Possible Quantity Released	Rate of Flow
Complete failure of a full tank\	12,000 gallons (largest tank size)	Instantaneous
Partial failure of a full tank	1 to 12,000 gallons	Gradual to instantaneous
Tank overfill while transferring to and from truck	1 to many gallons	10 to 100 gallon per minute

Source: Mammoth Yosemite Airport and Super tanks, Inc.
 Prepared By: Ricondo & Associates, Inc.

2.5.2 Airplane Accident

A crash on a runway or taxiway could present a problem with aviation fuel being spilled. The worst case scenario is based on the largest aircraft being fully loaded with fuel and losing half the contents of its tanks. The largest aircraft that would be used at the Airport would be a Boeing 757. These planes hold approximately 11,466 gallons of fuel. (Boeing Commercial Airplane Group, *757-200 Airplane Characteristics for Airport Planning*, October 1994.) If half of the tanks were to puncture and loose all of the fuel, approximately 5,700 gallons of jet fuel would be spilled onto the airfield.

The possibility of an aircraft accident at Mammoth Yosemite Airport is very low. Any such occurrences at on the apron area would be contained in the apron drainage system.

2.5.3 Vehicle Accident

A vehicle on the Airport could potentially have its tank rupture or leak as a result of valve or fitting failure or leaking hoses. The type of fuel that could be spilled from a vehicle tank could include: gasoline, diesel, ethylene glycol, or propane. The worst case scenario is that a fully loaded truck delivering product would be involved in an accident that would result in a spill of all of the contents of the truck. Currently the Airport is served by a 8,000 gallon transport.

2.5.4 Hazardous Substance Storage or Transfer

Currently the following items are stored at the Airport in addition to the fuel in the storage tanks.

- 100 gallons of de-icer fluid
- 50 gallons of tractor hydraulic/motor oil

For the most part all of the substances are stored in buildings in locations where the substance would not reach exposed soil in and around the Airport

2.6 Spill History

The spill history lists any spills that have occurred at Mammoth Yosemite Airport. A spill event is defined as a discharge of a “harmful quantity” into the navigable waters of the United States. (40 CFR § 112.1 (b)(1).) **Table 2** provides a list of previous spills at Mammoth Yosemite Airport, action taken to reduce the impacts of the spill and prevent future occurrences.

