

APPENDIX C

Noise

This appendix contains terminology, methodology, and assumptions used in the assessment of aircraft noise for the existing condition, No-Action Alternative and Proposed Action.

- C-1 Standard Noise Analysis
- C-2 Noise Screening Assessment
- C-3 Cumulative Noise Analysis

Appendix C-1

Standard Noise Analysis

The purpose of this appendix is to evaluate the potential aircraft noise impact of the Proposed Action Alternative for the Mammoth Yosemite Airport in the Town of Mammoth Lakes, California. This appendix contains a description of noise prediction methodology, Existing Condition, future No-Action and future Proposed Action Alternative aircraft activity at the airport, and predicted potential noise levels in the airport vicinity.

APPENDIX C-1 STANDARD NOISE ANALYSIS

C-1.1 AIRCRAFT NOISE DESCRIPTORS

A variety of noise metrics are used to assess airport noise impacts in different ways. Noise metrics are used to describe individual noise events (such as a single operation of an aircraft taking off overhead) or groups of events (such as the cumulative effect of numerous aircraft operations, the collection of which creates a general noise environment, or overall exposure level). Both types of descriptors are helpful in explaining how people tend to respond to a given noise condition. Descriptions of these metrics are provided below.

Decibel, dB – Sound is a complex physical phenomenon consisting of complex minute vibrations traveling through a medium, such as air. These vibrations are sensed by the human ear as sound pressure. Because of the vast range of sound pressure or intensity detectable by the human ear, sound pressure level (SPL) is represented on a logarithmic scale known as decibels (dB). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet (laboratory-type) listening conditions. A SPL of 120 dB begins to be felt inside the ear as discomfort and pain at approximately 140 dB. Most environmental sounds have SPLs ranging from 30 to 100 dB.

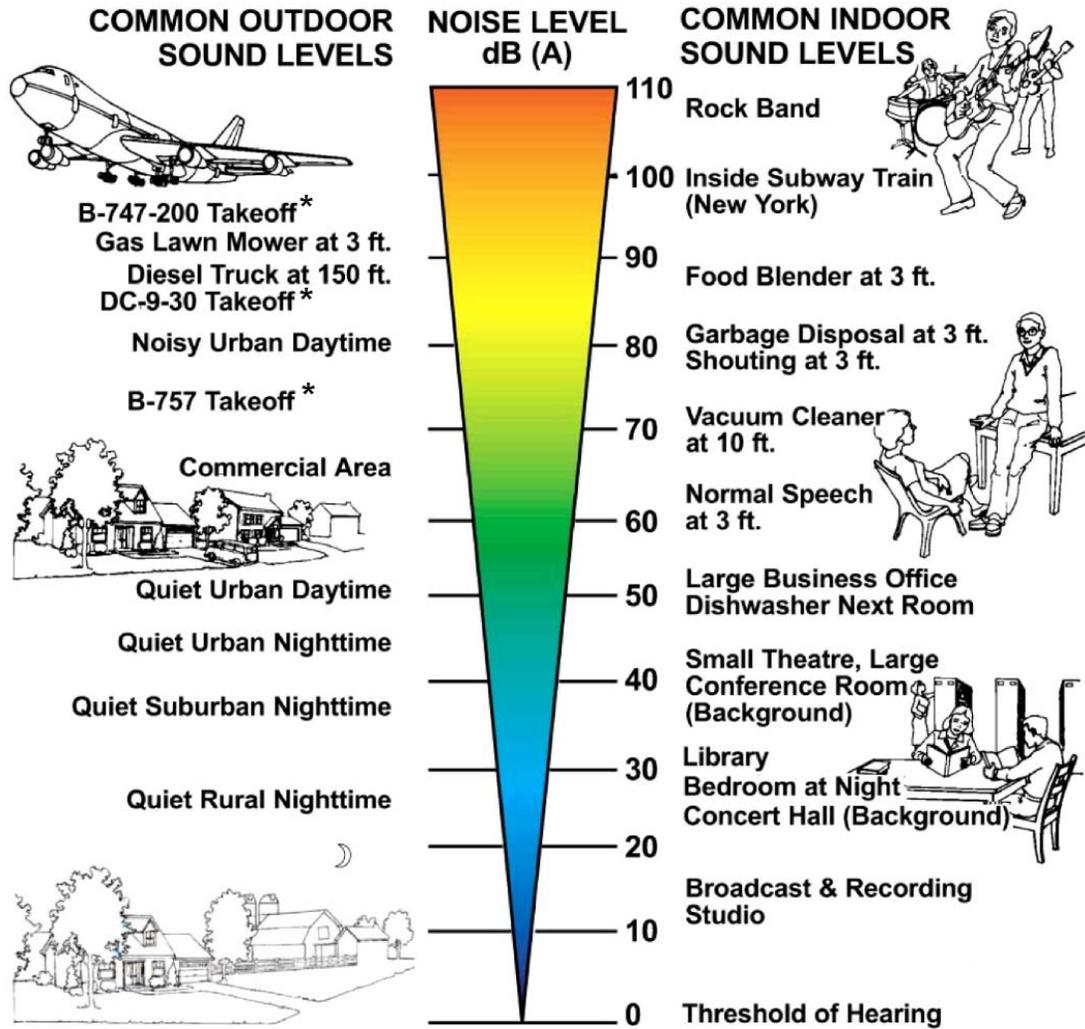
Because decibels are logarithmic, they cannot be added or subtracted directly like other (linear) numbers. For example, if two sound sources each produce 100 dB, when they are operated together they will produce 103 dB, not 200 dB. Four 100 dB sources operating together again double the sound energy, resulting in a total SPL of 106 dB, and so on. In addition, if one source is much louder than another, the two sources operating together will produce the same SPL as if the louder source were operating alone. For example, a 100 dB source plus an 80 dB source produce 100 dB when operating together. The louder source masks the quieter one.

Two useful rules to remember when comparing SPLs are: (1) most people perceive a 6 to 10 dB increase in SPL between two noise events to be about a doubling of loudness, and (2) changes in SPL of less than about 3 dB between two events are not easily detected outside of a laboratory.

A-Weighted Decibel, dBA – Frequency, or pitch, is a basic physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 15,000 Hz. Because the human ear is more sensitive to middle and high frequencies (i.e., 1000 to 4000 Hz), a frequency weighting called “A” weighting is applied to the measurement of sound. The internationally standardized "A" filter approximates the sensitivity of the human ear and helps in assessing the perceived loudness of various sounds. In this document all sound levels are A-weighted sound levels and the adjective "A-weighted" has been omitted.

Figure C-1.1 charts common indoor and outdoor sound levels. A quiet rural area at nighttime may be 30 dBA or lower while the operator of a typical gas lawn mower may experience a level of 90 dBA. Similarly, the level in a library may be 30 dBA or lower while the listener at a rock band concert may experience levels near 110 dBA.

**FIGURE C-1.1
COMMON OUTDOOR AND INDOOR SOUND LEVELS**



* 2 Miles from Brake Release

Source: Draft EIS/EIR LAX Proposed Master Plan Improvements, Los Angeles, CA
U.S. Department of Transportation, FAA, January 2001.

Maximum A-Weighted Noise Level, L_{max} – Sound levels vary with time. For example, the sound increases as an aircraft approaches, then falls and blends into the ambient or background as the aircraft recedes into the distance. Because of this variation, it is often convenient to describe a particular noise "event" by its highest or maximum sound level (L_{max}). Note L_{max} describes only one dimension of an event; it provides no information on the cumulative noise exposure generated by a sound source. In fact, two events with identical L_{max} may produce very different total exposures. One may be of very short duration, while the other may be much longer.

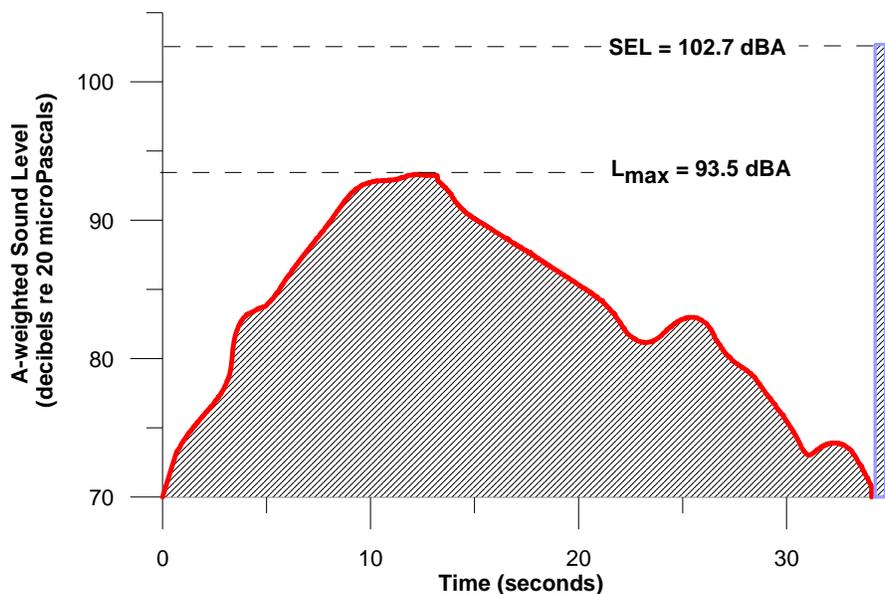
Sound Exposure Level, SEL – The most common measure of noise exposure for a single aircraft flyover is the SEL. SEL is a summation of the A-weighted sound energy at a particular location over the true duration of a noise event normalized to a fictional duration of one second. The true duration is defined as the amount of time the noise event exceeds background levels. For events lasting more than one second, SEL does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event.

The normalization to the fictional duration of one second enables the comparison of noise events with differing true duration and/or maximum level. Because the SEL is normalized to one second, it will almost always be larger in magnitude than the L_{max} for the event. In fact, for most aircraft events, the SEL is about 7 to 12 dB higher than the L_{max} . Additionally, since it is a cumulative measure, a higher SEL can result from either a louder or longer event, or some combination.

As SEL combines an event's overall sound level along with its duration, SEL provides a comprehensive way to describe noise events for use in modeling and comparing noise environments. Computer noise models, such as the one employed for this document, base their computations on these SELs.

Figure C-1.2 shows an event's "time history", the variation of sound level with time. For typical sound events experienced by a fixed listener, like a person experiencing an aircraft flying by, the sound level rises as the source (or aircraft) approaches the listener, peaks and then diminishes as the aircraft flies away from the listener. The area under the time history curve represents the overall sound energy of the noise event. The L_{max} for the event shown in the figure was 93.5 dBA. Compressing the event's total sound energy into one second to compute its SEL yields 102.7 dBA.

**FIGURE C-1.2
COMPARISON OF MAXIMUM SOUND LEVEL (L_{MAX}) AND SOUND EXPOSURE LEVEL (SEL)**



Source: URS Corporation, 2007.

Equivalent Sound Level, L_{eq} -- Equivalent sound level (abbreviated L_{eq}) is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest (e.g., an hour, an 8-hour school day, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example $L_{eq(8)}$ or $L_{eq(24)}$.

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal “peaks” and “dips”. In the context of noise from typical aircraft flight events and as noted earlier for SEL, L_{eq} does not represent the sound level heard at any particular time, but rather represents the total sound exposure for the period of interest. Also, it should be noted that the “average” sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic, or “energy-averaged,” sound level. Thus, loud events tend to dominate the noise environment described by the L_{eq} metric.

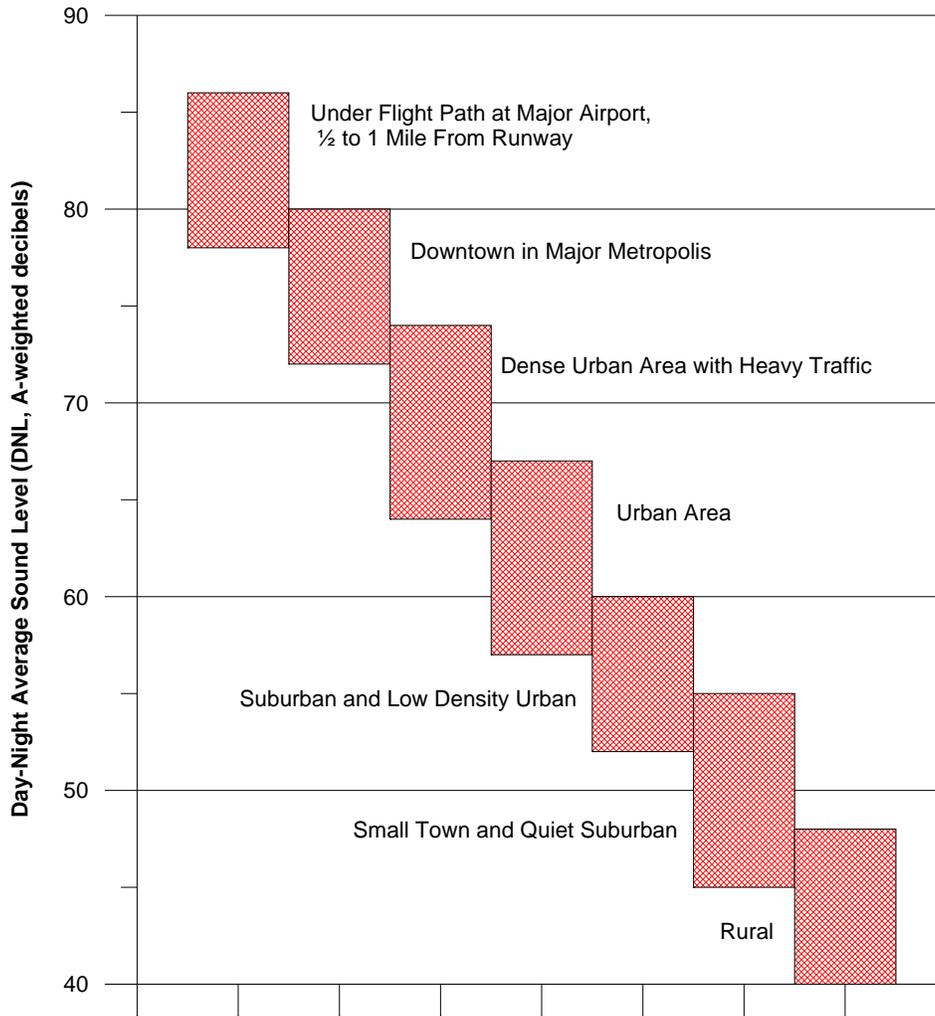
Day-Night Average Sound Level, DNL and Community Noise Equivalent Level, CNEL

Time-average sound levels are measurements of sound levels averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period. For the evaluation of community noise effects, and particularly aircraft noise effects, the Day-Night Average Sound Level (DNL) or the Community Noise Equivalent Sound Level (CNEL) is used. Both noise metrics logarithmically average aircraft sound levels at a location over a complete 24-hour period, with 10-decibel adjustment added to those noise events occurring between 10:00 p.m. and 7:00 a.m. (local time) the following morning. In addition, CNEL includes a 4.77-decibel adjustment added to noise events occurring between 7:00 p.m. and 10:00 p.m. (local time). The 7:00 p.m. to 10:00 p.m. period is defined as evening time (or evening), the 10:00 p.m. to 7:00 a.m. period is defined as nighttime (or night), and the 7:00 a.m. to 10:00 p.m. period is defined as daytime (or day). These noise penalties have been added because of the increased sensitivity to noise during normal evening and night time hours and because ambient (without aircraft) sound levels during evening and nighttime are typically about 5 dB and 10 dB, respectively, lower than during daytime hours, the 5- and 10-decibel “penalty” represents the added intrusiveness of sounds occurring during these hours.

CNEL is the primary noise descriptor of this study. CNEL is a 24-hour time-weighted-average noise metric expressed in A-weighted decibels (dBA) which accounts for the noise levels (in terms of SEL) of all individual aircraft events, the number of times those events occur, and the time of day at which they occur. Values of CNEL can be measured with standard monitoring equipment or predicted with computer models. This document utilizes estimates of CNEL with an FAA-approved computer-based noise model.

Typical DNL values for a variety of noise environments are shown in [Figure C-1.3](#). DNL values can be approximately 85 dBA outdoors under a flight path within a mile of a major airport and 40 dBA or less outdoors in a rural residential area. CNEL values would be similar.

FIGURE C-1.3
TYPICAL RANGE OF OUTDOOR COMMUNITY DAY-NIGHT AVERAGE SOUND LEVELS



Source: U.S. Department of Defense. Departments of the Air Force, the Army, and the Navy, 1978. Planning in the Noise Environment. AFM 19-10. TM 5-803-2, and NAVFAC P-970. Washington, D.C.: U.S. DoD.

Due to the CNEL and DNL descriptor's close correlation with the degree of community annoyance from aircraft noise, CNEL and DNL have been formally adopted by most Federal agencies for measuring and evaluating aircraft noise for land use planning and noise impact assessment. CNEL has been adopted by the State of California. Federal committees such as the Federal Interagency Committee on Urban Noise (FICUN) and the Federal Interagency Committee on Noise (FICON) which include the EPA, FAA, Department of Defense, Department of Housing and Urban Development (HUD), and Veterans Administration, found DNL to be the best metric for land use planning. They also found no new cumulative sound descriptors or metrics of sufficient scientific standing to substitute for DNL. Other cumulative metrics could be used only to supplement, not replace DNL. Furthermore, FAA Order 1050.1E for environmental impact studies, requires DNL be used in describing cumulative noise exposure

and in identifying aircraft noise/land use compatibility issues, although the FAA recognizes CNEL as an alternative metric for California (EPA, 1974; FICUN, 1980; FICON, 1992; 14 CFR Part 150, 1995; FAA, 2004).

Time-Above a Specified Level – The Time-Above a Specified Level (TA) metric describes the total number of minutes that instantaneous sound level (usually from aircraft) are above a given threshold. For example, if 75 dB is the specified threshold, the metric would be referred to as “TA75.” The TA metric is typically associated with 24-hour annual average daily conditions but can be used to represent any time period. Any threshold may be chosen for the TA calculation. For this study, the threshold is 75 dB for the full 24-hour day.

Number of Events Above a Specified Level – Number-of-events Above (NA) is a noise metric that reflects the average number of times noise equals or exceeds a chosen threshold level during a specified time period. NA contours can be depicted at any noise threshold level (x) and any user defined number of events (z), using the notation ‘NAX(z),’ meaning ‘z’ events at or above noise level ‘x’. These analysis parameters (x and z) may differ in each affected community, based on specific circumstances. No guidelines have yet been established for NA analyses, but individual jurisdictions may apply Federal guidelines in such a way as to reflect unique conditions at each airport. Therefore, each jurisdiction has some latitude in establishing local noise standards. The NA metric provides for much flexibility and can be tailored to any noise environment, such as daytime, nighttime, or any user-defined number of hours.

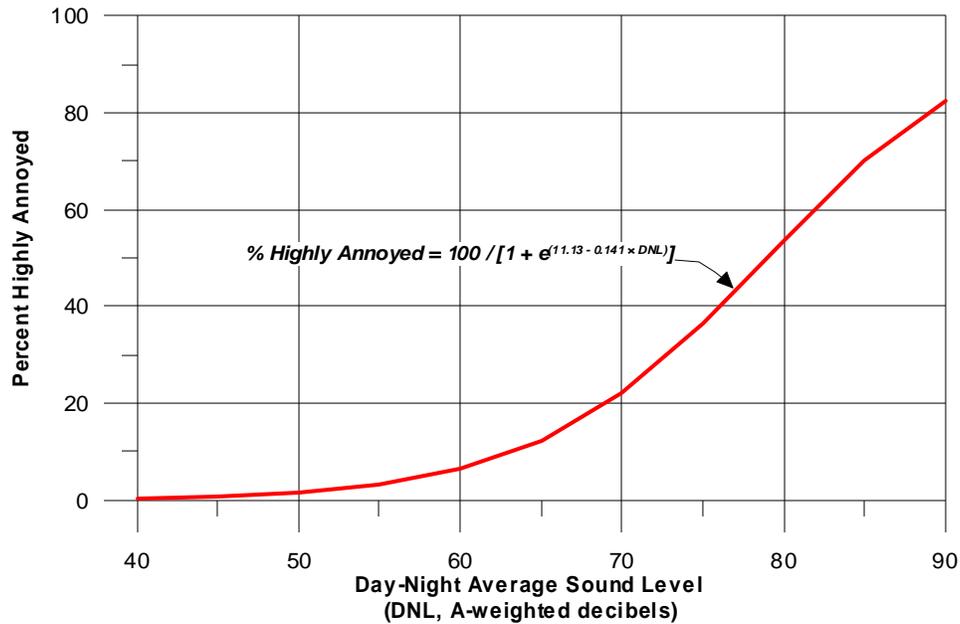
C-1.2 EFFECTS OF AIRCRAFT NOISE ON PEOPLE

This section addresses three ways humans can be affected by aircraft noise: annoyance, speech interference and sleep disturbance.

Annoyance – The primary potential effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the U.S. Environmental Protection Agency as any negative subjective reaction on the part of an individual or group (US EPA, 1974). Scientific studies and a large number of social/attitudinal surveys have been conducted to appraise people’s annoyance to all types of environmental noise, especially aircraft events. These studies and surveys have found the DNL to be the best measure of this annoyance (EPA, 1974; FICUN, 1980; FICON, 1992; ANSI, 1980; ANSI, 1988; Schultz, 1978; Fidell, et. al., 1991).

The relationship between annoyance and DNL determined by the scientific community and endorsed by many Federal agencies, including the FAA, is shown in [Figure C-1.4](#). For a DNL of 65 dBA, approximately 13% of the exposed population would be highly-annoyed. The figure also shows at very low values of DNL, such as 45 dB or less, 1% or less of the exposed population would be highly annoyed. At very high values of DNL, such as 90 dBA, more than 80% of the exposed population would be highly annoyed.

**FIGURE C-1.4
RELATIONSHIP BETWEEN ANNOYANCE AND DAY-NIGHT AVERAGE SOUND LEVEL**



Source: Federal Interagency Committee on Noise (FICON), "Federal Agency Review of Selected Airport Noise Analysis Issues," August 1992, p. 3-6, Figure 3.1, USAF (Finegold et. al. 1992) curve based on 400 points.

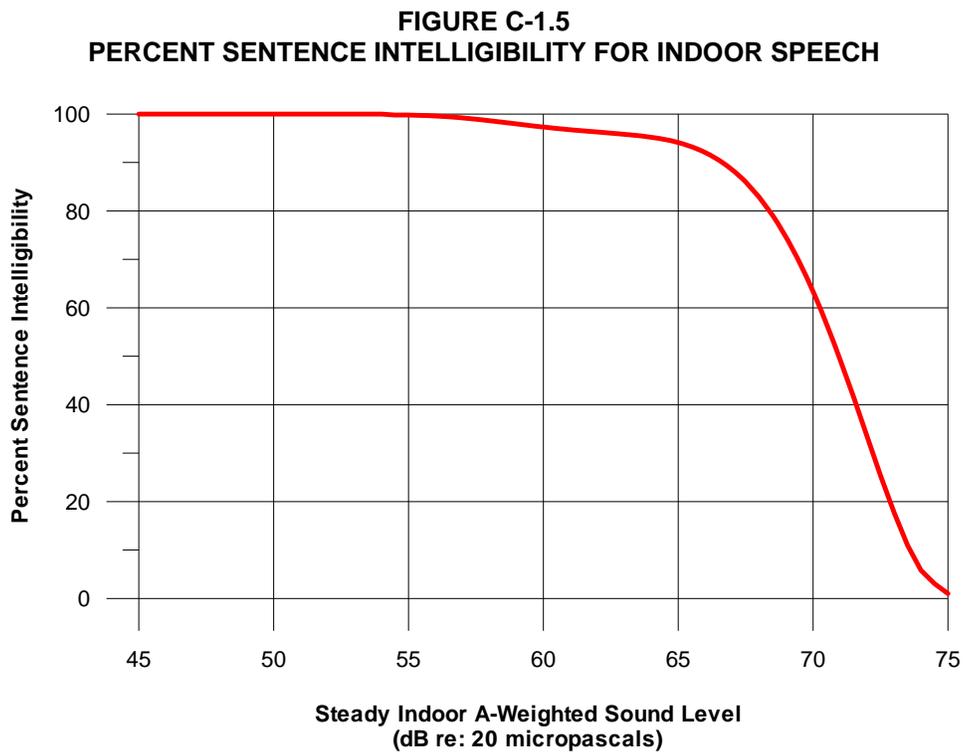
It is often suggested a lower DNL, such as 60 or 55 dB, be adopted as the threshold of community noise annoyance for FAA environmental analysis documents. While there is no technical reason why a lower level cannot be measured or calculated for comparison purposes, a DNL of 65 dB:

- 1) Provides a valid basis for comparing and assessing community noise effects.
- 2) Represents a noise exposure level normally dominated by aircraft noise and not other community or nearby highway noise sources.
- 3) Reflects the FAA's threshold for grant-in-aid funding of airport noise mitigation projects.
- 4) HUD also established a DNL standard of 65 dBA for eligibility for Federally guaranteed home loans.

Speech Interference – A primary effect of aircraft noise is its tendency to drown out or "mask" speech, making it difficult to carry on a normal conversation. As an aircraft approaches and its sound level increases, speech becomes harder to hear. As the ambient level increases, the talker must raise his/her voice, or the individuals must get closer together to continue talking.

For typical communication distances of 3 or 4 feet (1 to 1.5 meters), acceptable outdoor conversations can be carried on in a normal voice as long as the ambient noise outdoors is less than about 65 dBA (FICON, 1992). If the noise exceeds this level, intelligibility would be lost unless vocal effort was increased or communication distance was decreased.

Indoor speech interference can be expressed as a percentage of sentence intelligibility between two average adults with normal hearing speaking fluently in relaxed conversation approximately one meter apart in a typical living room or bedroom (EPA, 1974). As shown in **Figure C-1.5**, the percentage of sentence intelligibility is a non-linear function of the (steady) indoor ambient or background sound level (24-hour energy-average equivalent sound level ($L_{eq(24)}$)). Steady ambient indoor sound levels of up to 45 dBA $L_{eq(24)}$ are expected to allow 100% intelligibility of sentences. The curve shows 99 percent sentence intelligibility for $L_{eq(24)}$ at or below 54 dBA and less than 10 percent intelligibility for $L_{eq(24)}$ greater than 73 dBA. In the same document from which **Figure C-1.5** was taken, the EPA established an indoor criterion of 45 dBA DNL as requisite to protect against speech interference indoors (EPA, 1974).



Source: U.S. Environmental Protection Agency, 1974.

C-1.3 EXISTING CONDITION NOISE MODELING ASSUMPTIONS

Integrated Noise Model

INM Version 6.2a, released October 2006, was the version used for this EIS (www.faa.gov/about/office_org/headquarters_offices/aep/models/inm_model/inm6_2a/). INM v 7.0 was released on April 30, 2007, after the noise analysis for this EIS was substantially completed; therefore, INM v 6.2a was used for the entire analysis. INM aircraft profile and noise calculation algorithms are based on several guidance documents published by the Society of Automotive Engineers (SAE). These include the SAE-AIR-1845 report titled "Procedure for the Calculation of Airplane Noise in the Vicinity of Airports" as well as others which address atmospheric absorption and noise attenuation. The INM is an average-value-model and is designed to estimate long-term average effects using average annual input conditions. Because of this, differences between predicted and measured values can occur because certain local acoustical variables are not averaged, or because they may not be explicitly modeled in INM. Differences may also occur due to errors or improper procedures employed during the collection of the measured data.

Examples of detailed local acoustical variables include:

- Temperature profiles;
- Wind gradients;
- Humidity effects;
- Ground absorption;
- Individual aircraft directivity patterns; and
- Sound diffraction caused by terrain, buildings, barriers, etc.

Terrain data was also used in the calculation of noise exposures. The data contains 3-second digital elevation. MMH is surrounded by high mountains. Thus, it is important to incorporate this three-dimensional information about the local environment into the noise modeling. The INM uses terrain elevation to adjust observer-to-aircraft distances when computing noise levels.

The results of the INM analysis provide a relative measure of noise levels around airfield facilities. When the calculations are made in a consistent manner, the INM is most accurate for comparing before and after noise effects resulting from forecast changes or alternative noise control actions. It allows noise levels to be predicted for such proposed projects without the actual implementation and noise monitoring of those actions.

Modeled Aircraft Operations

This section describes in detail the sources and derivation of the INM input data for the existing (2005) conditions including airport layout, weather, flight operations, runway use, flight tracks, track use, and flight profiles.

Airport Layout

MMH has a single runway, which is designated as Runway 09/27. It is 7,000 feet long by 100 feet wide. A full parallel taxiway system, 50 feet wide, supports this runway. The field elevation at MMH is approximately 7,128 feet. Apron and hangar facilities are available for both based and transient aircraft. [Figure C-1.6](#) shows the current runway layout at MMH.

Weather and Climate

The average temperature in Lee Vining, the closest monitoring station, is 47.9 degrees (NOAA Climatology of the U.S. No. 81, 2002); humidity for the average annual day in Bishop, CA (National Climatic Data Center, 2004) was determined to be 35.5 percent. The INM default airport pressure is 29.92 inches of mercury because atmospheric pressure is referred to sea level. The default average headwind is 8 knots, which is the value used in the SAE-AIR 1845 equations. The INM default for pressure and headwind was not changed in the model. INM uses temperature, pressure, and headwind when computing procedural profiles. Humidity is only used in calculating atmospheric absorption.

Flight Operations

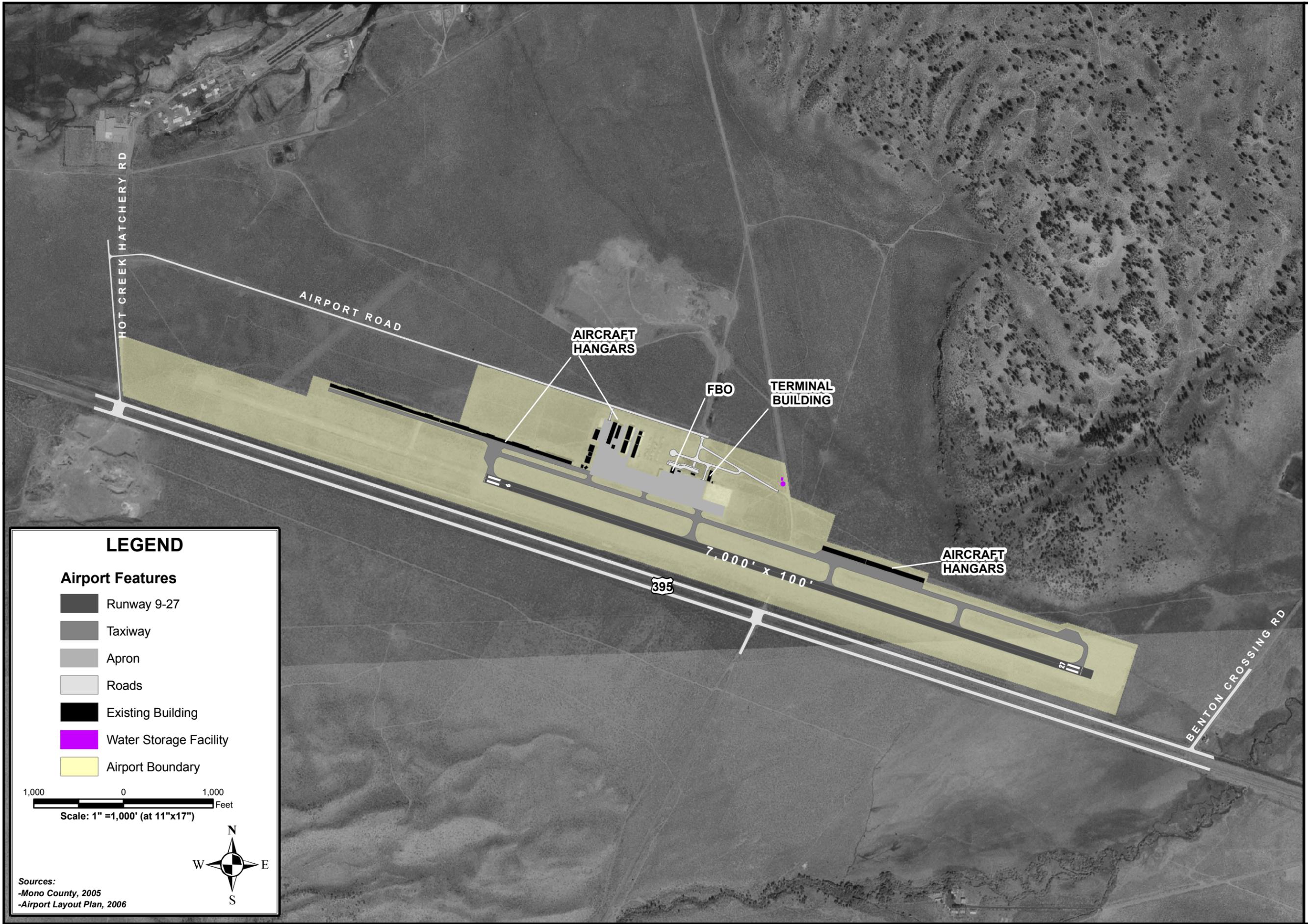
As shown in [Table C-1.1](#), INM modeled annual operations for the 2005 existing conditions totaled 12,800 operations, an average of approximately 35.1 daily operations. Jet operations accounted for approximately 11.4 percent of the total operations. Evening and nighttime operations accounted for 4.1 percent of the total operations.

Helicopters were also modeled for this EIS. Since helicopter operations accounted for approximately 1.5 percent of the total aircraft operations at MMH, several helicopter types were selected for the modeling using the data from the Heliport Noise Model (HNM), Version 2.2.

Runway Use

A summary of the modeled annual average daily utilization of MMH's runway is presented in [Table C-1.2](#). The percentages shown in the table are derived from Table C-8 of the Environmental Assessment (Town of Mammoth Lakes, 2000). The airport confirmed those percentages are still valid for the 2005 existing condition. Approximately 68 percent of the arrivals use Runway 27 and most of the departures (67 percent of jet aircraft and turboprop) use Runway 09 due to high terrain west of the airport. Because of terrain northwest of the airport that can affect the takeoff weight allowable for an aircraft, larger aircraft (jet and turboprop aircraft) tend to prefer departing on Runway 09.

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LEGEND

Airport Features

-  Runway 9-27
-  Taxiway
-  Apron
-  Roads
-  Existing Building
-  Water Storage Facility
-  Airport Boundary

1,000 0 1,000 Feet
 Scale: 1" = 1,000' (at 11"x17")



Sources:
 -Mono County, 2005
 -Airport Layout Plan, 2006



EXISTING AIRPORT FACILITIES

FIGURE
 C-1.6

**TABLE C-1.1
2005 ANNUAL AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Annual Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CIT3	J	27.26	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
CL600		39.38	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
CNA500		272.65	0.36	0.00	0.01	0.37	0.36	0.00	0.01	0.37
CNA750		27.26	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
GII		12.12	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
GIIB		30.29	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
GIV		24.24	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
IA1125		42.41	0.05	0.00	0.00	0.06	0.05	0.00	0.00	0.06
LEAR25		84.82	0.10	0.01	0.00	0.12	0.10	0.01	0.00	0.12
LEAR35		278.70	0.37	0.01	0.00	0.38	0.37	0.01	0.00	0.38
MU3001		624.06	0.85	0.01	0.00	0.85	0.85	0.01	0.00	0.85
Jet Total			1,463	1.95	0.04	0.01	2.00	1.95	0.04	0.01
BEC58P	P	1,876.58	2.47	0.09	0.01	2.57	2.47	0.09	0.01	2.57
CNA172		553.16	0.73	0.03	0.00	0.76	0.73	0.03	0.00	0.76
CNA206		2,483.27	3.21	0.18	0.00	3.40	3.21	0.18	0.00	3.40
GASEPF		532.34	0.69	0.03	0.00	0.73	0.69	0.03	0.00	0.73
GASEPF		8.92	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
GASEPV		3,497.40	4.59	0.19	0.01	4.79	4.59	0.19	0.01	4.79
PA28		2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA30		11.90	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
PA31		190.33	0.24	0.02	0.00	0.26	0.24	0.02	0.00	0.26
Prop Total			9,157	11.97	0.54	0.03	12.54	11.97	0.54	0.03
DHC6	T	23.79	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
C130		8.92	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
CNA441		686.99	0.91	0.03	0.00	0.94	0.91	0.03	0.00	0.94
DHC6		1,266.91	1.68	0.05	0.01	1.74	1.68	0.05	0.01	1.74
FAL20		5.95	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
Turboprop Total		1,993	2.64	0.08	0.01	2.73	2.64	0.08	0.01	2.73
B206L	H	8.33	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
B212		16.65	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
B222		4.16	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
EC130		4.16	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
H500D		16.65	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
R22		29.14	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
S65		12.49	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
S76		8.33	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
SA350D		87.43	0.11	0.01	0.00	0.12	0.11	0.01	0.00	0.12
Helicopter Total			187	0.25	0.01	0.00	0.26	0.25	0.01	0.00
GRAND TOTAL		12,800	16.82	0.66	0.05	17.53	16.82	0.66	0.05	17.53

J - Jet, P - Prop, T - Turboprop, H - Helicopter
Day = 7:00 a.m. to 6:59 p.m.
Evening = 7:00 p.m. to 9:59 p.m.
Night = 10:00 p.m. to 6:59 a.m.
SL = Stage Length

Source: URS Corp., 2006.

**TABLE C-1.2
2005 EXISTING CONDITION RUNWAY UTILIZATION**

Arrivals			
Runway	Business Jets	Commuter/ Turboprop	Props/ Helos
09	31.60%	31.60%	31.70%
27	68.40%	68.40%	68.30%
Total	100.00%	100.00%	100.00%
Departures			
Runway	Business Jets	Commuter/ Turboprop	Props/ Helos
09	67.10%	67.10%	31.70%
27	32.90%	32.90%	68.30%
Total	100.00%	100.00%	100.00%

Source: Mammoth Yosemite Environmental Assessment, 2000.

Flight Tracks

Flight tracks are the aircraft’s actual path through the air projected vertically onto the ground. Modeled flight tracks reflect a reasonable representation of the actual flight track recognizing that pilot technique and weather conditions will affect the actual track of individual flights. [Figures C-1.7 and C-1.8](#) depict modeled east and west flow tracks. East flow tracks represent aircraft using Runway 09. West flow tracks represent aircraft using Runway 27. During the development of flight tracks, topographic maps were reviewed to identify location of mountains, published U.S. Terminal Procedures were reviewed, and airport personnel were interviewed to accurately establish the location of flight tracks.

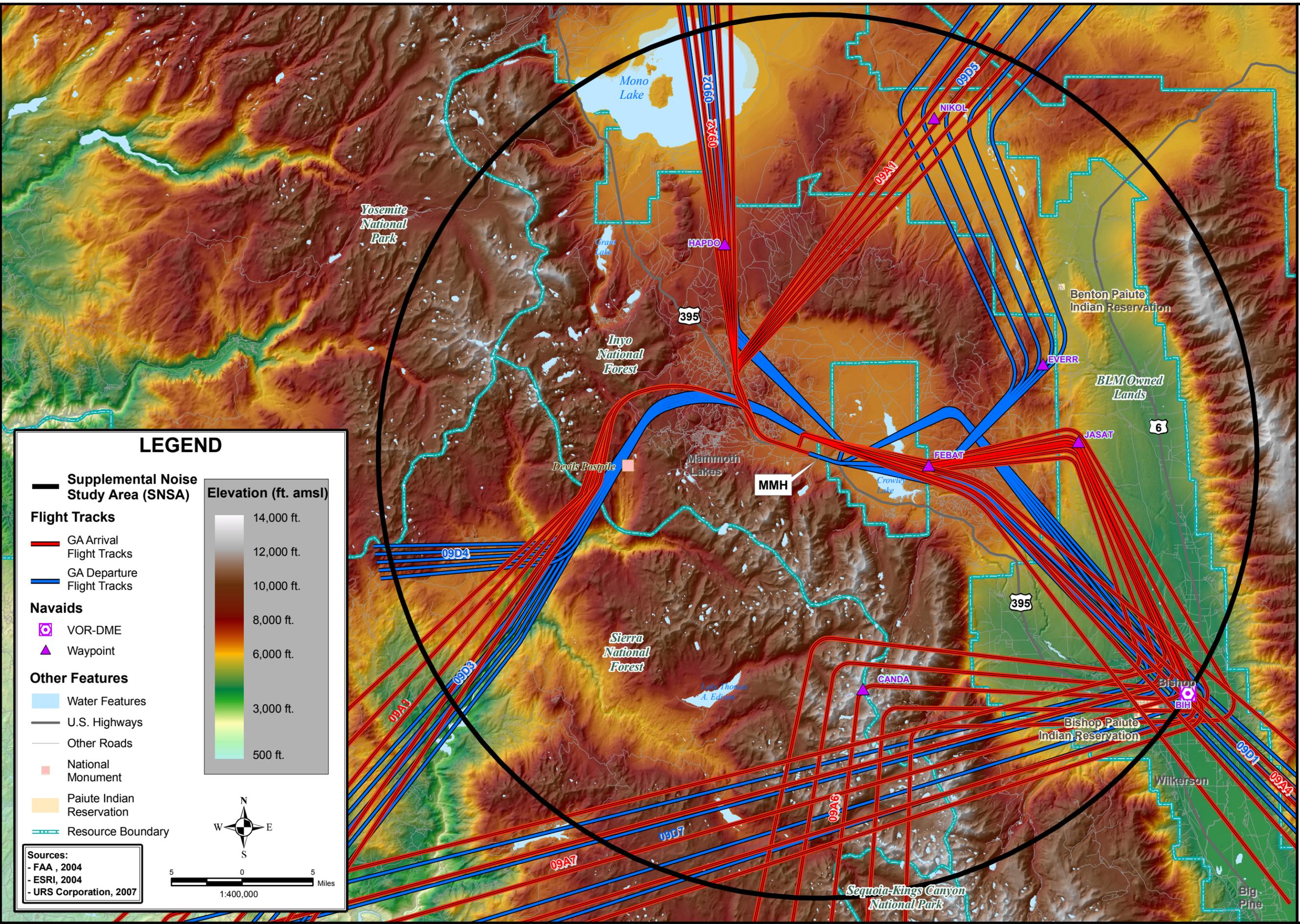
Track Use

Utilization percentages of the flight tracks are tabulated in [Table C-1.3](#) for arrivals and departures. Based on discussions with MMH Personnel, it was assumed that there would be six arrival and six departure routes to and from MMH. Because of the terrain surrounding the airport, it was assumed that helicopters would use the same flight tracks as fixed wing aircraft.

Flight Profiles

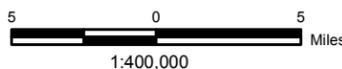
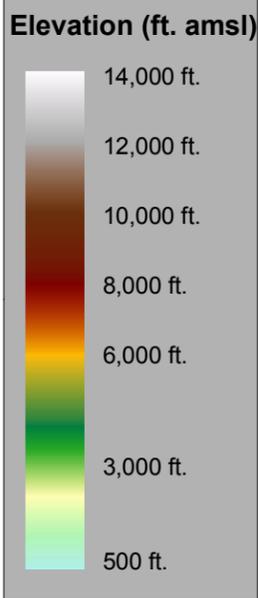
Flight profiles model the vertical paths of aircraft during departure and arrival to determine the altitude, speed, and engine thrust or power of an aircraft at any point along a flight track. INM uses this information to calculate noise exposure on the ground. Profiles are unique to each aircraft type and vary with temperature, barometric pressure, headwind, and aircraft weight. Stage (or trip) length information determined the standard profile to be used for each departing aircraft. See [Table C-1.4](#) for the definition of stage length.

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.7, 2005 Existing Conditions East Flow Flight Tracks - Aircraft Using Runway 09.mxd, rpf, (rde, 09/21/07)



LEGEND

- Supplemental Noise Study Area (SNSA)
- Flight Tracks**
 - GA Arrival Flight Tracks
 - GA Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary



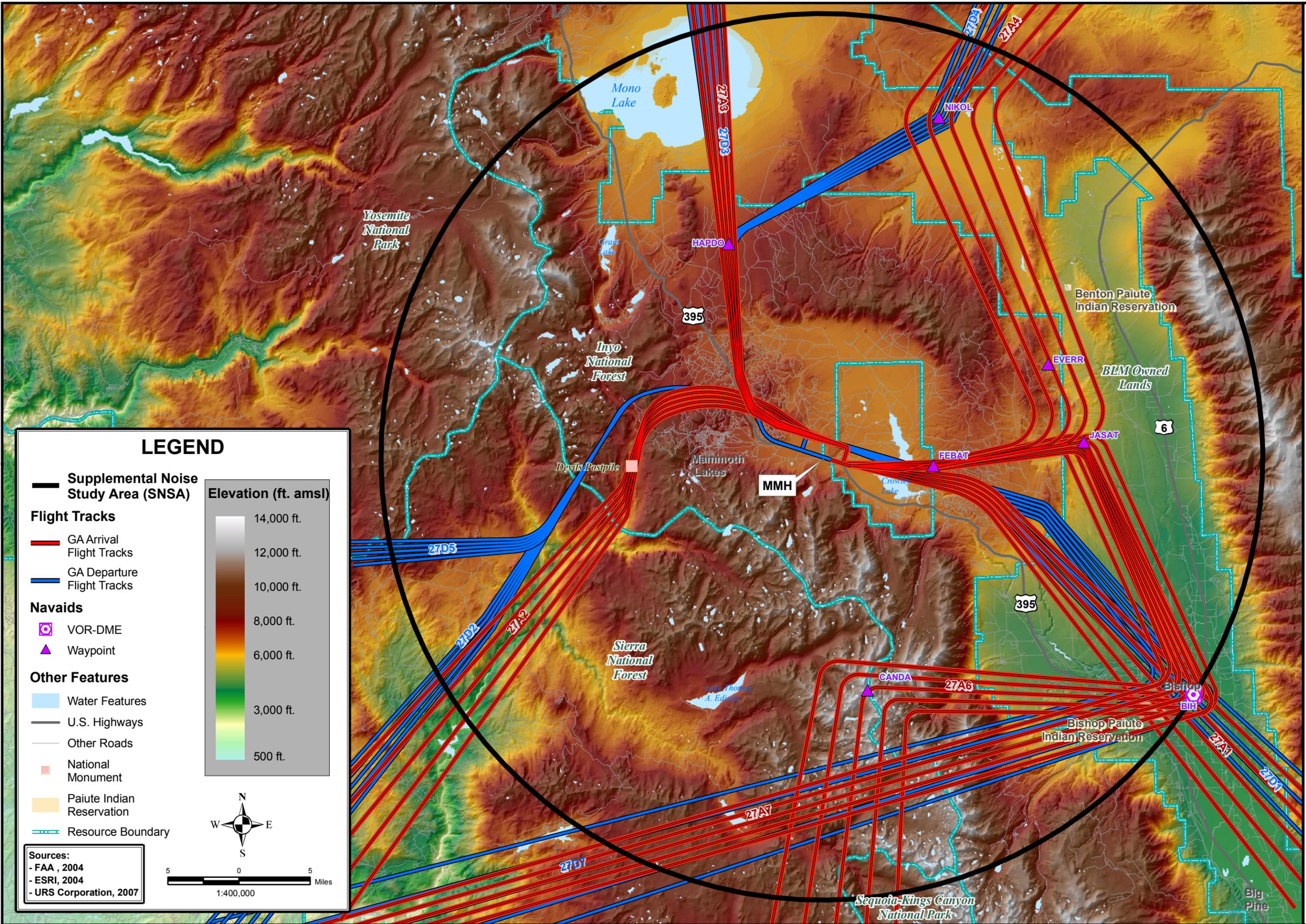
Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007



**2005 EXISTING CONDITIONS
 EAST FLOW FLIGHT TRACKS -
 AIRCRAFT USING RUNWAY 09**

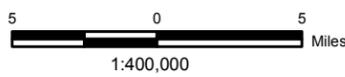
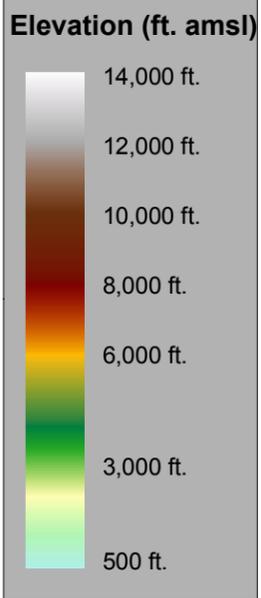
**FIGURE
 C-1.7**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.8_2005 Existing Conditions West Flow Flight Tracks - Aircrafts Using Runway 27.mxd, ppt, (bde, 09/21/07).



LEGEND

- Supplemental Noise Study Area (SNSA)**
- Flight Tracks**
 - GA Arrival Flight Tracks
 - GA Departure Flight Tracks
- Navaids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary



Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007



**2005 EXISTING CONDITIONS
 WEST FLOW FLIGHT TRACKS -
 AIRCRAFT USING RUNWAY 27**

**FIGURE
 C-1.8**

**TABLE C-1.3
2005 EXISTING CONDITION FLIGHT TRACK UTILIZATION**

GA ARRIVAL				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
GA DEPARTURE				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

Sources: Conversations with Federal Aviation Administration Personnel, 2004.
 Conversations with Mammoth Yosemite Airport Personnel, 2004.
 URS Corporation, 2006.

**TABLE C-1.4
INM STAGE LENGTHS**

Stage	Distance (NM)
1	Less Than 500
2	501 - 1,000
3	1,001 - 1,500
4	1,501 - 2,500
5	2,501 - 3,500
6	3,501 - 4,500
7	4,501-5,500
8	5,501-6,500
9	Greater Than 6,501

Source: INM 6.2a.

FAA Part 150 Compatible Land Use Criteria

14 CFR Part 150, Appendix A, Table 1, provides Federal compatible land use guidelines for several land uses as a function of DNL values. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL or CNEL values at a site to the values listed in Table 1. This table is provided below as [Table C-1.5](#).

C-1.4 EXISTING CONDITION RESULTS

For aviation noise analyses, the FAA has determined that the cumulative noise energy exposure of individuals, resulting from aviation activities, must be established in terms of yearly DNL as FAA’s primary metric. The FAA recognizes CNEL as an alternative metric for California (FAA Order 1050.1E, Section 14.1). Therefore, for California environmental documents, FAA defines CNEL 65 dB as the threshold of noise compatibility with residential land uses (State of California *General Plan Guidelines*, 2003). [Figure C-1.9](#) depicts the 2005 Existing Condition noise contours. The contours were superimposed over the local land use map, and acreage was calculated.

There is no residential land use or noise sensitive sites within the CNEL 65 dB contour. [Table C-1.6](#) identifies land use and acreage within the CNEL 65 dB contours for 2005 Existing Conditions.