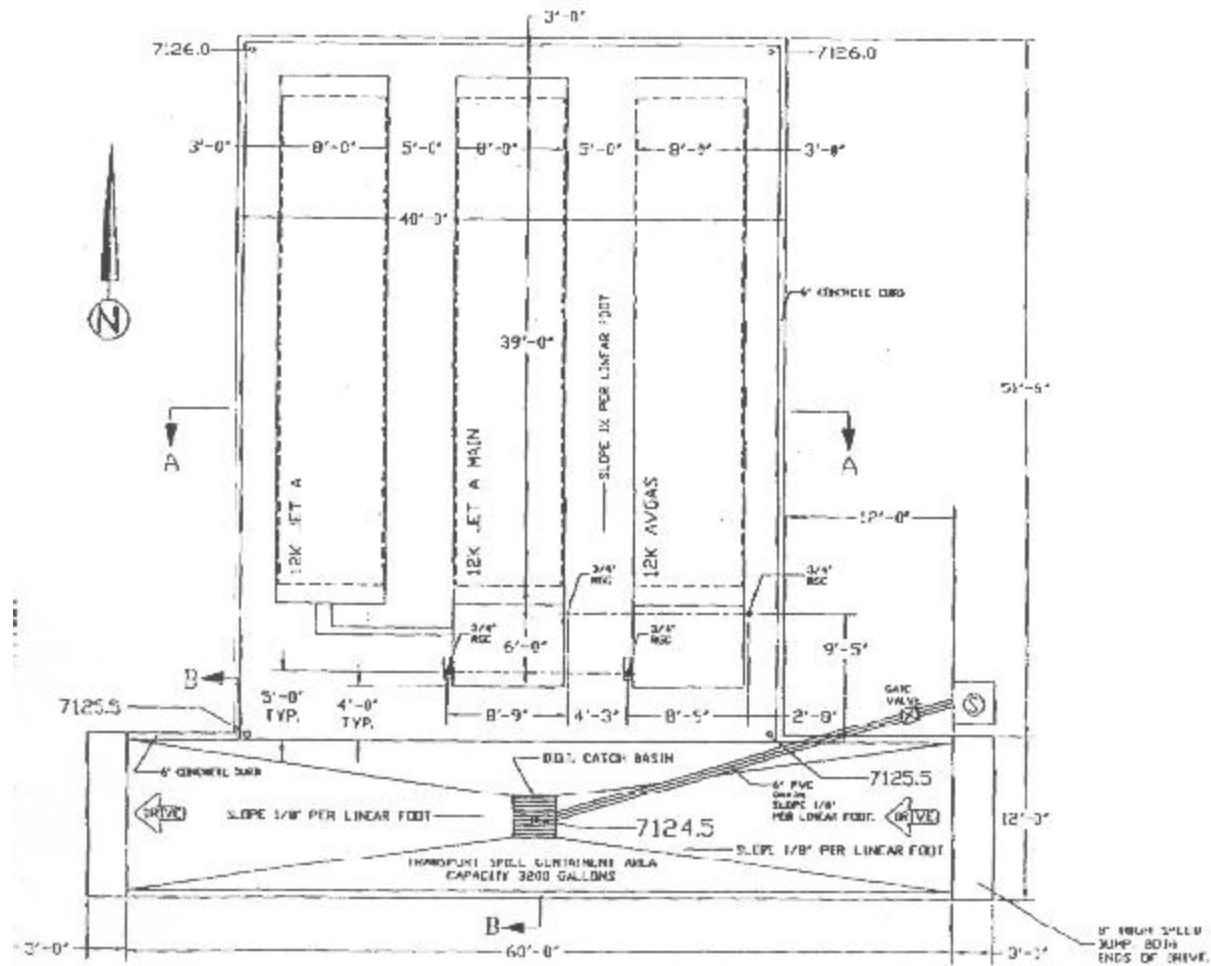
Table 2

Spill History at Mammoth Yosemite Airport

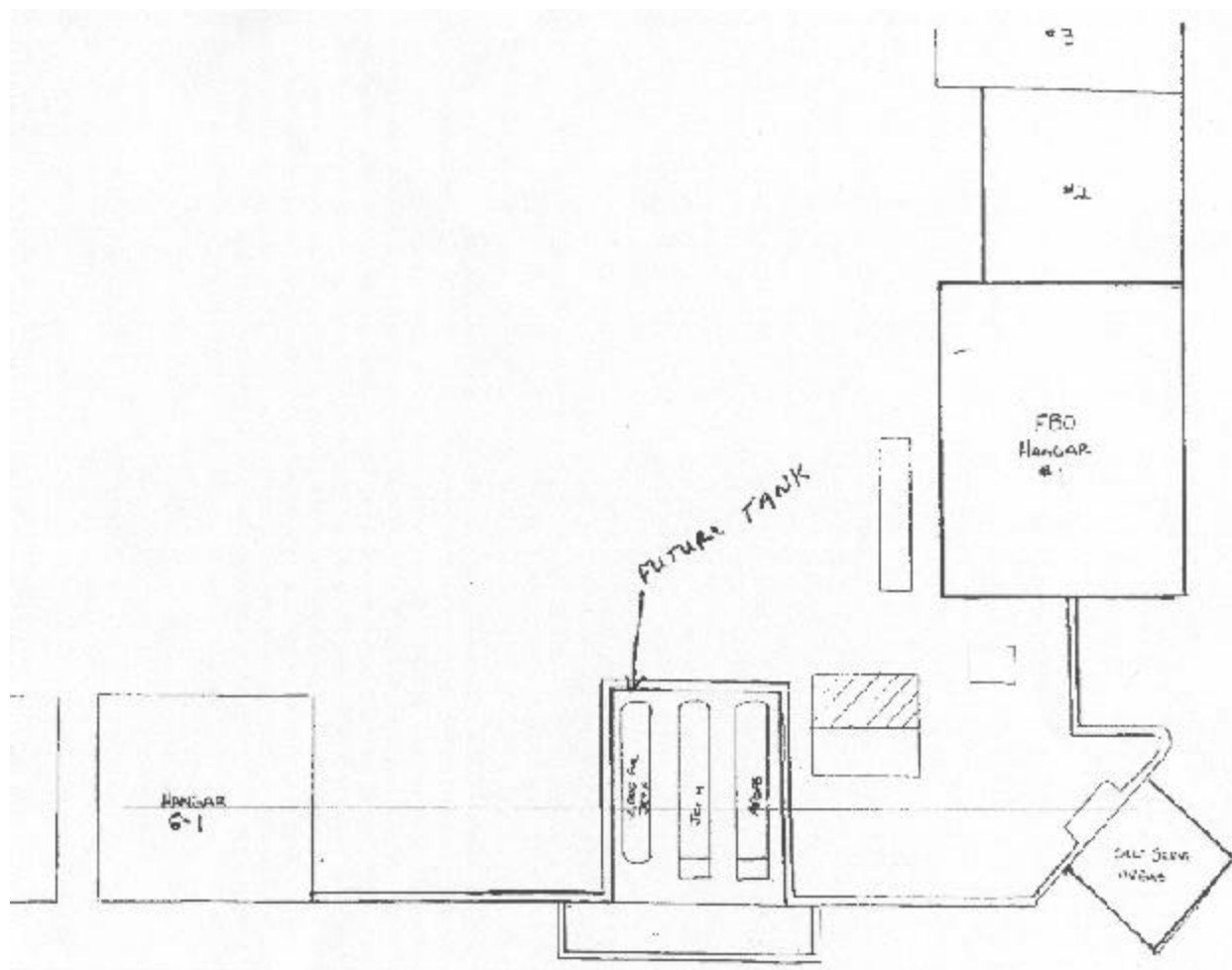
Date	Time	Estimated Amount	Material Spilled	Company (s) Involved	Action Taken	Remarks
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Source: Mammoth Yosemite Airport
Prepared By: Ricondo & Associates, Inc.

There have been no known incidents of spills at the Airport in the last couple of years. Several Underground Storage Tanks (UST) left over from military operations at the Airport were removed from the Airport facility and site characterizations/remedial investigations performed on the soil under and around the former USTs. The removal of these USTs was conducted in accordance to the direction of the Mono County Environmental Health Department, the lead agency for the remediation projects at the Airport property. No soil contamination was noted in the former area containing the four USTs situated to the east of the terminal building. Contaminated soil was noted in the area of the three former USTs situated to the west of the terminal building. Contaminated soil was removed from this location. The contamination did not impact the ground water in and around the Airport.



not to scale



Source: SuperSafe Tanks, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit 4

not to scale

Fuel Storage Tanks Location

3. Spill Prevention and Containment

This Section will discuss the spill prevention equipment and methods of containment in case of a spill or accidental release of hazardous substances maintained at Mammoth Yosemite Airport.

3.1 Equipment for Spill Prevention

The Airport management conducts annual checks of the fuel tanks to prevent potential leaks due to corrosion. The following measures have been put in place during the construction and placement of the tanks to prevent fuels reaching the navigable waters of United States.

Deicing, when required, would generally be accomplished by the use of glycol diluted to a 50 percent solution by water. All aircraft would be deiced at the same location on the planned commercial airline apron. The area on which the aircraft would park during the deicing operations would be graded such that all of the water from this area would be collected at one drop inlet. The pipes from this inlet would be constructed such that in normal operations, without any deicing fluid, the stormwater runoff is discharged into the oil/water separator. When deicing operations are being performed, the valves would be set such that all of the deicing fluids would be diverted to a holding tank. The runoff would be collected in the holding tank and removed from the site and suitably disposed.

The Airport has eight shovels and two loaders that would be used to dispose of any soil affected by a spill. In the event of a spill the first step undertaken to contain the spills would be to place wooden planks to reduce penetration of oil into the ground water, the second step would be remove the affected soil and replace it with new soil.