**TABLE C-1.5
LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS**

	Yearly Day-Night Average Sound Level (DNL)					
	Below 65 Decibels	65-70 Decibels	70-75 Decibels	75-80 Decibels	80-85 Decibels	Over 85 Decibels
<u>Residential</u>						
Residential (Other than mobile homes & transient lodges)	Y	N ¹	N ¹	N	N	N
Mobile Home Parks	Y	N	N	N	N	N
Transient Lodging	Y	N ¹	N ¹	N ¹	N	N
<u>Public Use</u>						
Schools	Y	N ¹	N ¹	N	N	N
Hospitals, Nursing Homes	Y	25	30	N	N	N
Churches, Auditoriums, Concert Halls	Y	25	30	N	N	N
Governmental Services	Y	Y	25	30	N	N
Transportation	Y	Y	Y ²	Y ³	Y ⁴	Y ⁴
Parking	Y	Y	Y ²	Y ³	Y ⁴	N
<u>Commercial Use</u>						
Offices, Business & Professional	Y	Y	25	30	N	N
Wholesale & Retail Building Materials, Hardware & Farm Equipment	Y	Y	Y ²	Y ³	Y ⁴	N
Retail Trade - General	Y	Y	25	30	N	N
Utilities	Y	Y	Y ²	Y ³	Y ⁴	N
Communications	Y	Y	25	30	N	N
<u>Manufacturing & Production</u>						
Manufacturing, General	Y	Y	Y ²	Y ³	Y ⁴	N
Photographic and Optical	Y	Y	25	30	N	N
Agriculture (Except Livestock) & Forestry	Y	Y ⁶	Y ⁷	Y ⁸	Y ⁸	Y ⁸
Livestock Farming & Breeding	Y	Y ⁶	Y ⁷	N	N	N
Mining & Fishing, Resource Production & Extraction	Y	Y	Y	Y	Y	Y
<u>Recreational</u>						
Outdoor Sports Arenas, Spectator Sports	Y	Y ⁵	Y ⁵	N	N	N
Outdoor Music Shells, Amphitheaters	Y	N	N	N	N	N
Nature Exhibits & Zoos	Y	Y	N	N	N	N
Amusement, Parks, Resorts, Camps	Y	Y	Y	N	N	N
Golf Courses, Riding Stables, Water Recreation	Y	Y	25	30	N	N

TABLE C-1.5 (CONTINUED)
LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

NOTE: The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties remains with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land use for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

KEY TO TABLE:

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures are compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) are to be achieved through incorporation of noise attenuation into the design and construction of structure.
25,30, or 35	Land use and related structures are generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated in design and construction of structure.

¹ Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems

² Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of the buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

³ Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of the buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

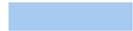
⁴ Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of the buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

⁵ Land use compatible provided special sound reinforcement systems are installed.

⁶ Residential buildings require an NLR of 25 dB.

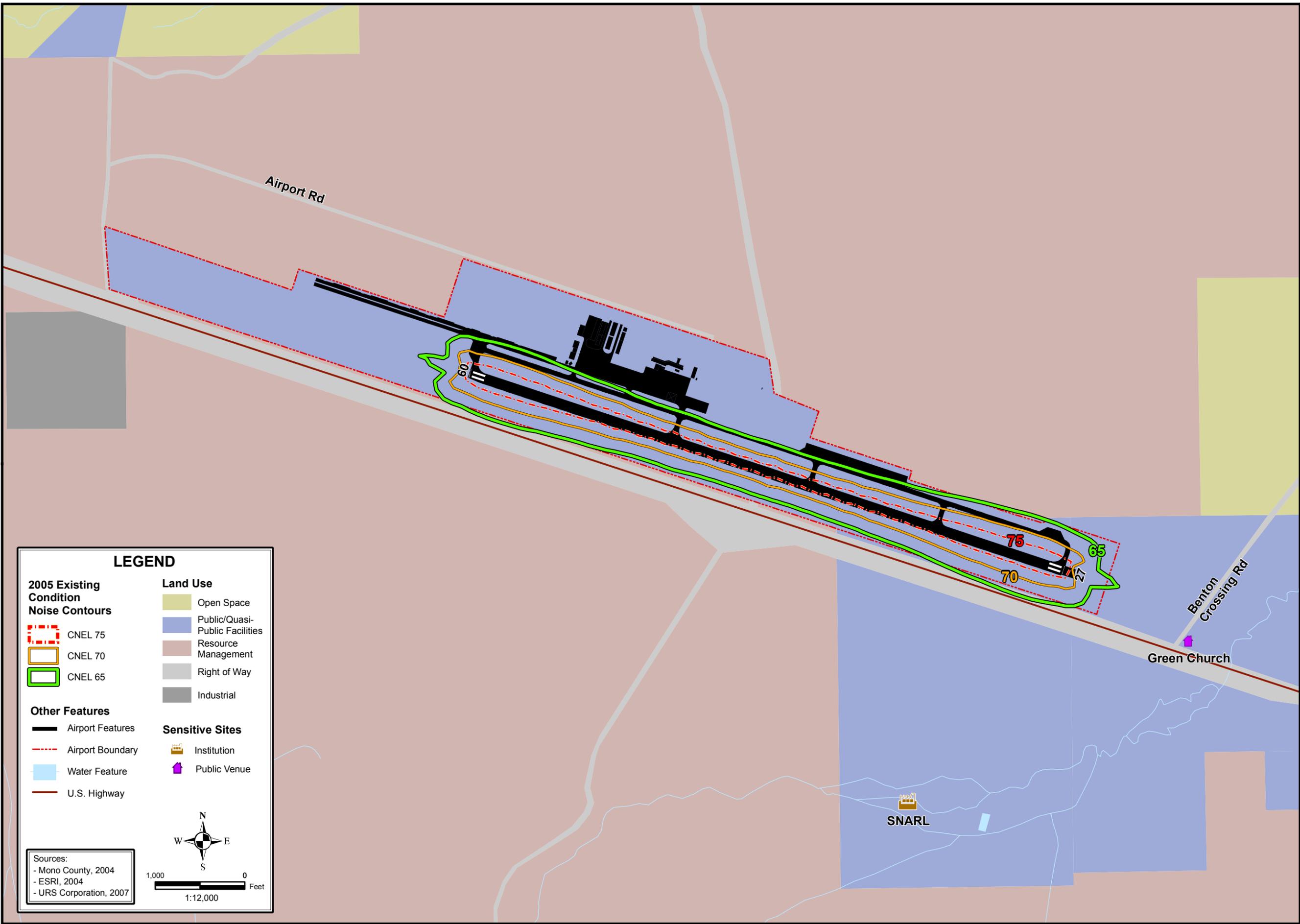
⁷ Residential buildings require an NLR of 30 dB.

⁸ Residential buildings not permitted.

 Noncompatible land use.

Source: 14 CFR Part 150, Appendix A, Table 1 (1 January 1998).

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LEGEND

2005 Existing Condition Noise Contours

- CNEL 75
- CNEL 70
- CNEL 65

Other Features

- Airport Features
- Airport Boundary
- Water Feature
- U.S. Highway

Land Use

- Open Space
- Public/Quasi-Public Facilities
- Resource Management
- Right of Way
- Industrial

Sensitive Sites

- Institution
- Public Venue

Sources:

- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2007

1,000 0 Feet
1:12,000

**2005 EXISTING CONDITION
 NOISE CONTOURS**

**FIGURE
 C-1.9**

**TABLE C-1.6
2005 NOISE IMPACTS TO LAND USE (ACRES)**

Off-Airport Land Use	Noise Contour Interval			
	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	1.2	0.0	0.0	1.2
Resource Management	1.3	0.0	0.0	1.3
Right of Way	0.8	0.0	0.0	0.8
Off-Airport Land Use Total	3.4	0.0	0.0	3.4
On-Airport Land Use	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	57.1	36.7	29.4	123.2
On-Airport Land Use Total	57.1	36.7	29.4	123.2
GRAND TOTAL	60.5	36.7	29.4	126.5

Source: URS Corp., 2006

Note: Numbers may not add, due to rounding.

C-1.5 FUTURE CONDITIONS NOISE MODELING ASSUMPTIONS

Flight Operations

As shown in [Table C-1.7](#), INM modeled annual operations for the 2009 No-Action Alternative totaled 13,801 operations, an average of approximately 37.8 daily operations. The fleet mix and day/evening/night split did not change from the existing condition. [Table C-1.8](#) shows the 2009 Proposed Action modeled operations. There are 13,801 general aviation (GA) operations with an additional 448 Q400 aircraft operations during the winter season. In total, it is an average of approximately 39.0 daily operations.

As shown in [Table C-1.9](#), INM modeled annual operations for the 2015 No-Action Alternative totaled 15,451 operations, an average of approximately 42.3 daily operations. As with the 2009 forecast, the fleet mix and day/evening/night split did not change from the existing condition. [Table C-1.10](#) shows the 2015 Proposed Action modeled operations. There are 15,451 GA operations with an additional 2,032 Q400 aircraft operations from the summer and winter seasons combined. In total, it is an average of approximately 47.9 daily operations.

Runway Use

GA runway utilization remains unchanged from the 2005 existing condition. A summary of the 2009 and 2015 modeled annual average daily utilization of MMH's runway is presented in [Table C-1.11](#), this table includes the GA runway utilization, but also shows the air carrier utilization for the Proposed Action Alternative.

**TABLE C-1.7
2009 NO-ACTION ALTERNATIVE ANNUAL AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Annual Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CIT3	J	29	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
CL600		42	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
CNA500		294	0.39	0.00	0.01	0.40	0.39	0.00	0.01	0.40
CNA750		29	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
FAL20		7	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
GII		13	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
GIIB		33	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
GIV		26	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
IA1125		46	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
LEAR25		91	0.11	0.01	0.00	0.13	0.11	0.01	0.00	0.13
LEAR35		300	0.40	0.01	0.00	0.41	0.40	0.01	0.00	0.41
MU3001		673	0.91	0.01	0.00	0.92	0.91	0.01	0.00	0.92
Jet Total			1,584	2.12	0.04	0.01	2.17	2.12	0.04	0.01
BEC58P	P	2,023	2.67	0.09	0.01	2.77	2.67	0.09	0.01	2.77
CNA172		596	0.79	0.03	0.00	0.82	0.79	0.03	0.00	0.82
CNA206		2,677	3.47	0.20	0.00	3.67	3.47	0.20	0.00	3.67
GASEPF		584	0.76	0.04	0.00	0.80	0.76	0.04	0.00	0.80
GASEPV		3,771	4.95	0.21	0.01	5.17	4.95	0.21	0.01	5.17
PA28		3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA31		218	0.28	0.02	0.00	0.30	0.28	0.02	0.00	0.30
Prop Total		9,873	12.91	0.58	0.03	13.52	12.91	0.58	0.03	13.52
C130	T	10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
CNA441		741	0.98	0.03	0.00	1.01	0.98	0.03	0.00	1.01
DHC6		1,392	1.84	0.05	0.01	1.91	1.84	0.05	0.01	1.91
Turboprop Total		2,142	2.84	0.08	0.01	2.93	2.84	0.08	0.01	2.93
B206L	H	9	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
B212		18	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
B222		4	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
EC130		4	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
H500D		18	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
R22		31	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
S65		13	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
S76		9	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
SA350D		94	0.12	0.01	0.00	0.13	0.12	0.01	0.00	0.13
Helicopter Total			202	0.27	0.01	0.00	0.28	0.27	0.01	0.00
GRAND TOTAL		13,801	18.13	0.71	0.06	18.91	18.13	0.71	0.06	18.91

J - Jet, P - Prop, T - Turboprop, H - Helicopter
Day = 7:00 a.m. to 6:59 p.m.
Evening = 7:00 p.m. to 9:59 p.m.
Night = 10:00 p.m. to 6:59 a.m.
SL = Stage Length

Source: URS Corp., 2006.

**TABLE C-1.8
2009 PROPOSED ACTION ALTERNATIVE ANNUAL AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Annual Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CIT3	J	29	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
CL600		42	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
CNA500		294	0.39	0.00	0.01	0.40	0.39	0.00	0.01	0.40
CNA750		29	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
FAL20		7	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
GII		13	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
GIIB		33	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
GIV		26	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
IA1125		46	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
LEAR25		91	0.11	0.01	0.00	0.13	0.11	0.01	0.00	0.13
LEAR35		300	0.40	0.01	0.00	0.41	0.40	0.01	0.00	0.41
MU3001		673	0.91	0.01	0.00	0.92	0.91	0.01	0.00	0.92
Jet Total			1,584	2.12	0.04	0.01	2.17	2.12	0.04	0.01
BEC58P	P	2,023	2.67	0.09	0.01	2.77	2.67	0.09	0.01	2.77
CNA172		596	0.79	0.03	0.00	0.82	0.79	0.03	0.00	0.82
CNA206		2,677	3.47	0.20	0.00	3.67	3.47	0.20	0.00	3.67
GASEPF		584	0.76	0.04	0.00	0.80	0.76	0.04	0.00	0.80
GASEPV		3,771	4.95	0.21	0.01	5.17	4.95	0.21	0.01	5.17
PA28		3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA31		218	0.28	0.02	0.00	0.30	0.28	0.02	0.00	0.30
Prop Total		9,873	12.91	0.58	0.03	13.52	12.91	0.58	0.03	13.52
C130	T	10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
CNA441		741	0.98	0.03	0.00	1.01	0.98	0.03	0.00	1.01
DHC6		1,392	1.84	0.05	0.01	1.91	1.84	0.05	0.01	1.91
Q400		448	0.61	0.00	0.00	0.61	0.61	0.00	0.00	0.61
Turboprop Total		2,590	3.45	0.08	0.01	3.55	3.45	0.08	0.01	3.55
B206L	H	9	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
B212		18	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
B222		4	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
EC130		4	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
H500D		18	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
R22		31	0.04	0.00	0.00	0.04	0.04	0.00	0.00	0.04
S65		13	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
S76		9	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
SA350D		94	0.12	0.01	0.00	0.13	0.12	0.01	0.00	0.13
Helicopter Total		202	0.27	0.01	0.00	0.28	0.27	0.01	0.00	0.28
GRAND TOTAL		14,249	18.75	0.71	0.06	19.52	18.75	0.71	0.06	19.52

J - Jet, P - Prop, T - Turboprop, H - Helicopter
Day = 7:00 a.m. to 6:59 p.m.
Evening = 7:00 p.m. to 9:59 p.m.
Night = 10:00 p.m. to 6:59 a.m.
SL = Stage Length

Source: URS Corp., 2006.

**TABLE C-1.9
2015 NO-ACTION ALTERNATIVE ANNUAL AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Annual Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CIT3	J	33	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
CL600		48	0.07	0.00	0.00	0.07	0.07	0.00	0.00	0.07
CNA500		329	0.44	0.01	0.01	0.45	0.44	0.01	0.01	0.45
CNA750		33	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
GII		15	0.02	0.00	0.00	0.01	0.02	0.00	0.00	0.01
GIIB		37	0.05	0.00	0.00	0.02	0.05	0.00	0.00	0.02
GIV		29	0.04	0.00	0.00	0.05	0.04	0.00	0.00	0.05
IA1125		51	0.07	0.01	0.00	0.04	0.07	0.01	0.00	0.04
FAL20		7	0.01	0.00	0.00	0.07	0.01	0.00	0.00	0.07
LEAR25		102	0.13	0.01	0.01	0.14	0.13	0.01	0.01	0.14
LEAR35		336	0.45	0.02	0.00	0.46	0.45	0.02	0.00	0.46
MU3001		753	1.02	0.01	0.00	1.03	1.02	0.01	0.00	1.03
Jet Total			1,773	2.37	0.05	0.02	2.43	2.37	0.05	0.02
BEC58P	P	2,265	2.99	0.10	0.01	3.10	2.99	0.10	0.01	3.10
CNA172		668	0.88	0.03	0.00	0.91	0.88	0.03	0.00	0.91
CNA206		2,998	3.88	0.22	0.00	4.11	3.88	0.22	0.00	4.11
GASEPF		653	0.85	0.04	0.00	0.90	0.85	0.04	0.00	0.90
GASEPV		4,222	5.54	0.23	0.01	5.78	5.54	0.23	0.01	5.78
PA28		4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA31		244	0.31	0.02	0.00	0.33	0.31	0.02	0.00	0.33
Prop Total		11,053	14.45	0.65	0.03	15.14	14.45	0.65	0.03	15.14
C130	T	11	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
CNA441		829	1.10	0.03	0.00	1.14	1.10	0.03	0.00	1.14
DHC6		1,558	2.07	0.06	0.01	2.13	2.07	0.06	0.01	2.13
Turboprop Total		2,398	3.19	0.09	0.01	3.29	3.19	0.09	0.01	3.29
B206L	H	10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
B212		20	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
B222		5	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
EC130		5	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
H500D		20	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
R22		35	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
S65		15	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
S76		10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
SA350D		106	0.14	0.01	0.00	0.14	0.14	0.01	0.00	0.14
Helicopter Total			226	0.30	0.01	0.00	0.31	0.30	0.01	0.00
GRAND TOTAL		15,451	20.30	0.80	0.06	21.17	20.30	0.80	0.06	21.17

J - Jet, P - Prop, T - Turboprop, H - Helicopter
Day = 7:00 a.m. to 6:59 p.m.
Evening = 7:00 p.m. to 9:59 p.m.
Night = 10:00 p.m. to 6:59 a.m.
SL = Stage Length

Source: URS Corp., 2006.

**TABLE C-1.10
2015 PROPOSED ACTION ALTERNATIVE ANNUAL AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Annual Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CIT3	J	33	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
CL600		48	0.07	0.00	0.00	0.07	0.07	0.00	0.00	0.07
CNA500		329	0.44	0.01	0.01	0.45	0.44	0.01	0.01	0.45
CNA750		33	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
GII		15	0.02	0.00	0.00	0.01	0.02	0.00	0.00	0.01
GIIB		37	0.05	0.00	0.00	0.02	0.05	0.00	0.00	0.02
GIV		29	0.04	0.00	0.00	0.05	0.04	0.00	0.00	0.05
IA1125		51	0.07	0.01	0.00	0.04	0.07	0.01	0.00	0.04
FAL20		7	0.01	0.00	0.00	0.07	0.01	0.00	0.00	0.07
LEAR25		102	0.13	0.01	0.01	0.14	0.13	0.01	0.01	0.14
LEAR35		336	0.45	0.02	0.00	0.46	0.45	0.02	0.00	0.46
MU3001		753	1.02	0.01	0.00	1.03	1.02	0.01	0.00	1.03
Jet Total			1,773	2.37	0.05	0.02	2.43	2.37	0.05	0.02
BEC58P	P	2,265	2.99	0.10	0.01	3.10	2.99	0.10	0.01	3.10
CNA172		668	0.88	0.03	0.00	0.91	0.88	0.03	0.00	0.91
CNA206		2,998	3.88	0.22	0.00	4.11	3.88	0.22	0.00	4.11
GASEPF		653	0.85	0.04	0.00	0.90	0.85	0.04	0.00	0.90
GASEPV		4,222	5.54	0.23	0.01	5.78	5.54	0.23	0.01	5.78
PA28		4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PA31		244	0.31	0.02	0.00	0.33	0.31	0.02	0.00	0.33
Prop Total		11,053	14.45	0.65	0.03	15.14	14.45	0.65	0.03	15.14
C130	T	11	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
CNA441		829	1.10	0.03	0.00	1.14	1.10	0.03	0.00	1.14
DHC6		1,558	2.07	0.06	0.01	2.13	2.07	0.06	0.01	2.13
Q400		2,032	2.78	0.00	0.00	2.78	2.78	0.00	0.00	2.78
Turboprop Total		4,430	5.96	0.09	0.01	6.07	5.96	0.09	0.01	6.07
B206L	H	10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
B212		20	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
B222		5	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
EC130		5	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
H500D		20	0.03	0.00	0.00	0.03	0.03	0.00	0.00	0.03
R22		35	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
S65		15	0.02	0.00	0.00	0.02	0.02	0.00	0.00	0.02
S76		10	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01
SA350D		106	0.14	0.01	0.00	0.14	0.14	0.01	0.00	0.14
Helicopter Total		226	0.30	0.01	0.00	0.31	0.30	0.01	0.00	0.31
GRAND TOTAL		17,483	23.09	0.80	0.06	23.95	23.09	0.80	0.06	23.95

J - Jet, P - Prop, T - Turboprop, H - Helicopter
Day = 7:00 a.m. to 6:59 p.m.
Evening = 7:00 p.m. to 9:59 p.m.
Night = 10:00 p.m. to 6:59 a.m.
SL = Stage Length

Source: URS Corp., 2006.

**TABLE C-1.11
FUTURE CONDITION RUNWAY UTILIZATION**

ARRIVALS				
Runway	Air Carrier Turboprops	Business Jets	Commuter / Turboprops	Props / Helos
09	25.00%	31.60%	31.60%	31.70%
27	75.00%	68.40%	68.40%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%
DEPARTURES				
Runway	Air Carrier Turboprops	Business Jets	Commuter / Turboprops	Props / Helos
09	75.00%	67.10%	67.10%	31.70%
27	25.00%	32.90%	32.90%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%

Source: Mammoth Yosemite Environmental Assessment, 2000.

Flight Tracks

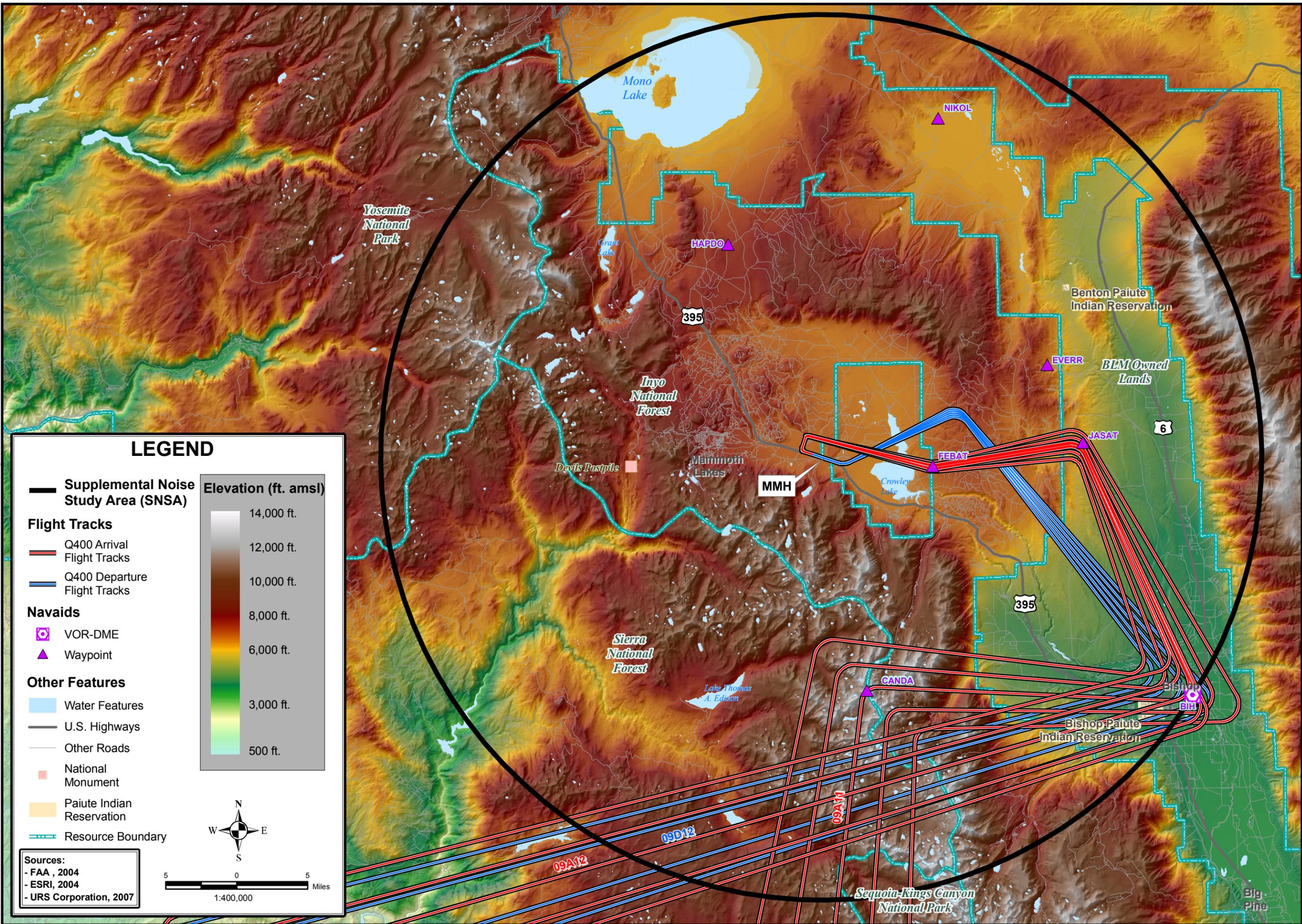
Figures C-1.10 and C-1.11 depict modeled Q400 flight tracks for the 2009 Proposed Action Alternative. **Figure C-1.10** depicts east flow Q400 departures to Los Angeles and arrivals from Los Angeles using Runway 09, while **Figure C-1.11** depicts west flow Q400 departures to Los Angeles and arrivals from Los Angeles using Runway 27.

Figures C-1.12 and C-1.13 depict modeled Q400 flight tracks for the 2015 Proposed Action Alternative. **Figure C-1.12** depicts east flow Q400 departures and arrivals using Runway 09, while **Figure C-1.13** depicts west flow Q400 departures to and arrivals using Runway 27. The additional Q400 that appear in 2015 would result from the introduction of flights to/from Las Vegas and San Francisco. The flights to/from San Diego will use the same tracks as those to/from Los Angeles.

Track Use

Utilization percentages of the flight tracks are tabulated in **Table C-1.12** for 2009 arrivals and departures. As was determined for the existing condition; based on discussions with MMH Personnel, it was assumed that there would be six arrival and six departure GA routes to and from MMH. Air Carrier track utilization is also depicted in **Table C-1.12** for the 2009 Proposed Action. **Table C-1.13** presents the flight track utilization for 2015 No-Action and Proposed Action Alternatives.

H:\projects\Mammoth_Lakes\12004269\Proposed Air Service\Appendix_C\Figure C-1.10_2009 Proposed Q400 Flight Tracks for Runway 09 - East Flow.mxd, rpf, (bde, 09/21/07)



LEGEND

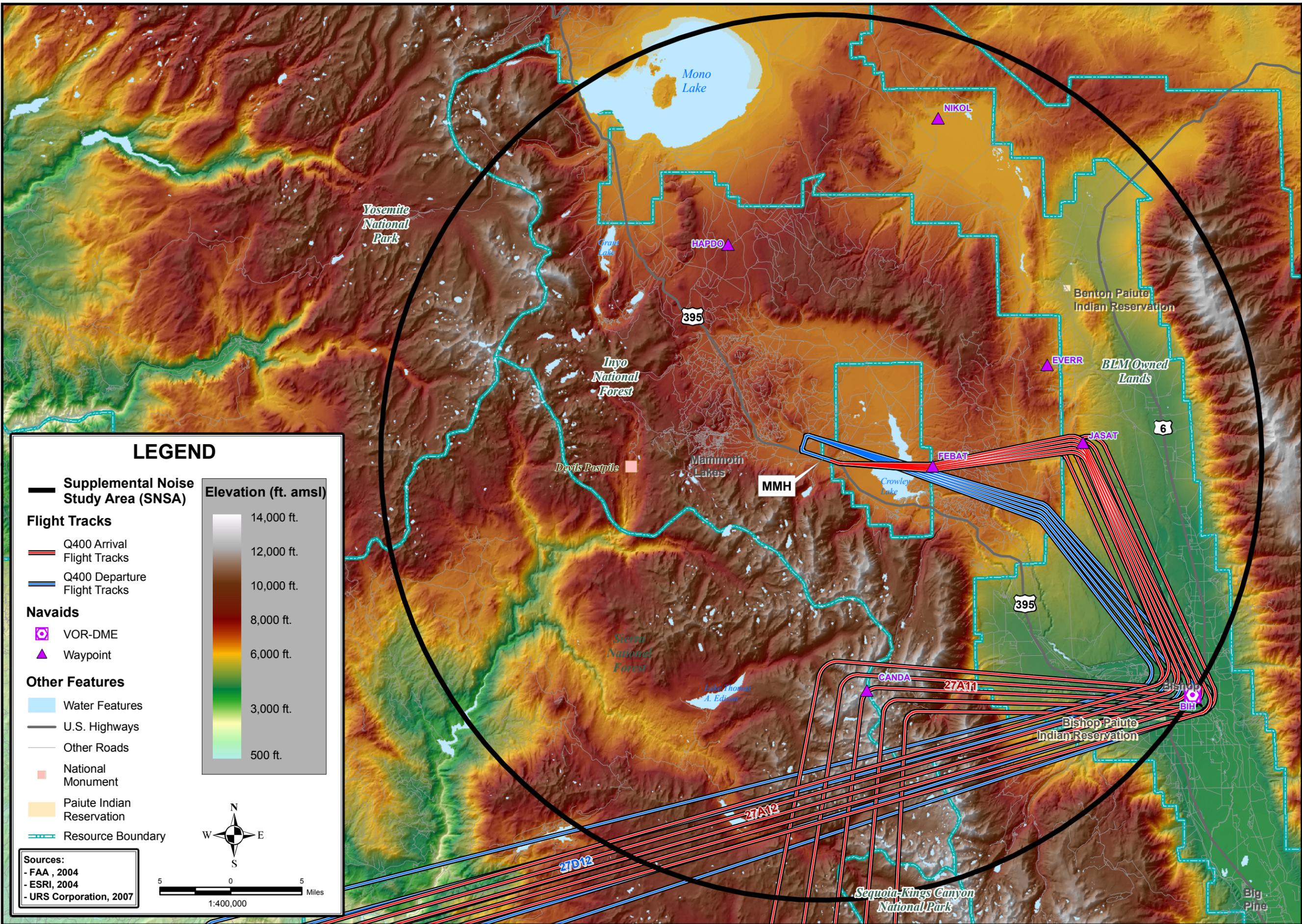
- Supplemental Noise Study Area (SNSA)**
 - Flight Tracks**
 - Q400 Arrival Flight Tracks
 - Q400 Departure Flight Tracks
 - Nav aids**
 - VOR-DME
 - Waypoint
 - Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary
- Elevation (ft. amsl)**
- 14,000 ft.
 - 12,000 ft.
 - 10,000 ft.
 - 8,000 ft.
 - 6,000 ft.
 - 3,000 ft.
 - 500 ft.
- Sources:**
- FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007
- Scale: 1:400,000
Miles: 0 to 5



2009 PROPOSED
Q400 FLIGHT TRACKS FOR
RUNWAY 09 - EAST FLOW

FIGURE
C-1.10

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.11_2009 Proposed Q400 Flight Tracks for Runway 27 - West Flow.mxd, rpf, (hde, 09/21/07)



LEGEND

Supplemental Noise Study Area (SNSA)
 ——— Supplemental Noise Study Area (SNSA)

Flight Tracks
 ——— Q400 Arrival Flight Tracks
 ——— Q400 Departure Flight Tracks

Nav aids
 [VOR-DME symbol] VOR-DME
 [Waypoint symbol] Waypoint

Other Features
 [Water symbol] Water Features
 [Highway symbol] U.S. Highways
 [Road symbol] Other Roads
 [Monument symbol] National Monument
 [Reservation symbol] Paiute Indian Reservation
 [Boundary symbol] Resource Boundary

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007

Elevation (ft. amsl)
 14,000 ft.
 12,000 ft.
 10,000 ft.
 8,000 ft.
 6,000 ft.
 3,000 ft.
 500 ft.

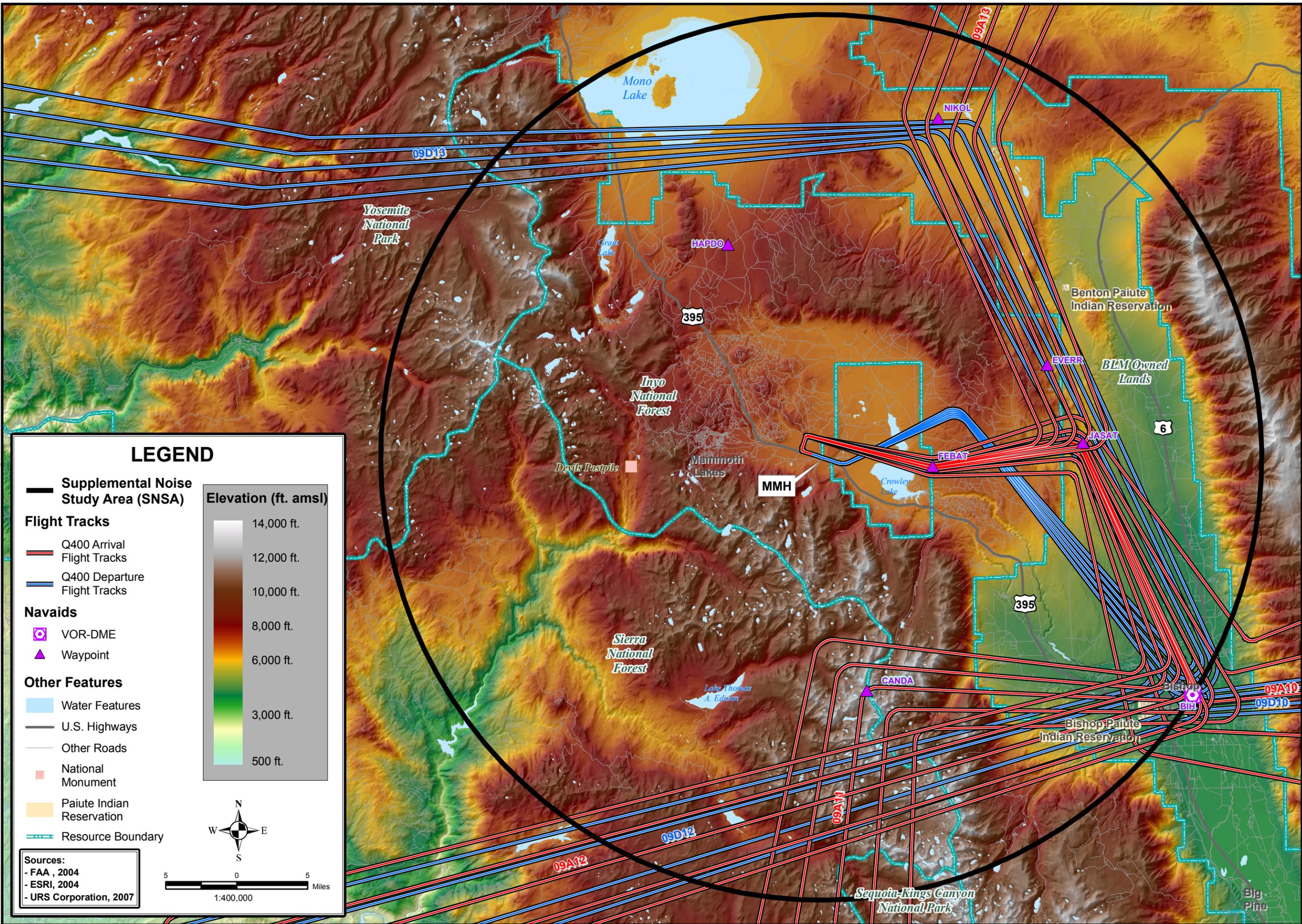
Scale: 1:400,000
 5 0 5 Miles



2009 PROPOSED Q400 FLIGHT TRACKS FOR RUNWAY 27 - WEST FLOW

FIGURE C-1.11

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.12_2015 Proposed Q400 Flight Tracks for Runway 09 - East Flow.mxd, rpf, (bde, 09/21/07)



LEGEND

Supplemental Noise Study Area (SNSA)
 —

Flight Tracks
 — Q400 Arrival Flight Tracks
 — Q400 Departure Flight Tracks

Nav aids
 ○ VOR-DME
 ▲ Waypoint

Other Features
 ■ Water Features
 — U.S. Highways
 — Other Roads
 ■ National Monument
 ■ Paiute Indian Reservation
 — Resource Boundary

Elevation (ft. amsl)
 14,000 ft.
 12,000 ft.
 10,000 ft.
 8,000 ft.
 6,000 ft.
 3,000 ft.
 500 ft.

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007

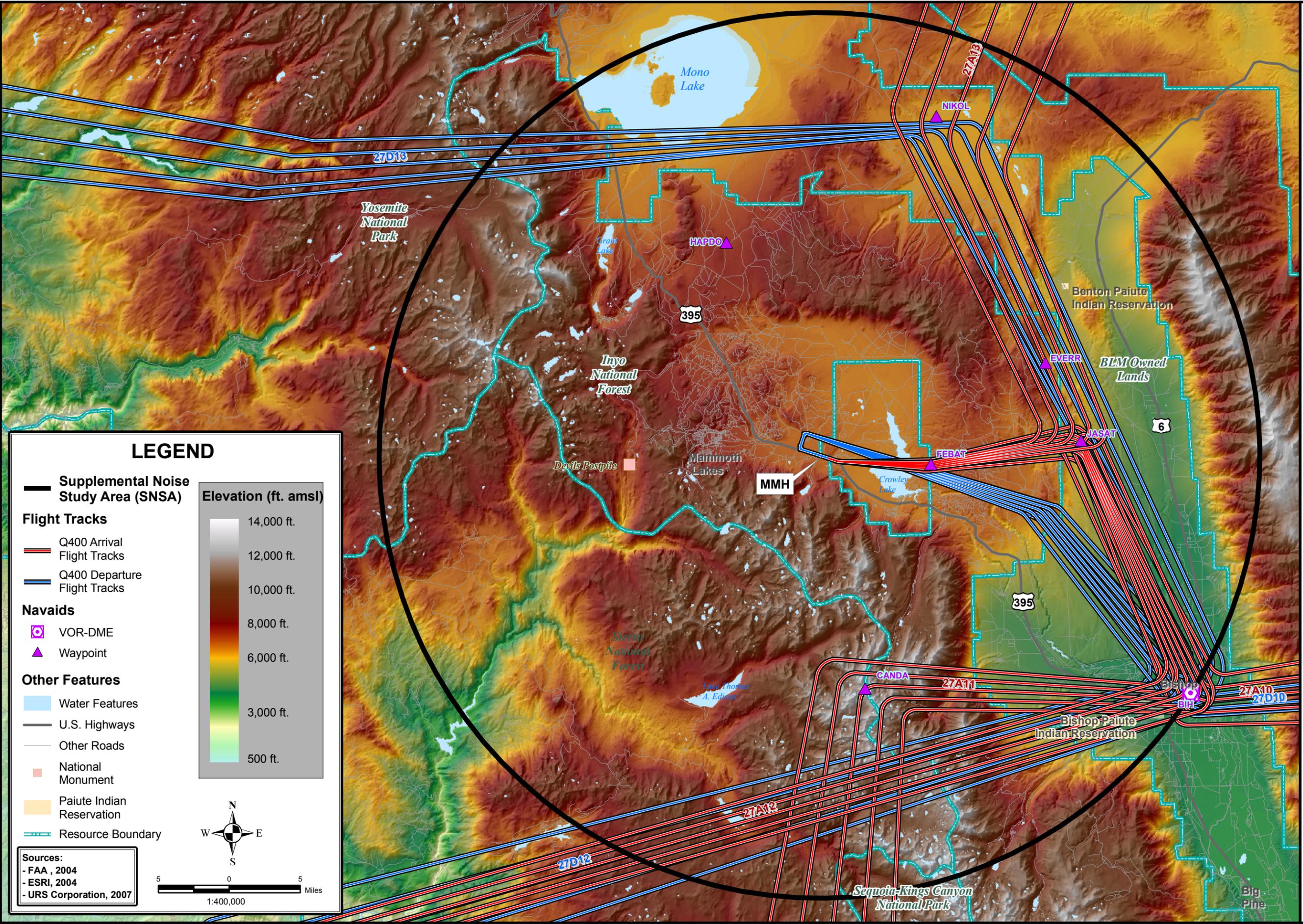
Scale: 1:400,000
 5 Miles



**2015 PROPOSED
 Q400 FLIGHT TRACKS FOR
 RUNWAY 09 - EAST FLOW**

**FIGURE
 C-1.12**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.13_2015 Proposed Q400 Flight Tracks for Runway 27 - West Flow.mxd, (pdf, hde, 09/21/07)



LEGEND

Supplemental Noise Study Area (SNSA)
 ———

Flight Tracks
 ——— Q400 Arrival Flight Tracks
 ——— Q400 Departure Flight Tracks

Nav aids
 [VOR-DME symbol] VOR-DME
 [Waypoint symbol] Waypoint

Other Features
 [Water Features symbol] Water Features
 [U.S. Highways symbol] U.S. Highways
 [Other Roads symbol] Other Roads
 [National Monument symbol] National Monument
 [Paiute Indian Reservation symbol] Paiute Indian Reservation
 [Resource Boundary symbol] Resource Boundary

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007

Elevation (ft. amsl)
 14,000 ft.
 12,000 ft.
 10,000 ft.
 8,000 ft.
 6,000 ft.
 3,000 ft.
 500 ft.

5 0 5 Miles
 1:400,000



2015 PROPOSED Q400 FLIGHT TRACKS FOR RUNWAY 27 - WEST FLOW

FIGURE C-1.13

**TABLE C-1.12
2009 FUTURE CONDITION FLIGHT TRACK UTILIZATION**

AIR CARRIER ARRIVAL		
Runway	Track	Winter
09	09A10	0.00%
	09A11	50.00%
	09A12	50.00%
	09A13	0.00%
	TOTAL	100.00%
27	27A10	0.00%
	27A11	50.00%
	27A12	50.00%
	27A13	0.00%
	TOTAL	100.00%
AIR CARRIER DEPARTURE		
Runway	Track	Winter
09	09D10	0.00%
	09D12	100.00%
	09D13	0.00%
	TOTAL	100.00%
27	27D10	0.00%
	27D12	100.00%
	27D13	0.00%
	TOTAL	100.00%

GA ARRIVAL				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
	27	27A1	0.00%	0.00%
27A2		0.00%	0.00%	20.00%
27A3		5.00%	5.00%	5.00%
27A4		5.00%	5.00%	5.00%
27A6		70.00%	70.00%	0.00%
27A7		20.00%	20.00%	0.00%
TOTAL		100.00%	100.00%	100.00%
GA DEPARTURE				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
	27	27D1	0.00%	0.00%
27D2		10.00%	10.00%	10.00%
27D3		5.00%	5.00%	5.00%
27D4		5.00%	5.00%	5.00%
27D5		10.00%	10.00%	10.00%
27D7		70.00%	70.00%	0.00%
TOTAL		100.00%	100.00%	100.00%

Note: No summer operations occur in 2009.
Sources: Conversations with Federal Aviation Administration Personnel, 2004.
Conversations with Mammoth Yosemite Airport Personnel, 2004.
URS Corporation, 2006.

**TABLE C-1.13
2015 FUTURE CONDITION FLIGHT TRACK UTILIZATION**

AIR CARRIER ARRIVAL			
Runway	Track	Summer	Winter
09	09A10	0.00%	25.00%
	09A11	50.00%	25.00%
	09A12	50.00%	25.00%
	09A13	0.00%	25.00%
	TOTAL	100.00%	100.00%
27	27A10	0.00%	25.00%
	27A11	50.00%	25.00%
	27A12	50.00%	25.00%
	27A13	0.00%	25.00%
	TOTAL	100.00%	100.00%
AIR CARRIER DEPARTURE			
Runway	Track	Summer	Winter
09	09D10	0.00%	25.00%
	09D12	100.00%	50.00%
	09D13	0.00%	25.00%
	TOTAL	100.00%	100.00%
27	27D10	0.00%	25.00%
	27D12	100.00%	50.00%
	27D13	0.00%	25.00%
	TOTAL	100.00%	100.00%

GA ARRIVAL				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
GA DEPARTURE				
Runway	Track	Business Jets	TurboProp	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

Sources: Conversations with Federal Aviation Administration Personnel, 2004.
 Conversations with Mammoth Yosemite Airport Personnel, 2004.
 URS Corporation, 2006.

C-1.6 FUTURE CONDITIONS RESULTS

Potential 2009 Impacts

No-Action and Proposed Action Alternatives were compared to one another in order to assess the potential impact of the additional Q400 operations in 2009. [Figure C-1.14](#) depicts the 2009 No-Action Alternative noise contours and [Figure C-1.15](#) depicts the 2009 Proposed Action noise contours. The contours were superimposed over the local land use map, and acreage was calculated.

There are no residential land uses or noise sensitive sites within the CNEL 65 dB contour for either the No-Action or the Proposed Action alternatives. [Table C-1.14](#) identifies land use and acreage within the CNEL 65 dB contours for 2009 No-Action and Proposed Action Alternatives.

**TABLE C-1.14
2009 NO-ACTION AND PROPOSED ACTION ALTERNATIVES IMPACTS TO LAND USE (ACRES)**

Off-Airport Land Use	No-Action Alternative				Proposed Action			
	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	1.6	0.0	0.0	1.6	1.6	0.0	0.0	1.6
Resource Management	1.7	0.0	0.0	1.7	1.7	0.0	0.0	1.7
Right of Way	1.2	0.0	0.0	1.2	1.2	0.0	0.0	1.2
Off-Airport Land Use Total	4.5	0.0	0.0	4.5	4.5	0.0	0.0	4.5
On-Airport Land Use	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	57.6	37.6	30.6	125.8	57.6	37.7	30.6	125.9
On-Airport Land Use Total	57.6	37.6	30.6	125.8	57.6	37.7	30.6	125.9
GRAND TOTAL	62.1	37.6	30.6	130.3	62.1	37.7	30.6	130.4

Source: URS Corp., 2006.

Note: Numbers may not add, due to rounding.

Units = acres.

Potential 2015 Impacts

No-Action and Proposed Action alternatives were compared in order to assess the potential impact of the additional Q400 operations in 2015. [Figure C-1.16](#) depicts the 2015 No-Action Alternative noise contours and [Figure C-1.17](#) depicts the 2015 Proposed Action noise contours. The contours were superimposed over the local land use map, and acreage was calculated.

There are no residential land uses or noise sensitive sites within the CNEL 65 dB contour for either the No-Action or the Proposed Action Alternatives. [Table C-1.15](#) identifies land use and acreage within the CNEL 65 dB contours for 2009 No-Action and Proposed Action alternatives.

**TABLE C-1.15
2015 NO-ACTION AND PROPOSED ACTION IMPACTS TO LAND USE (ACRES)**

Off-Airport Land Use	No-Action Alternative				Proposed Action			
	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	2.9	0.0	0.0	2.9	3.0	0.0	0.0	3.0
Resource Management	2.9	0.0	0.0	2.9	2.9	0.0	0.0	2.9
Right of Way	2.6	0.0	0.0	2.6	2.6	0.0	0.0	2.6
Off-Airport Land Use Total	8.4	0.0	0.0	8.4	8.5	0.0	0.0	8.5
On-Airport Land Use	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total	CNEL 65 dBA	CNEL 70 dBA	CNEL 75 dBA	Total
Public/Quasi-Public Facilities	58.6	40.3	34.0	132.9	58.7	40.4	34.0	133.1
On-Airport Land Use Total	58.6	40.3	34.0	132.9	58.7	40.4	34.0	133.1
GRAND TOTAL	66.9	40.3	34.0	141.2	67.1	40.4	34.0	141.6

Source: URS Corp., 2006.

Note: Numbers may not add, due to rounding.

C-1.7 REFERENCES

14 CFR Part 150, Amendment 150-4, (September 24, 2004). "Airport Noise Compatibility Planning," Federal Aviation Administration, Docket No. 18691, 49 FR 49269.

American National Standards Institute, Inc. [ANSI], (1980). "Sound Level Descriptors for Determination of Compatible Land Use," American National Standards Institute Standard ANSI S3.23-1980.

ANSI, (1988). "Quantities and Procedures for Description and Measurement of Environmental Sound, Part I," American National Standards Institute Standard ANSI S21.9-1988.

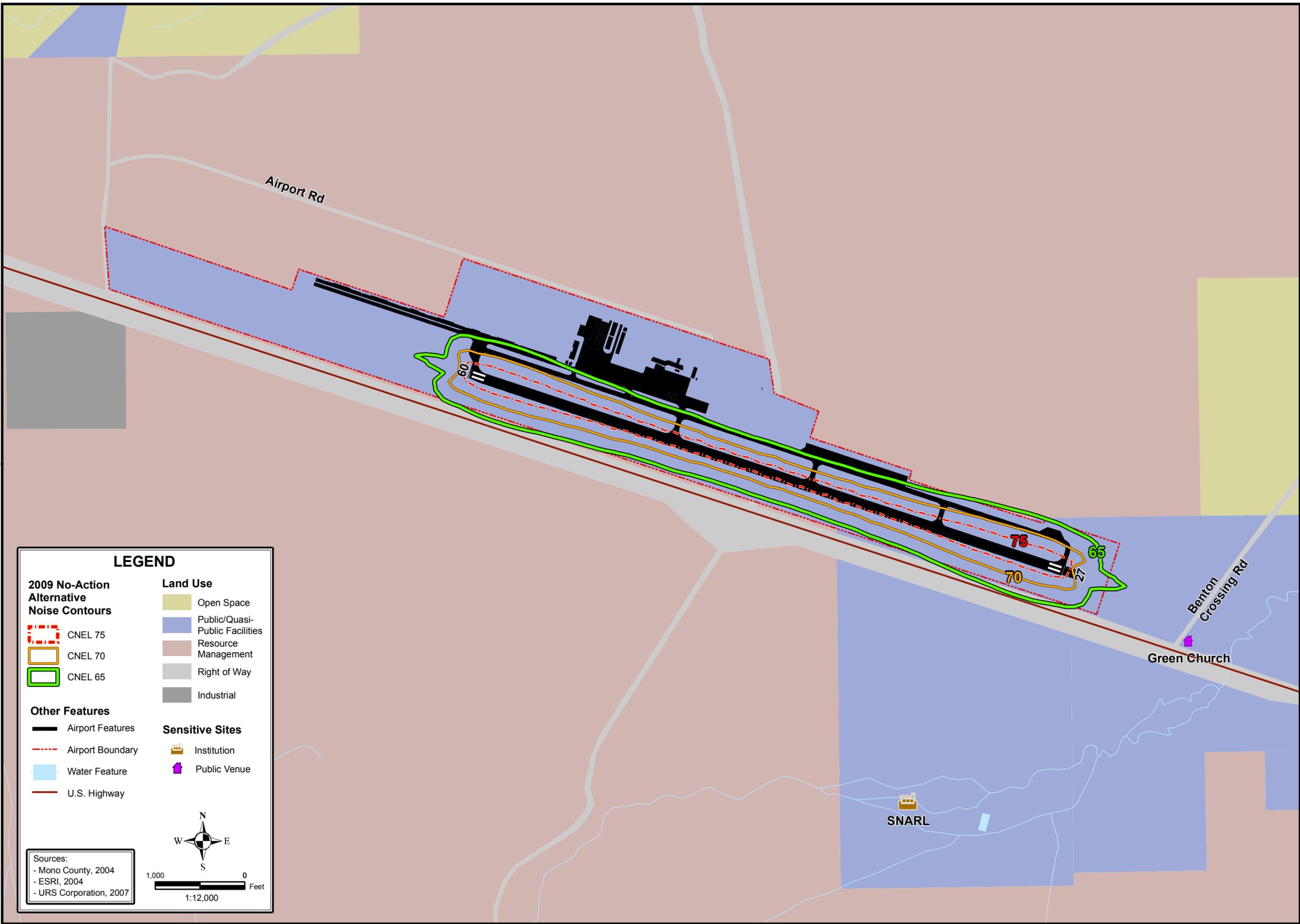
ANSI (2002). "Acoustical Performance Criteria, Design Requirements and Guidelines for Schools", Standard S12.60-2002.