3.2 Personnel Training

OPA requirements stipulate that the owner or operator are responsible for properly instructing personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution laws, rules and regulations. (40 CFR § 112.7 (e)(10)(i).) Further, spill prevention briefings for operating personnel need to be conducted frequently enough so that personnel have an adequate understanding of the SPCC Plan. The briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures. (40 CFR § 112.7 (e)(10)(iii).) The SPCC Spill Plan Coordinator will conduct briefings twice a year to review spill events or failures, malfunctioning components, and recently developed precautionary measures.

Airport and FBO employees are not trained to respond to hazardous substance spills. They may take immediate actions to lay down spill control equipment to prevent the hazardous substances from going into the ground water. Any additional response to a spill must be undertaken by trained personnel. Any spill greater than 10 square feet in area shall be responded by the Long Valley Fire Protection District (LVFPD). In the event that the spill is beyond the capabilities of the LVFPD a fully-trained emergency response team would be called upon.

However, all Airport and FBO employees who have the potential to witness a spill need to have sufficient awareness training to recognize that an emergency response situation exists and understand Plan procedures. It is expected that the Airport Manager or his designee would be the persons managing the spill control efforts and notifying the appropriate local, State, and federal agencies.

3.3 Security

All Airport facilities will be designed and constructed to conform with current FAA security requirements. 14 CFR Part 107 “Airport Security,” Section 107.3, requires the operator of an airport serving scheduled passenger operations of carriers required to have a security program, and to produce a written security program to be approved by the Director of Civil Aviation Security that provides for “the safety of persons and property traveling in air transportation and intrastate air transportation against acts of criminal violence and aircraft piracy.”

4. Spill Response

This section details the actions that must take place when a spill occurs, including responsibilities, spill notification, spill control and countermeasures, and clean up and disposal.

1. The Airport Manager or his designee will report any spills to the Lahontan Regional Water Quality Board ((761) 241-7365) within 48 hours. A written report will be provided within 14 days. Form A, which will be used for reporting the spills is attached.
2. The Airport Manager or his designee will also immediately notify the following State of California, the government of United States, and local emergency agencies providing them with all the information included in Form A.
 - a. The United States Coast Guard and the U.S. Environmental Protection Agency will be notified through the National Response Center (in accordance with federal law) if the hazardous material is likely to find its way into a navigable waterway or coastline. The telephone number of the NRC (Coast Guard) in Washington DC is (800) 424-8802. The EPA 24-hour emergency telephone number for oil spills/hazardous waste spills is (916) 262-1621.
 - b. The California State Emergency Service/Disaster Agency, telephone number is (916) 464-3271.
 - c. The local Long Valley Fire Protection District (LVFPD) will be contacted at (760) 935-4545 for emergency assistance.
3. Any measure to mitigate the adverse effects of the spills will be directed and coordinated by these federal, State, and local emergency agencies.
4. All steps would be taken to reduce the extent of the spill by closing appropriate valves, if possible.
5. If any spills endanger human life then life saving protection will be provided by LVFPD and Mono County Paramedics.
6. The Airport Manager or his designee will also develop a sampling plan to monitor the effectiveness of the spill cleanup after it has been contained and treated by the fire department.

Form A – Spill Reporting Form

1. Name of the person reporting the Spill: _____
2. Date: _____
3. Time of observation of Spill: _____
4. Location of Spill: _____
5. Identity of material spilled: _____
6. Probable source of Spill: _____
7. Estimate time of Spill: _____
8. Volume and duration of Spill: _____
9. Present and anticipated movement of Spill: _____
10. Weather conditions at the scene of Spill: _____
11. Personnel at the scene of Spill: _____
12. Action initiated by personnel at the scene of Spill: _____
13. Agencies contacted: _____
- FOLLOW UP:**
14. Disposal summary: _____
15. Comments: _____

Appendix A

40 CFR, Part 110 – Discharge of Oil and 40 CFR, Part 112 – Oil Pollution Prevention

§ 110.11

tion Contingency Plan, 40 CFR part 300, subpart E. (Approved by the Office of Management and Budget under the control number 2050-0046)

§ 110.11 Discharge at deepwater ports.

- (a) Except as provided in paragraph (b) below, for purposes of section 18(m)(3) of the Deepwater Port Act of 1974, the term "discharge" shall include but not be limited to, any spilling, leaking, pumping, or dumping into the marine environment of quantities of oil that:

- (1) Violate applicable water quality standards; or
- (2) Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

(b) For purposes of section 18(m)(3) of the Deepwater Port Act of 1974, the term "discharge" excludes:

- (1) Discharges of oil from a properly functioning vessel engine, (including an engine on a public vessel), but not discharges of such oil accumulated in a vessel's bilges (unless in compliance with MARPOL 73/78, Annex 1); and
- (2) Discharges of oil permitted under MARPOL 73/78, Annex 1.

PART 112—OIL POLLUTION PREVENTION

Sec.

112.1 General applicability.

112.2 Definitions.

112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

112.4 Amendment of SPCC Plans by Regional Administrator.

112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

112.6 Civil penalties for violation of oil pollution prevention regulations.

112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

112.20 Facility response plans.

112.21 Facility response training and drills/exercises.

(i) Onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(ii) Equipment or operations of vessels and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

- (i) The underground buried storage capacity of the facility is 42,000 gallons or less of oil; and
- (ii) The storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(c) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an off-

shore facility from compliance with other Federal, State or local laws.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§ 112.2 Definitions.

For the purposes of this part:

Adverse weather means the weather conditions that make it difficult for response equipment and personnel to clean up or remove spilled oil, and that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part, as appropriate, ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment are intended to function.

Compler means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act.

Contract or other approved means: (1) A written contractual agreement with an oil spill removal organization(s) that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization(s) that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; and/or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator. *Discharge* includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term *discharge* shall not include any discharge of oil which is authorized by a

permit issued pursuant to section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 *et seq.*, 33 U.S.C. 1251 *et seq.*).

Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness, and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

Maritime extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in § 112.20 or in a specific plan approved by the Regional Administrator.

The term **navigable waters** of the United States means navigable waters as defined in section 502(7) of the FWPCA, and includes:

ignee, in and for the Region in which the facility is located.

Spill event means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR part 110.

Transportation-related and non-transportation-related as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

[38 FR 34165, Dec. 11, 1973, as amended at 58 FR 45039, Aug. 25, 1993; 59 FR 34097, July 1, 1994]

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not

later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with § 112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare

and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraph (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) *Extensions of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraph (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

- (i) A complete copy of the SPCC Plan, if completed;
- (ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;
- (iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to

paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of § 112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of § 112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§ 112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with § 112.3, whenever a facility subject to § 112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator within 60 days from the time such facility becomes subject to this section, the following:

- (1) Name of the facility;
- (2) Name(s) of the owner or operator of the facility;
- (3) Location of the facility;
- (4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an

adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to § 112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendments of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written infor-

mation, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12658, Mar. 26, 1976]

§ 112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with § 112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore

lines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to § 112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with § 112.3(d).

§ 112.6 Civil penalties for violation of oil pollution prevention regulations.

(a) Applicability of section. This section shall apply to violations specified in paragraph (b) of this section which occurred prior to August 18, 1990.

(b) Owners or operators of facilities subject to § 112.3 (a), (b) or (c) who violate the requirements of this part 112 by failing or refusing to comply with any of the provisions of § 112.3, § 112.4 or § 112.5 shall be liable for a civil penalty of not more than \$5,000 for each day such violation continues. Civil penalties shall be imposed in accordance with procedures set out in part 114 of this subchapter D.

[57 FR 52705, Nov. 4, 1992]

§ 112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not

yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(i) Onshore facilities:
(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil;

(ii) Curbing, culverting, gutters or other drainage systems;

(iv) Weirs, booms or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds;

(vii) Sorbent materials.

(2) Offshore facilities:

(i) Curbing, drip pans;

(ii) Sumps and collection systems.

(d) When it is determined that the installation of structures or equipment, listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters, is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever

techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) Bulk storage tanks (onshore), (excluding production facilities). (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is

§ 112.7

pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore).* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient, to prevent discharges of oil into the navigable waters of the United States. Where drains and

sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an ex-

tended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

§ 112.20 Facility response plans.