American Speech-Language-Hearing Association, (1995). "Guidelines for Acoustics in Educational Environments", V.37, Suppl. 14, pgs. 15-19.

Bradley J.S., (1985). "Uniform Derivation of Optimum Conditions for Speech in Rooms", National Research Council, Building Research Note, BRN 239, Ottawa, Canada.

California Governor's Office of Planning and Research (2003). "State of California General Plan Guidelines", October 2003.

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.14_2009 No-Action Alternative Noise Contours.mxd (pdf, hde, 09/26/07)



LEGEND

2009 No-Action Alternative Noise Contours

- CNEL 75
- CNEL 70
- CNEL 65

Other Features

- Airport Features
- Airport Boundary
- Water Feature
- U.S. Highway

Land Use

- Open Space
- Public/Quasi-Public Facilities
- Resource Management
- Right of Way
- Industrial

Sensitive Sites

- Institution
- Public Venue

Sources:

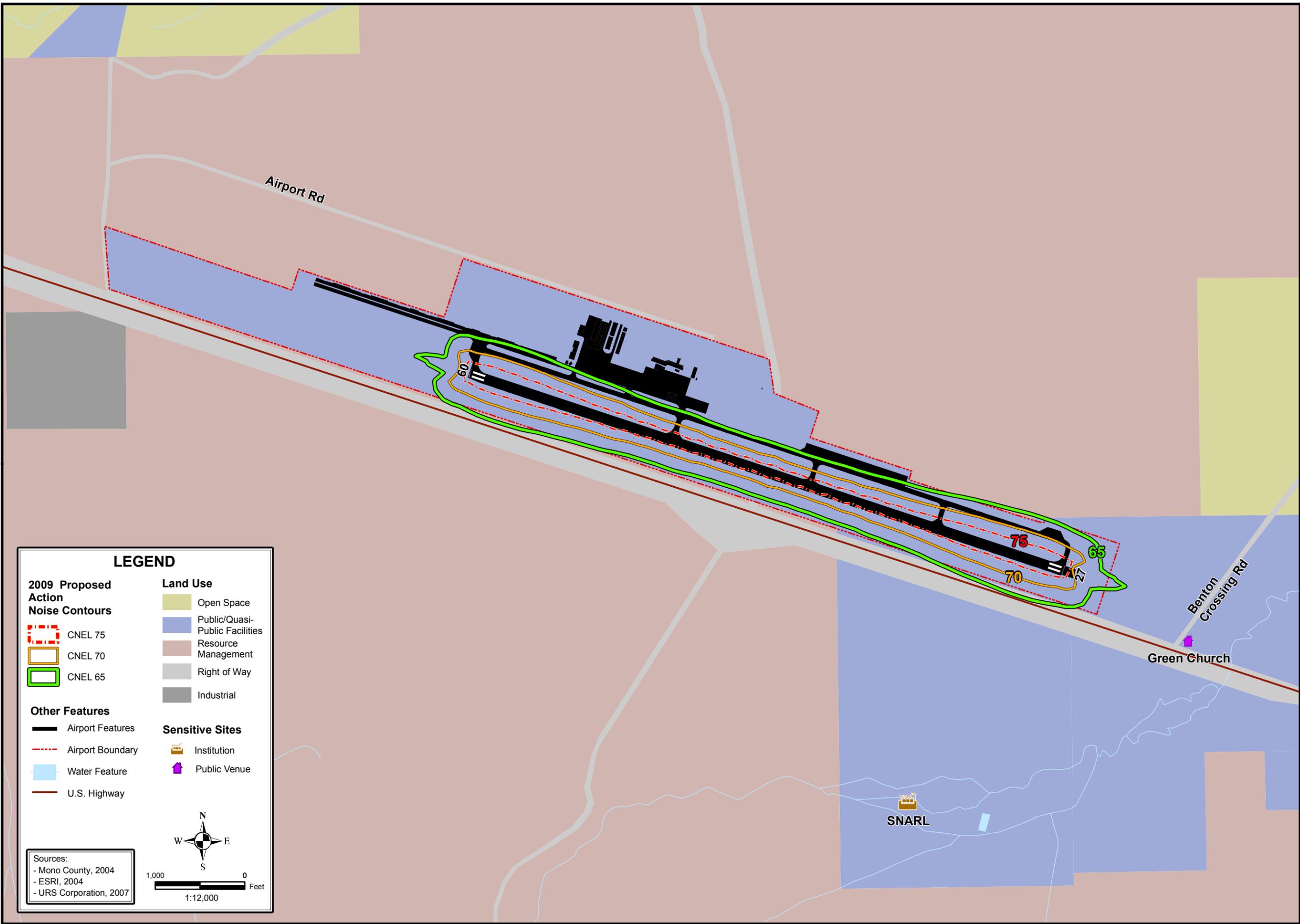
- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2007

Scale: 1:12,000
0 to 1,000 Feet

**2009 NO-ACTION
 ALTERNATIVE NOISE CONTOURS**

**FIGURE
 C-1.14**

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LEGEND

2009 Proposed Action Noise Contours

- CNEL 75
- CNEL 70
- CNEL 65

Other Features

- Airport Features
- Airport Boundary
- Water Feature
- U.S. Highway

Land Use

- Open Space
- Public/Quasi-Public Facilities
- Resource Management
- Right of Way
- Industrial

Sensitive Sites

- Institution
- ↑ Public Venue

Sources:

- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2007

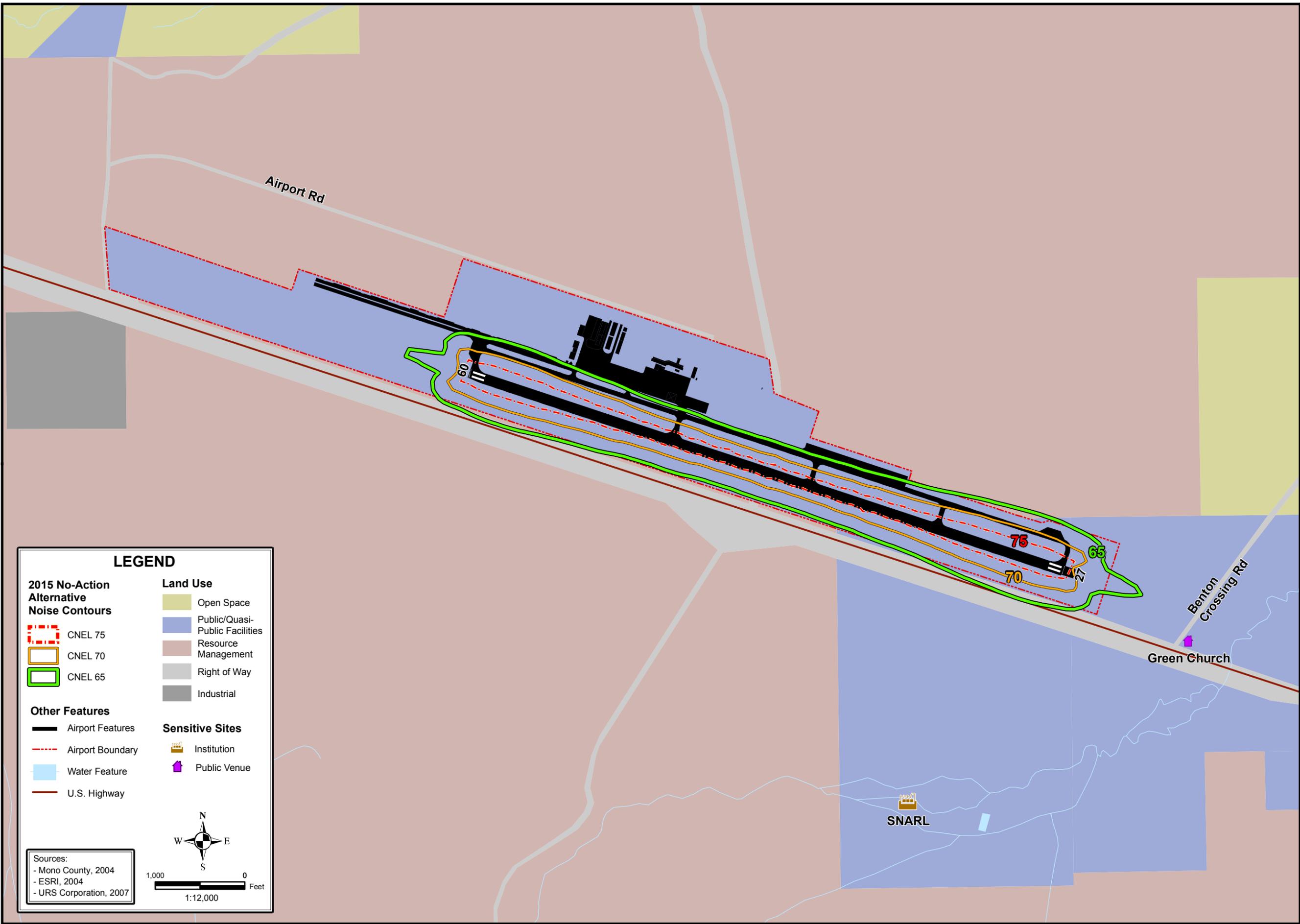
1,000
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2009 PROPOSED ACTION
NOISE CONTOURS

FIGURE
C-1.15

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix_C\Figure C-1.16_2015 No-Action Alternative Noise Contours.mxd (pdf, hde, 09/26/07)



LEGEND

2015 No-Action Alternative Noise Contours

- CNEL 75
- CNEL 70
- CNEL 65

Other Features

- Airport Features
- Airport Boundary
- Water Feature
- U.S. Highway

Land Use

- Open Space
- Public/Quasi-Public Facilities
- Resource Management
- Right of Way
- Industrial

Sensitive Sites

- Institution
- Public Venue

Sources:

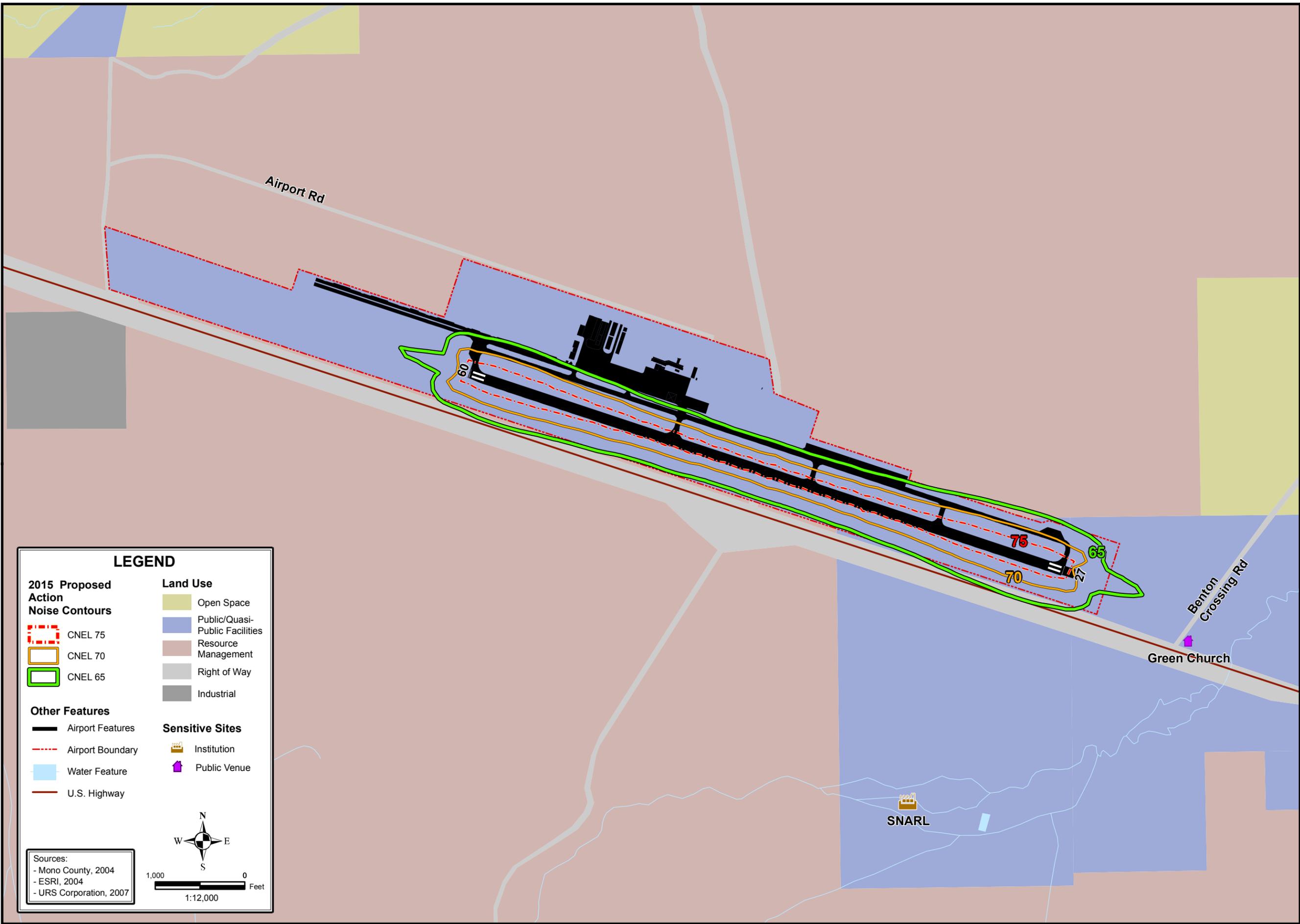
- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2007

1:12,000

**2015 NO-ACTION
 ALTERNATIVE NOISE CONTOURS**

FIGURE
 C-1.16

H:/projects/Mammoth_Lakes/12004269/Applications/mxd/Proposed Air Service/Appendix_C/Figure C-1.17_2015 Proposed Action Noise Contours.mxd, (pdf, hde, 09/26/07)



LEGEND

2015 Proposed Action Noise Contours

- CNEL 75
- CNEL 70
- CNEL 65

Other Features

- Airport Features
- Airport Boundary
- Water Feature
- U.S. Highway

Land Use

- Open Space
- Public/Quasi-Public Facilities
- Resource Management
- Right of Way
- Industrial

Sensitive Sites

- Institution
- Public Venue

Sources:

- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2007

1:12,000

**2015 PROPOSED ACTION
 NOISE CONTOURS**

**FIGURE
 C-1.17**

Draft EIS/EIR LAX Proposed Master Plan Improvements, Los Angeles, CA.

EPA, (1974). U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety," Report 550/9-74-004, March 1974.

Federal Aviation Administration [FAA], (2004). U.S. Department of Transportation, Federal Aviation Administration, Policies and Procedures for Considering Environmental Impacts, FAA Order 1050.1E, June 8, 2004.

FAA (1999). "U.S. Department of Transportation, Federal Aviation Administration Integrated Noise Model (INM) Version 6.0 User's Guide", FAA-AEE-99-03, September 1999.

FICAN, (1997). Federal Interagency Committee on Aviation Noise (FICAN), "Effects of Aviation Noise on Awakenings from Sleep," June 1997.

FICON, (1992). "Federal Agency Review of Selected Airport Noise Analysis Issues," Federal Interagency Committee on Noise (FICON), August 1992.

FICUN, (1980). "Guidelines for Considering Noise in Land Use Planning and Control," Federal Interagency Committee on Urban Noise (FICUN), June 1980.

Fidell et.al. (1991), Fidell, S., Barger, D.S., Schultz, T.J., "Updating a Dosage-Effect Relationship for the Prevalence of Annoyance Due to General Transportation Noise," J. Acoust. Soc. Am., 89, pgs. 221-233, January 1991.

Fidell et.al. (2000), Fidell, S., Pearsons, K, Tabachnick, B.G., Howes, R., "Effects on Sleep Disturbance of Changes in Aircraft Noise Near Three Airports", Journal of the Acoustical Society of America, 107(5) Pt.1, pgs. 2535-2547, May 2000.

Lazarus H. (1990), "New Methods for Describing and Assessing Direct Speech Communication Under Disturbing Conditions", Environment International, 16: 373 392.

Lind S.J., Pearsons K., and Fidell S. (1998). "Sound Insulation Requirements for Mitigation of Aircraft Noise Impact on Highline School District Facilities Volume I. BBN Systems and Technologies", BBN Report No. 8240.

Society of Automotive Engineers (Unknown). "Procedure for the Calculation of Airplane Noise in the Vicinity of Airports", SAE-AIR-1845.

Schultz, (1978). Schultz, T.J., "Synthesis of Social Surveys on Noise Annoyance," J. Acoust. Soc. Am., 64, 377-405, August 1978.

Sharp, B.S., Plotkin, K. J. (1984). "Selection of Noise Criteria for School Classrooms", Wyle Research Technical Note TN84-2 for the Port Authority of New York and New Jersey, October 1986.

Town of Mammoth Lakes (2000). "Environmental Assessment for the Mammoth Yosemite Airport Expansion Project", December 2000.

U.S. Department of Defense. Departments of the Air Force, the Army, and the Navy, (1978). "Planning in the Noise Environment", AFM 19-10. TM 5-803-2, and NAVFAC P-970. Washington, D.C.: U.S. DoD.

Wesler, J.E., (1977). "Concorde Operations At Dulles International Airport," NOISEXPO '77, Chicago, IL, March, 1977.

Wesler, J.E., (1986). "Priority Selection of Schools for Soundproofing", Wyle Research Technical Note TN96-8 for the Port Authority of New York and New Jersey, October 1986.

World Health Organization [WHO] (1999). "Guidelines for Community Noise", available online at <http://www.who.int/peh/noise/guidelines2.html>.

Appendix C-2

Noise Screening Assessment

The purpose of this Appendix is to evaluate the potential aircraft noise impact of the Proposed Action Alternative for the Mammoth Yosemite Airport in the Town of Mammoth Lakes, California on noise sensitive sites, including potential Section 4(f) resources, within the Initial Area of Investigation. This appendix contains a description of the noise analysis methodology, Existing Condition, future No-Action and future Proposed Action Alternative airport aircraft activity within the Initial Area of Investigation, and potential noise impacts on noise sensitive sites, including identified and potential Section 4(f) resources, within the Initial Area of Investigation.

The quantitative screening assessment is structured to provide conservative estimates (i.e., higher impact values) of possible noise effects from the project. The screening assessment is generally limited to potential project-related impacts and the relative changes due to the project. A cumulative analysis of overflights is not essential to the screening effort and is generally reserved from the main noise analysis.

The basic functions of the screening assessment are:

- To define an initial area of investigation.
- To identify individual parks that may receive noise increases or decreases from the project.
- To determine if further quantitative analysis is needed and, if so, the appropriate amount and level on analysis.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

Noise Screening Assessment for the Request for Operations Specification Amendment by Horizon Air to Provide Scheduled Air Service to Mammoth Yosemite Airport

**ENVIRONMENTAL IMPACT STATEMENT
Mammoth Lakes, Mono County, California**



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September 14, 2007

NOISE SCREENING ASSESSMENT

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
1.0 OBJECTIVE	1
2.0 METHODOLOGY	3
2.1 EVALUATION OF THE PROPOSED ACTION	3
2.2 MAMMOTH EIS STUDY AREA DEFINITION	3
2.3 INVENTORY OF POTENTIAL SECTION 4(F) RESOURCES WITHIN THE IAI	11
2.3.1 Units of the National Park System	13
2.3.2 National Forest Lands	14
2.3.3 Wilderness Areas	15
2.3.4 Bureau of Land Management (BLM) Facilities	16
2.3.5 State Park	16
2.3.6 Native American Lands and Reservations	17
2.3.7 LADWP Campgrounds	18
2.3.8 Summary of Section 4(f) Consultation	18
2.4 INVENTORY OF AIRCRAFT OPERATIONS WITHIN THE IAI	25
2.5 DETERMINATION OF NOISE LEVELS AT CONFIRMED AND POTENTIAL SECTION 4(F) PROPERTIES WITH A QUIET SETTING WITHIN THE IAI	32
2.5.1 Analysis Locations	32
2.5.2 Noise Metrics	32
2.5.3 Determination of Ambient Sound Levels	37
2.5.4 Change of Exposure (COE) Criteria	38
3.0 RESULTS	41
3.1 UNIFORM GRID ANALYSIS	41
3.2 INDIVIDUAL GRID POINT ANALYSIS	41
3.2.1 Yosemite National Park	41
3.2.2 Sequoia & Kings Canyon National Park	44
3.2.3 Devils Postpile National Monument	44
3.2.4 Mono Basin National Forest Scenic Area	44
3.2.5 Sierra National Forest	44
3.2.6 Inyo National Forest	44
3.2.7 Ansel Adams Wilderness	45
3.2.8 Dinkey Lakes Wilderness	45
3.2.9 John Muir Wilderness	45
3.2.10 Kaiser Wilderness	45
3.2.11 Bureau of Land Management (BLM)	46
3.2.12 Mono Lake Tufa State Reserve	46
3.2.13 Native American Reservations	46
3.2.14 Los Angeles Department of Water & Power (LADWP)	46
4.0 RECOMMENDATIONS	71

- Appendix A – FAA Approval of the Profile Extensions
- Appendix B – Descriptions of Potential Section 4(f) Properties
- Appendix C – Correspondences with Resource Agencies
- Appendix D – Aircraft Operational Data Information

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1	Inventory of Potential Section 4(f) Properties 13
2	Summary of Section 4(f) Consultation 21
3	2009 Winter Peak Month Average Daily Aircraft Operations..... 26
4	2015 Summer Peak Month Average Daily Aircraft Operations..... 27
5	2015 Winter Peak Month Average Daily Aircraft Operations..... 28
6	Section 4(f) and Potential Section 4(f) Analysis Locations..... 34
7	Initial Noise Screening Assessment (Year 2009) Yosemite National Park..... 47
8	Initial Noise Screening Assessment (Year 2015) Yosemite National Park..... 48
9	Initial Noise Screening Assessment (Year 2009) Sequoia & Kings Canyon National Park 49
10	Initial Noise Screening Assessment (Year 2015) Sequoia & Kings Canyon National Park 49
11	Initial Noise Screening Assessment (Year 2009) Devils Postpile national monument..... 50
12	Initial Noise Screening Assessment (Year 2015) Devils postpile national monument 50
13	Initial Noise Screening Assessment (Year 2009) Mono Basin National Forest Scenic Area 51
14	Initial Noise Screening Assessment (Year 2015) Mono Basin National Forest Scenic Area 51
15	Initial Noise Screening Assessment (Year 2009) Sierra National Forest 52
16	Initial Noise Screening Assessment (Year 2015) Sierra National Forest 53
17	Initial Noise Screening Assessment (Year 2009) Inyo National Forest 55
18	Initial Noise Screening Assessment (Year 2015) Inyo National Forest 57
19	Initial Noise Screening Assessment (Year 2009) Ansel Adams Wilderness 59
20	Initial Noise Screening Assessment (Year 2015) Ansel Adams Wilderness 59
21	Initial Noise Screening Assessment (Year 2009) Dinkey Lakes Wilderness..... 60
22	Initial Noise Screening Assessment (Year 2015) Dinkey Lakes Wilderness..... 60
23	Initial Noise Screening Assessment (Year 2009) John Muir Wilderness..... 61
24	Initial Noise Screening Assessment (Year 2015) John Muir Wilderness..... 62
25	Initial Noise Screening Assessment (Year 2009) Kaiser Wilderness 64
26	Initial Noise Screening Assessment (Year 2015) Kaiser Wilderness 64
27	Initial Noise Screening Assessment (Year 2009) Bureau of Land Management..... 65
28	Initial Noise Screening Assessment (Year 2015) Bureau of Land Management..... 66
29	Initial Noise Screening Assessment (Year 2009) Mono Lake Tufa State Reserve 68
30	Initial Noise Screening Assessment (Year 2015) Mono Lake Tufa State Reserve 68
31	Initial Noise Screening Assessment (Year 2009) Native American Reservations..... 69
32	Initial Noise Screening Assessment (Year 2015) Native American Reservations..... 69
33	Initial Noise Screening Assessment (Year 2009) Pleasant Valley Pit Campground 70
34	Initial Noise Screening Assessment (Year 2015) Pleasant Valley Pit Campground 70
35	Change of Exposure (Years 2009 and 2015) Summary 66

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	4(f) Resources within the Initial Area of Investigation (IAI)	6
2	No-Action Alternative Flight Tracks for Runway 09 - East Flow	7
3	No-Action Alternative Flight Tracks for Runway 27 - West Flow	8
4	Proposed Q400 Flight Tracks for Runway 09 - East Flow.....	9
5	Proposed Q400 Flight Tracks for Runway 27 - West Flow.....	10
6	MMH Runway 27 RNAV and GPS Arrival.....	30
7	MMH Take Off Minimums-Obstacle Avoidance	31
8	INM Uniform Grid within Initial Area of Investigation (IAI).....	35
9	4(f) Resource Grid Points within Initial Area of Investigation (IAI)	36
10	Locations of FAA and NPS Ambient Sound Level Monitoring.....	39
11	2015 Winter Grid Points Exceeding 3 dBA COE Criteria.....	42

CHAPTER 1.0
OBJECTIVE

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for the proposed introduction of seasonal Bombardier 70 seat de Havilland Dash 8 Series Q400 regional turboprop airliner operations at Mammoth Yosemite Airport (MMH) in northern California. The existing airport is within the vicinity of Federal and state park resources, and Native American land. Therefore, the EIS must assess potential impacts to these areas as prescribed in FAA Order 1050.1E.

Specifically, FAA Order 1050.1E, Appendix A, Section 14.5g states:

“The FAA will consider the use of appropriate supplemental noise analysis in consultation with the officials having jurisdiction for national parks, national wildlife refuges, and historic sites including traditional cultural properties where a quiet setting is a generally recognized purpose and attribute that FAA identifies within the study area of a proposed action. Such supplemental noise analysis is not, by itself, a measure of adverse aircraft noise or significant aircraft noise impact.”

In addition, FAA Order 1050.1E, Appendix A, Section 6.2i states:

“Part 150 guidelines may not be sufficient for all historic sites and do not adequately address the effects of noise on the expectations and purposes of people visiting areas within a national park or national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute.”

Some of the potential Section 4(f) properties are located in remote areas where a quiet setting is a generally recognized feature or attribute of the properties' Section 4(f) designation.

In June 2007, the FAA distributed ***Guidance on Procedures for Evaluating the Potential Noise Impacts of Airport Improvement Projects on National Parks and Other Sensitive Park Environments*** (Guidance Document) (FAA, 2007). The purpose of the guidance is “to bring standardization and consistency, quality control, and cost-consciousness to an emerging and complex area of noise analysis.” The guidance establishes a five-step process for supplemental noise analysis on parks. These five steps are:

- Prepare Noise Screening Assessment
- Inter-agency coordination
- Prepare Protocol and obtain approval
- Noise measurement (only if required)
- Complete noise impact analysis

The objectives of this Noise Screening Assessment are:

- To define a study area, or Initial Area of Investigation (IAI);
- To perform an inventory of park resources within the IAI where a quiet setting is a generally recognized purpose and attribute; and,
- To determine if further quantitative or qualitative analysis is needed at each potential Section 4(f) property, and if so, the appropriate level of analysis for each potential Section 4(f) property.

SEPTEMBER 2007

Since this Noise Screening Assessment includes potential Section 4(f) properties with quiet settings, it does not rely on 14 CFR Part 150 (Part 150) land use compatibility guidelines to assess potential noise impacts (per FAA Order 1050.1E, Appendix A, Section 6.2i). Instead, this Noise Screening Assessment utilizes a variety of noise metrics to assess the potential for noise increases at levels well below the Part 150 criteria.

This Noise Screening Assessment does not represent the determination by the FAA regarding the applicability of Section 4(f) to the sites analyzed and discussed. Rather, this Noise Screening Assessment identifies sites that managing resource agencies have indicated are potential 4(f) resources. Additionally, this Noise Screening Assessment will describe the physical and management characteristics of these resources, as reported by the managing resource agencies. The FAA will make determinations regarding the applicability of Section 4(f) to these resources at the appropriate time in the future.

The following sections summarize the methodology, results, and conclusion of the Noise Screening Assessment for the EIS for the Request for Operations Specifications Amendment by Horizon Air Service to Provide Scheduled Air Service to Mammoth Yosemite Airport. The Noise Screening Assessment has used an overly inclusive approach to ensure that potential Section 4(F) resources were included.

CHAPTER 2.0 **METHODOLOGY**

This Noise Screening Assessment presents a methodical, technical approach to determining the possible effect of the Proposed Action on noise-sensitive potential Section 4(f) properties located in the vicinity of the MMH. The methodology includes the definition of a study area, an inventory of potential Section 4(f) properties within the study area, the compilation of aircraft operational data associated with MMH, and an assessment of future noise levels at the potential Section 4(f) properties both with and without the Proposed Action.

The Noise Screening Assessment is designed to identify parks and other noise sensitive locations in the vicinity of the Proposed Action that could experience increased or decreased noise levels as a result of the project. The related goal is to identify regional park resources, whether further analysis is required, and the level or refinement of analysis needed for the main noise analysis. The main noise analysis builds upon the work in the Noise Screening Assessment and provides a more detailed and refined evaluation of predicted aircraft noise impacts on identified park environments, including potential cumulative effects.

2.1 EVALUATION OF THE PROPOSED ACTION

The Proposed Action is the introduction by Horizon Air of Bombardier 70 seat de Havilland Dash 8 Series Q400 (Q400) regional turboprop airliner operations at MMH. The forecast developed by the Town of Mammoth Lakes, and approved by the FAA, projects Horizon Air will begin operations at MMH with two flights per day from Los Angeles for the 2008-09 winter ski season (mid-December through mid-April). Additionally, in 2015 the forecast expects the winter season service to consist of eight flights per day and the addition of two flights per day during the summer season (mid-June through mid-August). The FAA's Integrated Noise Model (INM) Version 6.2a was utilized in this Noise Screening Assessment to evaluate the potential impacts of the Proposed Action. The INM Version 6.2a does not include noise and performance data for the Q400 aircraft. The standard substitution for the Q400 is the DHC830. The Federal Aviation Administration's Airports Division (APP-400), Office of Environment and Energy (AEE) and John A. Volpe National Transportation Systems Center determined that based on the anomalies in the flight and noise data resulting from modeling the DHC830 outside the standard arrival and departure profile altitudes, a more accurate depiction of the potential noise impacts would be obtained by developing a user-defined aircraft that was based on Q400 noise and performance data, rather than using the DHC830 as a surrogate. It was determined that using the DHC830, as a substitution for the Q400, with non-standard arrival and departure profiles forced INM Version 6.2a to extrapolate noise and flight data outside the available standard data resulting in inconsistent and illogical results. The FAA and Volpe contacted Bombardier Aerospace and obtained noise and performance data for the Q400, and formatted it for use in the INM. A user-defined aircraft was created for the Q400 and was submitted to FAA AEE for review and approval. A copy of the associated correspondence is included in **Appendix A**.

2.2 MAMMOTH EIS STUDY AREA DEFINITION

The noise analysis study area for the MMH EIS was developed by estimating the distance that the Q400, the aircraft proposed for use by Horizon Air at MMH, would need to climb to 10,000 feet altitude above

field elevation (AFE) from MMH. For MMH, Field Elevation is 7,128 feet above Mean Sea Level (MSL). Therefore, 10,000 feet AFE is equivalent to 17,128 feet MSL.

This aircraft would average a distance of approximately 166,039 feet (27.33 nautical miles) to reach an altitude of 10,000 feet AFE. Therefore, a circular shaped study area was established using a radius of 27 nautical miles around MMH. For the purposes of this Noise Screening Assessment, the study area is termed the Initial Area of Investigation (IAI) and is shown in **Figure 1**. The use of a 10,000 foot above ground level (AGL) threshold for development of the IAI is based on requirements in FAA Order 1050.1E, Appendix A, Paragraph 14.5e for airspace actions where the study area is larger than the immediate vicinity of the airport and on information and technical references contained in the new Airports guidance previously discussed. In this Noise Screening Assessment, 10,000 feet AFE is used instead of 10,000 feet AGL due to the varied terrain surrounding MMH. This also allows the IAI to coincide with the standard departure profile limits of INM.

The study area represents the geographical limits of the default analytical capabilities of the INM for the Q400 aircraft originating from MMH, if aircraft were to fly straight-out from the airport to the edge of the circle. However, due to terrain in the vicinity of MMH, aircraft do not fly straight out for a distance of 27 nautical miles, nor do they fly straight in from a distance of 27 nautical miles. FAA's Air Traffic Organization was consulted to identify departure and arrival tracks for the proposed Q400 operations. When the distance of 166,039 feet is measured along the Q400 departure tracks, the point where the Q400 reaches 10,000 feet AFE is inside the circle.

The other aircraft types in the fleet mix for MMH reach an altitude of 10,000 feet AFE at varying distances from the airport. Topographic maps were reviewed to identify location of mountains, published U.S. Terminal Procedures were consulted, radar data was analyzed, and airport personnel were interviewed to accurately establish the location of existing flight tracks to and from MMH. The highest-performing aircraft in the fleet mix is the DHC6 (INM substitution for Beechcraft King Air), which reaches an altitude of 10,000 feet AFE at a distance of 70,428 feet (11.59 nmi). The worst-performing aircraft in the fleet mix is the GASEPF, which reaches an altitude of 10,000 feet AFE at a distance of 317,414 feet (52.24 nmi). The GASEPF is an INM composite general aviation single engine fixed-pitch propeller aircraft and is a substitution for numerous single engine aircraft. All aircraft use the standard approach profile, which starts at an altitude of 6,000 feet AFE, with a corresponding distance of 114,487 feet (18.84 nmi). This point is inside the circle for all arriving aircraft on all tracks.

The INM default database includes standard profiles modeling aircraft departures up to 10,000 feet AFE and arrivals from 6,000 feet AFE. "INM standard aircraft do not exist above these altitudes; consequently, no noise is produced [by the model]. If you are computing noise in areas where aircraft are known to fly above these altitudes, you must modify the standard procedures by adding more procedure steps or profile points." (INM 6.0 User's Guide, page 2-3, bullet #6.)

In order for aircraft to fly to/from the airport to the IAI boundary, it was necessary to extend all arrival profiles, and most of the departure profiles, to reach the IAI boundary. Each INM aircraft type in the existing and future fleet mix operating at MMH was evaluated to determine the maximum altitude to which the aircraft should climb before leveling off to their enroute cruising altitude, based in part on the service

ceiling for that aircraft. Service ceilings, the highest altitude under standard atmospheric conditions at which an aircraft is designed to operate, were obtained from <http://www.airliners.net/info/>. The minimum vectoring altitude and the bottom of the positive-controlled airspace is 18,000 feet MSL, which ensures aircraft will be in constant radar contact with, and be directed by, the Air Route Traffic Control Center (ARTCC). Some non-turbo-charged aircraft (e.g., CNA172, CNA206, PA28) may not be capable of climbing to this altitude; in which case, their departure profiles would level off at their respective service ceiling.

Sufficient radar data is available to adequately characterize the enroute altitudes for higher altitude aircraft arriving at or departing MMH (lower altitude General Aviation (GA) aircraft are not in radar contact). Air Traffic Control (ATC) has indicated that the enroute altitude will be based on many variables for each specific flight, including but not limited to, weather and other area traffic. ATC did estimate, based on the cruise speed and performance characteristics of the Q400, that enroute altitude is likely to be between FL180 (18,000 feet MSL) and FL240 (24,000 feet MSL).

For the purposes of this study an enroute altitude of 18,000 feet MSL (or lower, based on service ceiling) was assumed for the propeller-driven aircraft, 22,000 feet MSL for the turboprops, and 24,000 feet MSL for the jet-powered aircraft. For this study, it is anticipated that aircraft will climb to their enroute altitude, followed by a level flight segment to reach the boundary of the IAI. Conversely, to ensure aircraft arriving at MMH will be modeled to the IAI boundary, aircraft will begin with a level flight segment at the enroute altitude and descend on a 3-degree approach path until reaching the airport.

As described above, the boundary of the IAI is at a radius of 27 nautical miles from the airport. However, the distance along the flight tracks to the boundary of the IAI varies by flight track. The maximum flight track length for GA arrivals is along track 09A7, where the distance to the IAI is 429,789 feet (70.73 nmi). The maximum flight track length for GA departures is along track 27D7, where the distance to the IAI is 406,846 feet (66.96 nmi). For the Q400 the maximum flight track length for arrivals is along track 09A12, where the distance to the IAI is 429,789 feet (70.73 nmi). The maximum flight track length for Q400 departures is along track 27D13, where the distance to the IAI is 586,493 feet (96.52 nmi). The No-Action Alternative flight tracks are illustrated on **Figures 2 and 3**. The proposed Q400 flight tracks are illustrated on **Figures 4 and 5**.

Extended profiles were submitted to AEE for review and approval, as required in the INM 6.0 User's Guide, page B-1. A copy of the associated correspondence is included in **Appendix A**.

The IAI encompasses approximately 2,290 square miles in size and contains portions of several potential Section 4(f) resources including: Inyo National Forest, Sierra National Forest, Yosemite National Park, Sequoia and Kings Canyon National Park, Devils Postpile National Monument, Ansel Adams Wilderness, John Muir Wilderness, Dinkey Lakes Wilderness, Kaiser Wilderness, Yosemite Wilderness, Sequoia & Kings Canyon Wilderness, Mono Basin National Forest Scenic Area, Mono Lake Tufa State Reserve, Chalfant Petroglyph Site, Yellow Jacket Petroglyphs Site, Fish Slough Area of Critical Environmental Concern, Benton Paiute Reservation, and Bishop Paiute Reservation.

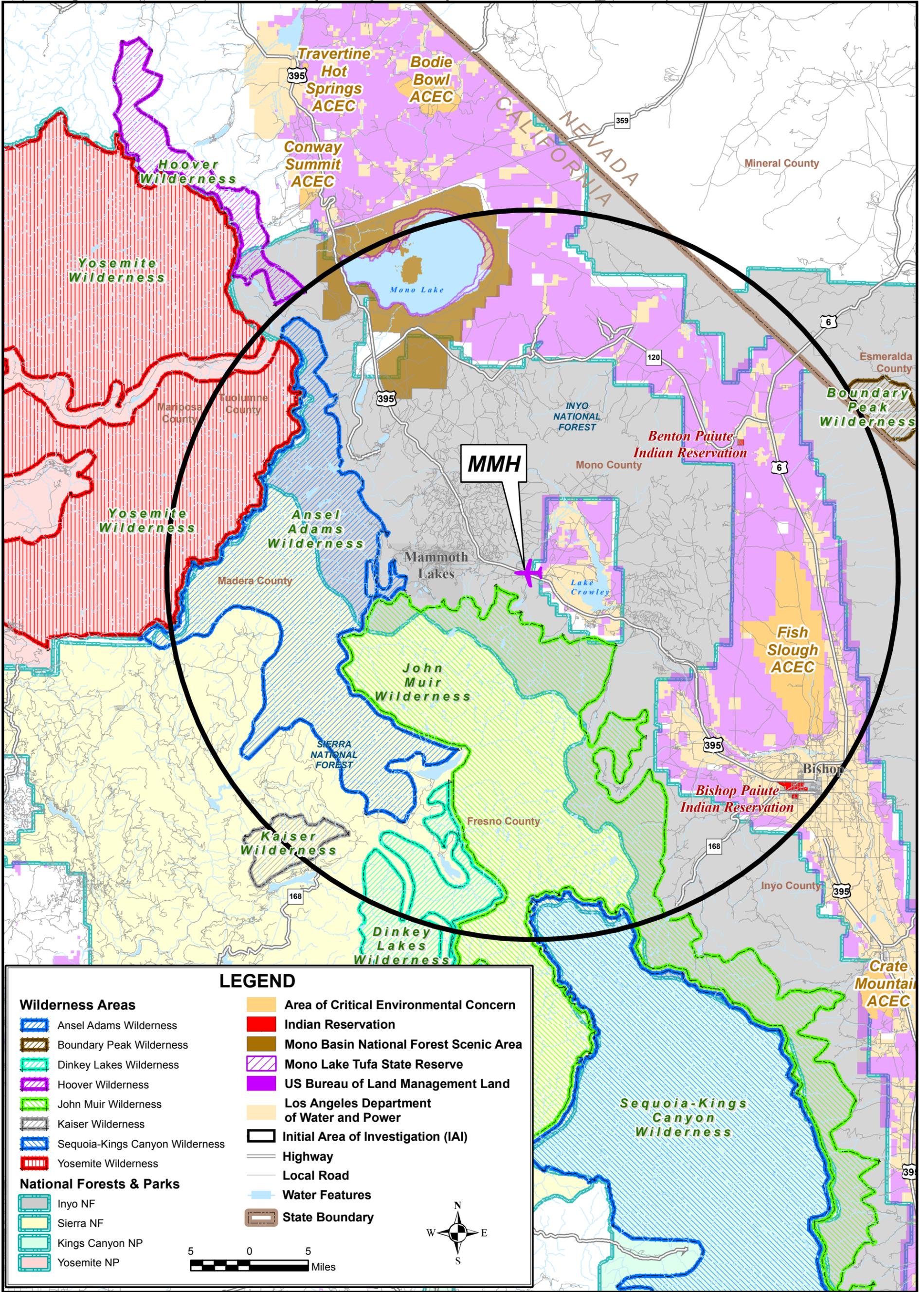
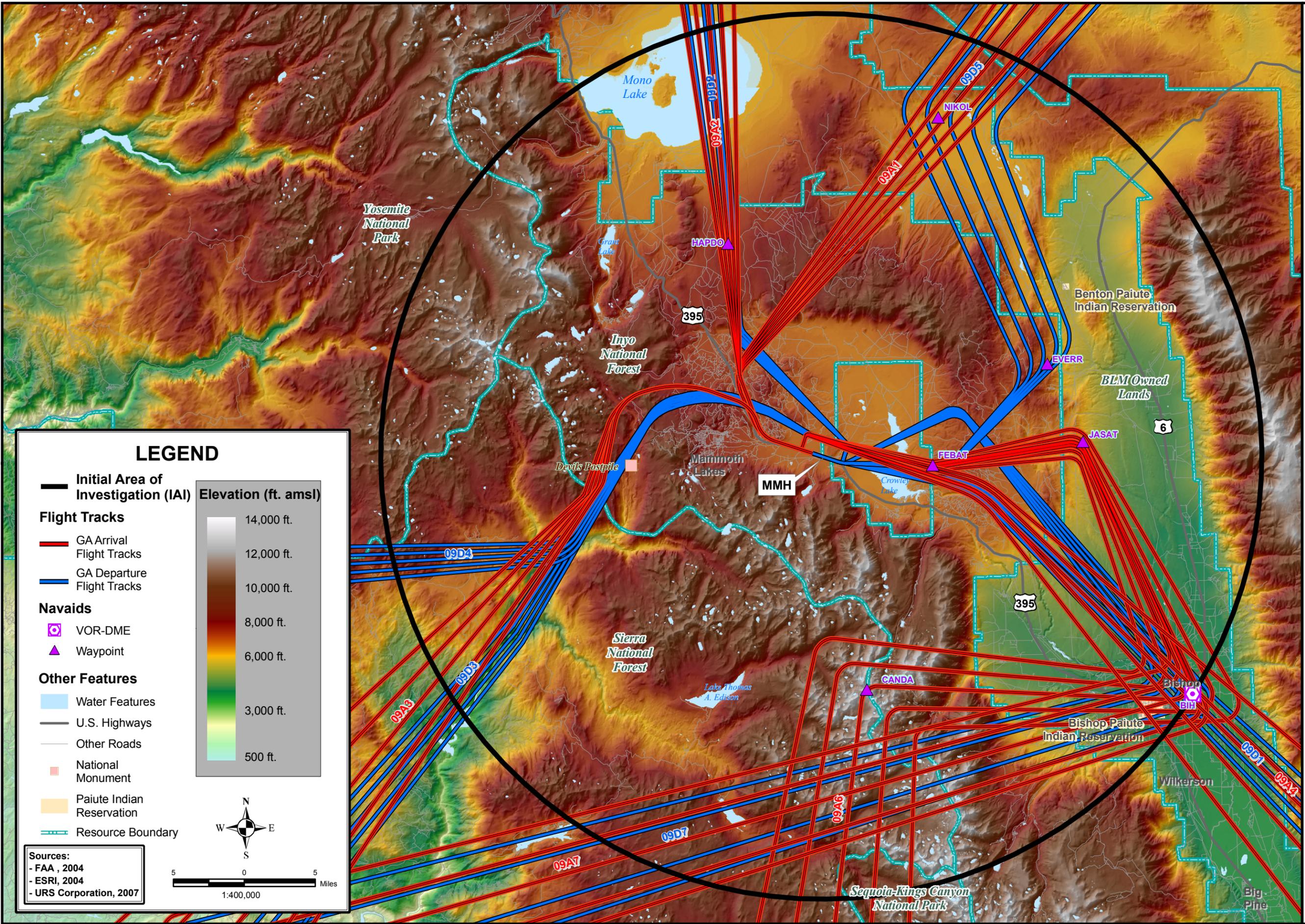


FIGURE 1

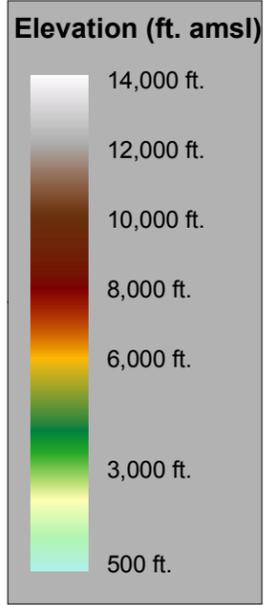
**NOISE SCREENING ASSESSMENT:
POTENTIAL 4(f) RESOURCES**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Noise Screening Assessment\Figure 2. Noise Screening Assessment: No-Action Alternative Flight Tracks for Runway 09 - East Flow.mxd (ref. lrp, hde, 09/13/07)

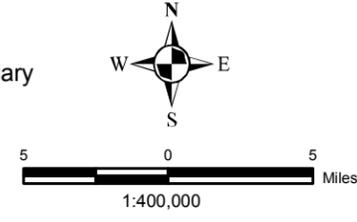


LEGEND

- Initial Area of Investigation (IAI)
- Flight Tracks**
 - GA Arrival Flight Tracks
 - GA Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary



Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007



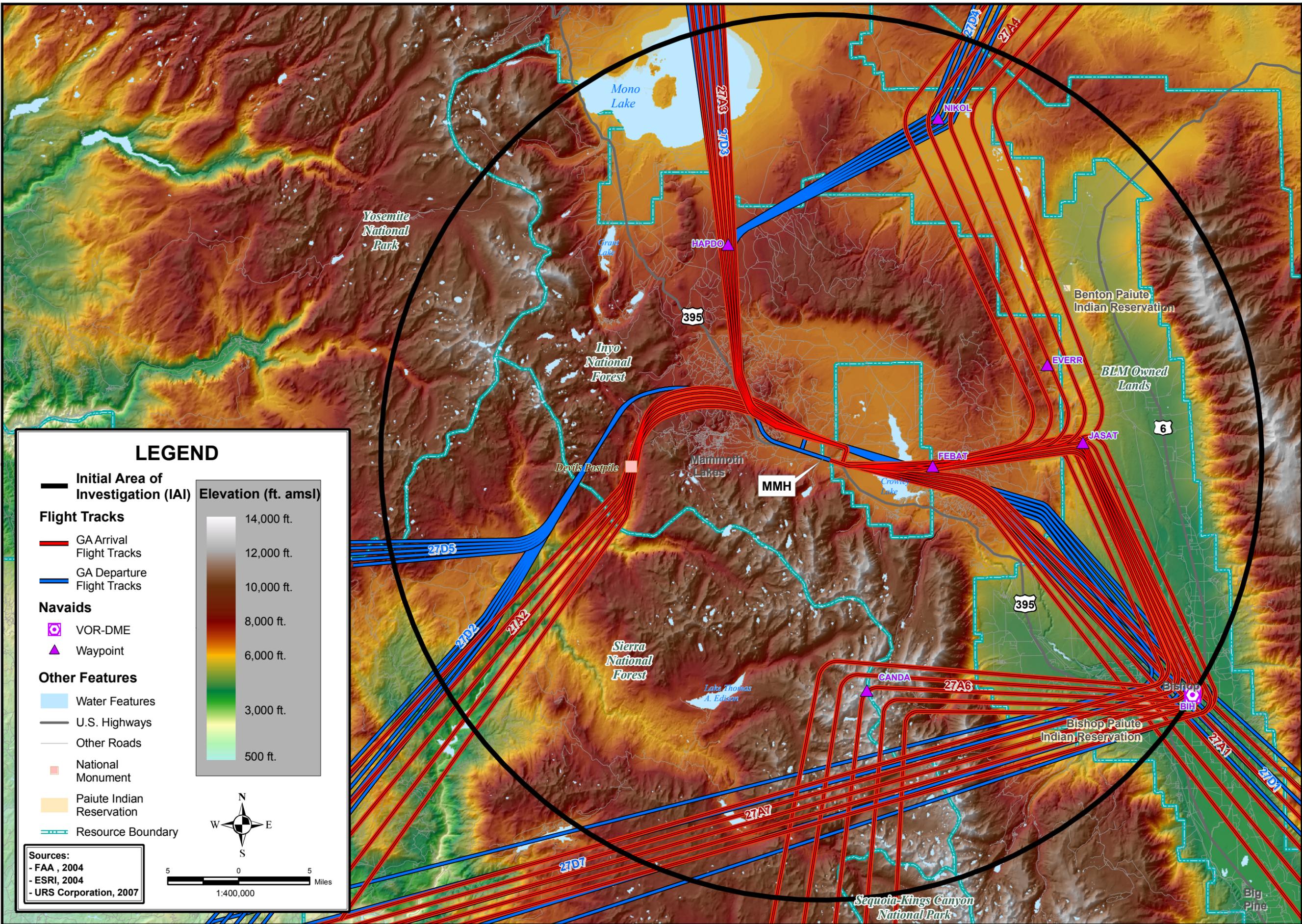
Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH