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101-380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Adminis-

trator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section; and

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s)

the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

APPENDIX B TO PART 112—MEMORANDUM OF UNDERSTANDING AMONG THE SECRETARY OF THE INTERIOR, SECRETARY OF TRANSPORTATION, AND ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

PURPOSE

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311 (j)(1)(C), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101-380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

BACKGROUND

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(i) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term "offshore facility" to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

RESPONSIBILITIES

Pursuant to section 2(l) of E.O. 12777, DOI redelegates, and EPA and DOT agree to assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term "coast line" shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean "the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters."

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.
2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.
3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

EFFECTIVE DATE

This MOU is effective on the date of the final execution by the indicated signatories.

LIMITATIONS

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.
2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

MODIFICATION AND TERMINATION

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.

Bruce Rabbitt,

Secretary of the Interior.

Dated: December 14, 1993.

Frederico Peña,

Secretary of Transportation.

Dated: February 3, 1994.

Carol M. Browner,

Administrator, Environmental Protection Agency.

[59 FR 34102, July 1, 1994]

APPENDIX C TO PART 112—SUBSTANTIAL HARM CRITERIA

1.0 Introduction

The flowchart provided in Attachment C-1 to this appendix shows the decision tree with the criteria to identify whether a facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines." In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 Definitions

1.1.1 *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2 *Higher Volume Port Areas* include

- (1) Boston, MA;
- (2) New York, NY;
- (3) Delaware Bay and River to Philadelphia, PA;
- (4) St. Croix, WI;
- (5) Pascagoula, MS;
- (6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;
- (7) Louisiana Offshore Oil Port (LOOP), LA;
- (8) Lake Charles, LA;
- (9) Sabine-Neches River, TX;
- (10) Galveston Bay and Houston Ship Channel, TX;
- (11) Corpus Christi, TX;
- (12) Los Angeles/Long Beach Harbor, CA;
- (13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;
- (14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;
- (15) Prince William Sound, AK; and
- (16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 *Inland Area* means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 90.740–90.850). The Inland area does not include the Great Lakes.

1.1.4 *Rivers and Canals* means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigating that have project depths of 12 feet or less.

2.0 Description of Screening Criteria for the Substantial Harm Flowchart

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 *Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil.* A non-transportation-related facility with a total oil storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 *Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* Any facility with a total oil storage capacity greater than or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DODNOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan. Facility owners or operators must determine the distance at which an oil spill could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities With a Total Storage Oil Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total storage capacity

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that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall not

ably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative of a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Frequency of past spills;

(ii) Proximity to navigable waters;

(iii) Age of oil storage tanks; and

(iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

(1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

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- (i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;
- (ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal, State, and local authorities providing response personnel and equipment can be ensured;
- (iii) A description of information to be passed to response personnel in the event of a reportable spill;
- (iv) A description of the facility's response equipment and its location;
- (v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
- (vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
- (vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of spilled oil; and
- (viii) A diagram of the facility.
- (2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.
- (3) *Information about emergency response.* The response plan shall include:
- The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

- Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;
- The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal, State, and local authorities providing response personnel and equipment can be ensured;
- A description of information to be passed to response personnel in the event of a reportable spill;
- A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
- A description of the facility's response equipment, the location of the equipment, and equipment testing;
- Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
- A diagram of evacuation routes; and
- A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:
 - Activate internal alarms and hazard and communication systems to notify all facility personnel;
 - Notify all response personnel, as needed;
 - Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
 - Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;
 - Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
 - Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect

- Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;
- The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal, State, and local authorities providing response personnel and equipment can be ensured;
- A description of information to be passed to response personnel in the event of a reportable spill;
- A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
- A description of the facility's response equipment, the location of the equipment, and equipment testing;
- Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
- A diagram of evacuation routes; and
- A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:
 - Activate internal alarms and hazard and communication systems to notify all facility personnel;
 - Notify all response personnel, as needed;
 - Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
 - Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;
 - Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
 - Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect

- Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;
- The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal, State, and local authorities providing response personnel and equipment can be ensured;
- A description of information to be passed to response personnel in the event of a reportable spill;
- A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;
- A description of the facility's response equipment, the location of the equipment, and equipment testing;
- Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;
- A diagram of evacuation routes; and
- A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:
 - Activate internal alarms and hazard and communication systems to notify all facility personnel;
 - Notify all response personnel, as needed;
 - Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
 - Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;
 - Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
 - Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect

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response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (1) or (2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of

the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

(59 FR 34098, July 1, 1994)

§ 112.21 Facility response training and drills/exercises.