NOISE SCREENING ASSESSMENT:
NO-ACTION ALTERNATIVE FLIGHT
TRACKS FOR RUNWAY 09 - EAST FLOW

FIGURE
2

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Noise Screening Assessment\Figure 3 - Noise Screening Assessment - No-Action Alternative Flight Tracks for Runway 27 - West Flow.mxd, (ipf, ip, hde, 09/13/07)



LEGEND

Initial Area of Investigation (IAI)
 — Elevation (ft. amsl)

Flight Tracks
 — GA Arrival Flight Tracks
 — GA Departure Flight Tracks

Nav aids
 ○ VOR-DME
 ▲ Waypoint

Other Features
 ■ Water Features
 — U.S. Highways
 — Other Roads
 ■ National Monument
 ■ Paiute Indian Reservation
 — Resource Boundary

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007

Scale: 1:400,000
 5 Miles

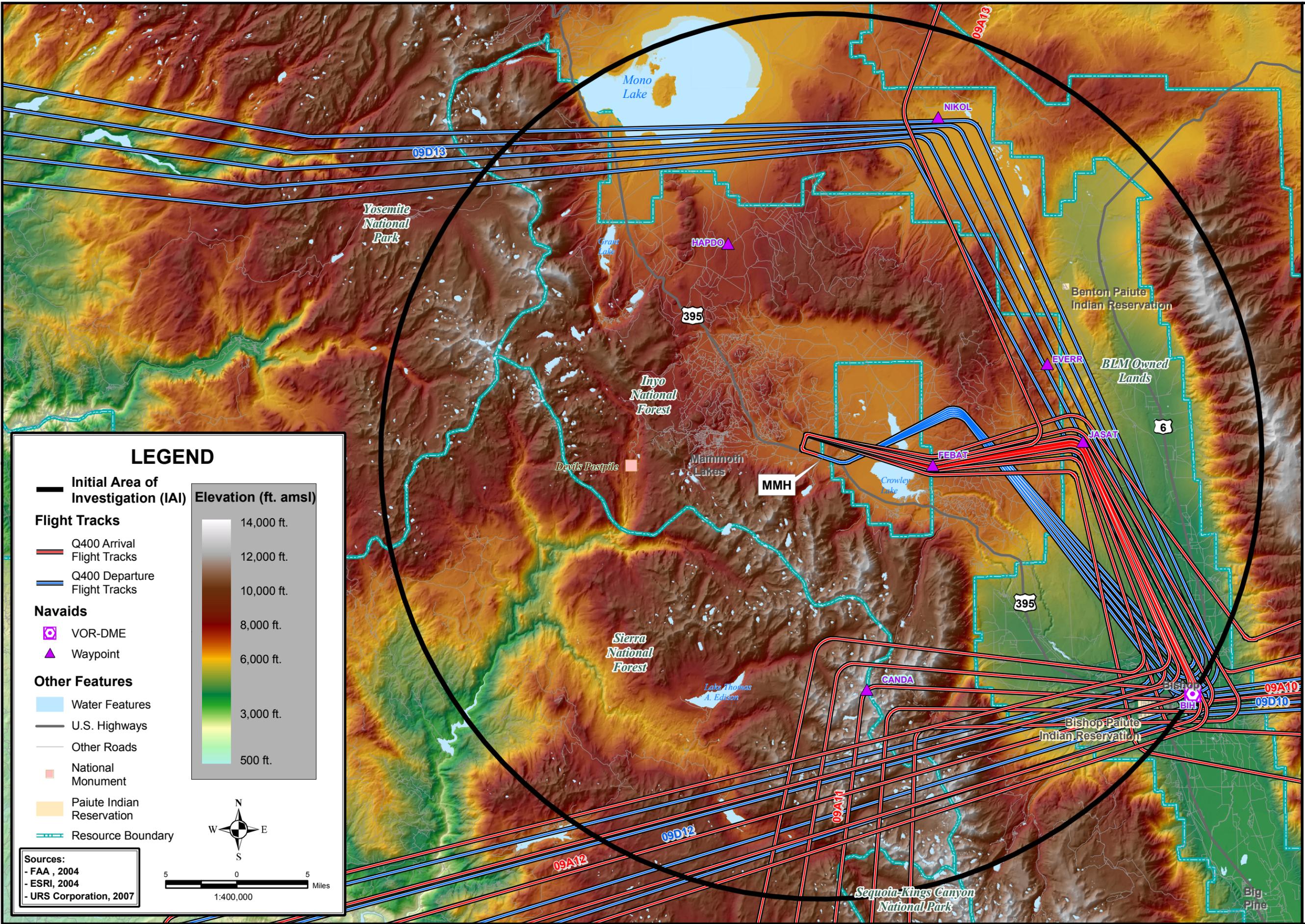
Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH



**NOISE SCREENING ASSESSMENT:
 NO-ACTION ALTERNATIVE FLIGHT
 TRACKS FOR RUNWAY 27 - WEST FLOW**

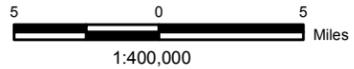
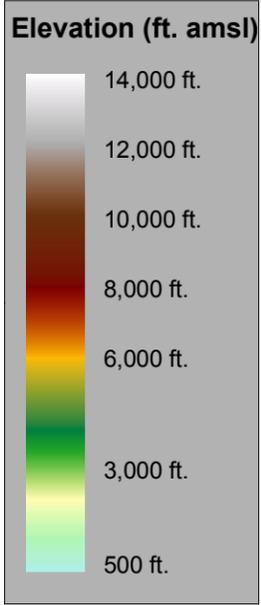
**FIGURE
 3**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Noise Screening Assessment\Figure 4 - Noise Screening Assessment - Proposed Q400 Flight Tracks for Runway 09.mxd ([.pdf, hde, 09/14/07]



LEGEND

- Initial Area of Investigation (IAI)
- Flight Tracks**
 - Q400 Arrival Flight Tracks
 - Q400 Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary



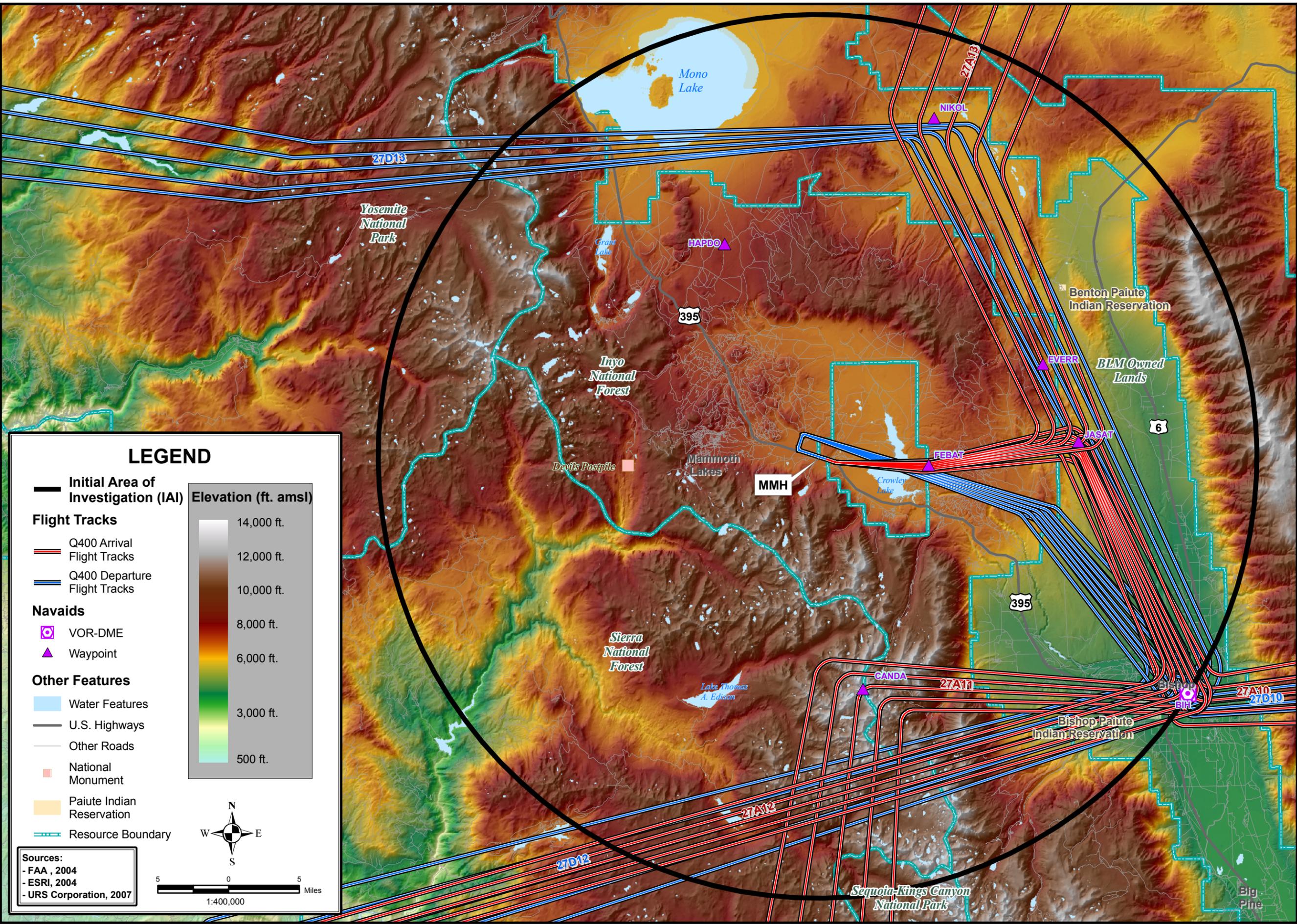
Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007



NOISE SCREENING ASSESSMENT:
PROPOSED Q400 FLIGHT TRACKS
FOR RUNWAY 09 - EAST FLOW

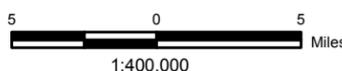
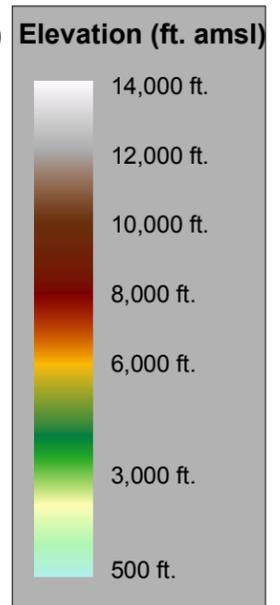
FIGURE
 4

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Noise Screening Assessment\Figure 5 - Noise Screening Assessment - Proposed Q400 Flight Tracks for Runway 27 - West Flow.mxd - (pdf, lrp, hds, 09/12/07)



LEGEND

- Initial Area of Investigation (IAI)**
- Flight Tracks**
 - Q400 Arrival Flight Tracks
 - Q400 Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary



Sources:

- FAA, 2004
- ESRI, 2004
- URS Corporation, 2007



NOISE SCREENING ASSESSMENT:
PROPOSED Q400 FLIGHT TRACKS
FOR RUNWAY 27 - WEST FLOW

FIGURE
5

2.3 **INVENTORY OF POTENTIAL SECTION 4(F) RESOURCES WITHIN THE IAI**

The Federal statute that governs potential impacts to park resources is commonly known as the Department of Transportation (DOT) Act, Section 4(f) provisions. Section 4(f) of the Department of Transportation Act, as amended, now resides in the United States Code at 49 U.S.C. 303. It states:

Sec. 303. Policy on lands, wildlife and waterfowl refuges, and historic sites

- a. It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.
- b. The Secretary of Transportation shall cooperate and consult with the Secretaries of the 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. APPROVAL OF PROGRAMS AND PROJECTS - Subject to subsection (d) [De Minimis Impacts], 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, recreation 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, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

The Federal Highway Administration (FHWA) Section 4(f) Policy Paper dated March 1, 2005, provides comprehensive guidance on when and how to apply the provisions of Section 4(f) to various types of land and resources. The Policy Paper explains how Section 4(f) applies generally and to specific situations where resources meeting the Section 4(f) criteria may be involved. Section 4(f) applies only to the actions of agencies within the USDOT. While other agencies may have an interest in Section 4(f), the agencies within the USDOT are responsible for applicability determinations, evaluations, findings and overall compliance.

Section 4(f) applies to significant publicly owned public parks and recreational areas that are open to the public, and to significant publicly owned wildlife and waterfowl refuges, irrespective of whether these areas are open to the public or not, since the "major purpose" of a refuge may make it necessary for the resource manager to limit public access. When private institutions, organizations or individuals own parks, recreational area or wildlife and waterfowl refuges, Section 4(f) does not apply to these properties, even if such areas are open to the public. If a governmental body has a permanent proprietary interest in the land (such as fee ownership or easement), it is considered "publicly owned" and thus, Section 4(f) may be applicable. Section 4(f) also applies to all historic sites of national, state or local significance, whether or

not these sites are publicly owned or open to the public. Except in unusual circumstances, only historic properties on or eligible for inclusion on the National Register of Historic Places are protected under Section 4(f).

As shown in **Figure 1**, a variety of public lands are located within the Mammoth EIS IAI with different designations (Federal, State, and Native American) and attributes. These areas include National Park Lands, National Forest Lands, National Wilderness Areas, Bureau of Land Management (BLM) lands, California State Reserve Areas and Native American Tribal Lands and Reservations. A brief description of these designations, resources, and a summary of the consultation efforts are provided in this section. **Table 1** provides a summary of resource designation, managing agency, total area, and elevation for the potential Section 4(f) properties within the IAI. These properties are described further in **Appendix B**.

FAA Order 1050.1E, Appendix A, Section 6.2a states:

“Any part of a publicly owned park, recreation area, refuge, or historic site is presumed to be significant unless there is a statement of insignificance relative to the whole park by the Federal, State, or local official having jurisdiction thereof. Any such statement of insignificance is subject to review by the FAA.”

Therefore, for the purposes of this Noise Screening Assessment, all of the resources shown in **Figure 1** and listed in **Table 1** were assumed to be Section 4(f) properties at the initial stage of this Noise Screening Assessment. FAA is in the process of consulting with the various managing agencies of the properties in order to determine the applicability of this Noise Screening Assessment to each resource. A summary of the consultations to-date is provided in this section.

The proposed introduction of air carrier service at Mammoth Yosemite Airport would not result in a direct use of any Section 4(f) properties. This Noise Screening Assessment focuses on the Section 4(f) properties that may experience an indirect, or constructive, use as a result of the proposed action at MMH. Constructive use occurs when transportation projects do not incorporate land from a Section 4(f) property but due to their proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Therefore, an inventory of potential Section 4(f) properties within the IAI and consultation with managing agencies was performed to determine their applicability to Section 4(f) and the importance of a quiet setting to the significance of the resources.

**TABLE 1
INVENTORY OF POTENTIAL SECTION 4(f) PROPERTIES**

Name	Managing Agency	Total Area (acres)	Elevation (ft. MSL)
Yosemite National Park	NPS	767,997	2,000-13,000
Sequoia & Kings Canyon National Park ¹	NPS	462,078	1,500-14,500
Devils Postpile National Monument	NPS	800	7,560
Mono Basin National Forest Scenic Area ²	FS	118,303	6,375-7,350
Sierra National Forest	FS	1,299,835	900-14,000
Inyo National Forest	FS	1,999,992	4,000-14,500
Ansel Adams Wilderness ²	FS	231,039	3,500-13,150
Dinkey Lakes Wilderness	FS	30,000	8,100-10,600
John Muir Wilderness ^{2,3}	FS	580,478	4,000-14,500
Kaiser Wilderness ⁴	FS	22,700	7,000-10,300
Yosemite Wilderness	NPS	704,624	2,000-13,000
Sequoia-Kings Canyon Wilderness	NPS	723,036	1,500-14,500
Crowley Lake Campground	BLM	50*	7,000
Fish Slough Area of Critical Environmental Concern	BLM	36,000	4,200-6,500
Horton Creek Campground	BLM	65*	4,975
Volcanic Tablelands	BLM	Not Available	4,500-7,100
Petroglyphs of the Volcanic Tablelands	BLM	Not Available	4,500
Mono Lake Tufa State Reserve ^{2,4}	State of CA	1,978	6,370-6,390
Bishop Paiute Indian Reservation	Bishop Paiute Tribe	875	4,150-4,335
Benton Paiute Indian Reservation	Utu Utu Gwaitu Paiute Tribe	163	5,600-5,750
Pleasant Valley Pit Campground	BLM	28*	4,300

Notes: ¹Kings Canyon National Park is managed as one park with Sequoia National Park.

²Located wholly or partially within the Inyo National Forest.

³Located wholly or partially within the Sierra National Forest.

⁴Located within the Mono Basin National Forest Scenic Area.

*Area is approximated from GIS mapping.

2.3.1 UNITS OF THE NATIONAL PARK SYSTEM

Within the Mammoth EIS IAI, National Park System units include Yosemite, Sequoia and Kings Canyon, and Devils Postpile National Monument. The United States Department of the Interior National Park Service (NPS) manages these National Parks. National Monuments are administered by the NPS with other agencies and are protected as a unit of the National Park System due to their national, natural, cultural, and recreational significance

FAA received correspondence from the NPS Pacific West Region on August 30, 2006, in response to the Notice of Intent to Prepare an EIS published in the Federal Register on July 24, 2006, and the Agency Scoping Meeting held on August 24, 2006. The Regional Director of the Pacific West Region requested a comprehensive analysis of the Section 4(f) impacts associated with the visitor use/resources of the

SEPTEMBER 2007

following NPS resources: Devils Postpile National Monument, Yosemite, Sequoia, Kings Canyon, and Death Valley National Parks, and Manzanar National Historic Site. He also included the John Muir Trail System and the Pacific Crest Trail, located within congressionally designated wilderness. Lastly, he included Hot Creek, which he indicated is listed as an eligible Wild and Scenic River. A copy of the letter from NPS is included in **Appendix C**.

FAA identified numerous representative locations within the Yosemite National Park, Yosemite Wilderness Area, Sequoia & Kings Canyon National Park, Sequoia-Kings Canyon Wilderness Area, and the Devils Postpile National Monument for inclusion in the Noise Screening Assessment. The sites were chosen to be representative of specific resource uses in various portions of the parks, wilderness areas, and national monument.

FAA sent correspondence to the NPS on May 9, 2007, to determine whether the selected sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources, and whether a quiet setting is an important feature of the resource's significance. FAA received a response from the NPS on June 28, 2007. The response from NPS represents the comments from the National Park managers at the following NPS resources: Devils Postpile National Monument, Death Valley National Park, Manzanar National Historic Site, Sequoia and Kings Canyon National Parks, and Yosemite National Park. They requested that the study area be expanded to include Manzanar National Historic Site and the northwest portion of Death Valley National Park. Manzanar National Historic Site and Death Valley National Park were not considered for inclusion in this Noise Screening Assessment due to the direction and distance from MMH. Manzanar National Historic Site, the closer of the two, lies more than 150 miles to the southeast of MMH, while the proposed Q400 operations will be operating to the southwest. In addition, the NPS Natural Sounds Program offered recommendations regarding noise analysis metrics. Additional sites for sound data collection were also recommended. A copy of the letter to the NPS and their response are included in **Appendix C**.

2.3.2 NATIONAL FOREST LANDS

Within the Mammoth EIS IAI, National Forest Lands include Inyo and Sierra National Forests and the Mono Basin National Forest Scenic Area. These National Forest Lands are managed by the United States Department of Agriculture Forest Service (FS). The FS also manages the Ansel Adams, John Muir, Dinkey Lakes, and Kaiser Wilderness Areas.

FAA received correspondence from the Inyo National Forest on November 15, 2006. The District Ranger of the Mammoth and Mono Lake Ranger Districts identified numerous resources and facilities as Section 4(f) resources. Management Prescriptions (Rx) identified as meeting 4(f) criteria are: Designated Wilderness, Proposed Wilderness, Mule Deer Habitat, Mountain Sheep Habitat, Mono Basin National Forest Scenic Area, Wild and Scenic Rivers, Concentrated Recreation Area, Alpine Ski Area, and Developed Recreation Site. The Designated Wilderness Rx applies to the Ansel Adams, Boundary Peak, Golden Trout, Hoover, Inyo Mountains, John Muir, and South Sierra Wilderness Areas. The Proposed Wilderness Rx applies to Table Mountain and Tioga Lake Further Planning Areas and portions of the White Mountains and Paiute-Mazourka Further Planning Areas. The Wild and Scenic River Rx applies to the North and South Forks of the Kern River. The Alpine Ski Area Rx applies to the areas within the

SEPTEMBER 2007

permit boundaries of the Mammoth Mountain and June Mountain Ski Areas. The Concentrated Recreation Area Rx applies to numerous campgrounds, pack stations, lodges & resorts, which were listed on Attachment A to the letter. A copy of the letter from Inyo National Forest is included in **Appendix C**.

FAA identified numerous representative locations within the Inyo and Sierra National Forests and the Mono Basin National Forest Scenic Area for inclusion in the Noise Screening Assessment. The sites were chosen to be representative of particular resource uses in various portions of the Inyo and Sierra National Forests.

FAA sent correspondence to the Inyo National Forest on May 9, 2007, to determine whether the selected sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources in the Forest, and whether a quiet setting is an important feature of the resource's significance. Correspondence was received from the Inyo National Forest on July 24, 2007 confirming that the sites chosen are representative samples. A copy of the letter to the Inyo National Forest, and their response, is included in **Appendix C**.

FAA sent correspondence to the Sierra National Forest on May 9, 2007, to determine the applicability of Section 4(f) to this resource, whether the selected sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources in the Forest, and whether a quiet setting is an important feature of the resource's significance. As of August 17, 2007, FAA has not received a response from the Sierra National Forest. A copy of the letter to Sierra National Forest is included in **Appendix C**.

2.3.3 WILDERNESS AREAS

The Wilderness Act of 1964 established the National Wilderness Preservation System "to be composed of federally owned areas designated by Congress as 'wilderness areas,' and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness. The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and agency having jurisdiction thereover immediately before its inclusion in the National Wilderness Preservation System unless otherwise provided by Act of Congress." The congressionally designated wildlands of this country have been entrusted to the BLM, Fish and Wildlife Service, FS, and the NPS.

According to the Wilderness Act, a wilderness is defined as "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; and has outstanding opportunities for solitude or a primitive and unconfined type of recreation. It may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." Therefore, a quiet setting is a generally recognized purpose and attribute of wilderness

SEPTEMBER 2007

areas, and any wilderness area used for recreational purposes within the IAI was considered a potential Section 4(f) property that would be included in this Noise Screening Assessment.

Wilderness areas within the IAI include Ansel Adams, John Muir, Kaiser, Dinkey Lakes, Yosemite, and Sequoia-Kings Canyon Wilderness Areas. The FS manages the Ansel Adams, John Muir, Dinkey Lakes, and Kaiser Wilderness Areas. Yosemite and Sequoia-Kings Canyon Wilderness Areas are managed by the NPS.

2.3.4 BUREAU OF LAND MANAGEMENT (BLM) FACILITIES

FAA received correspondence from the Bishop Field Office of the BLM on August 28, 2006, in response to the Agency Scoping Meeting held on August 24, 2006. The Field Office Manager indicated BLM is responsible for management of about 750,000 acres of public land in the Eastern Sierra region of California, and these lands are known for their significant wildlife, cultural, scenic, and recreational resources. However, the Field Office Manager did not identify any specific resources as Section 4(f).

Within the Mammoth EIS IAI, BLM Facilities include Crowley Lake and Horton Creek Campgrounds, Fish Slough Area of Critical Environmental Concern, Volcanic Tablelands, and the Petroglyphs of the Volcanic Tablelands. The Chalfant Petroglyph Site and the Yellow Jacket Petroglyphs Site are listed on the National Register of Historic Places.

FAA sent correspondence to the BLM on May 9, 2007, to determine the applicability of Section 4(f) to these resources and whether a quiet setting is an important feature of the resource's significance. The BLM replied on June 22, 2007 and included in the response was sites and relevant issues to be considered in the analyses, and per their recommendation, suggested BLM sites were added to this study. The major concern being that the BLM lands included in this analysis are significant because of their cultural and recreational resources. In addition, the BLM encourages future commercial flights through the Owens Valley to use air space above existing infrastructure developments by routing traffic about Highway 395 or above power lines. It is believed that this would be the least disruptive. A copy of the letter to the BLM, and their response, is included in **Appendix C**.

2.3.5 STATE PARK

The California Department of Parks and Recreation operates the Mono Lake Tufa State Reserve, which was established on September 28, 1984, within the Mammoth EIS IAI. The Department of Parks and Recreation aims to preserve the state's biological diversity while protecting its most valued natural and cultural resources, as well as create opportunities for high-quality outdoor recreation at its more than 270 parks. The state reserve includes nearly 77,000 acres of land and an additional approximate 41,600 acres of Mono Lake. Mono Lake, which is thought to be over 700,000 years old, and of volcanic origins, is located in the transition between the Sierra Nevada Mountains and the Great Basin Desert. Most of the Tufa Towers are between 200-900 years old and some reach a height of 15 feet, or greater. Mono Lake and Mono Lake Tufa State Reserve is an essential stop on the Pacific Flyway. There are nearly 100 species of birds found in the area during the migration season.

SEPTEMBER 2007

This Mono Lake Tufa State Reserve provides ecological, cultural, natural, scenic, historical, and recreational resources.

2.3.6 NATIVE AMERICAN LANDS AND RESERVATIONS

According to the FHWA Section 4(f) Policy Paper (March 1, 2005), which is used as guidance by FAA, tribal lands and Indian reservations “are not considered to be ‘publicly owned’ within the meaning of Section 4(f), nor open to the general public, and Section 4(f) does not automatically apply”. However, if the tribal government operates the land as a significant park or recreational area that is publicly-accessible, or if the land is eligible for the National Register of Historic Places (NRHP), then Section 4(f) would apply.

The FAA contacted the Native American Heritage Commission (NAHC) to identify areas within the IAI that may be of concern to the local Native American community and that may experience additional overflight as a result of the proposed action. The NAHC and the Department of the Interior, Bureau of Indian Affairs, Tribal Leaders Directory were also consulted to identify local Native American Tribal Representatives who may be knowledgeable about cultural resources in the study area. As a result of this inquiry a Native American Tribal Contact List was developed. The list included eleven contacts in California and six contacts in Nevada. FAA sent correspondence to the Native American Contact List on January 19, 2007 to determine whether any cultural resources, traditional cultural places or protected tribal resources are located within the study area. Copies of FAA’s requests for information are provided in **Appendix C**.

The Bridgeport Colony was established on October 18, 1974. The 40-acre reservation is adjacent to the community of Bridgeport in Mono County, California. There are approximately 100 tribal members living in the area, with over 40 living on the reservation. FAA received a response from Charlotte Baker, Tribal Chairperson of the Bridgeport Indian Colony, on March 21, 2007. Ms. Baker indicated the Bridgeport Indian Colony is in support of the proposed service at MMH. A copy of the letter from the Bridgeport Indian Colony is included in **Appendix C**.

The Washoe Reservation is located in western Nevada and eastern California. It includes a number of separate colonies including Carson, Dresslerville, Stewart, Washoe, Reno-Sparks, and Woodfords. The combined trust area of the colonies is 4,320 acres, and individual allotments to tribal members totaling over 61,000 acres. There are approximately 1,500 tribal members in this tribe. FAA received a response from Lynda Shoshone, Program Coordinator and Cultural Preservationist for the Washoe Tribe of Nevada and California, on June 8, 2007. Ms. Shoshone indicated the proposed project is outside the Washoe Aboriginal territory, and therefore, they have no concerns or comments. A copy of the letter from the Washoe Tribe is included in **Appendix C**.

Big Sandy Rancheria is located on the western edge of the Sierra National Forest, 40 miles northeast of Fresno, California. The California Rancheria Act of 1958 authorized the termination of Rancheria trust lands, including those held in trust for the Big Sandy Rancheria. The tribe's Federal status was restored in 1983. There are 93 tribal members living in the area. A telephone call between FAA and the Big Sandy Rancheria occurred on February 28, 2007. During the telephone call, Connie Lewis, Chairperson of the

SEPTEMBER 2007

Big Sandy Rancheria indicated that the Rancheria has no objections to the proposed action. A record of the telephone call is included in **Appendix C**.

The Paiute-Shoshone Indian Reservation is a federal reservation of Paiute Indians in Inyo County, near the city of Bishop. The reservation is located in Owens Valley at the easterly base of the Sierra Nevada mountain range. Total area is 877 acres. Population is approximately 1,441. The Bishop Paiute Tribe and the Timbi-sha Shoshone Tribe were included in the correspondence sent to the Native American Contact List on January 19, 2007. FAA contacted the Bishop Paiute Tribe via e-mail on March 8, 2007, and received a response via e-mail from Theresa Yanez, representative of the Bishop Paiute Tribe, on April 2, 2007. In her response Ms. Yanez indicated there may be some concern regarding disturbance of Bald and Golden Eagle nesting areas. Copies of e-mail correspondence between FAA and the Bishop Paiute Tribe are included in **Appendix C**.

The Benton Paiute Indian Reservation is a federal reservation of Paiute Indians located on the eastern slope of the Sierra Nevada Range in central California, in Mono County. This is about 10 miles from the Nevada border, near the city of Benton. Total area is 162.5 acres. Population is approximately 50. The Benton Paiute Tribe was included in the correspondence sent to the Native American Contact List on January 19, 2007. As of August 17, 2007, no response has been received from the tribe.

2.3.7 LADWP CAMPGROUNDS

The LADWP is the largest municipal utility in the nation and was established more than 100 years ago to deliver safe water and electricity supplies to 3.8 million residents and businesses, covering an area of 465 square miles in Los Angeles. LADWP owns approximately 250,000 acres in Inyo County and 60,000 acres in Mono County, much of this land in the Eastern Sierra is leased to private individuals or organizations for agricultural or livestock purposes. At least 75 percent of the leased land must remain open for recreational uses.

The public recreational uses include fishing, hiking, hunting, nature studies, photography, and painting, among other recreational opportunities. There are campgrounds, parks, golf courses, and even the Eastern California Museum on LADWP land in the Eastern Sierras. There are 13 campgrounds on LADWP land in the Eastern Sierra, these campgrounds provide hundreds of spaces, and all are located on or near streams and lakes and also offer fishing, hiking, hunting, wildlife viewing and many other recreational opportunities. Some of the campgrounds on LADWP land include Brown's Owens River, Crowley Lake, Camp High Sierra, and Pleasant Valley Campgrounds, among many more. Both the Bishop and Mt. Whitney Golf Courses are located on LADWP land, as are the following parks: Lone Pine, Dehy, Mendenhall, Bishop City, Izaak Walton, and Mono County at Mono Lake. These LADWP resources provide ecological, natural, scenic and recreational resources.

2.3.8 SUMMARY OF SECTION 4(f) CONSULTATION

A summary of the Section 4(f) correspondence received from the managing agencies is provided in **Table 2**. Correspondence from the managing agencies was received during the EIS scoping process and

SEPTEMBER 2007

after FAA correspondence that requested information from the agencies. Copies of all correspondence are provided in **Appendix C**.

The NPS and FS provided comment letters during the EIS scoping process regarding the applicability of Section 4(f) to several National Park resources and components of the Inyo National Forest. FAA sent a letter on May 9, 2007 to the NPS and Inyo National Forest to determine whether a quiet setting is an important feature of the sites' significance. The purpose of the correspondences is to solicit information from the agencies in order for the FAA to determine if:

- The resource could be considered a Section 4(f) property, and
- A quiet setting is a generally recognized feature or attribute of the significance of the resource (potential for constructive use due to the proposed action).

The NPS provided comments on June 28, 2007. Their responses to the four questions posed by FAA represented comments provided by the National Park managers at Devils Postpile National Monument, Death Valley National Park, Manzanar National Historic Site, Sequoia and Kings Canyon National Parks, and Yosemite National Park. All sites listed are nationally significant, and natural quiet is a generally recognized and valued feature and attribute. They requested that the study area be expanded to include Manzanar National Historic Site and the northwest portion of Death Valley National Park, but these resources were not included due to distance and direction from MMH. In addition, the NPS Natural Sounds Program offered recommendations regarding noise analysis metrics. Additional sites for sound data collection were also recommended.

Inyo National Forest provided comments on July 24, 2007, agreeing that the Inyo National Forest recreation sites in the Noise Screening Assessment are representative of the various recreational uses and should, in fact, be included. It was also established that a quiet setting is a generally recognized feature at Devils Postpile Lookout, Minaret Vista, Silver Lake, John Muir Trail (JMT) – Garnet Lake, Mosquito Flats Campground, and North Lake Campground.

FAA also sent a letter on May 9, 2007 to the BLM to determine whether a quiet setting is an important feature of the sites' significance. BLM provided a response on June 22, 2007 discussing sites and relevant issues they would like considered. It was established that a quiet setting is a favorable attribute for all public lands. Within the Mammoth EIS IAI, BLM cultural resources include Volcanic Tablelands, the Petroglyphs of the Volcanic Tablelands, and Red Rock Canyon. The Chalfant Petroglyph Site and the Yellow Jacket Petroglyphs Site are listed on the National Register of Historic Places and are BLM cultural resources. Other recreation resources include Crowley Lake and Horton Creek Campgrounds, Fish Slough Area of Critical Environmental Concern, and Chalk Bluff. It was stated that quiet likely plays an important role in campers' experiences; however, those at Crowley Lake Campground might expect it to be noisier, due to its proximity to highways. Other recreation resources that were identified that are not in the Noise Screening Assessment include several BLM hot tub recreation sites, where quiet plays an essential role because of the remoteness of these resources.

SEPTEMBER 2007

The BLM concluded their comments with a recommendation for future commercial flights through the Owens Valley to use air space above existing infrastructure developments by routing traffic about Highway 395 or above power lines. It is believed that this would be the least disruptive.

In addition, FAA sent a letter on May 9, 2007 to the managing agency of the Sierra National Forest in order to determine the applicability of Section 4(f) and whether a quiet setting is an important feature of the sites' significance. As of August 17, 2007, FAA has not received a response from the Sierra National Forest.

Although Section 4(f) is normally not applied to tribal lands and Indian reservations (as described in **Section 2.3.6**), FAA has included these resources in the noise screening assessment pending additional coordination with the tribes. As of August 17, 2007, the Big Sandy Rancheria, Bridgeport Indian Colony, Washoe Tribe of Nevada and California, and Bishop Paiute Tribe have responded to FAA's request for input. The Bishop Paiute Tribe indicated there may be some concern regarding disturbance of Bald and Golden Eagle nesting areas, but thus far have provided no additional information.

**TABLE 2
SUMMARY OF POTENTIAL SECTION 4(f) SITES**

Managing Agency	Potential Section 4(f) Resource	Letter Sent by FAA?	Date of Response	Basis for Evaluating Section 4(f) Applicability			Quiet Setting?
				Primary Use(s) / Purpose(s)	National, State, or Local Significance	Basis of Significance	
National Park Service	Yosemite National Park	5-9-2007	8-30-2006 (Scoping) & 6-28-07 (Inyo NF)	Preservation of resources (including wilderness values) and to make the varied resources available to the public for enjoyment, education, and recreation.	National Significance	U.S. Statutes at Large, Vol. 26, Chap. 1263, pp. 651-52, passed by the 51 st Congress, Session I, Oct. 1, 1890	Yes, within wilderness areas.
	Sequoia & Kings Canyon National Park			Protection of the Eastern Sierra ecosystem, provide opportunities for the public to experience and understand park resources and values, protect and preserve significant cultural resources and wilderness.		U.S. Statutes at Large, Vol. 26, Chap. 926, p. 478, passed by the 51 st Congress, Session I, Sept. 25, 1890	Yes, within wilderness areas.
	Devils Postpile National Monument			Protection and preservation of Devils Postpile formation, the 101-foot high Rainbow Falls, and pristine mountain scenery.		Presidential Proclamation July 6, 1911	Yes, within pristine scenic areas.
	Sequoia-Kings Canyon Wilderness			Primitive recreation, outstanding opportunities for solitude, preservation of flora, fauna and geological features, preservation of wild lands and their wilderness values of natural ecological integrity and natural appearance..		California Wilderness Act of 1984 (Public Law 98-425)	Yes
	Yosemite Wilderness						

**TABLE 2 (CONTINUED)
SUMMARY OF POTENTIAL SECTION 4(f) SITES**

Managing Agency	Potential Section 4(f) Resource	Letter Sent by FAA?	Date of Response	Basis for Evaluating Section 4(f) Applicability			Quiet Setting?
				Primary Use(s) / Purpose(s)	National, State, or Local Significance	Basis of Significance	
USDA Forest Service	Inyo National Forest	5-9-2007	11-15-06 (Scoping) & 7-24-2007 (Inyo NF)	Recreation areas, parklands, and wildlife refuges	National Significance	Presidential Proclamation May 25,1907	Yes
	Mono Basin National Forest Scenic Area			Recreational viewing of Tufa, bird watching, hiking, recreational boating, preservation of unique ecological and cultural resources around Mono Lake		California Wilderness Act of 1984 (Public Law 98-425)	Yes
	Sierra National Forest			Recreation areas, parklands, and wildlife refuges		Presidential Proclamation Feb. 14,1893	Yes
	Ansel Adams Wilderness (NPS & FS)			Primitive recreation, outstanding opportunities for solitude, preservation of flora, fauna and geological features, preservation of wild lands and their wilderness values of natural ecological integrity and natural appearance..		Wilderness Act of 1964 (Public Law 88-577) and California Wilderness Act of 1984 (Public Law 98-425)	Yes
	Dinkey Lakes Wilderness					California Wilderness Act of 1984 (Public Law 98-425)	Yes
	John Muir Wilderness					Wilderness Act of 1964 (Public Law 88-577) and California Wilderness Act of 1984 (Public Law 98-425)	Yes
	Kaiser Wilderness					Public Law 94-557	Yes

**TABLE 2 (CONTINUED)
SUMMARY OF POTENTIAL SECTION 4(f) SITES**

Managing Agency	Potential Section 4(f) Resource	Letter Sent by FAA?	Date of Response	Basis for Evaluating Section 4(f) Applicability			Quiet Setting?
				Primary Use(s) / Purpose(s)	National, State, or Local Significance	Basis of Significance	
Bureau of Land Management	Crowley Lake Campground	5-9-2007	8-28-06 (Scoping) & 6-22-07	Campground with 47 campsites; capacity for 376 people. ¹	Local Significance	Not Available	Yes
	Fish Slough ACEC			One of the richest wetland floras in the Great Basin; horseback riding, hiking, Native American rock art viewing, wildlife viewing, plant viewing, bird watching, rock climbing, ² and nature interpretation. ²		BLM ACEC Designation in 1982	Yes
	Horton Creek Campground			Campground with 53 campsites; capacity for 424 people, providing opportunities for exploring, hiking, and sightseeing. ³		Not Available	Yes
	Volcanic Tablelands			Four-wheel driving, hiking, bouldering & rock climbing, wildlife viewing, bird watching, horseback riding, and mountain biking. ⁴		Wilderness Study Areas	Yes
	Petroglyphs of the Volcanic Tablelands			Native American archaeological/cultural sites. ⁵	Wilderness Study Areas	Yes	
	Chalfant Petroglyph Site			Native American archaeological/cultural sites. ⁶	National Significance	NRHP Site #00001324	Yes
	Yellow Jacket Petroglyphs Site			Native American archaeological/cultural sites. ⁶		NRHP Site #00000321	Yes

**TABLE 2 (CONTINUED)
SUMMARY OF POTENTIAL SECTION 4(f) SITES**

Managing Agency	Potential Section 4(f) Resource	Letter Sent by FAA?	Date of Response	Basis for Evaluating Section 4(f) Applicability			Quiet Setting?
				Primary Use(s) / Purpose(s)	National, State, or Local Significance	Basis of Significance	
California Department of Parks and Recreation	Mono Lake Tufa State Reserve	No	Not Applicable	Preservation of Calcium-carbonate spires and knobs ("tufa towers") in lake; hiking, swimming, boating, camping, and cross-country skiing. ⁷	State Significance	Not Available	No
Utu Utu Gwaitu Paiute Tribe	Benton Paiute Reservation	1-19-07	None	Housing and Tribal offices. ⁸	None	Not Applicable	No
Bishop Paiute Tribe	Bishop Paiute Reservation	1-19-07	4-2-07	Housing and Tribal offices.	None	Not Applicable	No
Los Angeles Department of Water & Power	Eastern Sierra Recreation	No	Not Applicable	Fishing, hiking, wildlife viewing, camping, golf, and museums. ⁹	Local Significance	Not Available	No

¹ <http://www.blm.gov/ca/st/en/fo/bishop/camping/crowley.html>

² http://www.blm.gov/ca/st/en/fo/bishop/acec/fishslough_caso.html

³ <http://www.blm.gov/ca/st/en/fo/bishop/camping/horton.html>

⁴ http://www.blm.gov/ca/st/en/fo/bishop/volcanictablelands_caso.print.html

⁵ http://www.blm.gov/ca/st/en/fo/bishop/bouldering/archeology_b.print.html

⁶ <http://www.nationalregisterofhistoricplaces.com/CA/Mono/state.html>

⁷ http://www.parks.ca.gov/?page_id=514

⁸ <http://www.bentonpaiutetribe.com/Index.htm>

⁹ <http://www.ladwp.com/ladwp/cms/ladwp001007.jsp>

2.4 INVENTORY OF AIRCRAFT OPERATIONS WITHIN THE IAI

An inventory of all aircraft operations that occurred within the IAI was conducted to determine potential aviation noise effects on the potential Section 4(f) properties within the IAI. This inventory consists of all aircraft arriving to and departing from MMH, in addition to commercial, military and GA aircraft transitioning through the IAI airspace. Aircraft operating within the IAI that were analyzed at this stage of the Noise Screening Assessment were the MMH arrival and departure operations.

Aircraft operational data for MMH was gathered for calendar year 2005. The month of March was identified as the peak month during the 16-week winter ski season (mid-December through mid-April), while the month of July was identified as the peak month during the 8-week summer season (mid-June through mid-August). The fleet mix and number of operations were then identified for the average day in March, and will hereafter be referred to as the Winter Peak Month Average Day (Winter PMAD). Likewise, the fleet mix and number of operations were identified for the average day in July, and will hereafter be referred to as the Summer Peak Month Average Day (Summer PMAD). Detailed aircraft operations data and sources of information for MMH are provided in **Appendix D**.

Using the existing MMH aircraft operations as a basis, future annual aircraft operations at MMH were forecast using the national growth rate of 1.9% per year for general aviation operations. The number of GA aircraft operations for the No-Action Alternative, Winter PMAD and Summer PMAD, for the years 2009 and 2015 were calculated using this methodology.

The forecast developed by the Town of Mammoth Lakes and approved by the FAA projects that Horizon Air service, flying the de Havilland Dash 8 Series Q400, will start with two flights per day from Los Angeles for the 2008-09 winter ski season only. In 2015, eight winter ski season flights per day have been forecasted, consisting of: three flights to Los Angeles, two flights to San Francisco and Las Vegas, and one flight to San Diego. Additionally, two summer season flights per day to Los Angeles have been forecasted. All of these flights are assumed to occur during daytime hours (7:00 am to 7:00 pm). These proposed regional air carrier operations were added to the number of GA operations to represent the Proposed Action Alternative. The applicable tables for Winter PMAD in 2009 and both Winter and Summer PMAD for 2015 are provided in **Tables 3 through 5**.

It is important to note the following aspects of the MMH operational data:

- **The GA fleet mix (types of aircraft) operating at MMH would be the same for both the No-Action and Proposed Action Alternatives; however, regional air carrier aircraft are introduced in the Proposed Action.** The Town of Mammoth Lakes is the owner and operator of MMH. The Town holds a Class IV certificate for MMH pursuant to 14 CFR Part 139. This classification allows unscheduled air carrier operations using aircraft carrying 30 or more passengers. MMH currently serves a wide range of GA aircraft, including business jets, multi-engine turboprop and piston, single engine piston aircraft and helicopters. The forecast of aviation operations projects that the airport will continue to serve its role as a GA airport under both the No-Action and the Proposed Action Alternatives, but regional air carrier service would be introduced in future years under the Proposed Action Alternative

- **The number of GA aircraft operations at MMH would be the same under both the No-Action and Proposed Action Alternatives, but regional air carrier operations would increase under the Proposed Action.** The Proposed Action is to accommodate future passenger demand by providing regional air carrier service. In 2009 there would be 2 daily regional air carrier flights (4 operations) during the winter ski season under the Proposed Action Alternative. In 2015 there would be 8 daily regional air carrier flights (16 operations) during the winter ski season and 2 daily regional air carrier flights (4 operations) during the summer season under the Proposed Action Alternative.
- **The only changes in flight tracks are a result of the introduction of regional air carrier service as a result of the Proposed Action.** GA aircraft utilizing MMH generally fly to and from navigational aids (NAVAIDS) and airspace fixes within and beyond the IAI. **Figures 2 and 3** illustrate the Existing and Future No-Action Alternative arrival and departure flight routes. Additional flight tracks were added to the Proposed Action Alternative in order to accommodate the northern routes that the regional air carrier service may use, depending on the destination. This is shown in **Figures 4 and 5**. **Figures 6 and 7** provide the published arrival and departure procedures at MMH.

**TABLE 3
2009 WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			D	E	N	Total	D	E	N	Total
CL600	J	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIIB		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIV		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
IA1125		10	0.16	0.00	0.00	0.16	0.16	0.00	0.00	0.16
LEAR25		29	0.47	0.00	0.00	0.47	0.47	0.00	0.00	0.47
LEAR35		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
MU3001		202	3.26	0.00	0.00	3.26	3.26	0.00	0.00	3.26
Jet Total		276	4.45	0.00	0.00	4.45	4.45	0.00	0.00	4.45
BEC58P	P	308	4.96	0.00	0.00	4.96	4.96	0.00	0.00	4.96
CNA172		13	0.21	0.00	0.00	0.21	0.21	0.00	0.00	0.21
CNA206		234	3.62	0.10	0.05	3.78	3.62	0.10	0.05	3.78
GASEPF		51	0.78	0.05	0.00	0.83	0.78	0.05	0.00	0.83
GASEPV		401	6.36	0.10	0.00	6.46	6.36	0.10	0.00	6.46
PA31		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Prop Total		1,026	16.24	0.26	0.05	16.55	16.24	0.26	0.05	16.55
C130	T	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
CNA441		135	2.17	0.00	0.00	2.17	2.17	0.00	0.00	2.17
DHC6		205	3.21	0.10	0.00	3.31	3.21	0.10	0.00	3.31
Q400*		124	2.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00
Turboprop Total		470	7.48	0.10	0.00	7.59	7.48	0.10	0.00	7.59
B206L	H	22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
Helicopter Total		22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
GRAND TOTAL		1,795	28.53	0.36	0.05	28.95	28.53	0.36	0.05	28.95

Notes: J – Jet, P – Prop, T – Turboprop, H – Helicopter. SL – Stage Length.

D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.

*Q400 is only in the Proposed Project Alternative.

Source: URS Corporation, 2007.

**TABLE 4
2015 SUMMER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			D	E	N	Total	D	E	N	Total
CL600	J	11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
CNA500		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GIV		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
IA1125		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
LEAR25		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
LEAR35		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
MU3001		79	1.22	0.06	0.00	1.27	1.22	0.06	0.00	1.27
Jet Total		126	1.97	0.06	0.00	2.03	1.97	0.06	0.00	2.03
BEC58P	P	327	4.92	0.35	0.00	5.27	4.92	0.35	0.00	5.27
CNA172		39	0.52	0.12	0.00	0.64	0.52	0.12	0.00	0.64
CNA206		276	4.17	0.29	0.00	4.46	4.17	0.29	0.00	4.46
GASEPF		97	1.56	0.00	0.00	1.56	1.56	0.00	0.00	1.56
GASEPV		388	5.91	0.29	0.06	6.25	5.91	0.29	0.06	6.25
PA31		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
Prop Total		1,134	17.20	1.04	0.06	18.30	17.20	1.04	0.06	18.30
C130	T	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
CNA441		97	1.51	0.06	0.00	1.56	1.51	0.06	0.00	1.56
DHC6		122	1.85	0.12	0.00	1.97	1.85	0.12	0.00	1.97
Q400*		124	2.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00
Turboprop Total		347	5.42	0.17	0.00	5.59	5.42	0.17	0.00	5.59
S65	H	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
Helicopter Total		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GRAND TOTAL		1,610	24.64	1.27	0.06	25.97	24.64	1.27	0.06	25.97

Notes: J – Jet, P – Prop, T – Turboprop, H – Helicopter. SL – Stage Length.

D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.

*Q400 is only in the Proposed Project Alternative.

Source: URS Corporation, 2007.

**TABLE 5
2015 WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft Type	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			D	E	N	Total	D	E	N	Total
CL600	J	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIIB		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIV		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
IA1125		11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
LEAR25		32	0.52	0.00	0.00	0.52	0.52	0.00	0.00	0.52
LEAR35		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
MU3001		226	3.65	0.00	0.00	3.65	3.65	0.00	0.00	3.65
Jet Total		309	4.98	0.00	0.00	4.98	4.98	0.00	0.00	4.98
BEC58P	P	345	5.56	0.00	0.00	5.56	5.56	0.00	0.00	5.56
CNA172		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
CNA206		262	4.05	0.12	0.06	4.23	4.05	0.12	0.06	4.23
GASEPF		57	0.87	0.06	0.00	0.93	0.87	0.06	0.00	0.93
GASEPV		449	7.12	0.12	0.00	7.24	7.12	0.12	0.00	7.24
PA31		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
Prop Total		1,149	18.18	0.29	0.06	18.53	18.18	0.29	0.06	18.53
C130	T	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
CNA441		151	2.43	0.00	0.00	2.43	2.43	0.00	0.00	2.43
DHC6		230	3.59	0.12	0.00	3.71	3.59	0.12	0.00	3.71
Q400*		496	8.00	0.00	0.00	8.00	8.00	0.00	0.00	8.00
Turboprop Total		884	14.14	0.12	0.00	14.25	14.14	0.12	0.00	14.25
B206L	H	25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
Helicopter Total		25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
GRAND TOTAL		2,366	37.70	0.41	0.06	38.17	37.70	0.41	0.06	38.17

Notes: J – Jet, P – Prop, T – Turboprop, H – Helicopter. SL – Stage Length.