(a) The owner or operator of any facility required to prepare a facility response plan under § 112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in § 112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 10, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable

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able subject to approval by the Regional Administrator.

(59 FR 34101, July 1, 1994)

APPENDIX A TO PART 112—MEMORANDUM OF UNDERSTANDING BETWEEN THE SECRETARY OF TRANSPORTATION AND THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) *Non-transportation-related onshore and offshore facilities* means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) *Transportation-related onshore and offshore facilities* means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for

adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such

that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore)—(i) Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraphs (e)(2)(iii) (B), (C), and (D) of this section. Accumulated oil on the

rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(1) Adequate tank capacity to assure that a tank will not overflow should a pumper/gauger be delayed in making his regular rounds.

(2) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(3) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(4) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports,

greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil spill from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.5 Facilities That Have Experienced Reportable Oil Spills in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons. A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that has experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 Certification for Facilities That Do Not Pose Substantial Harm

If the facility does not meet the substantial harm criteria listed in Attachment C-I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C-II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

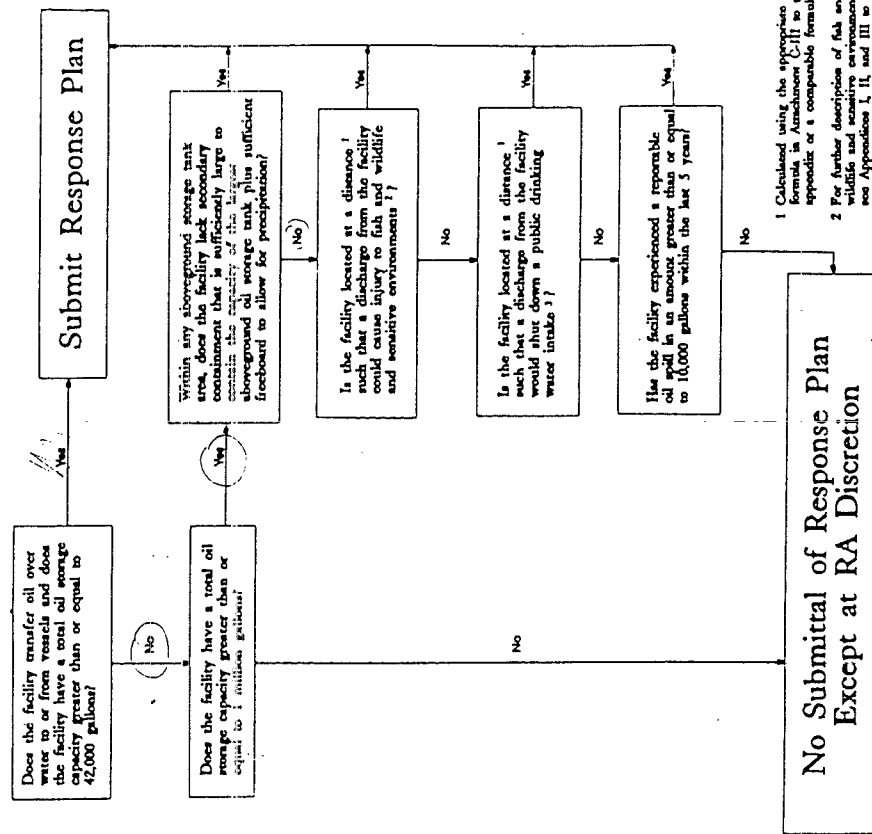
4.0 References

Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.
USCG IFR. (58 IFR 7353, February 5, 1993).
This document is available through EPA's rulemaking docket as noted in Appendix E to this part, section 10.

ATTACHMENTS TO APPENDIX C

Attachment C - I

Flowchart of Criteria for Substantial Harm



1 Calculated using the appropriate formula in Attachment C-II to this appendix or a comparable formula.
2 For further descriptions of fish and wildlife and sensitive environments, see Appendices I, II, and III to DQ-001, the Guidance for Facility Owners and Operators for Facility Water and Sediment Sampling, Fish and Wildlife and Sensitive Environments (59 FR 14713, March 25, 1994) and the applicable Area Contingency Plan.