D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.

*Q400 is only in the Proposed Project Alternative.

Source: URS Corporation, 2007.

MAMMOTH LAKES, CALIFORNIA

AL-6841 (FAA)

RNAV (GPS) RWY 27

MAMMOTH YOSEMITE (MMH)

APP CRS 259°
Rwy Idg 7000
TDZE 7092
Apt E ev 7128

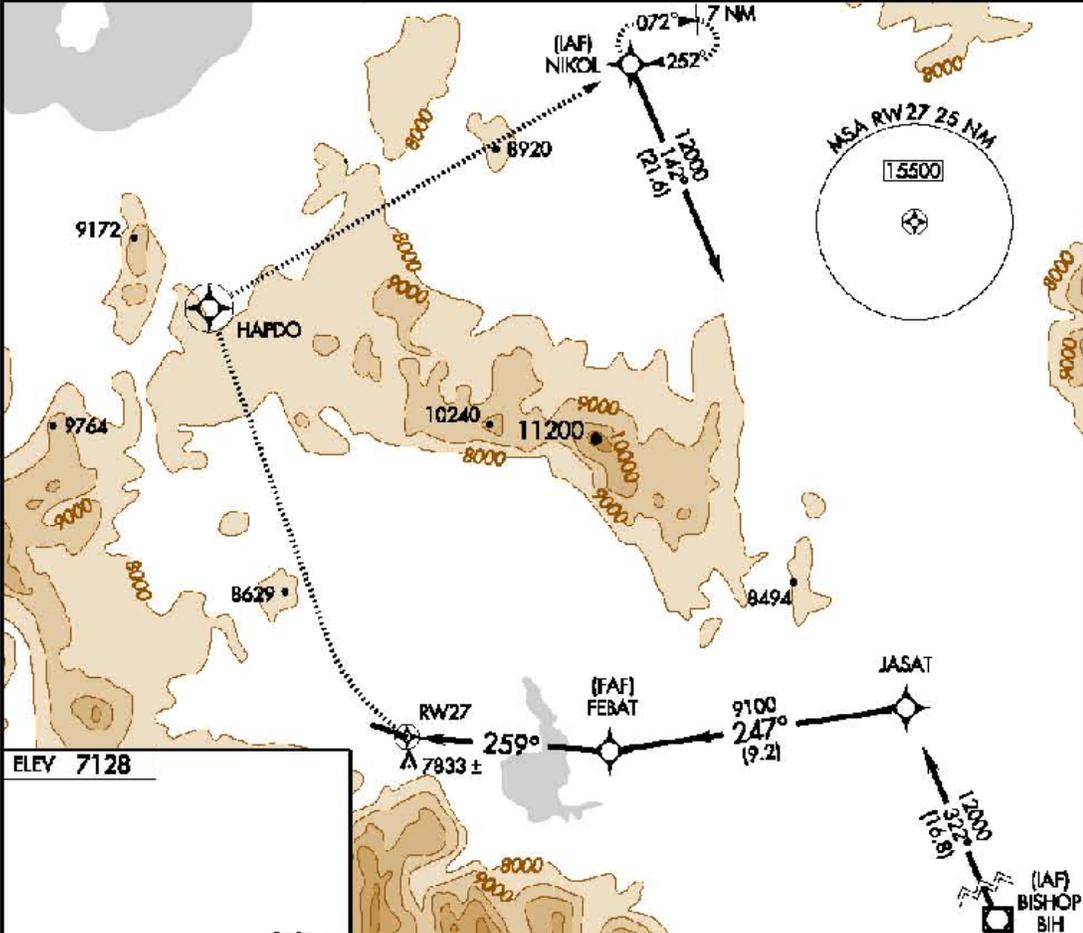
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Circling NA south of Rwy 9-27.
Circling NA at night.

MISSED APPROACH: Climbing right turn to 12000 d'rect
HAPDO WP then d'irect NIKOL WP and hold.

AWOS-3
118.05

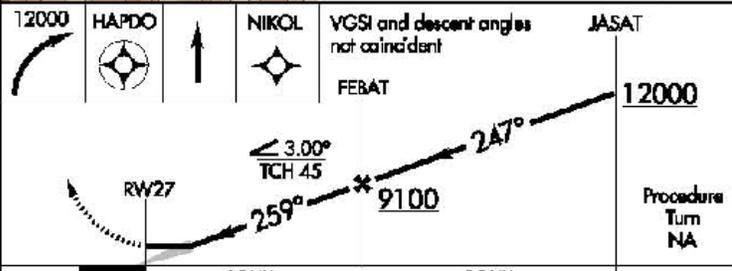
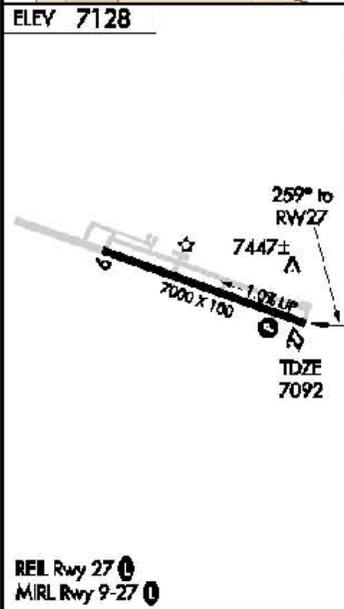
OAKLAND CENTER
125.75 284.65

UNICOM
122.8 (CTAF) ☺



SW-2, 30 AUG 2007 to 27 SEP 2007

SW-2, 30 AUG 2007 to 27 SEP 2007



CATEGORY	A	B	C	D
LNAV MDA	8380-1¼ 1288 (1300-1¼)	8380-1½ 1288 (1300-1½)	8380-3 1288 (1300-3)	NA
CIRCLING	8380-1¼ 1252 (1300-1¼)	8380-1½ 1252 (1300-1½)	8380-3 1252 (1300-3)	NA

MAMMOTH LAKES, CALIFORNIA
Orig 07242

37°37'N-118°50'W

RNAV (GPS) RWY 27

MAMMOTH YOSEMITE (MMH)



Environmental Impact Statement
Mammoth Yosemite Airport
Horizon Air Operation Specification
Amendment Service to/from MMH

RNAV (GPS) RWY 27
MAMMOTH YOSEMITE (MMH)

FIGURE
6

INSTRUMENT APPROACH PROCEDURE CHARTS
IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned another DP or radar vector by ATC, this procedure may be flown to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: FAR 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

04



04274

TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



**LOS BANOS, CA
LOS BANOS MUNI**

DEPARTURE PROCEDURE: Aircraft departing 320° CW 120° climb on course. All others climb via heading 240° to intercept V109. Southeast bound via V109 requires a climb rate of 300' per NM to 1000.

**MADERA, CA
MADERA MUNI**

DEPARTURE PROCEDURE: **Rwy 30**, climb right turn via FRAR 243 to BEREN Int/FRAR 18.6 DME then via assigned route. **Rwy 12**, turn left, climb heading 095° to 500, continue climb direct CZZ VORTAC, then via assigned route.

**MAMMOTH LAKES, CA
MAMMOTH YOSEMITE**

TAKE-OFF MINIMUMS: **Rwy 9**, 500-2 or std. with a min. climb of 400' per NM to 10700. **Rwy 27**, 5000-5 or std. with a min. climb of 450' per NM to 11800.
 DEPARTURE PROCEDURE: **Rwy 9**, climb left turn heading 050° to intercept: BIHR-307. **Rwy 27**, climb right turn to heading 095° to intercept: BIHR-307.
All aircraft proceed via BIHR 307 to BIH VOR/DME, then via BIHR-322 (V381) to NICOL Int then via assigned route.

**MOFFETT FEDERAL AFDL (KNUQ)
MOUNTAIN VIEW, CA**

Rwy 14L/R, 3300-3'
Rwy 22L/R, 3300-3**

*Or standard with minimum climb of 460' NM to 3300
 **Or standard with minimum climb of 410' NM to 3300
 TAKE-OFF OBSTACLES: Rwy 14L/R: Multiple trees on golf course, 80-150' MSL (40-110' AGL) left through right of both runway centerlines, 500' through 2500' from departure end of rwy.

**MONTAGUE, CA
SISKIYOU COUNTY**

TAKE-OFF MINIMUMS: **Rwy 17**, CAT A/B 2400-2 or std. with a min. climb of 350' per NM to 5500. CAT C/D 4100-2 or std. with a min. climb of 350' per NM to 7700. **Rwy 35**, 4000-2 or std. with a min. climb of 300' per NM to 7000.
 DEPARTURE PROCEDURE: **Rwy 17**, climb direct MOG NDB. Continue climb to 10000 on MOG holding pattern (N, right turns, 172° inbound). **Rwy 35**, climb to 7000 via runway heading and 352° bearing from MOG NDB, then climbing right turn to 10000 direct MOG NDB. **All aircraft** depart MOG NDB at or above MSA for route of flight.

MONTEREY, CA



**Environmental Impact Statement
Mammoth Yosemite Airport**
 Horizon Air Operation Specification
 Amendment Service to/from MMH

**TAKE-OFF MINIMUMS
AND (OBSTACLE)
DEPARTURE PROCEDURES**

**FIGURE
7**

2.5 DETERMINATION OF NOISE LEVELS AT CONFIRMED AND POTENTIAL SECTION 4(f) PROPERTIES WITH A QUIET SETTING WITHIN THE IAI

Information from **Sections 2.1 through 2.3** was used to assess potential future noise effects as a result of the proposed air carrier service at MMH on confirmed and potential Section 4(f) properties with quiet settings within the IAI. The FAA's INM Version 6.2a was used to conduct the Noise Screening Assessment. INM Version 6.2a has enhancements that enable it to produce more accurate noise predictions than previous versions. Such enhancements allow analysts to consider the effects of airfield elevation and average temperature upon noise propagation and aircraft performance. In addition, terrain elevation data allows the model to adjust the observer-to-aircraft distances when computing noise levels. These features were utilized in this analysis. The initial Noise Screening Assessment only includes aircraft operations associated with MMH. In addition to the INM inputs associated with aircraft operations at MMH, the INM input included data on the analysis locations, noise metrics, and the ambient noise level. These inputs are described in the following sections.

2.5.1 ANALYSIS LOCATIONS

A uniform grid was set up as an initial screening test, with points spaced 0.5 nautical miles (nm) apart over the entire IAI. This grid was utilized to help identify the areas that may need further investigation. In addition to the uniform grid, individual grid points were placed at representative locations within each potential Section 4(f) property (see **Table 6**). **Figure 8** illustrates the uniform grid over the IAI, while **Figure 9** displays the location of the individual Section 4(f) grid points.

2.5.2 NOISE METRICS

In order to consider a variety of noise conditions as a result of the Proposed Action, a combination of cumulative (average) and single-event noise metrics were used in the Noise Screening Assessment. As recommended by the FAA Guidance Document, the noise metrics included in this assessment include the Equivalent Sound Level (Leq), Community Noise Equivalent Level (CNEL), the Maximum A-Weighted Sound Level (L_{max}), and the Time Above Ambient Sound Level (TAA). These noise metrics are described further in the following paragraphs.

Equivalent Sound Level (Leq) – Leq is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest (e.g., an hour, a 15-hour daytime period, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the timeframe, the applicable period should always be identified or clearly understood when discussing the metric.

Conceptually, Leq may be thought of as a steady sound level, over a specific period of time that contains the same sound energy as the fluctuating sound levels actually occurring. In the context of noise from typical aircraft flight events, Leq does not represent the sound level heard at any particular time, but rather represents the total sound exposure for the period of interest. Also, it should be noted that the

SEPTEMBER 2007

“average” sound level suggested by Leq is not an arithmetic value, but a logarithmic, or “energy-averaged”, sound level. Thus, loud events tend to dominate the noise environment described by the Leq metric.

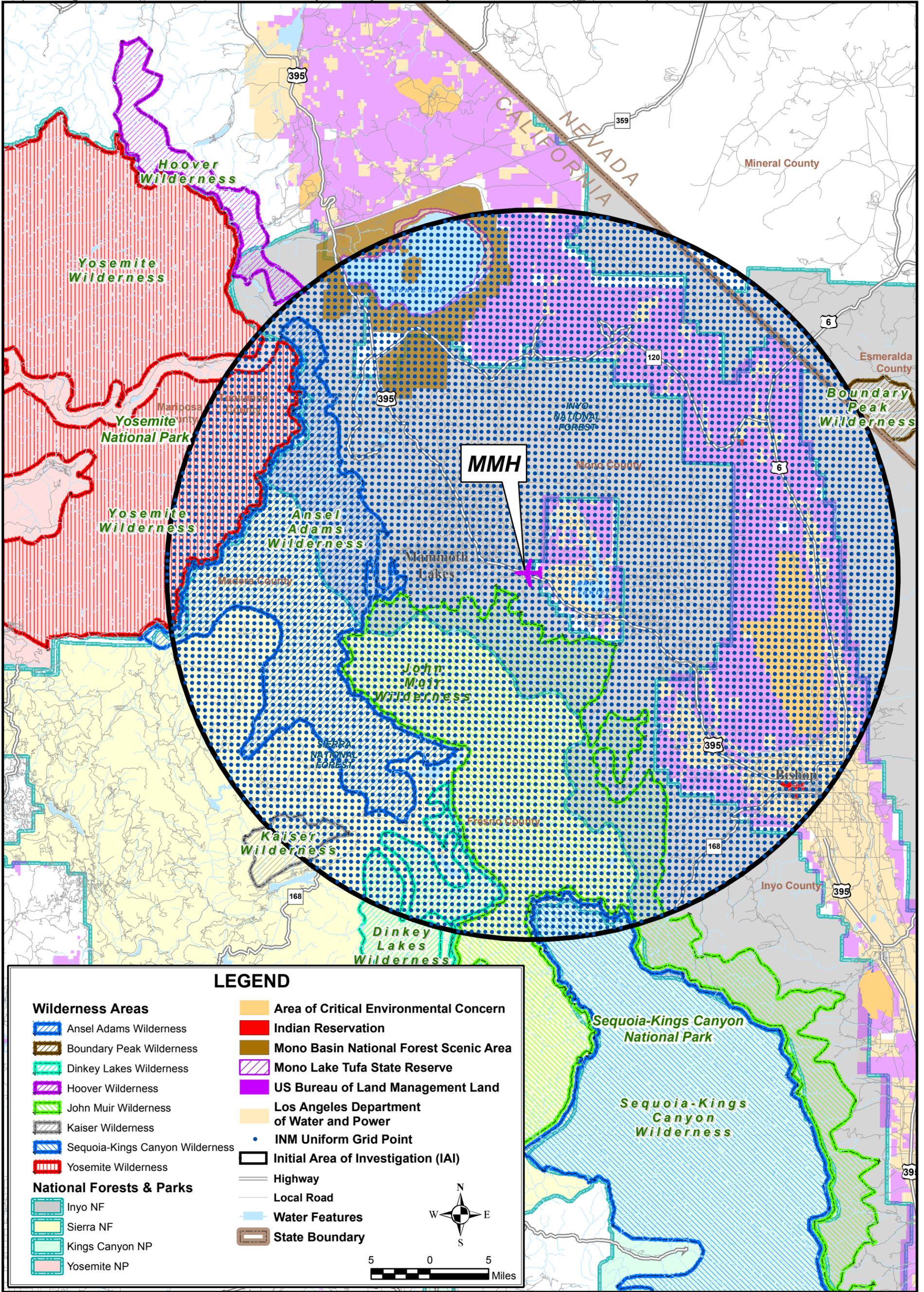
This Noise Screening Assessment uses two periods of interest relative to the Leq; a full 24-hour day, and daytime only (7:00 a.m. to 10:00 p.m.). The 24-hour Leq, represented by **Leq_(24 hour)**, is provided to disclose the average sound level over a full 24 hour day. Therefore, the Leq_(24 hour) includes the nighttime period (10:00 p.m. to 7:00 a.m.) in the average sound level. The daytime Leq, represented by the **Leq_(Day)** designation, provides the average sound level during the daytime hours only.

**TABLE 6
ANALYSIS LOCATIONS FOR POTENTIAL SECTION 4(F) SITES**

NO	SITE NAME	ELEVATION	LAND AREA	WILDERNESS AREA
AAW-1	Cargyle Meadow	8,055	Sierra NF	Ansel Adams
AAW-2	JMT - Garnet Lake	9,822	Inyo NF	Ansel Adams
BLM-1	Horton Creek Campground	4,954	BLM	None
BLM-2	Chalk Bluff in the Volcanic Tablelands	4,444	BLM	None
BLM-3	Fish Sanctuary	4,290	BLM	None
BLM-4	Chidago Canyon	4,498	BLM	None
BLM-5	Red Rock Canyon	5,800	BLM	None
BLM-6	Volcanic Tablelands	5,791	BLM	None
BLM-7	Crowley Lake Campground	7,029	BLM	None
BLM-8	Crowley (Wild Willy's) Hot Spring	6,889	BLM	None
DLW-1	California Riding/Hiking Trail	8,599	Sierra NF	Dinkey Lakes
INF-1	Sawmill Campground	9,799	Inyo NF	None
INF-2	Mosquito Flats Campground	10,382	Inyo NF	John Muir ¹
INF-3	Big Trees Campground	7,598	Inyo NF	None
INF-4	North Lake Campground	9,803	Inyo NF	John Muir ¹
INF-5	Iris Meadow Campground	8,526	Inyo NF	None
INF-6	Convict Lake Campground	7,651	Inyo NF	John Muir ¹
INF-7	Devils Postpile Lookout	7,761	Inyo NF	Ansel Adams ¹
INF-8	Minaret Vista	9,132	Inyo NF	None
INF-9	Boulder Campground	7,398	Inyo NF	None
INF-10	Silver Lake	7,398	Inyo NF	None
JMW-1	JMT - Sallie Keyes Lakes	10,362	Sierra NF	John Muir
JMW-2	JMT - Quail Meadows	7,798	Sierra NF	John Muir
JMW-3	JMT - Lake Virginia	10,397	Sierra NF	John Muir
JMW-4	Rainbow Lake	9,996	Sierra NF	John Muir
JMW-5	Mount Abbot	13,341	Sierra NF	John Muir
JMW-6	Desolation Lake	11,399	Sierra NF	John Muir
JMW-7	Tamarack Lakes	11,603	Inyo NF	John Muir
KCNP-1	JMT - San Joaquin River	8,458	Kings Canyon NP	Sequoia-Kings Canyon
KCNP-2	JMT - McClure Meadow	9,799	Kings Canyon NP	Sequoia-Kings Canyon
KW-1	Upper Twin Lake	8,671	Sierra NF	Kaiser
<i>LADWP-1</i>	<i>Pleasant Valley Campground</i>	<i>4,399</i>	<i>LADWP</i>	<i>None</i>
<i>MBNF-1</i>	<i>Mono Lake Lookout</i>	<i>6,431</i>	<i>Mono Basin NF</i>	<i>None</i>
<i>NA-1</i>	<i>Benton Paiute Indian Reservation</i>	<i>5,386</i>	<i>Native American</i>	<i>None</i>
<i>NA-2</i>	<i>Bishop Paiute Indian Reservation</i>	<i>4,227</i>	<i>Native American</i>	<i>None</i>
SNF-1	Granite Creek Campground	7,112	Sierra NF	None
SNF-2	Mount Tom Lookout	8,901	Sierra NF	None
SNF-3	Badger Flat Campground	8,201	Sierra NF	None
SNF-4	Mono Hot Springs Campground	6,600	Sierra NF	Ansel Adams ¹
SNF-5	Vermilion Campground	7,669	Sierra NF	None
SNF-6	Jackass Meadow Campground	7,198	Sierra NF	Ansel Adams ¹
YNP-1	JMT-Donohue Pass	11,011	Yosemite NP	Ansel Adams ¹ , Yosemite ¹
YNP-2	Washburn Lake	7,598	Yosemite NP	Yosemite
YNP-3	JMT - Lyell Canyon	8,805	Yosemite NP	Yosemite ¹
YNP-4	Tioga Pass	10,000	Yosemite NP	Yosemite ¹
YNP-5	Chain Lakes	9,396	Yosemite NP	Yosemite

¹ Site is adjacent to Wilderness Area

Note: Sites shown in italics indicate that a quiet setting is not a generally recognized feature or attribute of the significance of the resource.



LEGEND

Wilderness Areas

- Ansel Adams Wilderness
- Boundary Peak Wilderness
- Dinkey Lakes Wilderness
- Hoover Wilderness
- John Muir Wilderness
- Kaiser Wilderness
- Sequoia-Kings Canyon Wilderness
- Yosemite Wilderness

National Forests & Parks

- Inyo NF
- Sierra NF
- Kings Canyon NP
- Yosemite NP

- Area of Critical Environmental Concern
- Indian Reservation
- Mono Basin National Forest Scenic Area
- Mono Lake Tufa State Reserve
- US Bureau of Land Management Land
- Los Angeles Department of Water and Power
- INM Uniform Grid Point
- Initial Area of Investigation (IAI)
- Highway
- Local Road
- Water Features
- State Boundary

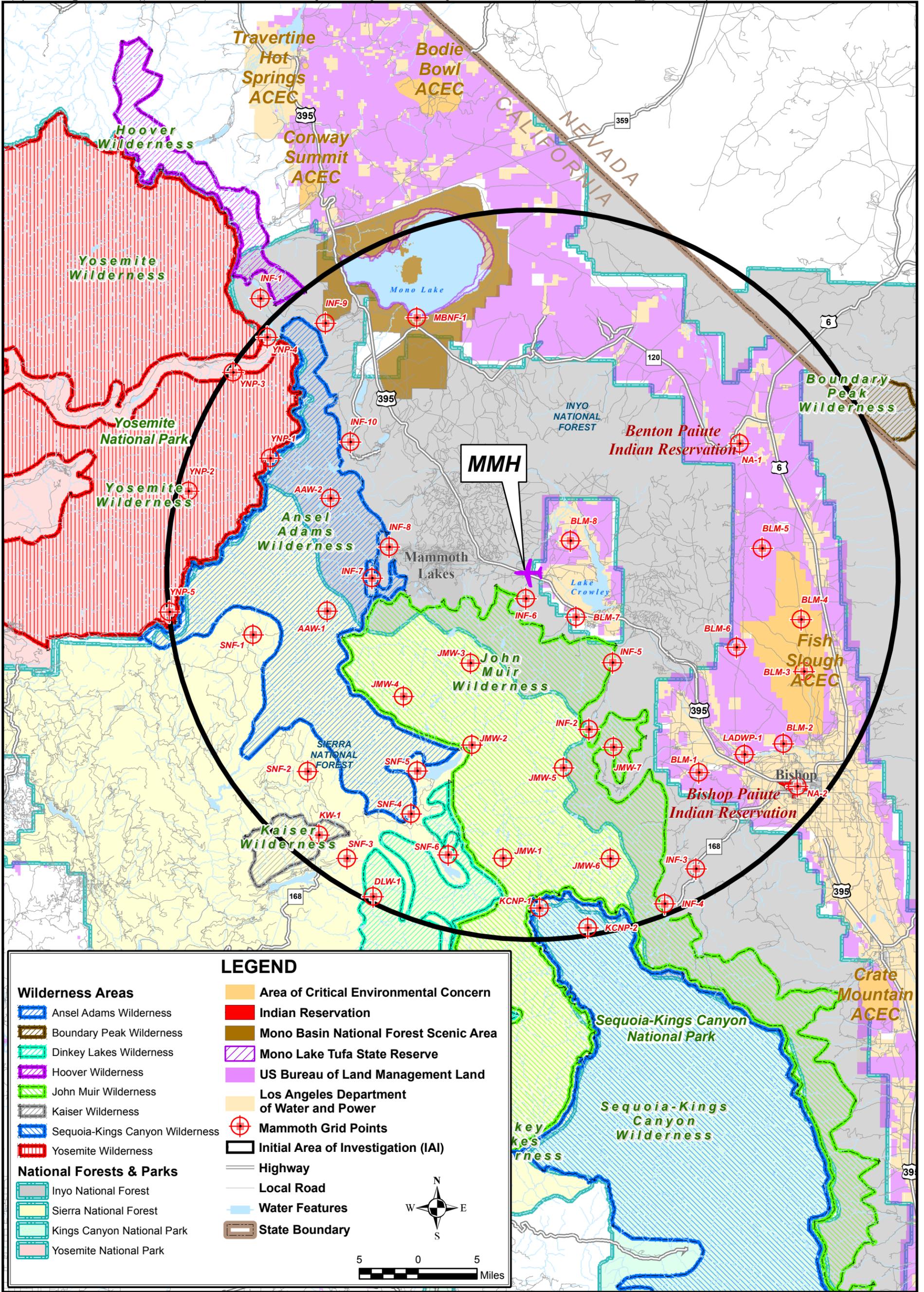


FIGURE
8

**NOISE SCREENING ASSESSMENT:
INM UNIFORM GRID**



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operation Specification
Amendment Service to/from MMH



LEGEND

Wilderness Areas	Area of Critical Environmental Concern
Ansel Adams Wilderness	Indian Reservation
Boundary Peak Wilderness	Mono Basin National Forest Scenic Area
Dinkey Lakes Wilderness	Mono Lake Tufa State Reserve
Hoover Wilderness	US Bureau of Land Management Land
John Muir Wilderness	Los Angeles Department of Water and Power
Kaiser Wilderness	Mammoth Grid Points
Sequoia-Kings Canyon Wilderness	Initial Area of Investigation (IAI)
Yosemite Wilderness	Highway
National Forests & Parks	Local Road
Inyo National Forest	Water Features
Sierra National Forest	State Boundary
Kings Canyon National Park	
Yosemite National Park	

FIGURE 9

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

Community Noise Equivalent Level (CNEL) - CNEL is the summation of aircraft noise exposure from all individual aircraft operations occurring during an average annual day over a 24-hour period, with the provision that noises occurring in the evening and at night (evening defined as 7:00 p.m. through 9:59 p.m. and night as 10:00 p.m. through 6:59 a.m.) are increased by 3 and 10 decibels (dBA), respectively. This penalty, or weighting, reflects the added intrusiveness of evening and nighttime noise in populated areas. Since community background noise typically decreases about 10 dBA at night, nighttime noise events sound louder because there is less background noise. The intrusiveness of evening and nighttime noise, and resultant weighting factor, is not necessarily applicable to assessments of Section 4(f) properties with a quiet setting since people are not living and sleeping in the properties (unless there is a remote campground for overnight park visitors). Because CNEL is an accumulation of total noise exposure, every noise event, regardless of level or duration, adds to the value, although the loudest sounds have the greatest effect.

To determine the potential for significant noise impacts of airport development actions, the State of California, with approval from the FAA, prefers to use the CNEL metric to calculate the noise impacts resulting from new proposed aircraft. The CNEL is used to determine compatible land uses with the Part 150 guidelines. However, as stated previously in Section 2.0, this Noise Screening Assessment does not rely on Part 150 Land Use Compatibility Guidelines to assess potential noise impacts (per FAA Order 1050.1E, Appendix A, Section 6.2i) and constructive use of the Section 4(f) properties within the IAI. Therefore, CNEL is provided for informational purposes in order to fully disclose the potential noise increases as a result of the Proposed Action. The FAA does not have a standard set of guidelines for determining changes in CNEL noise levels below 45 dBA.

Maximum A-Weighted Sound Level (L_{max}) – Sound levels vary with time. For example, the sound increases as an aircraft approaches, then falls and blends into the ambient or background as the aircraft recedes into the distance. Because of this variation, it is often convenient to describe a particular noise “event” by its highest or maximum sound level (L_{max}). Note that L_{max} describes only one dimension of an event; it provides no information on the cumulative noise exposure generated by a sound source. In fact, two events with identical L_{max} may produce very different total noise exposures. One may be of very short duration, while the other may be much longer and/or of higher frequency.

Time Above Ambient Sound Level (TAA) - Because analyses of decibel levels (of any variety) are complex and often unfamiliar to the public, the FAA has developed a supplemental concept of noise exposure: the time that the noise exceeds a particular A-weighted sound level. Every moment that the fluctuating noise level rises above the threshold, the number of seconds is accumulated and added to any previous periods that the noise was above the threshold. These times-above-thresholds are reported for an average 24-hour period. The ambient sound level was used as the threshold for this Noise Screening Assessment. The ambient sound level used as the TAA thresholds is described further in **Section 2.4.3**.

2.5.3 DETERMINATION OF AMBIENT SOUND LEVELS

Ambient sound level monitoring was conducted by the FAA at Mosquito Flats and Sawmill Campgrounds. A total of 10 days of noise monitoring data was gathered at each site (from October 23 through November 3, 2006).

The L_{50} sound pressure level is that which is exceeded 50 percent of the time, or the fiftieth percentile. It is considered the median noise level and is therefore used to define ambient or background noise levels. The L_{50} for the following ambient sound levels was calculated for the MMH ambient sound level study:

- *Existing Ambient* – All sounds in a study area, including all natural sounds as well as all mechanical, electrical and other human-caused sounds (including the source of interest: aircraft).
- *Natural Ambient* – The natural sound conditions found in a study area, including all sounds of nature (e.g., wind, streams, wildlife, etc.), and excluding all electrical, mechanical, and other human-produced sounds.

The results of the MMH noise monitoring and data analysis effort indicate that the Existing Ambient sound level was measured at 28.8 dBA at Mosquito Flats, while the Natural Ambient sound level was measured to be 28.6 dBA at that location. At Sawmill, the Existing Ambient sound level was measured at 34.7 dBA, while the Natural Ambient sound level was measured to be 34.4 dBA at that location. The ambient sound levels at Sawmill were higher due to the more open nature of the area, with a greater impact from wind through the trees and a localized water course; where the Mosquito Flats monitoring site had more protection from the wind and no close flowing water source.

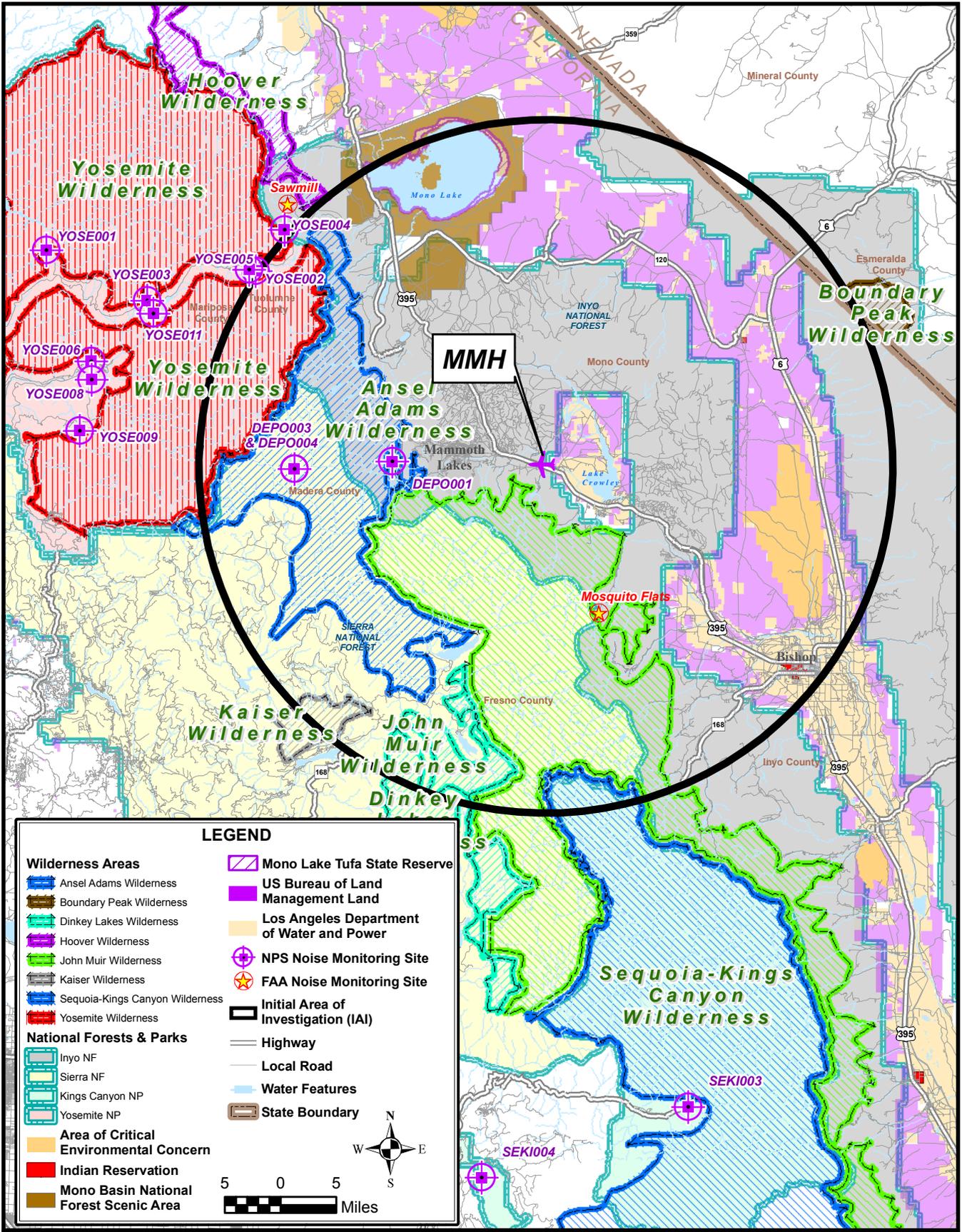
In addition, ambient sound level studies at several Section 4(f) properties in the general vicinity of MMH have been conducted by the NPS, including the Yosemite National Park, Kings Canyon National Park, Sequoia National Park, and Devils Postpile National Monument. The results of the NPS ambient sound level studies are have not been made available to the FAA at this time.

The locations of the FAA and NPS ambient sound level monitoring are shown on **Figure 10**.

This Noise Screening Assessment utilized the Natural Ambient sound level of 28.6 dBA (measured at Mosquito Flats) for the entire study area. It was determined that using the lower ambient noise level would produce a more conservative estimate of noise impacts in areas where Natural Ambient noise levels are actually higher than what was used for this Noise Screening Assessment.

2.5.4 CHANGE OF EXPOSURE (COE) CRITERIA

In order to determine the appropriate level of analysis beyond FAA's standard noise contour analysis required for a particular potential Section 4(f) property, the "change" in noise exposure between the Proposed Action and the No-Action Alternatives should be determined. The change of exposure (COE) criteria developed by FAA utilizes the CNEL, L_{eq} , and L_{max} noise metrics. The COE criteria are only applied to the noise levels associated with MMH aircraft operations and do not constitute a threshold for a determination of significant impact or constructive use.



LEGEND

Wilderness Areas	Mono Lake Tufa State Reserve
Ansel Adams Wilderness	US Bureau of Land Management Land
Boundary Peak Wilderness	Los Angeles Department of Water and Power
Dinkey Lakes Wilderness	NPS Noise Monitoring Site
Hoover Wilderness	FAA Noise Monitoring Site
John Muir Wilderness	Initial Area of Investigation (IAI)
Kaiser Wilderness	Highway
Sequoia-Kings Canyon Wilderness	Local Road
Yosemite Wilderness	Water Features
National Forests & Parks	State Boundary
Inyo NF	
Sierra NF	
Kings Canyon NP	
Yosemite NP	
Area of Critical Environmental Concern	
Indian Reservation	
Mono Basin National Forest Scenic Area	

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Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH

**NOISE SCREENING ASSESSMENT:
 LOCATIONS OF FAA AND NPS
 AMBIENT SOUND LEVEL MONITORING**

**FIGURE
 10**

FAA's criteria indicate that the change of noise exposure (either an increase or decrease) must be equal to, or greater than, 3 dBA of CNEL, L_{eq} , or L_{max} , when the No-Action Alternative is compared to the Proposed Action. Increases and decreases in noise exposure are defined as follows:

- If the No-Action and Proposed Action Alternatives noise levels are both below the natural ambient sound level, any change of noise exposure would be considered masked by ambient sounds and would not be considered an increase or decrease.
- An increase would occur if the No-Action Alternative noise level is below the natural ambient sound level and the change of noise exposure (3 dBA) as a result of the Proposed Action exceeds the natural ambient sound level.
- If the No-Action and Proposed Action Alternatives noise levels are both above the natural ambient sound level, a change of noise exposure (3 dBA) would occur in the direction of change (increase or decrease).
- A decrease would occur if the No-Action Alternative noise level is above the natural ambient sound level and the change of noise exposure (3 dBA) as a result of the Proposed Action results in noise levels below the ambient sound level.

CHAPTER 3.0
RESULTS

This section summarizes the results of the initial noise screening assessment for the uniform grid over the entire IAI, and for the representative individual grid locations at potential Section 4(f) properties within the IAI.

All GA aircraft would be operating on the same arrival and departure flight track routes in both the No-Action and Proposed Action Alternatives. However, the Proposed Action Alternative would introduce air carrier service resulting in two new flight tracks: departure tracks 09D13 and 27D13. Since there are no existing flight tracks to/from MMH in the vicinity of these tracks, it is anticipated that noise levels could increase in the vicinity of these tracks as a result of the Proposed Action when compared to the No Action Alternative.

3.1 UNIFORM GRID ANALYSIS

Figure 11 illustrates the results of the L_{max} uniform grid analysis. Yellow grid points indicate locations that meet the COE criteria described in Section 2.5.4. All changes of exposure are increases, where both No-Action and Proposed Action noise levels are above Natural Ambient and there is an increase of 3 dBA; no decreases occurred. Only one area would experience increases as a result of the Proposed Action.

The area that would experience an increase is northwest of the airport, along Q400 tracks 09D13 and 27D13, where the L_{max} levels are attributed to the Q400, and are no longer influenced by louder GA aircraft on tracks 27A3/09A2 and 27D3 /09D2 that are flying north/south over HAPDO. These air carrier routes are only used for flights departing from MMH to San Francisco, which are forecasted to only occur in winter, beginning in the winter of 2009/2010. The potential Section 4(f) resources that would experience an increase include portions of Yosemite National Park, Ansel Adams Wilderness, and Hoover Wilderness.

3.2 INDIVIDUAL GRID POINT ANALYSIS

The results of the Noise Screening Assessment at the individual grid point locations are described in the following sections.

3.2.1 YOSEMITE NATIONAL PARK

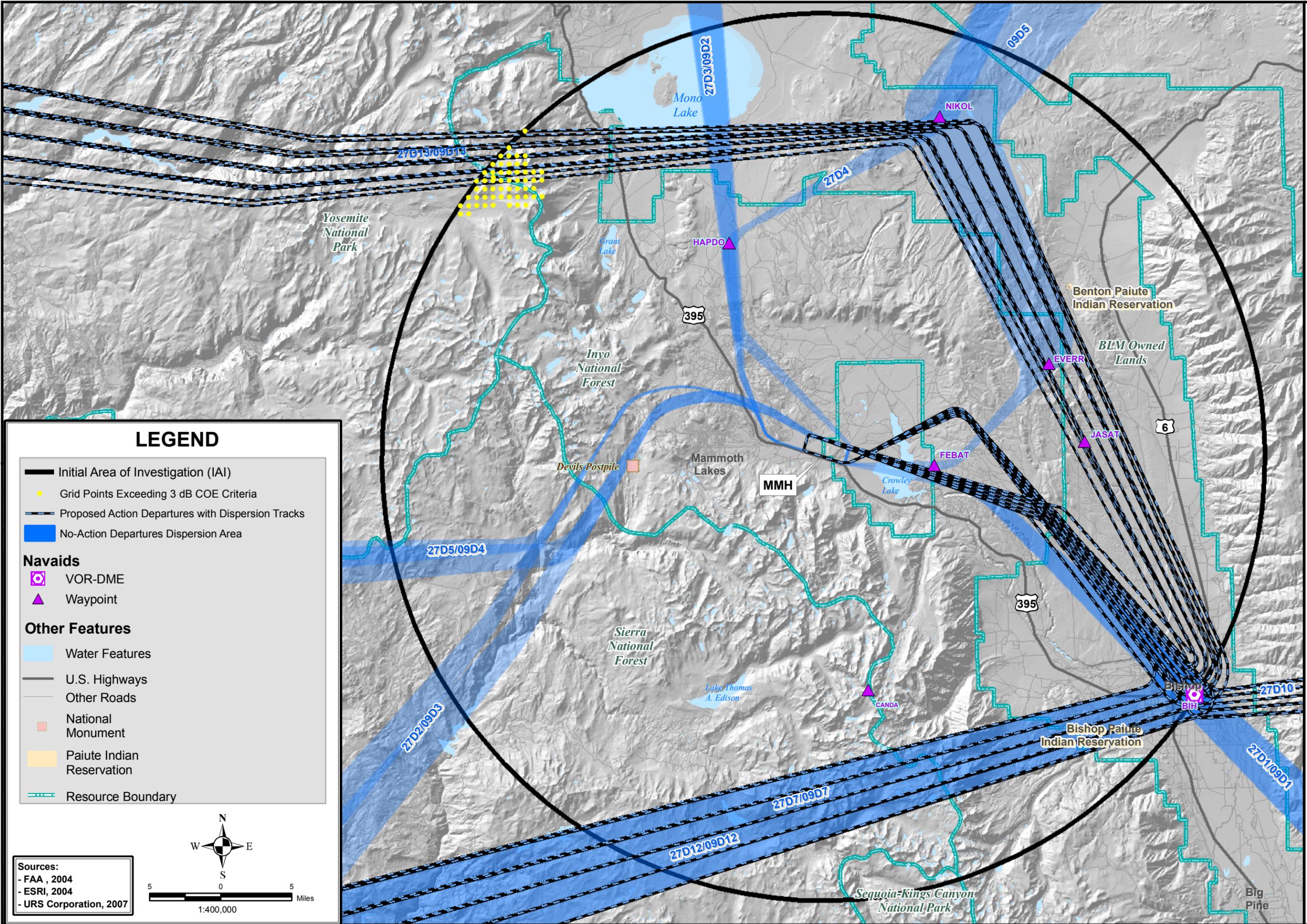
The results of the Noise Screening Assessment at the four grid point locations within Yosemite National Park are listed in **Tables 7 and 8**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 7 and 8** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at John Muir Trail (JMT) – Donohue Pass (YNP-1), Washburn Lake (YNP-2), or JMT – Lyell Canyon (YNP-3).

SEPTEMBER 2007

An increase only in L_{max} noise exposure would occur at Tioga Pass (YNP-4) as a result of the Proposed Action. As can be seen in **Figures 4 and 5**, YNP-4 is directly beneath Proposed Action departure tracks 09D13 and 27D13. The increase in L_{max} is a result of Q400 operations departing MMH on these tracks.

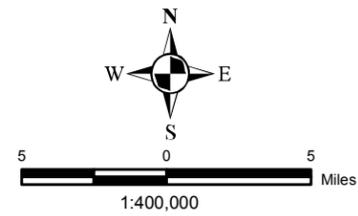
H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Noise Screening Assessment\Figure 11, 2015 Winter Grid Points Exceeding 3 dB COE Criteria.mxd, (.pdf, hde, 09/13/07)



LEGEND

- Initial Area of Investigation (IAI)
 - Grid Points Exceeding 3 dB COE Criteria
 - Proposed Action Departures with Dispersion Tracks
 - No-Action Departures Dispersion Area
- Nav aids**
- VOR-DME
 - Waypoint
- Other Features**
- Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007



**2015 WINTER
 GRID POINTS EXCEEDING
 3 dB COE CRITERIA**

**FIGURE
 11**

3.2.2 SEQUOIA & KINGS CANYON NATIONAL PARK

The results of the Noise Screening Assessment at the two grid point locations within Sequoia & Kings Canyon National Park are listed in **Tables 9 and 10**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables 9 and 10** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at JMT – San Joaquin River (KCNP-1) or JMT – McClure Meadow (KCNP-2).

3.2.3 DEVILS POSTPILE NATIONAL MONUMENT

The results of the Noise Screening Assessment at the two grid point locations closest to the Devils Postpile (INF-7 and INF-8) are also included in **Section 3.2.6**, Inyo National Forest. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables 11 and 12** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Devils Postpile Lookout (INF-7) or Minaret Vista (INF-8).

3.2.4 MONO BASIN NATIONAL FOREST SCENIC AREA

The results of the Noise Screening Assessment at the grid point location within the Mono Basin National Forest Scenic Area are listed in **Tables 13 and 14**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables 13 and 14** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Mono Lake Lookout (MBNF-1).

3.2.5 SIERRA NATIONAL FOREST

The results of the Noise Screening Assessment at the six grid point locations within the Sierra National Forest are listed in **Tables 15 and 16**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables 15 and 16** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Granite Creek Campground (SNF-1), Mount Tom Lookout (SNF-2), Badger Flat Campground (SNF-3), Mono Hot Springs Campground (SNF-4), Vermilion Campground (SNF-5), or Jackass Meadow Campground (SNF-6).

3.2.6 INYO NATIONAL FOREST

The results of the Noise Screening Assessment at the ten grid point location within the Inyo National Forest are listed in **Tables 17 and 18**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables 17 and 18** list the change in noise exposure that would occur as a result of the Proposed Action.

SEPTEMBER 2007

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Mosquito Flats Campground (INF-2), Big Trees Campground (INF-3) and North Lake Campground (INF-4), Iris Meadow Campground (INF-5), Convict Lake Campground (INF-6), Devils Postpile Lookout (INF-7), Minaret Vista (INF-8), Boulder Campground (INF-9), or Silver Lake (INF-10).

An increase only in L_{max} noise exposure would occur at Sawmill Campground (INF-1) as a result of the Proposed Action. As can be seen in **Figures 4 and 5**, INF-1 is directly beneath Proposed Action departure tracks 09D13 and 27D13. The increase in L_{max} is a result of Q400 operations departing MMH on these tracks.

3.2.7 ANSEL ADAMS WILDERNESS

The results of the Noise Screening Assessment at the two grid point locations within the Ansel Adams Wilderness are listed in **Tables 19 and 20**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 19 and 20** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric at either Cargyle Meadow (AAW-1) or Garnet Lake (AAW-2) as a result of the Proposed Action.

3.2.8 DINKEY LAKES WILDERNESS

The results of the Noise Screening Assessment at the grid point location within the Dinkey Lakes Wilderness are listed in **Tables 19 and 20**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 21 and 22** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at the California Riding/Hiking Trail (DLW-1).

3.2.9 JOHN MUIR WILDERNESS

The results of the Noise Screening Assessment at the seven grid point locations within the John Muir Wilderness are listed in **Tables 23 and 24**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 23 and 24** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Sallie Keyes Lakes (JMW-1), Quail Meadows (JMW-2), Lake Virginia (JMW-3), Rainbow Lake (JMW-4), Mount Abbot (JMW-5), Desolation Lake (JMW-6), or Tamarack Lakes (JMW-7).

3.2.10 KAISER WILDERNESS

The results of the Noise Screening Assessment at the grid point location within the Kaiser Wilderness are listed in **Tables 25 and 26**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 25 and 26** list the change in noise exposure that would occur as a result of the Proposed Action.

SEPTEMBER 2007

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Upper Twin Lake (KW-1).

3.2.11 BUREAU OF LAND MANAGEMENT (BLM)

The results of the Noise Screening Assessment at the seven grid point locations identified by the BLM are listed in **Tables 27 and 28**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 27 and 28** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Horton Creek Campground (BLM-1), Chalk Bluff in the Volcanic Tablelands (BLM-2), Fish Sanctuary (BLM-3), Chidago Canyon (BLM-4), Red Rock Canyon (BLM-5), Volcanic Tablelands (BLM-6), or Crowley Lake Campground (BLM-7).

3.2.12 MONO LAKE TUFA STATE RESERVE

The results of the Noise Screening Assessment at the grid point location within the Mono Lake Tufa State Reserve (MBNF-1) are listed in **Tables 29 and 30**, and are also included in Section 3.2.4, Mono Basin National Forest Scenic Area. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 29 and 30** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Mono Lake Lookout (MBNF-1).

3.2.13 NATIVE AMERICAN RESERVATIONS

The results of the Noise Screening Assessment at the two grid point locations near or within Native American Reservations are listed in **Tables 31 and 32**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 31 and 32** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Benton Paiute Indian Reservation (NA-1) or the Bishop Paiute Indian Reservation (NA-2).

3.2.14 LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)

The results of the Noise Screening Assessment at the grid point location at LADWP Pleasant Valley Pit Campground are listed in **Tables 33 and 34**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables 33 and 34** list the change in noise exposure that would occur as a result of the Proposed Action at Pleasant Valley Campground.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Pleasant Valley Campground (LADWP-1).

**TABLE 7
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
YOSEMITE NATIONAL PARK**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
YNP-1	Leq _(Day) (dBA)	2.0	2.0	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	0.0	0.0	None
	CNEL (dBA)	0.2	0.2	0.0	None
	L _{max} (dBA)	42.1	42.1	0.0	None
	TAA (minutes)	0.1	0.1	0.0	Not Applicable ³
YNP-2	Leq _(Day) (dBA)	3.5	3.5	0.0	None
	Leq _(24 hour) (dBA)	1.5	1.5	0.0	None
	CNEL (dBA)	1.7	1.7	0.0	None
	L _{max} (dBA)	44.6	44.6	0.0	None
	TAA (minutes)	0.1	0.1	0.0	Not Applicable ³
YNP-3	Leq _(Day) (dBA)	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	36.8	36.8	0.0	None
	TAA (minutes)	0.0	0.0	0.0	Not Applicable ³
YNP-4	Leq _(Day) (dBA)	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	39.1	39.1	0.0	None
	TAA (minutes)	0.0	0.0	0.0	Not Applicable ³
YNP-5	Leq _(Day) (dBA)	19.4	19.4	0.0	None
	Leq _(24 hour) (dBA)	17.4	17.4	0.0	None
	CNEL (dBA)	17.5	17.5	0.0	None
	L _{max} (dBA)	67.0	67.0	0.0	None
	TAA (minutes)	6.1	6.1	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 8
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
YOSEMITE NATIONAL PARK**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
YNP-1	Leq _(Day) (dBA)	2.5	2.7	0.2	None	1.3	1.3	0.0	None
	Leq _(24 hour) (dBA)	0.4	0.7	0.3	None	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	0.7	0.9	0.2	None	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	42.1	42.1	0.0	None	32.4	32.4	0.0	None
	TAA (minutes)	0.1	0.1	0.0	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
YNP-2	Leq _(Day) (dBA)	4.0	4.0	0.0	None	3.2	3.2	0.0	None
	Leq _(24 hour) (dBA)	2.0	2.0	0.0	None	1.2	1.2	0.0	None
	CNEL (dBA)	2.2	2.2	0.0	None	1.7	1.7	0.0	None
	L _{max} (dBA)	44.6	44.6	0.0	None	31.5	31.5	0.0	None
	TAA (minutes)	0.1	0.1	0.0	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
YNP-3	Leq _(Day) (dBA)	N/A ²	5.1	5.1	None ¹	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	3.0	3.0	None ¹	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	3.1	3.1	None ¹	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	36.8	39.2	2.4	None	26.1	26.1	0.0	None
	TAA (minutes)	0.0	0.9	0.9	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
YNP-4	Leq _(Day) (dBA)	N/A ²	12.2	12.2	None ¹	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	10.1	10.1	None ¹	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	10.1	10.1	None ¹	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	39.1	44.9	5.8	Increase	27.3	27.3	0.0	None
	TAA (minutes)	0.0	1.9	1.9	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
YNP-5	Leq _(Day) (dBA)	19.9	19.9	0.0	None	19.2	19.2	0.0	None
	Leq _(24 hour) (dBA)	17.9	17.9	0.0	None	17.2	17.2	0.0	None
	CNEL (dBA)	18.0	18.0	0.0	None	17.7	17.7	0.0	None
	L _{max} (dBA)	67.0	67.0	0.0	None	56.7	56.7	0.0	None
	TAA (minutes)	6.8	6.8	0.0	Not Applicable ³	5.9	5.9	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 9
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
SEQUOIA & KINGS CANYON NATIONAL PARK**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
KCNP-1	Leq _(Day) (dBA)	19.5	19.9	0.4	None
	Leq _(24 hour) (dBA)	17.4	17.8	0.4	None
	CNEL (dBA)	17.6	18.0	0.4	None
	L _{max} (dBA)	57.4	57.4	0.0	None
	TAA (minutes)	13.2	15.7	2.5	Not Applicable ³
KCNP-2	Leq _(Day) (dBA)	15.2	15.5	0.3	None
	Leq _(24 hour) (dBA)	13.1	13.4	0.3	None
	CNEL (dBA)	13.3	13.6	0.3	None
	L _{max} (dBA)	57.0	57.0	0.0	None
	TAA (minutes)	4.7	5.2	0.5	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 10
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
SEQUOIA & KINGS CANYON NATIONAL PARK**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
KCNP-1	Leq _(Day) (dBA)	20.0	20.7	0.7	None	16.8	17.5	0.7	None
	Leq _(24 hour) (dBA)	17.9	18.6	0.7	None	14.7	15.4	0.7	None
	CNEL (dBA)	18.1	18.8	0.7	None	15.1	15.8	0.7	None
	L _{max} (dBA)	57.4	57.4	0.0	None	52.9	52.9	0.0	None
	TAA (minutes)	14.8	19.8	5.0	Not Applicable ³	7.1	9.6	2.5	Not Applicable ³
KCNP-2	Leq _(Day) (dBA)	15.7	16.2	0.5	None	12.4	13.0	0.6	None
	Leq _(24 hour) (dBA)	13.6	14.2	0.6	None	10.4	11.0	0.6	None
	CNEL (dBA)	13.8	14.3	0.5	None	10.8	11.3	0.5	None
	L _{max} (dBA)	57.0	57.0	0.0	None	52.9	52.9	0.0	None
	TAA (minutes)	5.3	6.3	1.0	Not Applicable ³	2.6	3.1	0.5	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 11
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
DEVILS POSTPILE NATIONAL MONUMENT**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-7	Leq _(Day) (dBA)	29.5	29.5	0.0	None
	Leq _(24 hour) (dBA)	27.4	27.4	0.0	None
	CNEL (dBA)	27.6	27.6	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None
	TAA (minutes)	23.1	23.1	0.0	Not Applicable ³
INF-8	Leq _(Day) (dBA)	33.1	33.1	0.0	None
	Leq _(24 hour) (dBA)	31.0	31.0	0.0	None
	CNEL (dBA)	31.1	31.1	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None
	TAA (minutes)	29.0	29.0	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 12
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
DEVILS POSTPILE NATIONAL MONUMENT**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-7	Leq _(Day) (dBA)	30.0	30.0	0.0	None	28.2	28.2	0.0	None
	Leq _(24 hour) (dBA)	27.9	27.9	0.0	None	26.2	26.2	0.0	None
	CNEL (dBA)	28.1	28.1	0.0	None	26.7	26.7	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None	68.2	68.2	0.0	None
	TAA (minutes)	25.8	25.8	0.0	Not Applicable ³	21.9	21.9	0.0	Not Applicable ³
INF-8	Leq _(Day) (dBA)	33.6	33.6	0.0	None	31.4	31.4	0.0	None
	Leq _(24 hour) (dBA)	31.5	31.5	0.0	None	29.3	29.3	0.0	None
	CNEL (dBA)	31.6	31.6	0.0	None	29.8	29.8	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None	74.1	74.1	0.0	None
	TAA (minutes)	32.5	32.5	0.0	Not Applicable ³	27.2	27.2	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 13
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
MONO BASIN NATIONAL FOREST SCENIC AREA**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
MBNF-1	Leq _(Day) (dBA)	17.4	17.4	0.0	None
	Leq _(24 hour) (dBA)	15.3	15.3	0.0	None
	CNEL (dBA)	15.5	15.5	0.0	None
	L _{max} (dBA)	65.5	65.5	0.0	None
	TAA (minutes)	5.3	5.3	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 14
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
MONO BASIN NATIONAL FOREST SCENIC AREA**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
MBNF-1	Leq _(Day) (dBA)	17.9	18.9	1.0	None	17.0	17.0	0.0	None
	Leq _(24 hour) (dBA)	15.8	16.9	1.1	None	15.0	15.0	0.0	None
	CNEL (dBA)	16.0	17.0	1.0	None	15.6	15.6	0.0	None
	L _{max} (dBA)	65.5	65.5	0.0	None	55.2	55.2	0.0	None
	TAA (minutes)	5.9	8.3	2.4	Not Applicable ³	5.0	5.0	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 15
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
SIERRA NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
SNF-1	Leq _(Day) (dBA)	25.7	25.7	0.0	None
	Leq _(24 hour) (dBA)	23.7	23.7	0.0	None
	CNEL (dBA)	23.8	23.9	0.1	None
	L _{max} (dBA)	72.1	72.1	0.0	None
	TAA (minutes)	15.4	15.4	0.0	Not Applicable ³
SNF-2	Leq _(Day) (dBA)	9.5	9.6	0.1	None
	Leq _(24 hour) (dBA)	7.5	7.6	0.1	None
	CNEL (dBA)	7.7	7.8	0.1	None
	L _{max} (dBA)	57.2	57.2	0.0	None
	TAA (minutes)	1.9	1.9	0.0	Not Applicable ³
SNF-3	Leq _(Day) (dBA)	16.0	16.9	0.9	None
	Leq _(24 hour) (dBA)	14.0	14.9	0.9	None
	CNEL (dBA)	14.1	15.0	0.9	None
	L _{max} (dBA)	59.3	59.3	0.0	None
	TAA (minutes)	6.8	9.2	2.4	Not Applicable ³
SNF-4	Leq _(Day) (dBA)	11.2	12.0	0.8	None
	Leq _(24 hour) (dBA)	9.2	10.0	0.8	None
	CNEL (dBA)	9.3	10.1	0.8	None
	L _{max} (dBA)	53.7	53.7	0.0	None
	TAA (minutes)	3.1	3.8	0.7	Not Applicable ³
SNF-5	Leq _(Day) (dBA)	6.5	7.0	0.5	None
	Leq _(24 hour) (dBA)	4.4	4.9	0.5	None
	CNEL (dBA)	4.6	5.1	0.5	None
	L _{max} (dBA)	49.6	49.6	0.0	None
	TAA (minutes)	0.2	0.2	0.0	Not Applicable ³
SNF-6	Leq _(Day) (dBA)	19.9	20.5	0.6	None
	Leq _(24 hour) (dBA)	17.9	18.5	0.6	None
	CNEL (dBA)	18.0	18.6	0.6	None
	L _{max} (dBA)	59.0	59.0	0.0	None
	TAA (minutes)	10.6	13.8	3.2	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 16
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
SIERRA NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
SNF-1	Leq _(Day) (dBA)	26.2	26.2	0.0	None	25.4	25.4	0.0	None
	Leq _(24 hour) (dBA)	24.2	24.2	0.0	None	23.3	23.3	0.0	None
	CNEL (dBA)	24.3	24.3	0.0	None	23.9	23.9	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None	61.8	61.8	0.0	None
	TAA (minutes)	17.3	17.3	0.0	Not Applicable ³	14.8	14.8	0.0	Not Applicable ³
SNF-2	Leq _(Day) (dBA)	10.0	10.2	0.2	None	9.1	9.2	0.1	None
	Leq _(24 hour) (dBA)	8.0	8.2	0.2	None	7.0	7.1	0.1	None
	CNEL (dBA)	8.2	8.4	0.2	None	7.5	7.6	0.1	None
	L _{max} (dBA)	57.2	57.2	0.0	None	46.8	46.8	0.0	None
	TAA (minutes)	2.2	2.2	0.0	Not Applicable ³	1.8	1.8	0.0	Not Applicable ³
SNF-3	Leq _(Day) (dBA)	16.5	18.0	1.5	None	13.3	14.8	1.5	None
	Leq _(24 hour) (dBA)	14.5	15.9	1.4	None	11.2	12.8	1.6	None
	CNEL (dBA)	14.6	16.0	1.4	None	11.6	13.0	1.4	None
	L _{max} (dBA)	59.3	59.3	0.0	None	55.4	55.4	0.0	None
	TAA (minutes)	7.6	12.5	4.9	Not Applicable ³	3.7	6.2	2.5	Not Applicable ³
SNF-4	Leq _(Day) (dBA)	11.7	13.1	1.4	None	8.7	10.0	1.3	None
	Leq _(24 hour) (dBA)	9.6	11.0	1.4	None	6.7	8.0	1.3	None
	CNEL (dBA)	9.8	11.1	1.3	None	7.1	8.3	1.2	None
	L _{max} (dBA)	53.7	53.7	0.0	None	48.2	48.2	0.0	None
	TAA (minutes)	3.4	5.0	1.6	Not Applicable ³	1.6	2.4	0.8	Not Applicable ³
SNF-5	Leq _(Day) (dBA)	7.0	7.9	0.9	None	4.9	5.6	0.7	None
	Leq _(24 hour) (dBA)	4.9	5.9	1.0	None	2.8	3.5	0.7	None
	CNEL (dBA)	5.1	6.0	0.9	None	3.3	3.9	0.6	None
	L _{max} (dBA)	49.6	49.6	0.0	None	37.2	37.2	0.0	None
	TAA (minutes)	0.2	0.2	0.0	Not Applicable ³	0.1	0.1	0.0	Not Applicable ³

**TABLE 16, CONTINUED
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
SIERRA NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
SNF-6	Leq _(Day) (dBA)	20.4	21.5	1.1	None	17.0	18.1	1.1	None
	Leq _(24 hour) (dBA)	18.3	19.4	1.1	None	14.9	16.1	1.2	None
	CNEL (dBA)	18.5	19.5	1.0	None	15.3	16.4	1.1	None
	L _{max} (dBA)	59.0	59.0	0.0	None	55.3	55.3	0.0	None
	TAA (minutes)	11.9	18.1	6.2	Not Applicable ³	5.7	8.8	3.1	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 17
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
INYO NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-1	Leq _(Day) (dBA)	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	39.3	43.6	4.3	Increase
	TAA (minutes)	0.0	0.0	0.0	Not Applicable ³
INF-2	Leq _(Day) (dBA)	15.1	15.2	0.1	None
	Leq _(24 hour) (dBA)	13.0	13.2	0.2	None
	CNEL (dBA)	13.2	13.4	0.2	None
	L _{max} (dBA)	53.5	53.5	0.0	None
	TAA (minutes)	3.4	3.7	0.3	Not Applicable ³
INF-3	Leq _(Day) (dBA)	16.4	16.9	0.5	None
	Leq _(24 hour) (dBA)	14.3	14.8	0.5	None
	CNEL (dBA)	14.5	14.9	0.4	None
	L _{max} (dBA)	62.9	62.9	0.0	None
	TAA (minutes)	7.2	8.9	1.7	Not Applicable ³
INF-4	Leq _(Day) (dBA)	10.7	11.1	0.4	None
	Leq _(24 hour) (dBA)	8.7	9.1	0.4	None
	CNEL (dBA)	8.8	9.2	0.4	None
	L _{max} (dBA)	57.2	57.2	0.0	None
	TAA (minutes)	1.6	1.8	0.8	Not Applicable ³
INF-5	Leq _(Day) (dBA)	17.9	17.9	0.0	None
	Leq _(24 hour) (dBA)	15.8	15.9	0.1	None
	CNEL (dBA)	16.1	16.1	0.0	None
	L _{max} (dBA)	53.0	53.0	0.0	None
	TAA (minutes)	21.5	21.5	0.0	Not Applicable ³
INF-6	Leq _(Day) (dBA)	29.3	29.3	0.0	None
	Leq _(24 hour) (dBA)	27.2	27.3	0.1	None
	CNEL (dBA)	27.4	27.4	0.0	None
	L _{max} (dBA)	61.2	61.2	0.0	None
	TAA (minutes)	82.9	85.5	2.6	Not Applicable ³
INF-7	Leq _(Day) (dBA)	29.5	29.5	0.0	None
	Leq _(24 hour) (dBA)	27.4	27.4	0.0	None
	CNEL (dBA)	27.6	27.6	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None
	TAA (minutes)	23.1	23.1	0.0	Not Applicable ³
INF-8	Leq _(Day) (dBA)	33.1	33.1	0.0	None
	Leq _(24 hour) (dBA)	31.0	31.0	0.0	None
	CNEL (dBA)	31.1	31.1	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None
	TAA (minutes)	29.0	29.0	0.0	Not Applicable ³

**TABLE 17, CONTINUED
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
INYO NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-9	Leq _(Day) (dBA)	1.3	1.3	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	46.9	46.9	0.0	None
	TAA (minutes)	0.0	0.0	0.0	Not Applicable ³
INF-10	Leq _(Day) (dBA)	8.0	8.0	0.0	None
	Leq _(24 hour) (dBA)	6.0	6.0	0.0	None
	CNEL (dBA)	6.2	6.2	0.0	None
	L _{max} (dBA)	50.8	50.8	0.0	None
	TAA (minutes)	1.4	1.4	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 18
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
INYO NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-1	Leq _(Day) (dBA)	N/A ²	10.1	10.1	None ¹	N/A ²	N/A ²	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	8.0	8.0	None ¹	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	N/A ²	8.0	8.0	None ¹	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	39.3	43.6	4.3	Increase	27.2	27.2	0.0	None
	TAA (minutes)	0.0	1.7	1.7	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
INF-2	Leq _(Day) (dBA)	15.6	15.9	0.3	None	13.3	13.5	0.2	None
	Leq _(24 hour) (dBA)	13.5	13.8	0.3	None	11.2	11.5	0.3	None
	CNEL (dBA)	13.7	14.0	0.3	None	11.7	11.9	0.2	None
	L _{max} (dBA)	53.5	53.5	0.0	None	53.5	53.5	0.0	None
	TAA (minutes)	3.8	4.4	0.6	Not Applicable ³	2.1	2.4	0.3	Not Applicable ³
INF-3	Leq _(Day) (dBA)	16.9	17.7	0.8	None	13.1	14.1	1.0	None
	Leq _(24 hour) (dBA)	14.8	15.7	0.9	None	11.0	12.0	1.0	None
	CNEL (dBA)	14.9	15.8	0.9	None	11.5	12.4	0.9	None
	L _{max} (dBA)	62.9	62.9	0.0	None	51.5	51.5	0.0	None
	TAA (minutes)	8.0	11.5	3.5	Not Applicable ³	3.8	5.5	1.7	Not Applicable ³
INF-4	Leq _(Day) (dBA)	11.2	11.9	0.7	None	7.5	8.3	0.8	None
	Leq _(24 hour) (dBA)	9.1	9.9	0.8	None	5.4	6.3	0.9	None
	CNEL (dBA)	9.3	10.0	0.7	None	5.9	6.6	0.7	None
	L _{max} (dBA)	57.2	57.2	0.0	None	42.6	42.6	0.0	None
	TAA (minutes)	1.8	2.2	0.4	Not Applicable ³	0.8	1.0	0.2	Not Applicable ³
INF-5	Leq _(Day) (dBA)	18.3	18.6	0.3	None	17.4	17.5	0.1	None
	Leq _(24 hour) (dBA)	16.3	16.5	0.2	None	15.4	15.5	0.1	None
	CNEL (dBA)	16.5	16.8	0.3	None	16.0	16.0	0.0	None
	L _{max} (dBA)	53.0	53.0	0.0	None	42.1	42.1	0.0	None
	TAA (minutes)	24.0	24.2	0.2	Not Applicable ³	20.8	20.9	0.1	Not Applicable ³
INF-6	Leq _(Day) (dBA)	29.8	29.9	0.1	None	28.4	28.4	0.0	None
	Leq _(24 hour) (dBA)	27.7	27.9	0.2	None	26.3	26.4	0.1	None
	CNEL (dBA)	27.9	28.0	0.1	None	26.9	26.9	0.0	None
	L _{max} (dBA)	61.2	61.2	0.0	None	53.2	53.2	0.0	None
	TAA (minutes)	92.8	103.0	10.2	Not Applicable ³	72.3	74.8	2.5	Not Applicable ³

**TABLE 18, CONTINUED
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
INYO NATIONAL FOREST**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
INF-7	Leq _(Day) (dBA)	30.0	30.0	0.0	None	28.2	28.2	0.0	None
	Leq _(24 hour) (dBA)	27.9	27.9	0.0	None	26.2	26.2	0.0	None
	CNEL (dBA)	28.1	28.1	0.0	None	26.7	26.7	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None	68.2	68.2	0.0	None
	TAA (minutes)	25.8	25.8	0.0	Not Applicable ³	21.9	21.9	0.0	Not Applicable ³
INF-8	Leq _(Day) (dBA)	33.6	33.6	0.0	None	31.4	31.4	0.0	None
	Leq _(24 hour) (dBA)	31.5	31.5	0.0	None	29.3	29.3	0.0	None
	CNEL (dBA)	31.6	31.6	0.0	None	29.8	29.8	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None	74.1	74.1	0.0	None
	TAA (minutes)	32.5	32.5	0.0	Not Applicable ³	27.2	27.2	0.0	Not Applicable ³
INF-9	Leq _(Day) (dBA)	1.8	12.8	11.0	None	0.8	0.8	0.0	None
	Leq _(24 hour) (dBA)	N/A ²	10.8	10.8	None	N/A ²	N/A ²	0.0	None
	CNEL (dBA)	0.0	10.8	10.8	None	N/A ²	N/A ²	0.0	None
	L _{max} (dBA)	46.9	46.9	0.0	None	34.2	34.2	0.0	None
	TAA (minutes)	0.1	2.4	2.3	Not Applicable ³	0.0	0.0	0.0	Not Applicable ³
INF-10	Leq _(Day) (dBA)	8.5	8.6	0.1	None	7.3	7.3	0.0	None
	Leq _(24 hour) (dBA)	6.4	6.6	0.2	None	5.3	5.3	0.0	None
	CNEL (dBA)	6.7	6.8	0.1	None	5.8	5.8	0.0	None
	L _{max} (dBA)	50.8	50.8	0.0	None	39.2	39.2	0.0	None
	TAA (minutes)	1.5	1.5	0.0	Not Applicable ³	1.1	1.1	0.0	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 19
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
ANSEL ADAMS WILDERNESS**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
AAW-1	Leq _(Day) (dBA)	30.3	30.3	0.0	None
	Leq _(24 hour) (dBA)	28.2	28.2	0.0	None
	CNEL (dBA)	28.4	28.4	0.0	None
	L _{max} (dBA)	74.3	74.3	0.0	None
	TAA (minutes)	22.7	22.7	0.0	Not Applicable ³
AAW-2	Leq _(Day) (dBA)	13.6	13.6	0.0	None
	Leq _(24 hour) (dBA)	11.5	11.5	0.0	None
	CNEL (dBA)	11.7	11.7	0.0	None
	L _{max} (dBA)	57.2	57.2	0.0	None
	TAA (minutes)	5.3	5.3	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 20
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
ANSEL ADAMS WILDERNESS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
AAW-1	Leq _(Day) (dBA)	30.7	30.7	0.0	None	29.6	29.6	0.0	None
	Leq _(24 hour) (dBA)	28.7	28.7	0.0	None	27.5	27.5	0.0	None
	CNEL (dBA)	28.8	28.8	0.0	None	28.1	28.1	0.0	None
	L _{max} (dBA)	74.3	74.3	0.0	None	64.9	64.9	0.0	None
	TAA (minutes)	25.4	25.4	0.0	Not Applicable ³	21.8	21.8	0.0	Not Applicable ³
AAW-2	Leq _(Day) (dBA)	14.1	14.1	0.0	None	12.8	12.8	0.0	None
	Leq _(24 hour) (dBA)	12.0	12.0	0.0	None	10.7	10.7	0.0	None
	CNEL (dBA)	12.2	12.2	0.0	None	11.3	11.3	0.0	None
	L _{max} (dBA)	57.2	57.2	0.0	None	46.7	46.7	0.0	None
	TAA (minutes)	6.0	6.0	0.0	Not Applicable ³	4.8	4.8	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 21
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
DINKEY LAKES WILDERNESS**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
DLW-1	Leq _(Day) (dBA)	20.9	21.7	0.8	None
	Leq _(24 hour) (dBA)	18.9	19.6	0.7	None
	CNEL (dBA)	19.0	19.8	0.8	None
	L _{max} (dBA)	59.9	59.9	0.0	None
	TAA (minutes)	10.1	13.5	3.4	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 22
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
DINKEY LAKES WILDERNESS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
DLW-1	Leq _(Day) (dBA)	21.4	22.7	1.3	None	18.1	19.5	1.4	None
	Leq _(24 hour) (dBA)	19.4	20.7	1.3	None	16.0	17.4	1.4	None
	CNEL (dBA)	19.5	20.8	1.3	None	16.4	17.7	1.3	None
	L _{max} (dBA)	59.9	59.9	0.0	None	54.3	54.3	0.0	None
	TAA (minutes)	11.3	18.1	6.8	Not Applicable ³	5.4	8.8	3.4	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 23
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
JOHN MUIR WILDERNESS**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
JMW-1	Leq _(Day) (dBA)	23.9	24.4	0.5	None
	Leq _(24 hour) (dBA)	21.9	22.4	0.5	None
	CNEL (dBA)	22.0	22.5	0.5	None
	L _{max} (dBA)	64.7	64.7	0.0	None
	TAA (minutes)	15.9	19.6	3.7	Not Applicable ³
JMW-2	Leq _(Day) (dBA)	8.2	8.5	0.3	None
	Leq _(24 hour) (dBA)	6.1	6.5	0.4	None
	CNEL (dBA)	6.3	6.6	0.3	None
	L _{max} (dBA)	51.0	51.0	0.0	None
	TAA (minutes)	0.5	0.5	0.0	Not Applicable ³
JMW-3	Leq _(Day) (dBA)	9.6	9.8	0.2	None
	Leq _(24 hour) (dBA)	7.6	7.7	0.1	None
	CNEL (dBA)	7.7	7.9	0.2	None
	L _{max} (dBA)	44.9	44.9	0.0	None
	TAA (minutes)	0.5	0.5	0.0	Not Applicable ³
JMW-4	Leq _(Day) (dBA)	6.9	7.0	0.1	None
	Leq _(24 hour) (dBA)	4.9	5.0	0.1	None
	CNEL (dBA)	5.1	5.2	0.1	None
	L _{max} (dBA)	48.8	48.8	0.0	None
	TAA (minutes)	0.4	0.4	0.0	Not Applicable ³
JMW-5	Leq _(Day) (dBA)	20.9	21.1	0.2	None
	Leq _(24 hour) (dBA)	18.9	19.0	0.1	None
	CNEL (dBA)	19.0	19.2	0.2	None
	L _{max} (dBA)	59.6	59.6	0.0	None
	TAA (minutes)	7.5	8.3	0.8	Not Applicable ³
JMW-6	Leq _(Day) (dBA)	23.8	24.2	0.4	None
	Leq _(24 hour) (dBA)	21.8	22.2	0.4	None
	CNEL (dBA)	21.8	22.2	0.4	None
	L _{max} (dBA)	68.1	68.1	0.0	None
	TAA (minutes)	13.5	16.8	3.3	Not Applicable ³
JMW-7	Leq _(Day) (dBA)	17.9	18.1	0.2	None
	Leq _(24 hour) (dBA)	15.8	16.0	0.2	None
	CNEL (dBA)	16.0	16.2	0.2	None
	L _{max} (dBA)	55.2	55.2	0.0	None
	TAA (minutes)	5.3	5.9	0.6	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 24
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
JOHN MUIR WILDERNESS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
JMW-1	Leq _(Day) (dBA)	24.4	25.3	0.9	None	20.9	21.9	1.0	None
	Leq _(24 hour) (dBA)	22.4	23.2	0.8	None	18.9	19.8	0.9	None
	CNEL (dBA)	22.5	23.3	0.8	None	19.2	20.1	0.9	None
	L _{max} (dBA)	64.7	64.7	0.0	None	58.6	58.6	0.0	None
	TAA (minutes)	17.8	25.2	7.4	Not Applicable ³	8.4	12.2	3.8	Not Applicable ³
JMW-2	Leq _(Day) (dBA)	8.7	9.5	0.8	None	6.9	7.3	0.4	None
	Leq _(24 hour) (dBA)	6.6	7.4	0.8	None	4.8	5.3	0.5	None
	CNEL (dBA)	6.8	7.6	0.8	None	5.3	5.7	0.4	None
	L _{max} (dBA)	51.0	51.0	0.0	None	42.5	42.5	0.0	None
	TAA (minutes)	0.6	0.6	0.0	Not Applicable ³	0.2	0.2	0.0	Not Applicable ³
JMW-3	Leq _(Day) (dBA)	10.1	10.6	0.5	None	8.7	8.9	0.2	None
	Leq _(24 hour) (dBA)	8.1	8.6	0.5	None	6.7	6.9	0.2	None
	CNEL (dBA)	8.2	8.7	0.5	None	7.2	7.4	0.2	None
	L _{max} (dBA)	44.9	44.9	0.0	None	36.7	36.7	0.0	None
	TAA (minutes)	0.5	0.5	0.0	Not Applicable ³	0.3	0.3	0.0	Not Applicable ³
JMW-4	Leq _(Day) (dBA)	7.4	7.6	0.2	None	6.3	6.4	0.1	None
	Leq _(24 hour) (dBA)	5.4	5.6	0.2	None	4.3	4.4	0.1	None
	CNEL (dBA)	5.6	5.8	0.2	None	4.8	4.9	0.1	None
	L _{max} (dBA)	48.8	48.8	0.0	None	38.8	38.8	0.0	None
	TAA (minutes)	0.4	0.4	0.0	Not Applicable ³	0.3	0.3	0.0	Not Applicable ³
JMW-5	Leq _(Day) (dBA)	21.4	21.7	0.3	None	18.5	18.8	0.3	None
	Leq _(24 hour) (dBA)	19.3	19.6	0.3	None	16.5	16.7	0.2	None
	CNEL (dBA)	19.5	19.8	0.3	None	16.9	17.1	0.2	None
	L _{max} (dBA)	59.6	59.6	0.0	None	56.9	56.9	0.0	None
	TAA (minutes)	8.4	10.1	1.7	Not Applicable ³	4.2	5.0	0.8	Not Applicable ³
JMW-6	Leq _(Day) (dBA)	24.3	25.0	0.7	None	20.0	21.0	1.0	None
	Leq _(24 hour) (dBA)	22.2	23.0	0.8	None	18.0	18.9	0.9	None
	CNEL (dBA)	22.3	23.0	0.7	None	18.4	19.2	0.8	None
	L _{max} (dBA)	68.1	68.1	0.0	None	60.8	60.8	0.0	None
	TAA (minutes)	15.2	21.6	6.4	Not Applicable ³	7.2	10.4	3.2	Not Applicable ³

**TABLE 24, CONTINUED
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
JOHN MUIR WILDERNESS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
JMW-7	Leq _(Day) (dBA)	18.4	18.7	0.3	None	15.8	16.1	0.3	None
	Leq _(24 hour) (dBA)	16.3	16.7	0.4	None	13.7	14.0	0.3	None
	CNEL (dBA)	16.5	16.9	0.4	None	14.1	14.4	0.3	None
	L _{max} (dBA)	55.2	55.2	0.0	None	54.5	54.5	0.0	None
	TAA (minutes)	5.9	7.2	1.3	Not Applicable ³	3.1	3.7	0.6	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 25
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
KAISER WILDERNESS**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
KW -1	Leq _(Day) (dBA)	10.4	11.2	0.8	None
	Leq _(24 hour) (dBA)	8.3	9.2	0.9	None
	CNEL (dBA)	8.5	9.3	0.8	None
	L _{max} (dBA)	54.1	54.1	0.0	None
	TAA (minutes)	2.4	3.0	0.6	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 26
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
KAISER WILDERNESS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
KW -1	Leq _(Day) (dBA)	10.9	12.3	1.4	None	8.1	9.5	1.4	None
	Leq _(24 hour) (dBA)	8.8	10.3	1.5	None	6.1	7.4	1.3	None
	CNEL (dBA)	9.0	10.4	1.4	None	6.5	7.8	1.3	None
	L _{max} (dBA)	54.1	54.1	0.0	None	47.7	47.7	0.0	None
	TAA (minutes)	2.7	3.8	1.1	Not Applicable ³	1.4	1.9	0.5	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 27
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
BUREAU OF LAND MANAGEMENT**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
BLM-1	Leq _(Day) (dBA)	21.5	21.7	0.2	None
	Leq _(24 hour) (dBA)	19.4	19.7	0.3	None
	CNEL (dBA)	19.6	19.8	0.2	None
	L _{max} (dBA)	65.3	65.3	0.0	None
	TAA (minutes)	31.0	33.9	2.9	Not Applicable ³
BLM-2	Leq _(Day) (dBA)	32.6	32.6	0.0	None
	Leq _(24 hour) (dBA)	30.5	30.6	0.1	None
	CNEL (dBA)	30.7	30.8	0.1	None
	L _{max} (dBA)	69.2	69.2	0.0	None
	TAA (minutes)	90.7	96.7	6.0	Not Applicable ³
BLM-3	Leq _(Day) (dBA)	25.8	26.0	0.2	None
	Leq _(24 hour) (dBA)	23.8	24.0	0.2	None
	CNEL (dBA)	24.0	24.1	0.1	None
	L _{max} (dBA)	63.9	63.9	0.0	None
	TAA (minutes)	55.1	59.2	4.1	Not Applicable ³
BLM-4	Leq _(Day) (dBA)	20.1	20.4	0.3	None
	Leq _(24 hour) (dBA)	18.1	18.3	0.2	None
	CNEL (dBA)	18.3	18.5	0.2	None
	L _{max} (dBA)	56.9	56.9	0.0	None
	TAA (minutes)	29.6	31.3	1.7	Not Applicable ³
BLM-5	Leq _(Day) (dBA)	17.6	17.8	0.2	None
	Leq _(24 hour) (dBA)	15.5	15.7	0.2	None
	CNEL (dBA)	15.8	15.9	0.1	None
	L _{max} (dBA)	58.9	58.9	0.0	None
	TAA (minutes)	7.9	8.5	0.6	Not Applicable ³
BLM-6	Leq _(Day) (dBA)	33.9	34.0	0.1	None
	Leq _(24 hour) (dBA)	31.9	31.9	0.0	None
	CNEL (dBA)	32.0	32.1	0.1	None
	L _{max} (dBA)	73.9	73.9	0.0	None
	TAA (minutes)	82.2	85.6	3.4	Not Applicable ³
BLM-7	Leq _(Day) (dBA)	25.5	25.6	0.1	None
	Leq _(24 hour) (dBA)	23.5	23.6	0.1	None
	CNEL (dBA)	23.7	23.8	0.1	None
	L _{max} (dBA)	62.0	62.0	0.0	None
	TAA (minutes)	65.8	67.6	1.8	Not Applicable ³
BLM-8	Leq _(Day) (dBA)	28.2	28.3	0.1	None
	Leq _(24 hour) (dBA)	26.2	26.3	0.1	None
	CNEL (dBA)	26.4	26.4	0.0	None
	L _{max} (dBA)	58.4	58.4	0.0	None
	TAA (minutes)	77.0	80.5	3.5	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 28
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
BUREAU OF LAND MANAGEMENT**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
BLM-1	Leq _(Day) (dBA)	21.9	22.5	0.6	None	19.5	19.9	0.4	None
	Leq _(24 hour) (dBA)	19.9	20.4	0.5	None	17.4	17.9	0.5	None
	CNEL (dBA)	20.1	20.6	0.5	None	17.9	18.3	0.4	None
	L _{max} (dBA)	65.3	65.3	0.0	None	53.3	53.3	0.0	None
	TAA (minutes)	34.7	40.5	5.8	Not Applicable ³	25.9	28.8	2.9	Not Applicable ³
BLM-2	Leq _(Day) (dBA)	33.1	33.2	0.1	None	32.2	32.3	0.1	None
	Leq _(24 hour) (dBA)	31.0	31.2	0.2	None	30.2	30.2	0.0	None
	CNEL (dBA)	31.2	31.4	0.2	None	30.7	30.8	0.1	None
	L _{max} (dBA)	69.2	69.2	0.0	None	57.9	57.9	0.0	None
	TAA (minutes)	101.6	121.7	20.1	Not Applicable ³	82.9	88.8	5.9	Not Applicable ³
BLM-3	Leq _(Day) (dBA)	26.3	26.9	0.6	None	25.0	25.2	0.2	None
	Leq _(24 hour) (dBA)	24.3	24.9	0.6	None	22.9	23.1	0.2	None
	CNEL (dBA)	24.5	25.1	0.6	None	23.5	23.7	0.2	None
	L _{max} (dBA)	63.9	63.9	0.0	None	51.9	51.9	0.0	None
	TAA (minutes)	61.7	78.7	17.0	Not Applicable ³	49.8	53.9	4.1	Not Applicable ³
BLM-4	Leq _(Day) (dBA)	20.6	21.7	1.1	None	18.9	19.2	0.3	None
	Leq _(24 hour) (dBA)	18.6	19.6	1.0	None	16.9	17.2	0.3	None
	CNEL (dBA)	18.8	19.8	1.0	None	17.4	17.6	0.2	None
	L _{max} (dBA)	56.9	56.9	0.0	None	47.7	47.7	0.0	None
	TAA (minutes)	33.1	41.2	8.1	Not Applicable ³	25.9	27.6	1.7	Not Applicable ³
BLM-5	Leq _(Day) (dBA)	18.1	19.8	1.7	None	16.1	16.4	0.3	None
	Leq _(24 hour) (dBA)	16.0	17.8	1.8	None	14.1	14.3	0.2	None
	CNEL (dBA)	16.3	17.9	1.6	None	14.6	14.8	0.2	None
	L _{max} (dBA)	58.9	58.9	0.0	None	54.5	54.5	0.0	None
	TAA (minutes)	8.9	14.4	5.5	Not Applicable ³	5.2	5.8	0.6	Not Applicable ³
BLM-6	Leq _(Day) (dBA)	34.4	34.7	0.3	None	32.4	32.5	0.1	None
	Leq _(24 hour) (dBA)	32.4	32.6	0.2	None	30.4	30.5	0.1	None
	CNEL (dBA)	32.5	32.7	0.2	None	30.9	31.0	0.1	None
	L _{max} (dBA)	73.9	73.9	0.0	None	64.4	64.4	0.0	None
	TAA (minutes)	92.0	107.1	15.1	Not Applicable ³	77.4	80.8	3.4	Not Applicable ³

**TABLE 28, CONTINUED
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
BUREAU OF LAND MANAGEMENT**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
BLM-7	Leq _(Day) (dBA)	26.0	26.3	0.3	None	24.9	25.0	0.1	None
	Leq _(24 hour) (dBA)	24.0	24.2	0.2	None	22.9	23.0	0.1	None
	CNEL (dBA)	24.2	24.4	0.2	None	23.4	23.5	0.1	None
	L _{max} (dBA)	62.0	62.0	0.0	None	53.2	53.2	0.0	None
	TAA (minutes)	73.7	80.7	7.0	Not Applicable ³	58.7	60.5	1.8	Not Applicable ³
BLM-8	Leq _(Day) (dBA)	28.7	29.0	0.3	None	26.9	27.0	0.1	None
	Leq _(24 hour) (dBA)	26.7	27.0	0.3	None	24.9	25.0	0.1	None
	CNEL (dBA)	26.8	27.2	0.4	None	25.4	25.5	0.1	None
	L _{max} (dBA)	58.4	58.4	0.0	None	57.6	57.6	0.0	None
	TAA (minutes)	86.2	100.3	14.1	Not Applicable ³	65.6	69.1	3.5	Not Applicable ³

¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).

² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.

³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 29
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
MONO LAKE TUFA STATE RESERVE**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
MBNF -1	Leq _(Day) (dBA)	17.4	17.4	0.0	None
	Leq _(24 hour) (dBA)	15.3	15.3	0.0	None
	CNEL (dBA)	15.5	15.5	0.0	None
	L _{max} (dBA)	65.5	65.5	0.0	None
	TAA (minutes)	5.3	5.3	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 30
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
MONO LAKE TUFA STATE RESERVE**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
MBNF -1	Leq _(Day) (dBA)	17.9	18.9	1.0	None	17.0	17.0	0.0	None
	Leq _(24 hour) (dBA)	15.8	16.9	1.1	None	15.0	15.0	0.0	None
	CNEL (dBA)	16.0	17.0	1.0	None	15.6	15.6	0.0	None
	L _{max} (dBA)	65.5	65.5	0.0	None	55.2	55.2	0.0	None
	TAA (minutes)	5.9	8.3	2.4	Not Applicable ³	5.0	5.0	0.0	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 31
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
NATIVE AMERICAN RESERVATIONS**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
NA-1	Leq _(Day) (dBA)	15.5	15.5	0.0	None
	Leq _(24 hour) (dBA)	13.5	13.5	0.0	None
	CNEL (dBA)	13.6	13.7	0.1	None
	L _{max} (dBA)	71.9	71.9	0.0	None
	TAA (minutes)	2.4	2.4	0.0	Not Applicable ³
NA-2	Leq _(Day) (dBA)	30.1	30.2	0.1	None
	Leq _(24 hour) (dBA)	28.0	28.1	0.1	None
	CNEL (dBA)	28.2	28.3	0.1	None
	L _{max} (dBA)	67.7	67.7	0.0	None
	TAA (minutes)	83.2	89.1	5.9	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 32
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
NATIVE AMERICAN RESERVATIONS**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
NA-1	Leq _(Day) (dBA)	16.0	17.1	1.1	None	14.6	14.6	0.0	None
	Leq _(24 hour) (dBA)	14.0	15.0	1.0	None	12.5	12.6	0.1	None
	CNEL (dBA)	14.1	15.2	1.1	None	13.1	13.1	0.0	None
	L _{max} (dBA)	71.9	71.9	0.0	None	61.9	61.9	0.0	None
	TAA (minutes)	2.7	5.7	3.0	Not Applicable ³	2.1	2.1	0.0	Not Applicable ³
NA-2	Leq _(Day) (dBA)	30.5	30.8	0.3	None	29.4	29.5	0.1	None
	Leq _(24 hour) (dBA)	28.5	28.8	0.3	None	27.3	27.4	0.1	None
	CNEL (dBA)	28.7	28.9	0.2	None	27.8	27.9	0.1	None
	L _{max} (dBA)	67.7	67.7	0.0	None	56.1	56.1	0.0	None
	TAA (minutes)	93.2	109.7	16.5	Not Applicable ³	77.0	82.9	5.9	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 33
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2009)
PLEASANT VALLEY PIT CAMPGROUND**

GRID ID	NOISE METRIC	WINTER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
LADWP-1	Leq _(Day) (dBA)	27.4	27.5	0.1	None
	Leq _(24 hour) (dBA)	25.4	25.5	0.1	None
	CNEL (dBA)	25.6	25.7	0.1	None
	L _{max} (dBA)	63.9	63.9	0.0	None
	TAA (minutes)	76.2	80.6	4.4	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**TABLE 34
INITIAL NOISE SCREENING ASSESSMENT (YEAR 2015)
PLEASANT VALLEY PIT CAMPGROUND**

GRID ID	NOISE METRIC	WINTER				SUMMER			
		FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE	FUTURE NO-ACTION	PROPOSED ACTION	DIFFERENCE	CHANGE OF EXPOSURE
LADWP-1	Leq _(Day) (dBA)	27.9	28.1	0.2	None	27.1	27.2	0.1	None
	Leq _(24 hour) (dBA)	25.9	26.1	0.2	None	25.0	25.1	0.1	None
	CNEL (dBA)	26.1	26.3	0.2	None	25.6	25.7	0.1	None
	L _{max} (dBA)	63.9	63.9	0.0	None	52.5	52.5	0.0	None
	TAA (minutes)	85.3	97.8	12.5	Not Applicable ³	70.3	74.7	4.4	Not Applicable ³

- ¹ No change of exposure since both the No-Action and Proposed Action Alternatives noise levels would be below the ambient sound level (28.6 dBA).
- ² Noise levels are not available (N/A) because they are outside the capabilities of INM to calculate.
- ³ Change of exposure criteria does not apply to Time Above Ambient.

**CHAPTER 4.0
RECOMMENDATIONS**

As stated previously, the objectives of this Noise Screening Assessment are to define a study area, or IAI, conduct an inventory of potential Section 4(f) properties within the IAI, and determine the appropriate level of further quantitative or qualitative analysis beyond the standard FAA noise contour analysis needed at each potential Section 4(f) properties.

This section summarizes FAA's general assumptions and preliminary recommendations for each of the potential Section 4(f) properties based on a comparison of noise levels between the No-Action Alternative and the Proposed Action utilizing the COE criteria. FAA will communicate the results of this Noise Screening Assessment with the managing agencies of the various potential Section 4(f) properties before making a final determination if any further quantitative or qualitative analysis is needed and if so, the appropriate level of analysis.

A summary of the comparison of the No-Action Alternative and Proposed Action noise levels utilizing the COE criteria is provided in **Table 35** for the individual grid locations that would experience an increase in one or more of the metrics. In addition, the areas that would experience an increase in L_{max} are illustrated in **Figure 9**. These comparisons serve as the basis for determining if further quantitative analysis is needed at each Section 4(f) or potential Section 4(f) property. FAA's preliminary recommendations regarding the need for additional analysis are provided in this section.

Q400 aircraft are anticipated to overfly portions of the following potential Section 4(f) properties along the Proposed Action flight tracks, resulting in increases in noise exposure:

- Yosemite National Park (NPS) in the general vicinity of Tioga Pass, and
- Inyo National Forest (FS) in the general vicinity of Sawmill Campground.

Additional consultation with the National Park Service and the Forest Service will be conducted to determine primary uses of these areas within the IAI.

**TABLE 35
CHANGE OF EXPOSURE (YEARS 2009 AND 2015) SUMMARY**

SECTION 4(f) PROPERTY	GRID ID	NOISE METRIC	2009 WINTER DIFFERENCE (dBA)	2015 WINTER DIFFERENCE (dBA)	2015 SUMMER DIFFERENCE (dBA)
Yosemite National Park	YNP-4	L_{max} (dBA)	0.0	5.8	0.0
Inyo National Forest	INF-1	L_{max} (dBA)	0.0	4.3	0.0

The FAA anticipates that further analysis to include existing commercial, military and GA aviation activity transitioning through the IAI airspace may be needed at these locations

APPENDIX A

FAA Approval of the Profile Extensions



U.S Department
of Transportation
**Federal Aviation
Administration**

Memorandum

Western-Pacific Region
San Francisco ADO
831 Mitten Road, Suite 210
Burlingame, CA 94010

Subject: **ACTION:** Approval Request for Integrated
Noise Model Modification From Office of
Environmental and Energy; Environmental
Impact Statement and Noise Screening
Assessment for Proposed Horizon Air
Service to Mammoth Yosemite Airport

Date: August 10, 2007

From: Acting Manager, Airports District Office,
SFO-600

Reply to C. Garibaldi: SFO-613
Attn. of: 650/876-2778 extension 613
650/876-2733 FAX

To: Assistant Manager, Airport Planning and Environmental Division, APP-400
THRU: Manager, Planning and Programming Branch, AWP-610

The San Francisco Airports District Office is requesting Office of Environment and Energy (AEE) approval of Integrated Noise Model (INM) modifications to allow for extended aircraft profiles and use of a user defined aircraft for the Horizon Air Operation Specification Amendment/Mammoth Yosemite Airport Environmental Impact Statement (EIS) and Noise Screening Assessment (NSA).

The EIS team has been working with AEE to resolve INM data anomalies identified during modeling of the DHC830 (substitution aircraft for Bombardier DHC8 Q400 [Q400]) for a NSA. As a result of coordination with Bombardier, Q400 specific data was provided to AEE and Volpe for development of an INM user defined aircraft. Approval to use the Q400 INM user defined aircraft and extended profile in the Horizon Air/MMH EIS and NSA is requested.

The NSA Initial Area of Investigation (IAI) evaluates over flight noise in an approximate 27-mile radius study area around MMH. In order to complete the analysis approval of profile modifications are being sought for the General Aviation (GA) turboprop and GA jet aircraft that operate in IAI.

The attached MMH Profile Modification request contains the technical evaluation to support this request.

(Original signed by:)

Edward Agnew

Attachment

CC:
APP-600, AGC-600, AWP-7, ANM-230, AWP610.1

----- Forwarded by Camille Garibaldi/AWP/FAA on 08/02/2007 09:50 AM -----

From: "Boeker, Eric" <Eric.Boeker@volpe.dot.gov>
To: Camille Garibaldi/AWP/FAA@FAA
Date: 08/02/2007 08:30 AM
cc: "Roof, Christopher" <Christopher.Roof@volpe.dot.gov>, Hua He/AWA/FAA@FAA, Rebecca Cointin/AWA/FAA@FAA, "Senzig, David" <David.Senzig@volpe.dot.gov>, <ericdinges@atac.com>
Subject: [WARNING : MESSAGE ENCRYPTED] Q400 Noise and Performance Data for MMH Airport - 1 of 2

Good Morning Camille~

Attached is the long-awaited Q400 Noise and Performance Data applicable only to MMH airport. It is in an encrypted zip file and the password will come in the following e-mail. These data are ready for distribution to URS.

The data (submitted by Bombardier) was input as a user-defined aircraft in INM 7.0, and utilizes fixed point profiles, which are specific to MMH. These profiles consist of an approach profile (with landing ground roll), and two departure profiles (one with a 1000ft cutback, and the other with a 2000ft cutback).

None of these profiles include level flight segments (representing cruise), and we leave it up to URS to setup the appropriate level flight segments. For these level segments, estimates for the power setting (SHP) needed to maintain level cruise using SAE-AIR-1845 equations A4 and A15 along with the DHC830's "ZERO" flap setting R coefficient are as follows:

- (A) 2064 using the approach profile weight and speed at top of descent, and
- (B) 2105 using the departure profile weight and speed at top of climb.

Please let us know if you have any questions, or require any additional information. Have a great afternoon,

Eric B.

<<Q400-MMH.zip>>



(See attached file: Q400-MMH.zip)
Date: 8/ 2/2007 09:51:53
File: Q400-MMH.zip
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of Environment and Energy

800 Independence Ave., S.W.
Washington, D.C. 20591

February 28, 2007

Deborah Murphy Lagos
URS Corporation
7650 W. Courtney Campbell Causeway
Tampa, FL 33607-1462

Dear Deborah Murphy Lagos,

The Office of Environment and Energy has reviewed the proposed profile extensions for the arrival and departure of the 24 aircraft for the EIS for the Mammoth Yosemite Airport (MMH).

Our office approves the use of the extended profiles and concurs with your proposal based on your original submission and the additional clarification and update email exchanges in February.

Please understand that approvals listed above are limited to this particular EIS study for the Mammoth Yosemite Airport (MMH). Any additional projects or non standard INM input will require separate approval.

Sincerely,

A handwritten signature in cursive script that reads "M. Marsan".

Mehmet Marsan, Ph.D.
Acting Manager
AEE/Noise Division



U.S. Department
of Transportation
Federal Aviation
Administration

Memorandum

Western-Pacific Region
San Francisco ADO
831 Mitten Road, Suite 210
Burlingame, CA 94010

Subject: ACTION: Office of Environmental and
Energy Approval of Integrated Noise
Model Profile Extensions; Environmental
Impact Statement for Proposed Horizon
Air Service to Mammoth Yosemite Airport

Date: January 31, 2007

From: Manager, Airports District Office,
SFO-600

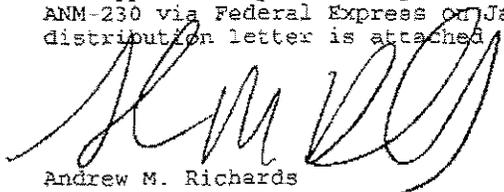
Reply to C. Garibaldi: SFO-613
Attn. of: 650/876-2778 extension 613
650/876-2733 FAX

To: Assistant Manager, Airport Planning and Environmental Division, APP-400
THRU: Manager, Planning and Programming Branch, AWP-610

The San Francisco Airports District Office (SFOADO) is requesting, on behalf of Northwest Mountain Region, Flight Standards Division, Office of Environment and Energy (AEE) approval of modifications to Integrated Noise Model (INM) 6.2 standard arrival and departure profiles¹. The arrival and departure extensions are required to complete a Noise Screening Assessment in support of the proposed Horizon Air Operation Specification Amendment for air service to Mammoth Yosemite Airport Environmental Impact Statement (EIS). Completion of the Noise Screening Assessment is required to respond to EIS scoping comments received from United States Department of Interior, National Park Service.

As discussed with Dr. He of AEE on January 8, 2007, the SFOADO requests an expedited review and approval of the proposed INM modifications, since the EIS is included in the 2007 Work Plan Goals for the Airports Division.

The FAA's EIS consultant, URS Corporation, provided the technical analyses to support the profile adjustment directly to AEE, APP-400, AWP-610.1, and ANM-230 via Federal Express on January 30, 2007. A copy of the URS distribution letter is attached.