3 Public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Coefficient (for flood flow rates), n , can be determined from Table 1 of this attachment. The hydraulic radius, r , can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s , can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2 of this attachment.

1.6 Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Highways, Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate response levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in §112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$$d = v \times t \times c; \text{ where}$$

d : the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v : the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);

t : the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c : constant conversion factor 0.68 sec/mile/hr-ft (3600 sec/hr + 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$$v = 1.49/n \times r^{2/3} \times s^{1/2}; \text{ where}$$

v =the velocity of the river of concern (in ft/sec);

n =Manning's Roughness Coefficient from Table 1 of this attachment;

writing that an alternative formula was used.¹

1.3 A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in the flowchart in Attachment C-1 to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal-influenced water) applicable to the facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v , is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness

¹ For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

and that, based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature
Name (please type or print)
Title
Date

ATTACHMENT C-III—CALCULATION OF THE PLANNING DISTANCE

1.0 Introduction

1.1 The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil spilled and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(d)(1)(B) or (d)(1)(i)(C), the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in

Pl. 112, App. C

ATTACHMENT C-II—CERTIFICATION OF THE AVAILABILITY OF THE SUBSTANTIAL HARM CRITERIA

Facility Name: _____
Facility Address: _____
1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes ☐ No ☐

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest above-ground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?
Yes ☐ No ☐

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula¹) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.
Yes ☐ No ☐

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula¹) such that a discharge from the facility would shut down a public drinking water intake?
Yes ☐ No ☐

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes ☐ No ☐

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document.

¹ If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

² For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Appendix B – Determination of Substantial Harm

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons ?

Yes _____ No X .

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility leak secondary containment that is sufficiently large to contain the capacity of the largest above ground oil storage tank plus sufficient freeboard to allow for precipitation within any above ground oil storage tank area ?

Yes _____ No X .

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" and the applicable Area Contingency Plan.

Yes _____ No X .

4. Does the facility have a total oil storage capacity greater than or equal to 1 millions gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

Yes _____ No X .

5. Does the facility have total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last five years.

Yes _____ No X .

Attachment E
Copy of the Caltrans transmittal form

LSA ASSOCIATES, INC.
ONE PARK PLAZA, SUITE 500
IRVINE, CALIFORNIA 92614

OTHER OFFICES: PT. COLLINS
BERKELEY RIVERSIDE
PT. RICHMOND ROCKLIN

TO, Tom Meyers

Caltrans District 9

500 South Main Street

Bishop, CA 93514

DATE: September 4, 2001

☐ FOR YOUR REVIEW

☐ FOR YOUR FILES

☐ AT YOUR REQUEST

☐ FOR YOUR INFORMATION

☒ FOR YOUR APPROVAL

☐ DISTRIBUTION

SUBJECT.

PROJECT: Mammoth-Yosemite Airport Traffic Study

PROJECT NUMBER: TML030

ITEMS BELOW ARE TRANSMITTED: 8 HERewith ☐ UNDER SEPARATE COVER ☐ VIA:

DATE	COPIES	DESCRIPTION
August 31, 2001	1	Revised Mammoth Lakes-Yosemite Traffic Study

GENERAL REMARKS.

The attached traffic study has been updated to reflect the agreed upon revisions discussed at our meeting on August 28. Specifically the intersection analysis methodology has been updated to the recently released HCM 2000, the deceleration/acceleration lanes at the Hot Creek Road/U.S. Route 395 intersection have been committed as initial first phase project components, and an annual intersection monitoring requirement has been included to assure timely implementation of mitigation measures

We would appreciate your and Jerry Gabriel's written confirmation that, with these revisions, the report is technically acceptable to Caltrans.

L. Rand

COPIES TO: Bill Taylor, Town of Mammoth Lakes
Bill Manning, Mammoth Lakes Airport
Tom Cornell, Ricondo and Associates (1 bound, 1 unbound)
Reinard Brandley
Jerry Gabriel, Caltrans District 9 Traffic Engineer

BY: ✓ Les Card