Andrew M. Richards

Attachment

cc:
APP-400, AGC-600, AWP-7, ANM-230, AWP610.1

¹ FAA Order 1050.1E, Appendix A, Paragraph 14.2c



January 30, 2007

Dr. "Bill" Hua He
INM Program Manager
Federal Aviation Administration
Office of Environment and Energy
AEE-100, Noise Division
800 Independence Ave. SW
Washington, DC 20591

RE: FAA PROFILE REVIEW
INM ARRIVAL AND DEPARTURE PROFILE EXTENSIONS

Dear Dr. He:

As discussed in our conference call on January 8, 2007, URS Corporation is submitting the attached FAA Profile Review and supporting documentation for AEE review and approval. The proposed arrival and departure profile extensions will be applied to the noise modeling for the EIS for Mammoth Yosemite Airport, Horizon Air Operation Specification Amendment for Service to/from MMH. Approval to extend standard profiles is requested for the following INM aircraft types:

- | | | |
|-----------|------------|------------|
| 1. BEC58P | 9. CNA750 | 17. GASEPV |
| 2. C130 | 10. DHC6 | 18. IA1125 |
| 3. CIT3 | 11. DHC830 | 19. LEAR25 |
| 4. CL600 | 12. FAL20 | 20. LEAR35 |
| 5. CNA172 | 13. GII | 21. MU3301 |
| 6. CNA206 | 14. GIIB | 22. PA28 |
| 7. CNA441 | 15. GIV | 23. PA30 |
| 8. CNA500 | 16. GASEPF | 24. PA31 |

Should you have questions, please feel free to contact me.

Sincerely,

URS Corporation

Deborah Murphy Lagos
Senior Project Manager

cc: Camille Garibaldi, FAA Western Pacific Region
Dave Kessler, FAA Western Pacific Region
Frank Smigelski, FAA Headquarters
Jake Plante, FAA Headquarters
Chuck Cox, FAA Northwest Mountain Region

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APPENDIX B

Descriptions of Potential Section 4(f) Properties

APPENDIX B

Descriptions of Potential Section 4(f) Properties

This appendix contains a description of the size, location and major features of each potential Section 4(f) resource within the IAI. **Figure B-1** depicts the location of the national park lands, national forest lands, national wilderness areas, Bureau of Land Management lands, State of California lands, and tribal lands.

National Park Lands

Yosemite National Park – H.R. 12187, “An act to set apart a certain tract of land in the State of California as forest reservations” established the foundations of Yosemite National Park (in Sections 1 and 2 of the Act). The bill was passed by the House of Representatives and the Senate, and on October 1, 1890, President Benjamin Harrison signed it into law. The park, shown in **Figure B-2**, is approximately 1,200 square miles with elevations ranging from 2,000 to 13,000 feet above sea level. The park contains numerous waterfalls, three groves of Giant Sequoia trees, meadows, and other forested areas. Facilities include campground areas, packstations, alpine skiing, trails, picnic tables, and restrooms. Yosemite is approximately 22 miles northwest of MMH.

Sequoia-Kings Canyon National Park – H.R. 11570, “An act to set apart a certain tract of land in the State of California as a public park” established what became Sequoia National Park. The bill was passed by the House of Representatives and the Senate, and on September 25, 1890, President Benjamin Harrison signed it into law. H.R. 12187 established the foundations of General Grant National Park (in Section 3 of the Act), and added lands to the park which became Sequoia National Park (also in Section 3 of the Act). Kings Canyon National Park was established on March 5, 1940. Kings Canyon, formerly called General Grant National Park, shares a boundary with Sequoia National Park. Both are managed as one park and are depicted in **Figure B-3**. The park is approximately 722 square miles with elevations ranging from 1,500 to 14,500 feet above sea level. The park contains numerous waterfalls, over 200 caverns, groves of Giant Sequoia trees, meadows, other forested areas, and several deep glaciated canyons. The Pacific Crest National Scenic Trail, part of 2,640-mile footpath from Canada to Mexico, passes through the park near the eastern border. Facilities include campground areas, packstations, trails, picnic tables, and restrooms. Sequoia-Kings Canyon is approximately 27 miles south of MMH.

Devils Postpile National Monument – Established by Presidential Proclamation of William Howard Taft on July 6, 1911, to protect the natural formations known as the Devil Postpile and Rainbow Falls, because they are of “scientific interest.” (U.S. Statutes at Large, Vol 37, Part 2, p.1715 and map preceding p. 1715) Devils Postpile National Monument, shown in **Figure B-4**, rests along the Middle Fork of the San Joaquin River on the western slopes of the Sierra Nevada (elevation 7,560 feet). This 800-acre monument preserves two natural features: the columnar basalt formation know as Devils Postpile and the 101-foot Rainbow Falls. Fewer than 100,000 years ago basalt lava erupted two miles upstream from today’s postpile. As the lava cooled it contracted and cracked forming the vertical and hexagonal columns. The formation is the world’s finest example of columnar-jointed basalt. The columns, four to seven sided, display a honeycomb pattern. A glacier flowed down the Middle Fork of the San Joaquin River and overrode the fractured mass of lava. The moving ice carved away one side of the postpile, exposing a sheer wall of columns 60 feet high. Later, many columns fell due to erosion and earthquakes; these lie fragmented on the talus slope below the postpile. The formation is an excellent geologic

example of hexagonal columns that have been polished by glaciers. The Pacific Crest National Scenic Trail passes through this area, as does the John Muir Trail. Devils Postpile is approximately 14 miles west of MMH.

National Forest Lands

Mono Basin National Forest Scenic Area – The United States Congress established the Mono Basin National Forest Scenic Area to preserve the geologic, ecologic, cultural, scenic, and other natural resources of the Mono Basin. On September 28, 1984, the California Wilderness Act was signed into law (Public Law 98-425), allotting the lake, the surrounding lands, and land use administration to the Forest Service. The boundary of the Scenic Area surrounds Mono Lake and includes 76,703 acres of land and approximately 41,600 acres of Mono Lake. Dozens of tufa towers are scattered on the south shore of the lake. These structures reach 15 feet or more in height, occurring where freshwater seeps flow into the lake, and the calcium precipitates due to the action of calcareous algae. The area is primarily located north and east of Lee Vining community, in the Inyo National Forest. Towering cinder cone mountains are located south of Mono Lake and east of U.S. 395. Lava and pumice floor the basin in many places, raising sections of it into tablelands often over 8,000 feet in elevation. Though the lake itself has two small island craters, the most notable remnant of volcanism is the Mono Craters. Other craters, lava flows, hot springs, steam vents, pumice flats, and cliffs of volcanic glass are indicative of activity in the last 1,000 years. Facilities include a visitor center, trails, and restrooms. Mono Basin is approximately 17 miles north of MMH. See **Figure B-5** for a figure of the Mono Lake area.

The boundary of the Inyo National Forest includes the area within the boundary of the Mono Basin National Forest Scenic Area. The Secretary of Agriculture, acting through the Chief of the Forest Service, administers the Scenic Area as a separate unit within the boundary of the Inyo National Forest. All Bureau of Land Management administered lands that fall within the boundaries of the Scenic Area have been added to the Inyo National Forest. Lands within the boundary of the Scenic Area are owned by the State of California, the City of Los Angeles, Inyo National Forest, and other private owners. Indian people are guaranteed access to the Scenic Area for traditional cultural and religious purposes, including the harvest of the brine fly larvae.

Sierra National Forest – The Sierra Forest Reserve was established by Presidential Proclamation of Benjamin Harrison on February 14, 1893. Established in 1983, the forest is located between Yosemite and Kings Canyon National Parks in the western Sierra Nevada Mountains. The forest, depicted in **Figure B-6**, is approximately 2,031 square miles with elevations ranging from 900 to 14,000 feet above sea level. The forest contains the National Forest Scenic Byway, numerous reservoirs, two wild and scenic rivers (on the western slope of the Sierra Nevada Mountains), oak-covered foothills, and other forested areas. The forest also contains portions of the Ansel Adams, Kaiser, Dinkey Lakes, and John Muir Wilderness Areas. Facilities include numerous campground areas, packstations, alpine skiing, trails, picnic tables, and restrooms. Sierra is approximately 22 miles west of MMH.

Inyo National Forest – Established by Presidential Proclamation of Theodore Roosevelt on May 25, 1907, the forest contains the Benton Range, White Mountains, and Inyo Mountains in the eastern Sierra Nevada Mountains as well as the eastern slopes of the western Sierra Nevada Mountains. The forest, shown in **Figure B-7**, is over 3,125 square miles with elevations ranging from 4,000 to 14,500 feet above

sea level. The forest extends for approximately 165 miles from Mono Lake south beyond the Owens Valley and contains portions of the Ansel Adams, John Muir, and Inyo Wilderness Areas. The forest also contains reservoirs, the Mammoth Mountain ski area, June Mountain ski area, Mount Whitney, the Devils Postpile National Monument, and the Ancient Bristlecone Pine Forest. The Ancient Bristlecone Pine Forest is located in the White Mountains between 10,000 and 11,000 feet above sea level. The area contains the oldest known living trees on earth at over 4,000 years old. Facilities include numerous campground areas (Bishop Creek, Rock Creek, McGee Creek, Convict Lake, Mammoth Village Area, Mammoth Lakes Basin, Reds Meadow Area, Crestview Area, June Lake Loop, Lee Vining Area), packstations, alpine skiing, trails, picnic tables, and restrooms. Of note, the Inyo National Forest surrounds MMH and the western portion of MMH is located on land leased from the FS.

National Wilderness Areas

Ansel Adams Wilderness – The United States Congress designated the Minarets Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 88-577, known as The Wilderness Act, on September 3, 1964. The area was enlarged and re-designated the Ansel Adams Wilderness in 1984. **Figure B-8** shows Ansel Adams Wilderness; which has an area of approximately 231,000 acres with elevations ranging from 3,500 to 13,150 feet above sea level. The minarets are a jagged ridge of peaks, known as the Ritter range, and are an exposed roof pendant of metavolcanic rock. The alpine wilderness is dotted with sparkling lakes, glacially sculpted gorges and imposing peaks and spires. Vegetation is mixed coniferous and deciduous forests of pine and oak in low elevations and sub-alpine forests of lodgepole pine, mountain hemlock and red fir. Alpine meadows grace the higher elevations with wildflowers and crystal streams. The area is located within the Inyo and Sierra National Forests and contains campground areas and trails. The Ansel Adams Wilderness has good stream and lake fishing that include rainbow, golden and eastern brook trout. The Ritter Range affords challenges for experienced mountain climbers. Southern portions of the wilderness provide forests of huge pine and fir where few people visit. There are 349 miles of trail, including both the John Muir Trail and Pacific Crest National Scenic Trail that traverse portions of the wilderness. The wilderness experiences high visitor use, including day hiking, packstock and backpacking use. Overnight use is controlled by a trailhead quota system that limits the amount of use entering each day from May through October. Ansel Adams is approximately 13 miles west of MMH.

Dinkey Lakes Wilderness – The United States Congress designated the Dinkey Lakes Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 98-425, known as California Wilderness Act, on September 28, 1984. This small area is approximately 30,000 acres on the western slope of the Sierra Nevada Mountains; see **Figure B-9**. Elevations range from 8,000 to 10,600 feet above sea level. Most of the Dinkey Lakes Wilderness consists of timbered rolling terrain. Sixteen lakes are clustered in the west central region. Stands of white fir, red fir, and Jeffrey pine are interspersed with large mountain meadows, especially in the north central region and along Helms Creek. Rocky outcroppings often break the skyline. The area is located within the Sierra National Forest and contains campground areas and trails. Cattle grazing is a historical and continuing use of the Dinkey Lakes Wilderness. Human use is rated as moderate. Dinkey Lakes is approximately 38 miles southwest of MMH.

John Muir Wilderness – The United States Congress designated the John Muir Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 88-577, known as The Wilderness Act, on September 3, 1964. Initially, the John Muir Wilderness encompassed 502,978 acres. The California Wilderness Act of 1984 – Public Law 98-425, which was passed on September 28, 1984, added 81,000 acres to the John Muir Wilderness. Today the John Muir Wilderness encompasses approximately 584,000 acres, and is shown in **Figure B-10**. The area extends almost 100 miles in the Sierra Nevada Mountains. Elevations range from 4,000 to 14,500 feet above sea level. Deep canyons, lofty peaks, meadows, lakes and expansive alpine terrain characterize the John Muir Wilderness. Stands of Jeffery and lodgepole pine, incense cedar, and red and white fir can be found on the lower western slopes of the Sierra Nevada. Higher up are lodgepole, whitebark, and western pine, red fir and mountain hemlock. The highest elevations are barren granite. The area is located within the Sierra and Inyo National Forests, and contains campground areas and trails. The John Muir Wilderness is heavily visited and has use limits in the form of trailhead quotas on all the trailheads accessing the wilderness from both the east and west side of the Sierra Nevada. The Pacific Crest National Scenic Trail passes through this area, as does the John Muir Trail. John Muir Wilderness is approximately 4 miles south of MMH.

Kaiser Wilderness – The United States Congress designated the Kaiser Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 94-557 on October 19, 1976. It covers approximately 22,700 acres on the western slope of the Sierra Nevada Mountains; see **Figure B-11**. Elevations range from 7,000 to 10,300 feet above sea level. Kaiser Ridge divides this Wilderness into two distinctly different areas. The southern portion rises gradually from near the shore of Huntington Lake under stands of Jeffery pine and red fir until it reaches the alpine zone on the ridge. The northern half is much more open, with a steep descent from the ridgeline to 18 small lakes. Most of the lakes require cross-country travel to reach. The northern portion receives heavy human use, but the steep, rugged northwest section receives far less human use. The area is located within the Sierra National Forest and contains campground areas and trails. Kaiser is approximately 37 miles southwest of MMH.

Yosemite Wilderness - The United States Congress designated the Yosemite Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 98-425, known as California Wilderness Act, on September 28, 1984. It now has a total of 704,624 acres. Yosemite Fabulous granite faces, domes, and peaks stand above expansive meadows that sprout a lustrous green in summer and are buried in soft white snow during winter. Beautiful, glacier-filled lakes spill their water down turbulent, sparkling streams and over spectacular waterfalls, while nearby groves of giant sequoias tower to eye-stretching heights. Elevations range from about 2,000 feet to more than 13,000 feet, and the area supports an outstanding variety of plant and animal life. Facilities include campground areas, packstations, alpine skiing, trails, picnic tables, and restrooms. Yosemite is approximately 22 miles northwest of MMH.

Sequoia-Kings Canyon Wilderness - The United States Congress designated the Sequoia-Kings Canyon Wilderness as a component of the National Wilderness Preservation System through passage of Public Law 98-425, known as California Wilderness Act, on September 28, 1984. It now has a total of 723,036 acres.

BLM Facilities

Crowley Lake Campground – The campground is located in Long Valley at approximately 7,000 feet above sea level, about 10 miles south of the Town of Mammoth Lakes. Facilities include 47 campsites, barbeque grills, a boat ramp, picnic tables, and vault toilets. The portion of the campground near the South Landing is leased from the Los Angeles Department of Water and Power (LADWP). Crowley Lake is approximately 6 miles southeast of MMH.

Fish Slough Area of Critical Environmental Concern – The slough is an oasis amid desert landscape, which is approximately 36,000 acres and approximately five miles north of the City of Bishop. A geologic feature that allows an underground spring to reach the surface created the slough. The slough supports a wide array of plants and animals, and was designated an Area of Critical Environmental Concern in 1982. Prehistoric rock carvings are also found in this area. The slough was used as a watering hole for stagecoach travel in Owens Valley in the late 1800s. Fish Slough is approximately 26 miles southeast of MMH.

Horton Creek Campground – The campground is located in the north end of Owens Valley at approximately 4,975 feet, about 6 miles north of the City of Bishop. Facilities include 53 campsites, barbeque grills, picnic tables, and vault toilets. Horton Creek is approximately 23 miles southeast of MMH.

Volcanic Tablelands – This area lies at the southern end of the Great Basin High Desert Plateau, north of the City of Bishop. The area was formed over 700,000 years ago by material from the Long Valley caldera, and is characterized by north-south trending fault scarps. Fish Slough Creek is also located here. No facilities area located here, but activities include trails, four-wheel driving, and wildlife viewing. Volcanic Tablelands is approximately 26 miles southeast of MMH.

Petroglyphs of the Volcanic Tablelands – The petroglyphs date back to approximately 8,800 years ago; there are hundreds of petroglyphs located in the Volcanic Tablelands. Some of the locations of the petroglyphs include the Fish Slough, Chidago, and Red Canyon. No facilities are located here, as these are cultural sites to be viewed but not disturbed.

State of California

Mono Lake Tufa State Reserve – This reserve was established in 1982 to preserve the “tufa towers,” which are calcium carbonate spires and knobs formed by the interaction of underground fresh and alkaline lake water. Most of the Tufa Towers are between 200-900 years old and some reach a height of 15 feet, or greater. The reserve, which includes nearly 77,000 acres of land and an additional approximate 41,600 acres of Mono Lake, is located within the Mono Basin National Forest Scenic Area, near the shores of Mono Lake, east of the Lee Vining community and contains trails and picnic areas. The tufa towers are primarily located on the west side of Mono Lake. Tufa is approximately 30 miles northwest of MMH.

Tribal Lands

Bishop Paiute Indian Reservation – the 875 acre Indian Reservation is located in downtown Bishop, with a population of approximately 1,441. The Paiute Tribe has been at this downtown site since 1936, and in the last fifteen years erected a casino onsite. This site is located approximately 29 miles southeast of MMH.

Benton Paiute Indian Reservation – the Benton Paiute Indian Reservation is located approximately 40 miles northeast of Bishop, California, on the eastern slope of the Sierra Nevada Range near Benton, California. The reservation is about 10 miles from the Nevada border and encompasses an area of 162.5 acres. The population is approximately 50.

Town of Mammoth Lakes

Mammoth Creek Park – Located on Old Mammoth Road, the park is only open during mild weather. Facilities include playground equipment, trails, picnic tables, and restrooms on 20 acres (15 of which are leased from the U.S. Forest Service). Mammoth Creek is approximately 5 miles west of MMH.

Community Center Park – Located south of Highway 203 on Center Street, facilities include tennis courts, softball fields, a soccer field, and a community center on 4.5 acres. Community Center is approximately 5 miles west of MMH.

Shady Rest Park – Located one half mile south of Sawmill Cutoff Road and Highway 203, the park facilities include playground equipment, picnic shelter and tables, volleyball courts, softball fields, soccer fields, skatepark, and restrooms on 12.5 acres leased from the U.S. Forest Service. Shady Rest is approximately 5 miles west of MMH.

Whitmore Recreation Area – Located 10 miles south of the Town of Mammoth Lakes on U.S. 395 near Benton Crossing Road, the park contains a baseball diamond, softball fields, outdoor pool, barbecue grills, and restrooms on 23 acres leased from LADWP. Whitmore is located approximately 1 mile east of MMH.

Trail End Park – Located east of the Trails subdivision off Meridian Street. The park is currently under construction and facilities will include a 30,000 sq ft skate park, playground equipment, paved walking trails, benches, picnic tables, and restrooms on 3 acres. Trails End is approximately 5 miles west of MMH.

Boulder Campground – Located just southwest of Mono Lake along Route 120. This campground includes 24 sites, and is also adjacent to Gibbs Canyon. This site is approximately 27 miles northwest of MMH.

Mono County

Lee Vining Park (Gus Hess Park) – Located in the Lee Vining community. Park facilities include a museum, tennis courts, an athletic field, barbecue grills, picnic tables, and restrooms. Lee Vining is approximately 27 miles northwest of MMH.

June Lake Park (Gull Lake Park) – Located about 13 miles north of the Town of Mammoth Lakes on Route 158. Park facilities include boat rentals, tennis courts, a community center, library, barbeque grills, picnic tables, and restrooms. June Lake is approximately 16 miles northwest of MMH.

Crowley Lake Park (Hilton Creek Park) – Located about 15 miles southeast of the Town of Mammoth Lakes on Crowley Lake Drive. Park facilities include tennis courts, basketball courts, a community center, barbeque grills, picnic tables, and restrooms. Crowley Lake is approximately 7 miles southeast of MMH.

Owens River Campground – Located about 13 miles southeast of the Town of Mammoth Lakes on Benton Crossing Road. Park facilities include campsites, picnic tables, grills, and restrooms. The campground is leased from LADWP. Brown's Owens is approximately 5 miles east of MMH.

Chalfant Park – Located in the Chalfant community on Route 6. Park facilities include basketball courts, an athletic field, a community center, barbeque grills, picnic tables, and restrooms. Chalfant Park is approximately 27 miles southeast of MMH.

Inyo County

Millpond Recreation Area and Campground – The recreation area/campground is located about 10 miles west of the City of Bishop. Facilities include 100 campsites, athletic fields, tennis courts, horseshoe pits, and a pond on 125 acres. The campground is leased from LADWP. Millpond is located approximately 26 miles to the southeast of MMH.

Pleasant Valley Campground – The campground is located about 7 miles west of the City of Bishop. Facilities include 200 campsites, barbeque grills, picnic tables, and vault toilets. The campground is leased from LADWP. Pleasant Valley is located approximately 17 miles to the southeast of MMH.

Izaak Walton Park – The park is located in the City of Bishop on SR-168. Facilities include playground equipment, picnic tables, grills, and restrooms on 2 acres. Izaak Walton is located approximately 29 miles to the southeast of MMH.

Starlite Park – The park is located in the Starlight community. Facilities include playground equipment, picnic tables, and tennis courts on 1.5 acres. Starlight is located approximately 28 miles to the southeast of MMH.

Schober Lane Campground – The campground is located about 1 mile south of the City of Bishop. Facilities include 100 campsites, barbeque grills, picnic tables, fresh water, and restrooms. The campground is leased from LADWP. Schober Lane is located approximately 33 miles to the southeast of MMH.

Wilkerson Park – The park is located in Wilkerson community, south of the City of Bishop. Facilities include athletic fields on 4 acres. Wilkerson is located approximately 35 miles to the southeast of MMH.

Bishop Creek Recreational Area – the recreation area is located about 16 miles southwest of the City of Bishop on SR-168, facilities include trails, barbeque grills, picnic tables and 8 campsites. The recreation area is located approximately 31 miles to the southeast of MMH.

City of Bishop

Bishop City Park – Located on U.S. 395 in the City of Bishop, facilities include a pool, tennis courts, softball/baseball fields, a visitor center, barbeque grills, picnic tables, and restrooms on 53 acres. A portion of Bishop City Park is leased from LADWP. Bishop City Park is approximately 31 miles southeast of MMH.

Eastern Sierra Tri-County Fairgrounds – Located on U.S. 395 at SR-6 in the City of Bishop, facilities include three meeting facilities (150 square feet, 6,000 square feet, 14,000 square feet), an open-air arena, 20 camping spaces, and horse stables on 60 acres. The fairgrounds are approximately 30 miles southeast of MMH.

USDA Forest Service

Sawmill Campground – This site is located along 0.7 miles of land that look down onto Sawmill Valley and Lee Vining Creek. It includes 12 tent sites, wheelchair friendly toilets, and is only open seasonally between May 30th and October 13th. Sawmill Campground is located approximately 10 miles west of Mono Lake.

Mosquito Flats Campground – Located along the east bank of Rock Creek at the Rock Creek Trailhead, facilities include wheelchair friendly toilets, 10 tent sites, and a hut, which is used as shelter for Nordic skiers and hikers during the winter months. The campground is approximately 14 miles southeast of MMH.

Granite Creek Campground – Just 0.9 miles from Lower Granite Creek, this campground has 20 walk-in campsites, no water source, and corrals are available for horses. Granite Creek Campground is approximately 24 miles southwest of MMH.

Badger Flat Campground – Located 3.5 miles NNE of Lakeshore, CA, Badger Flat Campground is a collection of 7 tent sites and 5 Tent/RV sites. It is open from mid-May through October 1, and provides access to the Dinkey Lake Wilderness to the south and to the Kaiser Wilderness to the north. Badger Flat Campground is approximately 29 miles SW of MMH.

Mono Hot Springs Campground – Only 5 miles northwest of Florence Lake, this campground offers 22 tent sites adjacent to the South Fork of the San Joaquin River. The site is open seasonally from mid-May through October 1, and has such amenities as flush toilets, limited groceries, and hot spring baths. The Mono Hot Springs Campground is approximately 23 miles southwest of MMH.

Vermilion Campground – Found on the northwest shore of Lake Thomas A. Edison, Vermilion Campground has 31 group tent sites with a bear-proof food container at each site. The adjacent Vermilion Valley Resort offers groceries, laundry services, boat rentals, and a ferry across the lake. The Vermilion Campground is approximately 20 miles SW of MMH.

Jackass Meadow Campground – This site is located along the northern coast of Florence Lake just below the Florence Lake Dam. Site amenities include a weekly nature walk, limited groceries and camping supplies, and a ferry to the John Muir Wilderness. The Jackass Meadow Campground is located approximately 25 miles SSW of MMH.

Convict Lake Campground – Found on the northeast shore of Convict Lake, this campground has 85 camping sites with water spigots and flush toilets on site. It also has the nearby amenities of the Convict Lake Resort, which include camping supplies, boat rentals, and a full service restaurant. The Convict Lake Campground is located 2 miles south of MMH.

Iris Meadow Campground – Located just off of Rock Creek Road and due west of Red Mountain, the Iris Meadow Campground has 13 Tent/RV sites, and is open seasonally between Memorial Day Weekend and September 10. The available facilities include flush toilets, 3 water spigots, and an RV waste station. The Iris Meadow Campground is located approximately 10 miles southeast of MMH.

Pleasant Valley Campground – This site is located between the Owens River Gorge and the Pleasant Valley Reservoir. This campsite is popular among fisherman, because both the Owens River and the Pleasant Valley Reservoir are trout fisheries and are open year-round. This site is approximately 24 miles southeast of MMH.

Big Trees Campground – This site is located just 12 miles southwest of nearby Bishop, CA. Its attributes include 9 campsites, a creek, and the nearby Historic Cardinal Mine. This site is located approximately 29 miles southeast of MMH.

North Lake Campground – This site is located next to North Fork Bishop Creek and just half a mile from North Lake. Some amenities include 11 tent sites, a well-stocked North Lake, and the nearby Cardinal Village Resort, which has limited groceries, fishing supplies, internet access, and a café. This site is approximately 30 miles southeast of MMH.

Campsite South of Mosquito Flat – This campground is just southeast of Mosquito Flat and southwest of the Eastern Brook Lakes. It is easily accessible because of the nearby Rock Creek Road. This site is approximately 15 miles southeast of MMH.

Aspen Meadow – This site is located at the intersection of the John Muir Trail and the San Joaquin River in the southern section of Aspen Meadow. Local amenities include a Pack Station, which provides various trail rides and programs. This site is approximately 29 miles south of MMH.

Rockhouse Meadow – This site is located southeast of Huntington Lake and just north of Ershim Lake. It also serves as a trailhead into the Dome Land Wilderness. This site is approximately 30 miles southeast of MMH.

Other

Camp High Sierra– Located south of the Town of Mammoth Lakes on Lake Mary Road, facilities include a recreation lodge, 40 campsites, cabins, barbeque grills, picnic tables, restrooms, showers, and trails. The camp is operated by the Los Angeles Department of Recreation and Parks. High Sierra is approximately 9 miles west of MMH.

Cargyle Meadow – This meadow is located approximately 17.5 miles SW of MMH, and is a popular destination for hikers and campers. It can be used as a path to local peaks/monuments such as Electra Peak and Devils Postpile.

Washburn Lake – Washburn Lake is 6 miles away from the Yosemite Valley and has a size of 39 acres. The lake is approximately 30 miles WNW of MMH.

Mount Tom Lookout Tower - Located on Mount Tom in the Sierra National Forrest, this site is approximately 26 miles southwest of MMH.

John Muir Trail-Donahue Pass – The Donahue Pass allows for a way through some mountains at the edge of Yosemite National Park to continue along the John Muir Trail. It is located approximately 24 miles northwest of MMH.

Upper Twin Lake – This site is located 4 miles NNE of Huntington Lake, and is a well used lake with a vacation resort directly on the lake. The lake is located approximately 29 miles southwest of MMH.

Sallie Keyes Lakes – The Sallie Keyes Lakes are a pair of lakes located approximately four miles ENE from Florence Lake, and can be found along the John Muir Trail. The Sallie Keyes Lakes are located approximately 25 miles south of MMH.

Quail Meadows – This site is located just south of the Vermilion Cliffs and northeast of Lake Thomas A. Edison. It is located 16 miles SSW of MMH.

McClure Meadow – This site is located between Emerald Peak and Mount Goethe, and is the site of a ranger station for Kings Canyon National Park. McClure Meadow is approximately 30 miles SSE of MMH.

Mount Abbot – Mount Abbot is the central peak in the Abbot group of the Sierra Nevada peaks, and is used as a site for rock and ice climbing. This site is located approximately 17 miles SSE of MMH.

Benton (Town Center) – Benton, California is a small town (Population: 331) located at the intersection of U.S. Route 6 and Route 120. This site is located approximately 24 miles northeast of MMH.

Devils Postpile Lookout – This site overlooks Devils Postpile, a National Monument made up of columnar basalt. The nearby Devils Postpile National Monument includes the Postpile, the over hundred foot high Rainbow Falls, and a nearby 21 tent campsite. This site is approximately 13 miles due east of MMH.

Minaret Vista – Minaret Vista is a turnaround just southwest of Minaret Summit, a peak of 9,200 feet. From these sites, there are views of the 13,000 foot Mount Ritter, Banner Peak, and the nearby Minarets. This site is approximately 12 miles WNW of MMH.

Garnet Lake – This site is one of a number of lakes sitting just to the east of Banner Peak and Mount Ritter. There are a number of nearby trails and areas to camp near this lake found in the Ansel Adams Wilderness. Garnet Lake is approximately 18 miles northwest of MMH.

Donohue Pass – This site is situated just between Donohue Peak and Mount Lyell, which is the highest peak in Yosemite National Park. This site is located approximately 24 miles northwest of MMH.

Mammoth Peak Overview – This view is situated due west of Mammoth Peak, which has a summit of over 12,000 feet, and also overlooks Lyell Canyon. This site is located approximately 30 miles northwest of MMH.

Tioga Pass – This pass serves as the eastern entry point for Yosemite National Park, and it is also the starting points for a number of hiking trails. The nearby Tioga Pass Resort also provides a number of amenities. This site is approximately 30 miles northwest of MMH.

Mono Lake Lookout – The Mono Lake Lookout is located on the southern shore of Lake Mono due north of the Mono Craters. The amenities included at nearby Mono Lake include sites for camping, fishing, boating, and various winter activities. This site is located approximately 23 miles NNE of MMH.

Silver Lake – Silver Lake is located among a group of lakes just northwest of the Inyo Craters. The nearby amenities include the Silver Lake Lodge, which provides cabin rentals, a small grocery store, and boat rentals. The site is located approximately 19 miles northwest of MMH.

Lake Virginia – Lake Virginia is located in a large group of lakes in-between Bloody Mountain and Jackson Meadow. This site is located approximately nine miles southeast of MMH.

Rainbow Lake – This Lake is one of the Cockscomb Lakes located just southwest of Sharktooth Peak and Silver Peak. This site is located approximately 15 miles southwest of MMH.

Desolation Lake – This site is the largest of a group of lakes found in Humphreys Basin and just to the west of Mount Humphrey. Desolation Lake is located approximately 25 miles SSE of MMH.

Tamarack Lakes – The Tamarack Lakes are found just to the northeast of Broken Finger Peak due west of Round Valley, California, and are located 16 miles southeast of MMH.

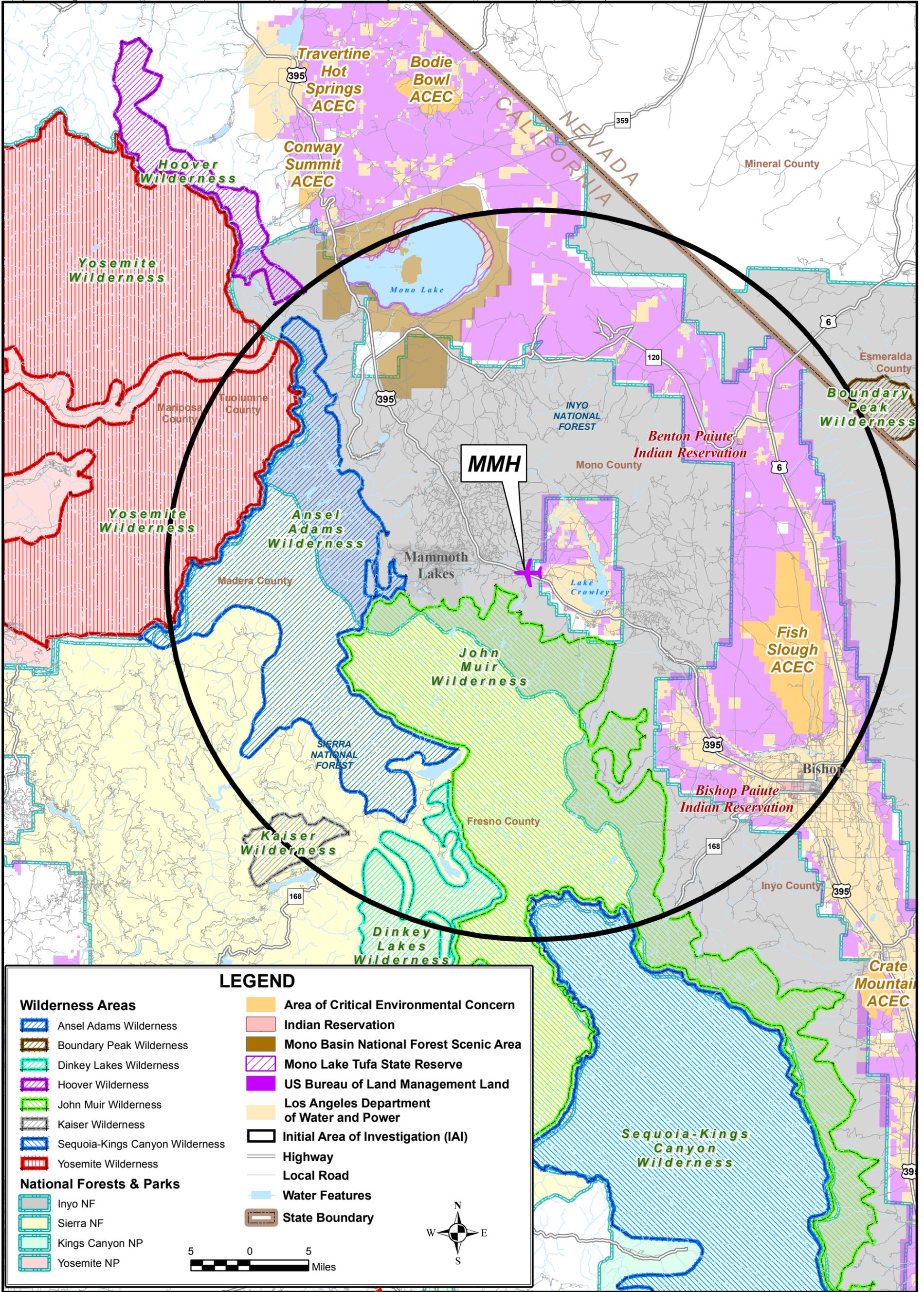


FIGURE B-1

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4(f) RESOURCES**

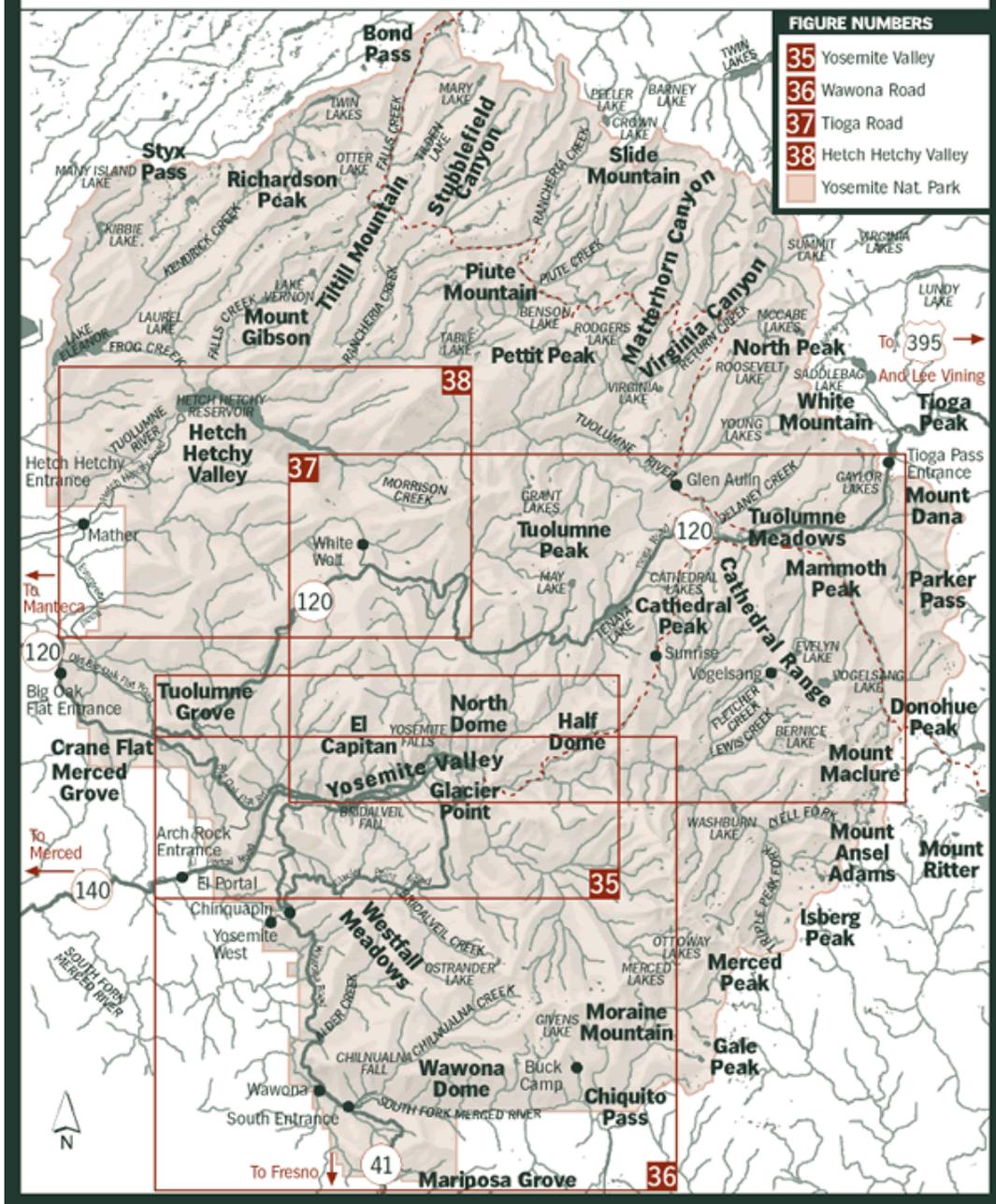
DRAFT



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operation Specification
Amendment Service to/from MMH

Yosemite Nat. Park

Yosemite National Park spans elevations ranging from 2,000 feet in the western foothills to more than 13,000 feet in the high Sierra.



Source: www.sherpaguides.com



Mammoth Yosemite Airport
Environmental Impact Statement

Yosemite National Park

FIGURE
B-2



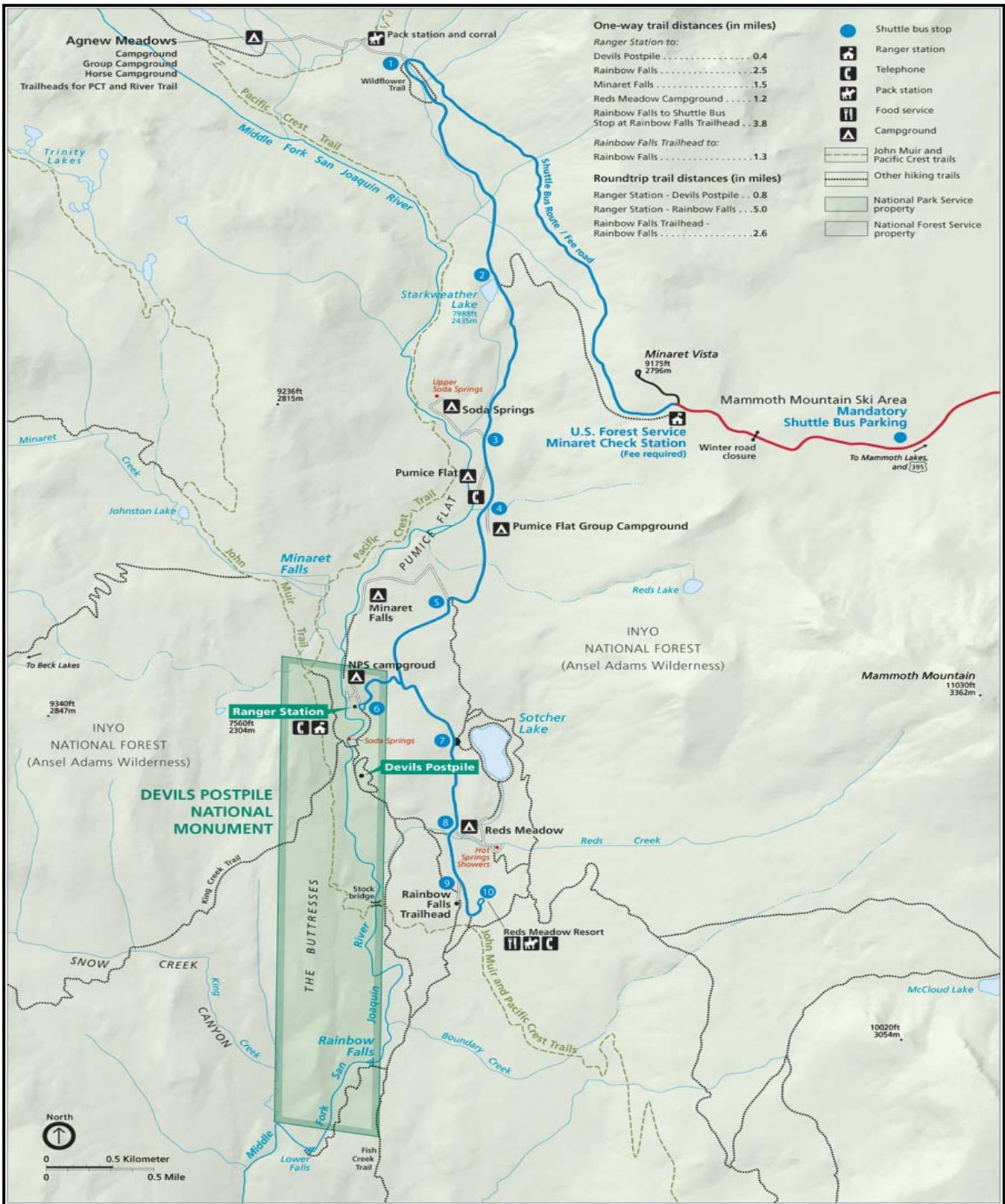
Source: www.closetonature.com/



**Mammoth Yosemite Airport
Environmental Impact Statement**

**Sequoia-Kings Canyon National
Park**

**FIGURE
B-3**



Source: www.nps.gov



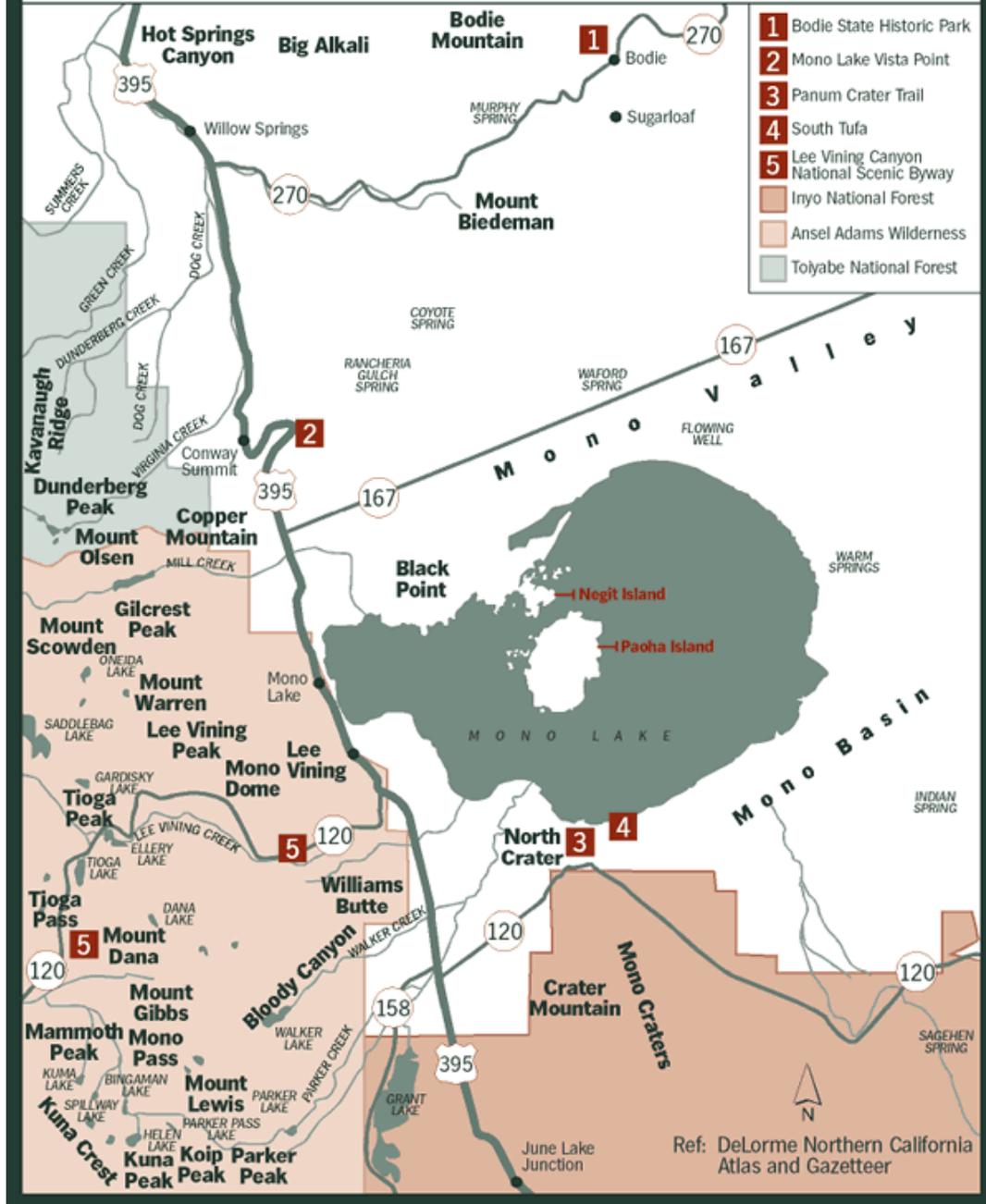
Mammoth Yosemite Airport
Environmental Impact Statement

Devils Postpile National
Monument

FIGURE
B-4

Mono Lake Area

40,000-acre Mono Lake was designated a National Forest Scenic Area in 1984.



Source: www.sherpaguides.com



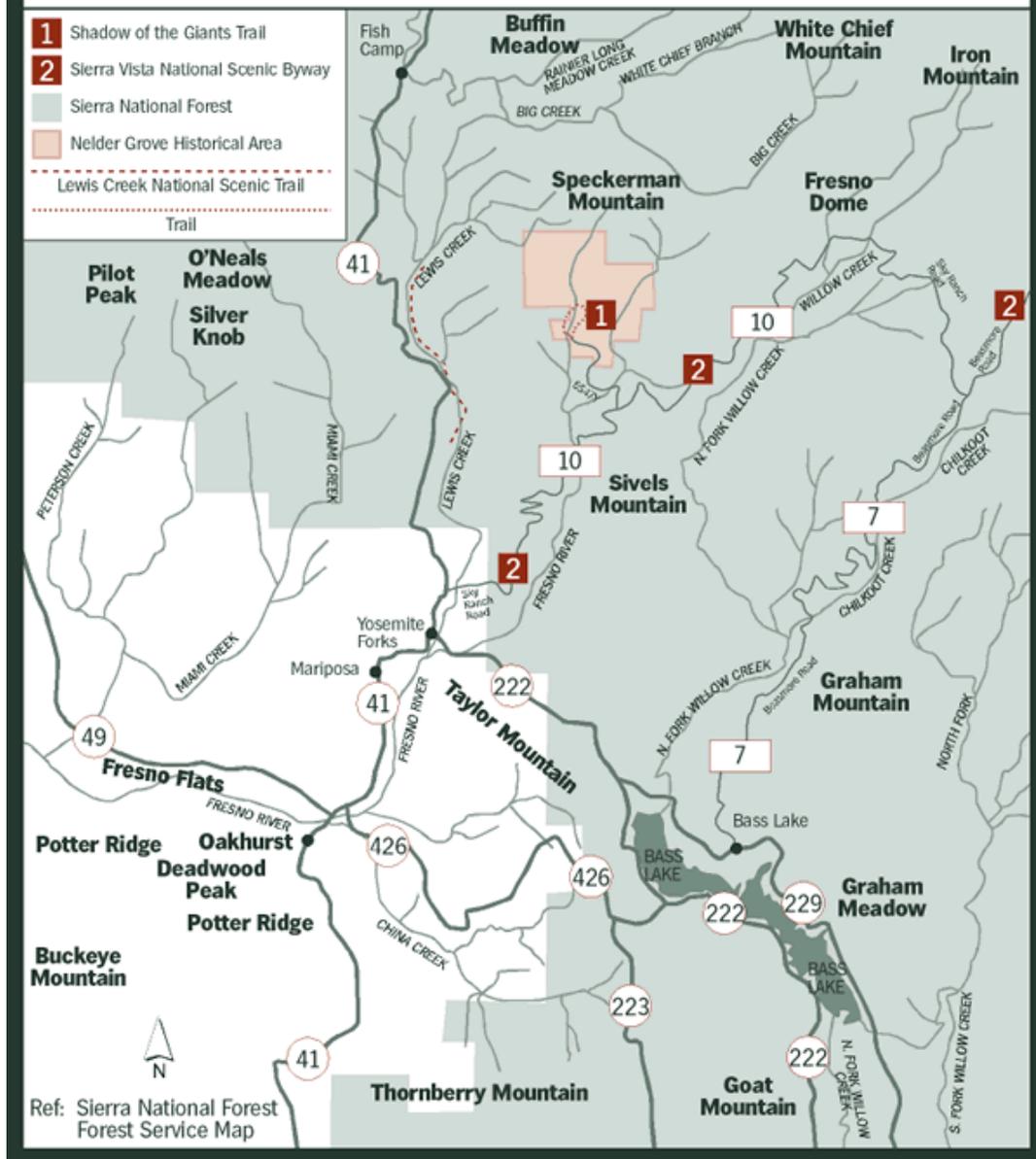
Mammoth Yosemite Airport
Environmental Impact Statement

Mono Basin National Forest
Scenic Area

FIGURE
B-5

Sierra National Forest

The Sierra National Forest began in 1893 and encompasses the High Sierra and a connection to the Eastern Sierra.



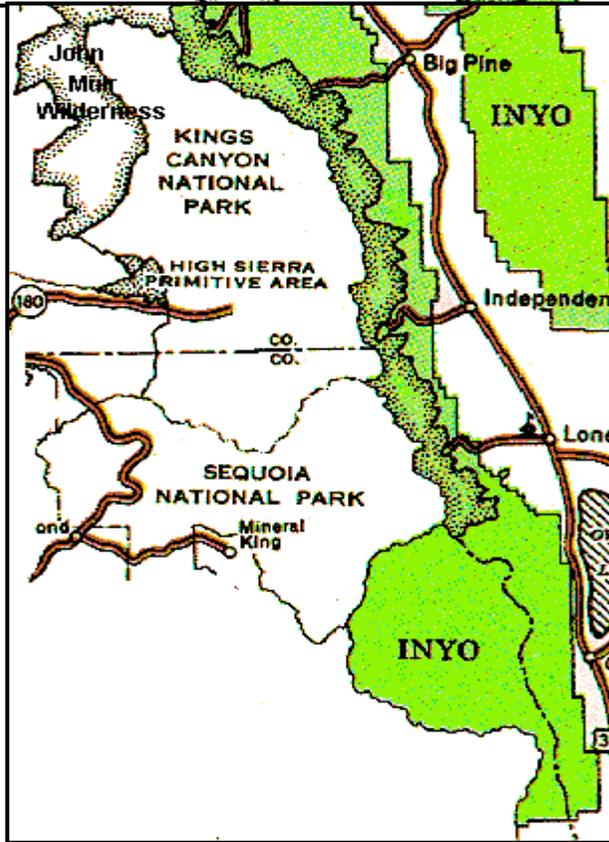
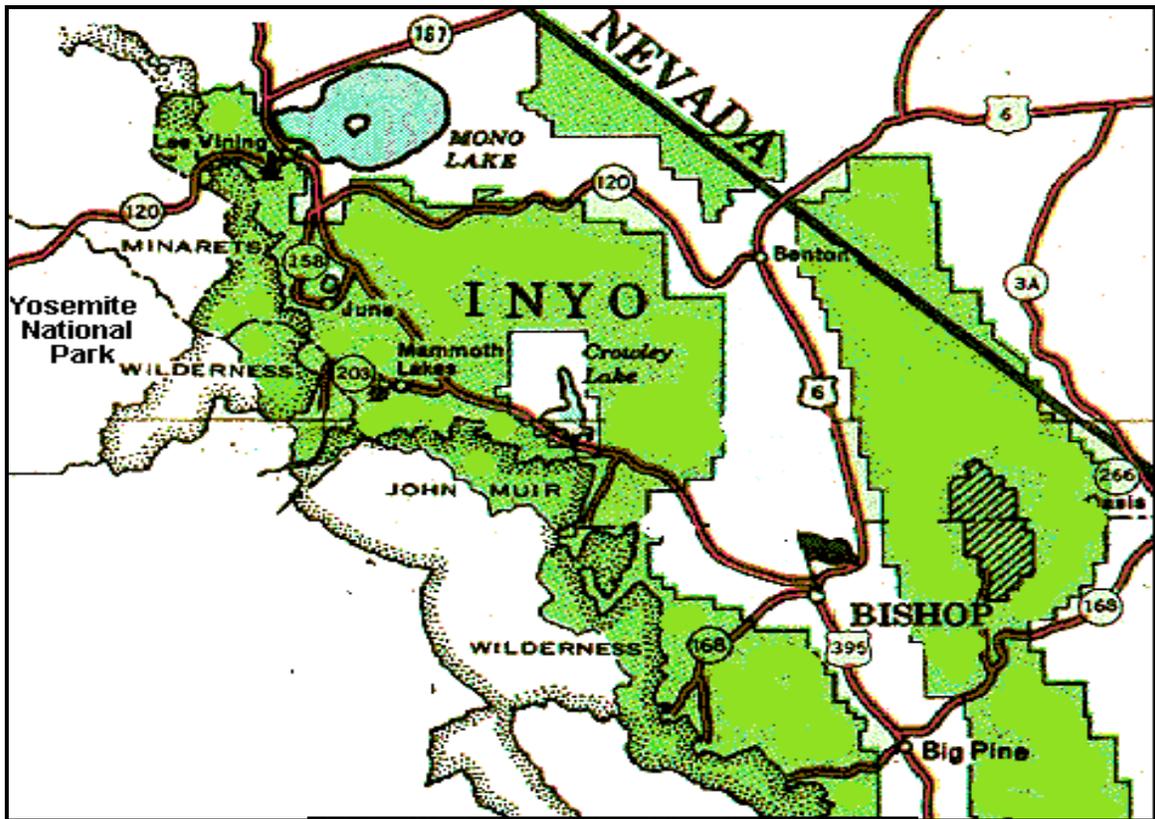
Source: www.sherpaguides.com



Mammoth Yosemite Airport
Environmental Impact Statement

Sierra National Forest

FIGURE
B-6



Source: www.gorp.away.com



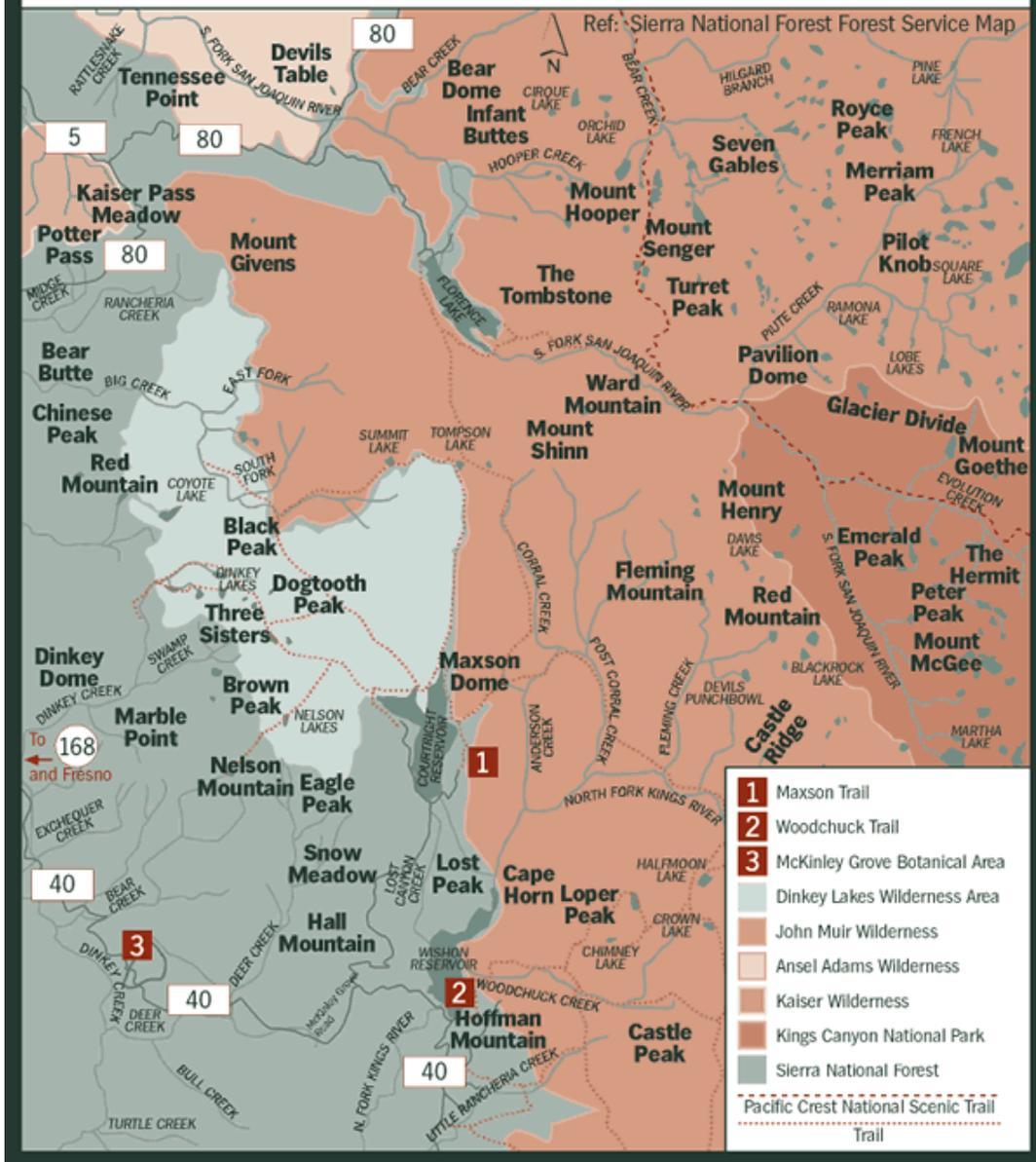
Mammoth Yosemite Airport
Environmental Impact Statement

Inyo National Forest

FIGURE
B-7

Dinkey Lakes Wilderness Area

The Dinkey Lakes Wilderness is a 30,000-acre area southeast of Huntington Lake and northwest of Courtright Reservoir.



Source: www.sherpaguides.com



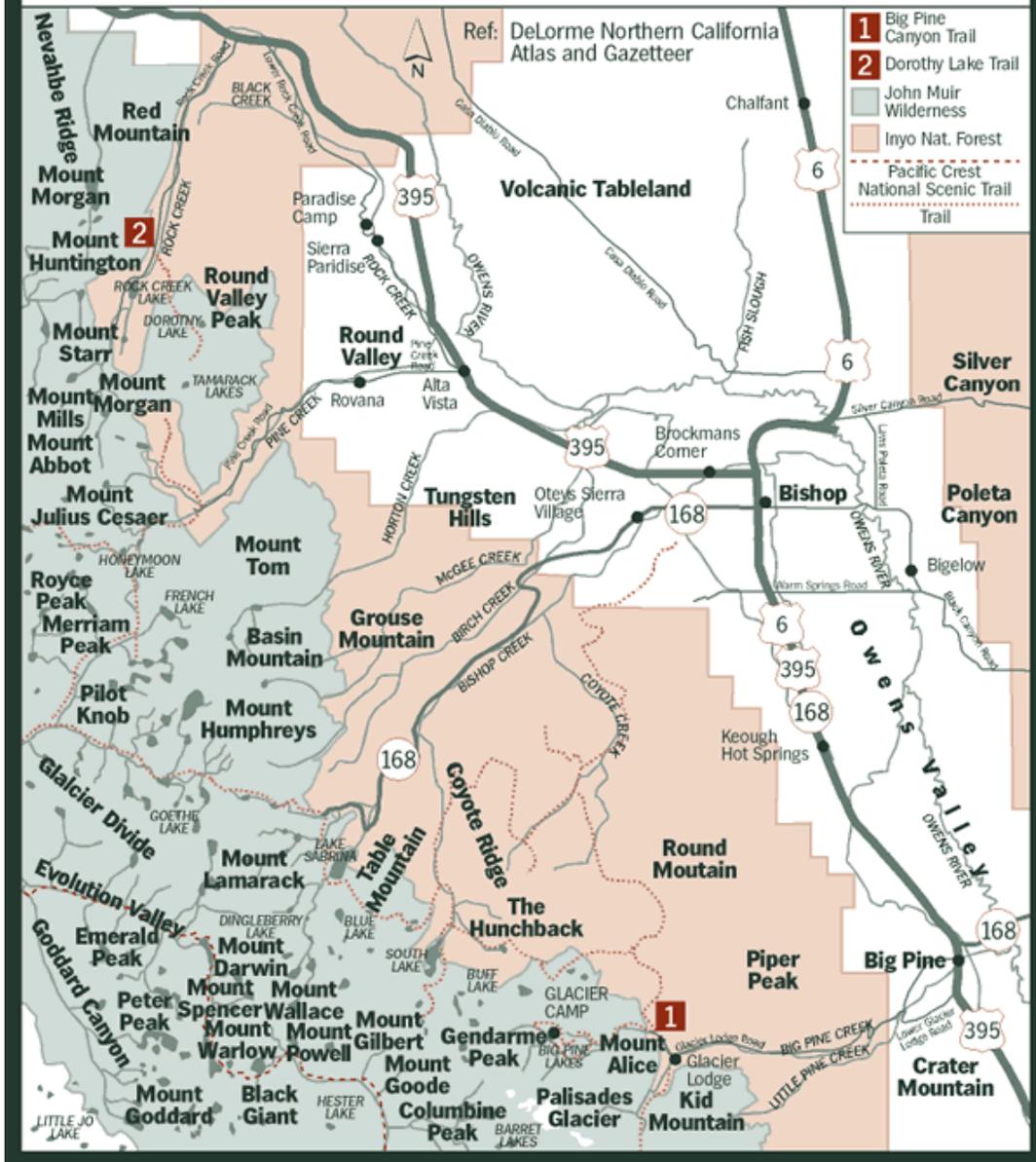
Mammoth Yosemite Airport
Environmental Impact Statement

Dinkey Lakes Wilderness

FIGURE
B-9

John Muir Wilderness Area

The John Muir Wilderness covers 581,000 acres and stretches 100 miles along the Sierra crest.



Source: www.sherpaguides.com



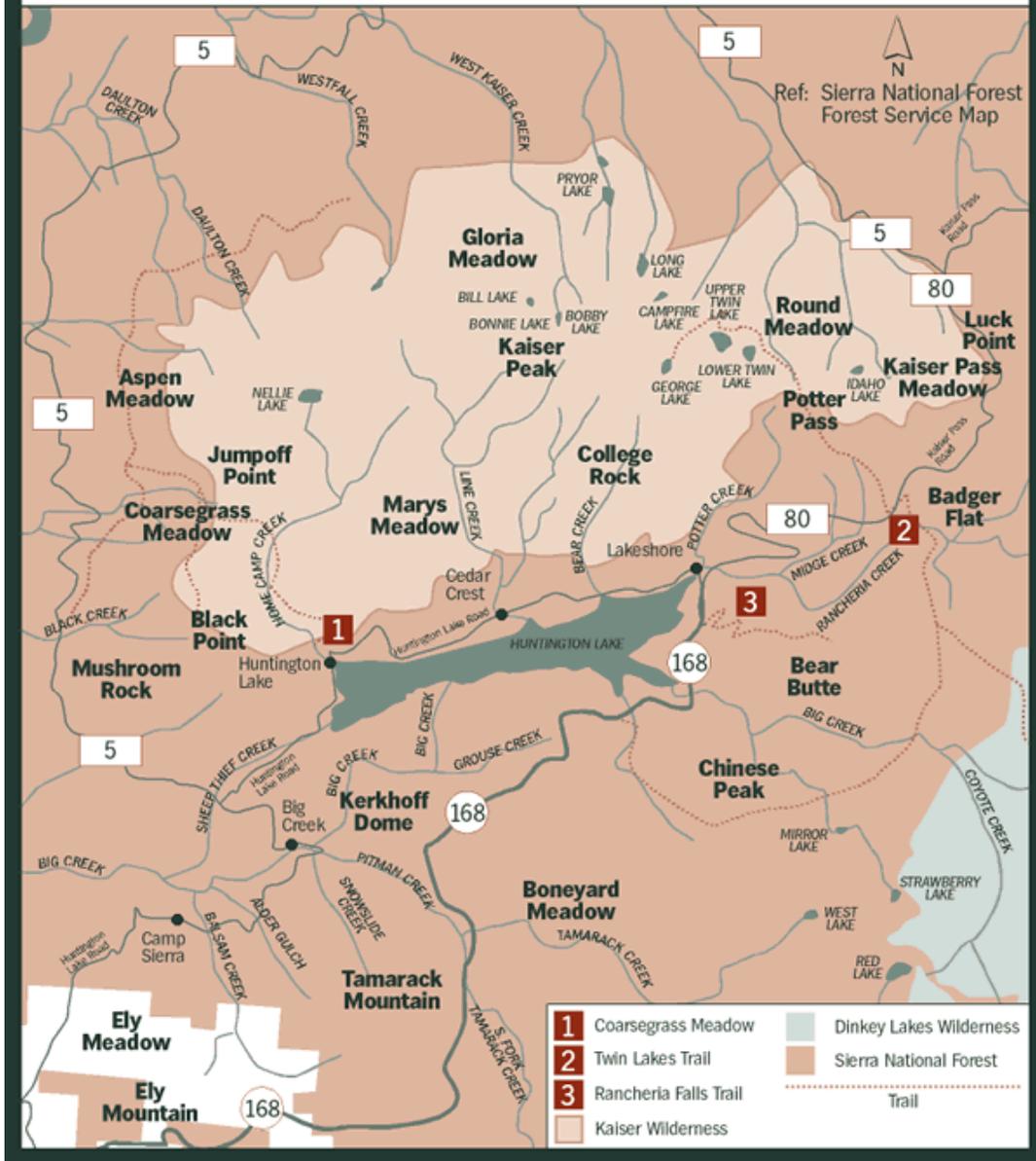
Mammoth Yosemite Airport
Environmental Impact Statement

John Muir Wilderness

FIGURE
B-10

Kaiser Wilderness Area

The 22,700-acre Kaiser Wilderness, formed in 1975, has elevations ranging from 8,000 feet to 10,320 feet.



Source: www.sherpaguides.com



Mammoth Yosemite Airport
Environmental Impact Statement

Kaiser Wilderness

FIGURE
B-11

APPENDIX C

Correspondences with Resource Agencies

Correspondences with Resource Agencies

- Native American Tribes
- Bureau of Land Management
- Inyo National Forest
- National Park Service
- Sierra National Forest



U.S Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
San Francisco Airports District Office

831 Mitten Road, Suite 210
Burlingame, CA 94010-1300

January 19, 2007

Ms. Connie Lewis
Chairperson
Big Sandy Rancheria
P. O. Box 337
Auberry, CA 93602

Subject: Proposed Horizon Air Operation Specification Amendment Environmental Impact Statement - Scheduled Air Service to Mammoth Yosemite Airport

Dear Ms. Lewis:

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for a Horizon Air proposal for an Operation Specification Amendment to allow for scheduled air service to Mammoth Yosemite Airport (MMH). Horizon Air proposes to provide air service to MMH using a turbo-propeller driven aircraft that can seat up to 78 passengers. Horizon Air's air service proposal would be accommodated within the existing facilities (runway, taxiway or buildings) at MMH.

As a part of the EIS study, the FAA is evaluating environmental resources in the vicinity of MMH to determine if direct or indirect significant environmental impacts could result from the proposed action.

Proposed Location

MMH is located on the west edge of Owens Valley just northeast of US 395 approximately six miles due east of the Town of Mammoth Lakes, California in Mono County, and approximately four miles west of Lake Crowley.

MMH consists of one east-west oriented runway (Runway 9/27) with a parallel and connecting taxiway system. Runway 9/27 is paved with asphalt and is 7,000 feet long by 100 feet wide. Buildings at the airport include hangars, office space and warehouse/terminal space.

Proposed Action Description

On May 11, 2006 Horizon Air issued a letter to the FAA confirming its intent to provide scheduled air service to MMH beginning in December of 2007. Horizon Air's initial service would begin with two flights daily between MMH and Los Angeles International Airport (LAX) during the winter ski season (approximately December to April).

The FAA has approved the Town of Mammoth Lake's aviation activity forecasts for MMH. The aviation forecast estimates that the commercial service activity would begin with two flights per day during the winter and could increase to a maximum of eight flights per day during the winter ski season and two flights per day during the summer months by 2011. This commercial activity level is predicted to be constant through the year 2016. The forecasts assume that in 2011 air service to MMH could be provided from other airport locations either from Northern California or Southern California.

MMH Area of Investigation

In addition to evaluating potential cultural resources within and adjacent to MMH, the FAA has developed a larger study area (Enclosure 1) to evaluate the potential for overflight noise impacts that could result from the proposed air service. The MMH Area of Investigation is comprised of the area within a 27 nautical mile radius centered over the airport. It should be noted that the MMH Area of Investigation is broader than the existing flight routes, which would not change as a result of the proposed scheduled air service. The proposed action also would also result in no change to routes currently used by General Aviation activity. The MMH Area of Investigation is intended to encompass an area of sufficient size so that the FAA can identify and document potential areas of concern.

Consultation

The FAA contacted the Native American Heritage Commission (NAHC) to identify areas within the MMH Area of Investigation that may be of concern to the local Native American community and that may experience additional overflight as a result of the proposed action. The NAHC and the U. S. Department of Interior, Bureau of Indian Affairs, Tribal Leaders Directory were also consulted to identify local Native American Tribal Representatives who may be knowledgeable about cultural resources in the study area. As a result of this inquiry a list of Native American Tribal Contact List was developed, Enclosure 2.

If you have specific knowledge of cultural resources, traditional cultural places or protected tribal resources that are located within the study area, we would appreciate hearing from you no later than February 16, 2007. If we do not hear from you by this date, we will assume you have no knowledge of cultural resources within the MMH Area of Investigation.

Your attention to this matter is appreciated. We have added you to our coordination list for this project. We will notify you of the availability of the Draft EIS for review and future public workshops or public hearings on the EIS.

If you would like to discuss this matter further, have knowledge of cultural resources in the area or have questions about the proposed action, please contact our Environmental Protection Specialist, Ms. Camille Garibaldi at (650) 876-2778 extension 613 or by fax at (650) 876-2733. I am also available at (650) 876-2778 extension 600.

Sincerely,

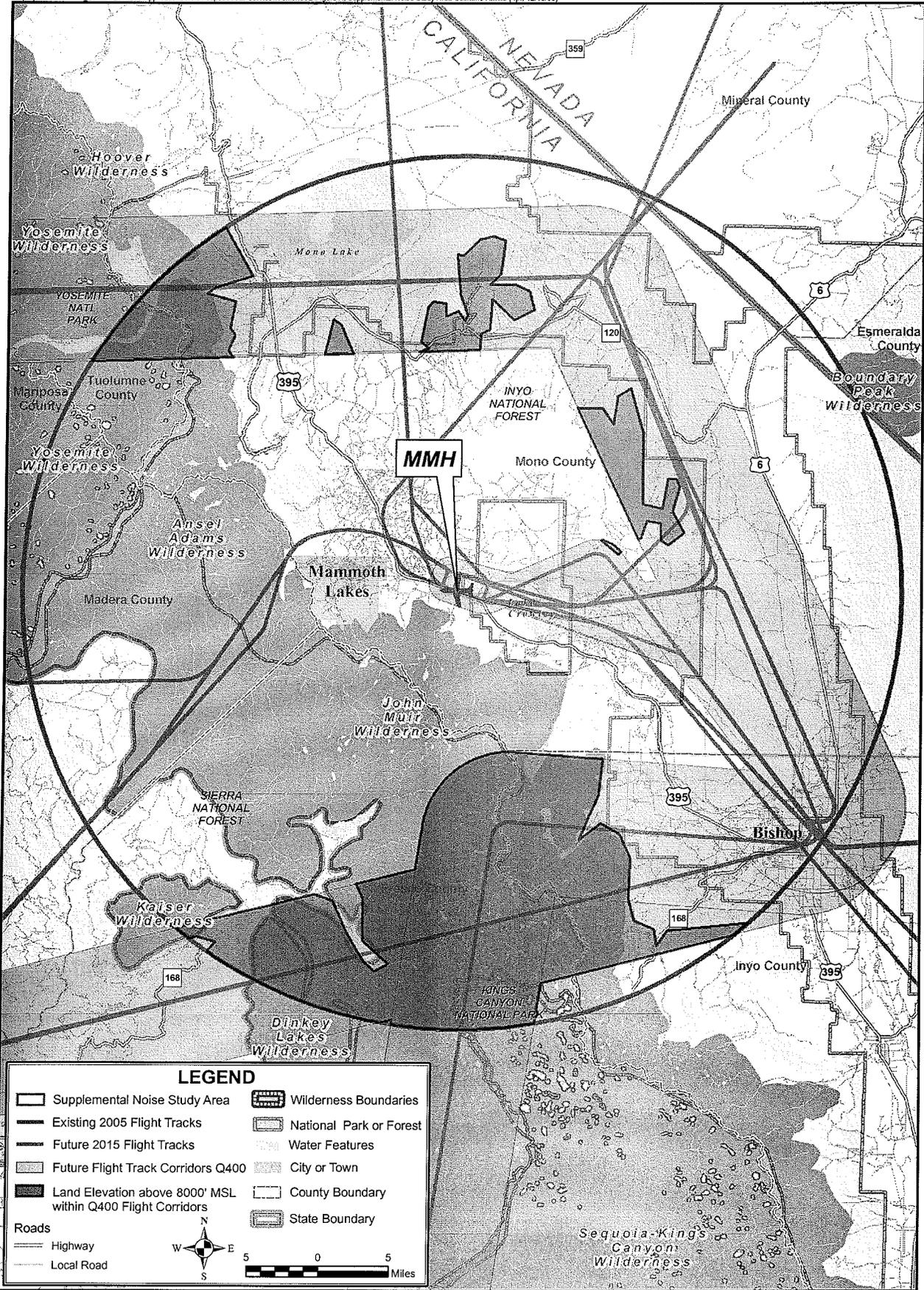
ORIGINAL SIGNED BY
ANDREW M. RICHARDS

Andrew M. Richards
Manager, Airports District Office

Enclosures: (1) MMH Area of Investigation – Mammoth Yosemite Airport
(2) Native American Community Contact List

cc:

✓ Bill Fehring, URS Corporation



LEGEND

Supplemental Noise Study Area	Wilderness Boundaries
Existing 2005 Flight Tracks	National Park or Forest
Future 2015 Flight Tracks	Water Features
Future Flight Track Corridors Q400	City or Town
Land Elevation above 8000' MSL within Q400 Flight Corridors	County Boundary
State Boundary	

Roads

- Highway
- Local Road

W N E S

0 5 Miles

MMH AREA OF INVESTIGATION

Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH



NATIVE AMERICAN TRIBAL CONTACT LIST
Horizon Air Proposed Operation Specification Amendment EIS

<p>Connie Lewis, Chairperson Big Sandy Rancheria P. O. Box 337 Auberry, CA 93602</p> <p>Phone: (559) 855-4003 Fax: (559) 855-4129</p>	<p>Joseph Saulque, Chairman Benton Paiute Reservation 567 Yellow Jacket Road Benton, CA 93512</p> <p>Phone: (760) 933-2321 Fax: (760) 933-2412</p>
<p>Jessica Bacoeh, Chairperson Mr. Bill Helmer, THPO Big Pine Paiute Tribe of the Owens Valley 825 South Main Street P. O. Box 700 Big Pine, CA 93513</p> <p>Phone: (760) 938-2003 Fax: (760) 938-2942</p>	<p>Mr. Leland Chavez THPO Bishop Paiute Tribe 50 Tu Su Lane Bishop, CA 93514</p> <p>Phone: (760) 873-3665</p>
<p>Joe Kennedy, Chairman Timbi-sha Shoshone Tribe P. O. Box 786 Bishop, CA 93515</p> <p>Phone: (760) 873-9003 Fax: (760) 873-9004</p>	<p>Charlotte Baker, Chairperson Bridgeport Indian Colony P. O. Box 37 Bridgeport, CA 93517</p> <p>Phone: (760) 932-7083 Fax: (760) 932-7846</p>
<p>Dixie Jackson, Chairperson Picayune Rancheria of Chuckchansi Indians 46575 Road 417 Coarsegold, CA 93614</p> <p>Phone: (559) 642-3681 Fax: (559) 642-3683</p>	<p>Carl A. Dahlberg, Chairman Fort Independence Reservation P. O. Box 67 Independence, CA 93526</p> <p>Phone: (760) 878-2126 Fax: (760) 878-2311</p>
<p>Marjianne Yonge, Chairperson Lone Pine Paiute Shoshone Reservation 1103 South Main Street P. O. Box 747 Lone Pine, CA 93545</p> <p>Phone: (760) 876-1034 Fax: (760) 876-8302</p>	<p>Judy E. Fink, Chairperson North Fork Rancheria P. O. Box 929 North Fork, CA 93643-0929</p> <p>Phone: (559) 877-2461 Fax: (559) 877-2467</p>
<p>Travis Coleman, Chairman Cold Springs Rancheria P. O. Box 209 Tollhouse, CA 93667</p> <p>Phone: (559) 855-5043 Fax: (559) 855-4445</p>	

Enclosure (2)

NATIVE AMERICAN TRIBAL CONTACT LIST
Horizon Air Proposed Operation Specification Amendment EIS

<p>Warner Gary Nevers, Chairman Carson Community Council 2900 S. Curry Street Carson City, NV 89703</p> <p>Phone: (775) 883-6459 Fax: (775) 883-6467</p>	<p>Wanda Batchelor, Chairperson Stewart Community Council 5300 Snyder Ave. Carson City, NV 89701</p> <p>Phone: (775) 883-7794 Fax: (775) 883-5679</p>
<p>A. Brian Wallace, Chairman Washoe Tribal Council 919 Highway 395 South Garderville, NV 89410</p> <p>Phone: (775) 265-4191 Fax: (775) 265-6240</p>	<p>Anthony Smokey, Chairman Dresslerville Community Council 585 Watasheamu Road Garderville, NV 89410</p> <p>Phone: (775) 265-5645 Fax: (775) 265-3897</p>
<p>Genia Williams, Chairperson Walker River Paiute Tribal Council P. O. Box 220 Schurz, NV 89427</p> <p>Phone: (775) 773-2306 Fax: (775) 773-2585</p>	<p>Wayne M. Garcia, Chairman Yerington Paiute Tribe 171 Campbell Lane Yerington, NV 89447</p> <p>Phone: (775) 883-3895 Fax: (775) 463-2416</p>

Enclosure (2)

RECORD OF TELEPHONE CALL DATE & TIME 5/21/2007 3:24 PM

Participants: FAA [Camille Garibaldi (SFO-163)] / Bishop Paiute Tribe/Theresa Yanez

Subj: Mammoth Yosemite Airport – Horizon Air Operations Specifications
Amendment - EIS

Digest: A message was left for Theresa in follow-up to her e-mail of April 2, 2007. I indicated that the purpose of my call was to confirm whether the Tribe had additional information that they intended on providing regarding the eagles identified in her e-mail or other resources also of concern.

Phone Number: (760) 873-3584 x 250

Date: May 21, 2007 Title: EPS Signature: C. Garibaldi



Camille.Garibaldi@faa.gov

04/06/2007 11:27 AM

To bill_fehring@urscorp.com

cc Frank.Smigelski@faa.gov, Ellen.Athas@faa.gov, Dave.Kessler@faa.gov,
Lorraine.Herson-Jones@faa.gov, Lisa.M.Toscano@faa.gov, Raymond.Chiang@faa.gov

bcc

Subject MMH: Fw: RE: Horizon Air Proposed Service to Mammoth Yosemite Airport

Bill,

I've just started to scan my e-mail. I received the following response from the Bishop Paiute Tribe.

Camille

-----Forwarded by Camille Garibaldi/AWP/FAA on 04/06/2007 08:21AM -----

To: Camille Garibaldi/AWP/FAA@FAA

From: "Theresa Yanez" <theresa.yanez@bishoppaiute.org>

Date: 04/02/2007 04:54PM

Subject: RE: Horizon Air Proposed Service to Mammoth Yosemite Airport

Camille

I am sorry that I passed the deadline, however it took me time to search things out. What I have come up with is the concern with the disturbance of the Bald and Golden eagles nesting areas. They are a big part of the Tribes beliefs and not like other birds that migrate they are like us, who live in the surrounding areas. Finding out exactly were they are occupying would take more time. I hope this information would help. Again I am sorry it took me so long. Thank you for your patience.

-----Original Message-----

From: Camille.Garibaldi@faa.gov [<mailto:Camille.Garibaldi@faa.gov>]

Sent: Thursday, March 08, 2007 9:38 AM

To: Theresa.Yanez@bishoppaiute.org

Subject: MMH: Horizon Air Proposed Service to Mammoth Yosemite Airport

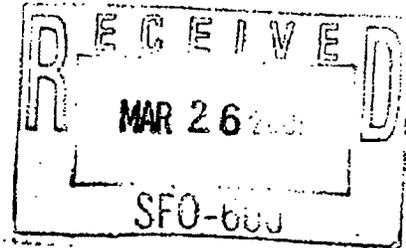
Good Morning Theresa,



Bridgeport Indian Colony
P.O. Box 37
Bridgeport, CA 93517

(760) 932-7083 Fax: (760) 932-7846 e-mail: biogovadm@yahoo.com

March 21, 2007



U.S. Department of Transportation
Federal Aviation Administration
Western-Pacific Region, Airports Division
San Francisco Airports District Office
Attn: Andrew M. Richards, Manager
831 Mitten Road, Suite 210
Burlingame, CA 94010-1300

**RE: Proposed Horizon Air Operations Specification Amendment
Environmental Impact Statement – Scheduled Air Service to
Mammoth Yosemite Airport**

Dear Mr. Richards:

In response to your letter dated January 19, 2007 the following information is being provided.

The Bridgeport Indian Colony has reviewed the proposed Horizon Air Operations Specification Amendment Environment Impact Statement and finds that we are in support to open the airport for turbo-propeller driven aircraft.

Although this is a significant increase in size of engine of what is currently being authorized to land at the airport now the tribe would like continued follow up as landing increases occur and if there is a potential impact that would affect the surrounding areas.

Please contact me if I can be of further assistance in this matter.

Sincerely,

Charlotte Baker
Tribal Chairperson

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RECORD OF TELEPHONE CALL DATE & TIME 2/28/2007 9:37 AM

Participants: FAA [Camille Garibaldi (SFO-613)] / Big Sandy Rancheria [Chairperson
Connie Lewis]

Subj: Mammoth Yosemite Airport – Horizon Air Operations Specifications
Amendment - EIS

Digest: After briefly explaining the proposed action. Chairperson Lewis indicated that the Rancheria has no objection to the proposed action. She requested that a duplicate of the letter be sent to the Rancheria. A response letter will be prepared.

Conference Call:

Conclusion:

Date: February 28, 2007 Title: EPS Signature: C. Garibaldi

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 384
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov



February 28, 2005

Mr. Brian Hatoff
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612

No. of Pages: 2

Re: Mammoth Lakes EIS Project, Mono County

Dear Mr. Hatoff:

Thank you for the opportunity to comment on the above referenced project. The Commission was able to perform a record search of its Sacred Lands File for the project area, which revealed no recorded Native American cultural resources within the area of the proposed project. The absence of recorded sites does not preclude the possibility that cultural resources might be present at the site; other sources of information should be contacted to assure that no resources will be impacted.

I have enclosed a list of Native American individuals/organizations that may have knowledge of additional cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. The Commission makes no recommendation of a single individual or group over another. Please contact all those listed; if they cannot supply you with specific information, they may be able to recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If you have not received a response within two weeks' time, we recommend that you follow-up with a telephone call to make sure that the information was received.

If you learn of any change of address or telephone number from any of these individuals or groups, please notify me. With your assistance we will be able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-6251.

Sincerely,

Handwritten signature of Carol Gaubatz in black ink.

Carol Gaubatz
Program Analyst

Native American Contacts

Mono County

February 28, 2005

Antelope Valley Indian Community Coleville Paiutes
 Bill Lovett, Chairperson
 PO Box 119
 Coleville, CA 96107
 (530) 495-2801

Washoe / Paiute

Mono Lake Indian Community
 Ronald Balncey, Chairperson
 P.O. Box 237
 Lee Vining, CA 93451

Mono
Northern Paiute

Antelope Valley Paiute Tribe
 Bill Lovett, Chairperson
 11 Camp Antelope Road
 Coleville, CA 96107
 (530) 495-2801
 (530) 495-2736

Paiute

Benton Paiute Reservation
 Rose Marie Saulque, Chairperson
 Star Route 4, Box 56-A
 Benton, CA 93512
 numic@gnet.com
 (760) 933-2321
 (760)933-2412 Fax

Paiute

Bridgeport Paiute Indian Colony
 Vineca Hess, Chairperson
 P.O. Box 37
 Bridgeport, CA 93517
 bic@gnet.com
 (760) 932-7083
 (760) 932-7846 Fax

Paiute

Laurie Thom, Chairperson
 Walker River Reservation
 P.O. Box 220
 Schurz, NV 89427
 chair@wrpt.net
 775-773-2306
 FAX: 775-773-2585

Northern Paiute

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed Mammoth Lakes EIS Project, Mono County.

~~STATE OF CALIFORNIA~~~~Arnold Schwarzenegger GOVERNOR~~**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 304
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov



January 27, 2005

Brian W. Hatoff
Senior Project Archaeologist
URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612

Sent by Fax: 510-874-3268
Number of Pages: 2

RE: Proposed FAA Project, Inyo, County.

Dear Mr. Hatoff:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impacts within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-6251.

Sincerely,

A handwritten signature in cursive script that reads "Carol Gaubatz".

Carol Gaubatz
Program Analyst

Native American Contacts
Inyo County
January 25, 2005

Big Pine Band of Owens Valley
Jessica Bacoch, Chairperson
P. O. Box 700
Big Pine, CA 93513
(760) 938-2003
(760) 938-2942-FAX

Owens Valley Paiute

Lone Pine Paiute-Shoshone Reservation
Rachel Joseph, Chairperson
P.O. Box 747
Lone Pine, CA 93545
rajoseph@lppsr.org
(760) 876-1034
(760) 876-8302 Fax

Big Pine Tribal Historic Preservation Office
Bill Helmer, THPO
P.O. Box 700
Big Pine, CA 93513
amargosa@aol.com

Paiute

Lone Pine Paiute-Shoshone Reservation
Loren Joseph, Tribal Administrator
P.O. Box 747
Lone Pine, CA 93545
lorjoseph@lppsr.org
(760) 876-1034
(760) 876-8302 fax

Bishop Reservation
Michael Rogers, Chairperson
50 Tu Su Lane
Bishop, CA 93515
(760) 873-3584
Fax: (760) 873-4143

Paiute - Shoshone

Lone Pine Paiute-Shoshone Reservation
Wilfred Nabahe, Environmental Coordinator
P.O. Box 747
Lone Pine, CA 93545
wjnabahe@lppsr.org
(760) 876-4690
(760) 876-8302 fax

Bishop Reservation
Brian Adkins, Environmental Mgr
50 Tu Su Lane
Bishop, CA 93515
(760) 873-3076

Paiute - Shoshone

Lone Pine Paiute-Shoshone Reservation
Sandy Jefferson Yonge, Cultural Representative
880 Zucco Road
Lone Pine, CA 93545
hutsie@qnet.com
(760) 876-5658
(760) 876-8302 fax

Fort Independence Community of Paiute
Richard Wilder, Chairperson
P.O. Box 67
Independence, CA 93526
(760) 878-2126
Fax: (760) 878-2311

Paiute

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed FAA Project, Inyo County.



Joe Kennedy
Chairperson

Ed Beaman
Vice-Chairman

Grace Goad
Secretary/Treasurer

Virginia Beck
Executive
Council Member

Cleveland Casey
Executive
Council Member

May 18, 2007

United States Department of Transportation
Federal Aviation Administration
Western-Pacific Region
Manager
Airports Division
P.O. Box 92007
Los Angeles, CA 90009-2007



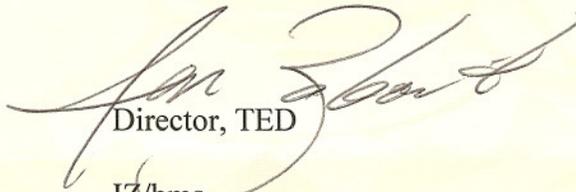
This is a request for the Timbisha Environmental Department (TED) of the Timbisha Shoshone Tribe to be added to your mailing list for all activities under the National Environmental Policy Act (NEPA) including Advanced Notice of Intent, comment and review of your agency activity that may affect the trust lands of the tribe established by the Timbisha Homeland Act (Public Law 106-423, 11/1/2000).

Our mailing address is:

Timbisha Environmental Department
P.O. Box 206
Death Valley, CA 92328

A map of the Tribe's trust land is included for your reference.

Sincerely,


Director, TED
IZ/bms

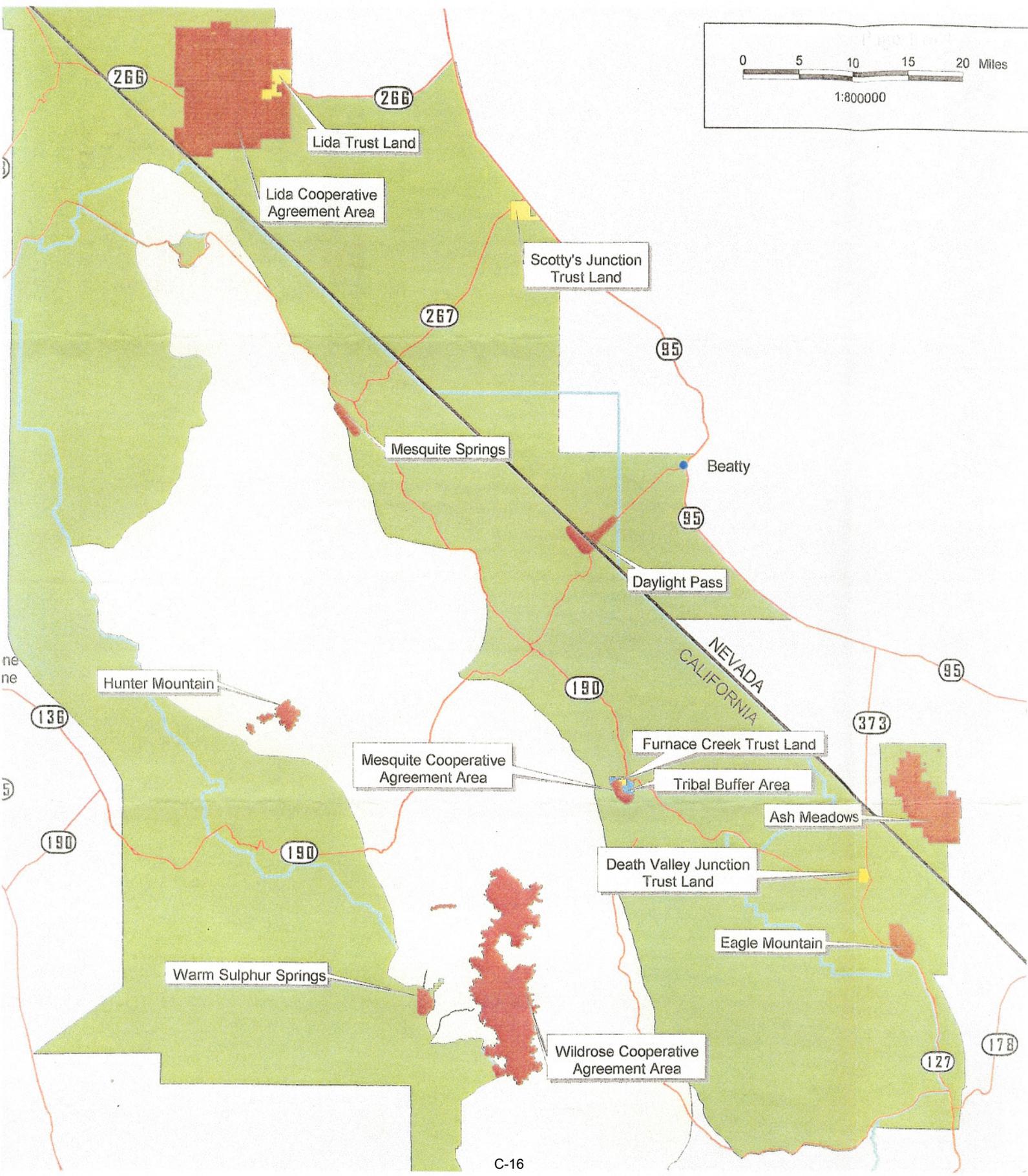
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Timbisha Shoshone Tribe

785 N. Main Street, Suite Q • Bishop, CA 93514 • PH: (760) 873-9003 • FAX: (760) 873-9004
Post Office Box 206 • Death Valley, California • 92328-0206 • PH: (760) 786-2374 • FAX: (760) 786-2376



Washoe Tribe of Nevada and California



June 8, 2007

Federal Aviation Admin., Western Pacific Region
San Francisco Airports District Office
ATTN: Carmille Garibaldi
831 Mitten Road, Suite 210
Burlingame, California 94010

RE: Mammoth Yosemite Airport (MMH)

Huṇa mi heṣi Ms. Garibaldi:

I want to thank you for your correspondence regarding your proposed Mammoth Yosemite Airport Project; I am not sure if you've received a response from the Washoe Tribe. This project is out side of Washo Aboriginal territory, therefore we do not have any comments or concerns on this project.

In the future please do not send us consultation letters unless these projects are within the following California Counties: Sierra, Placer, Nevada, El Dorado Amador, Alpine, eastern part of Calaveras and northern part of Tuolumne and Mono, southern Lassen, and the eastern part of Plumas. Enclosed is the Washoe Aboriginal territory map to use as a reference.

If you have any questions or need additional information, please do not hesitate to contact my office at (775) 265-8600, ext. 1168.

Mi ligi goba gi,

Lynda Shoshone, WWM (Washoe Language)
Program Coordinator and Cultural Preservation

/ls

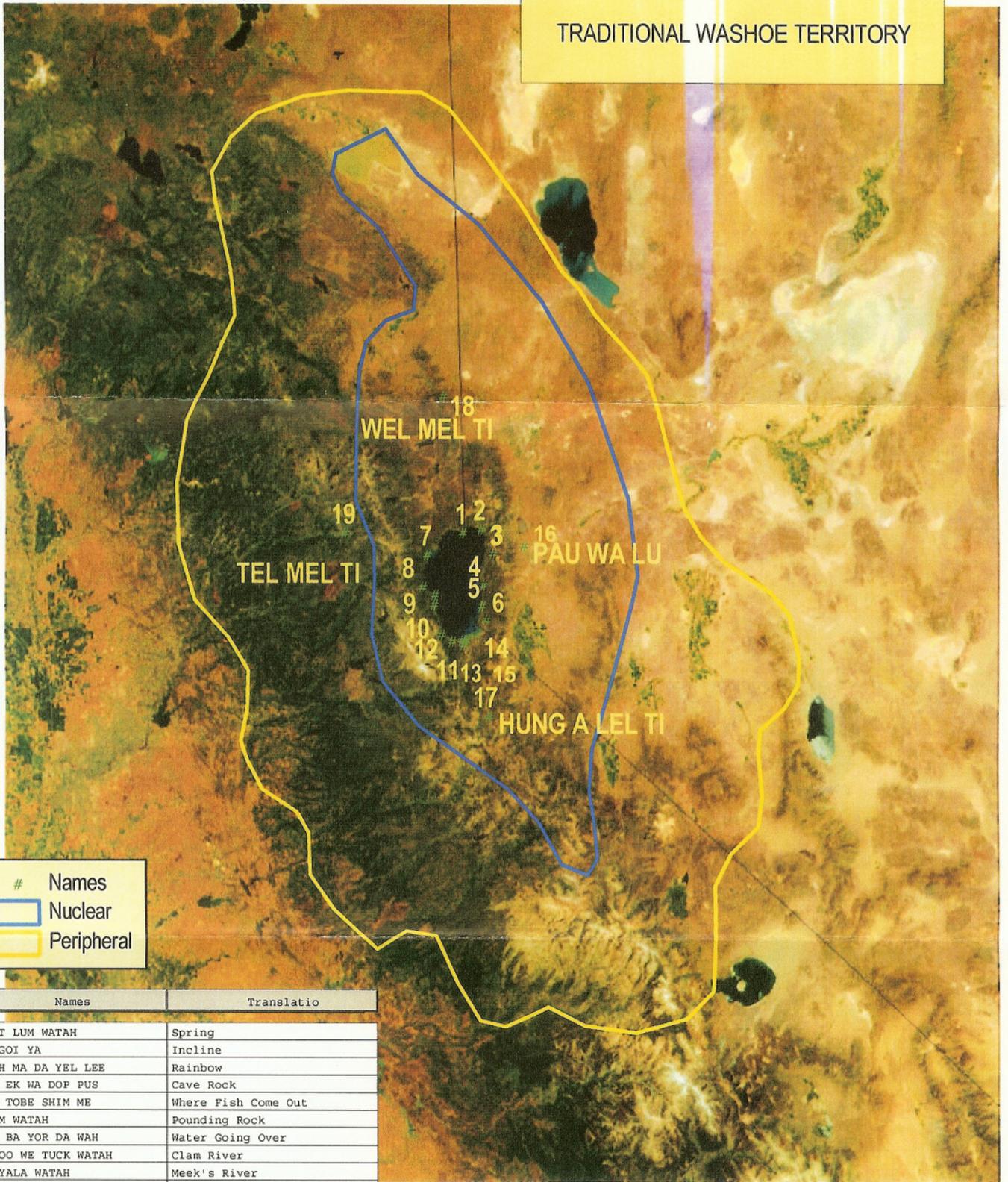
Enclosure: Map

cc: Waldo Walker, Tribal Chairman
Jorge Lopez, Interim Tribal Admin
Project file

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919 Highway 395 South • Gardnerville, Nevada 89410
(775) 265-4191 ♦ (775) 883-1446 ♦ (530) 694-2339 ♦ FAX (775) 265-6240

TRADITIONAL WASHOE TERRITORY



Names
 [Blue Box] Nuclear
 [Yellow Box] Peripheral

Id	Names	Translatio
1	MOT LUM WATAH	Spring
2	MAGOI YA	Incline
3	DAH MA DA YEL LEE	Rainbow
4	DE EK WA DOP PUS	Cave Rock
5	OT TOBE SHIM ME	Where Fish Come Out
6	LAM WATAH	Pounding Rock
7	DA BA YOR DA WAH	Water Going Over
8	SHOO WE TUCK WATAH	Clam River
9	MAYALA WATAH	Meek's River
10	MAGULU WATAH	Lonley Gulch
11	ASHUK WATAH	Back River
12	DE GIL EK WATAH	Red River
13	IMGI WATAH	Salmon Creek
14	DAUGA .SHASHU	Bright or Light River
15	MATUSH HA WHO WATAH	White Trout River
16	PAU WA LU	People of the Valley
17	HUNG A LEL TI	Southern Band of Washo
18	WEL MEL TI	Northern Band of Washo
19	TEL MEL TI	Western Band of Washo



Washoe Tribe of Nevada & California
 Map Created by Phoebe Bender
 March 2003





Record of Meeting

PROJECT & FILE: Mammoth-Yosemite Airport EIS
DATE: 9 December 2003
RECORDED BY: Bill Fehring, Deborah Lagos, Camille Garibaldi
SUBJECT: Scoping Process Meeting at Bureau of Land Management
(Bishop) and with L.A. Dept. of Water & Power

ATTENDEES

BLM: Joe Pollini, Steve Nelson, Joy Fatooh, Bill Dunkleberger
LADWP: Dale Schmidt, Brian Tillemans, Lori Gillem, Debbie House
FAA: Camille Garibaldi, Barry Franklin
URS: Bill Fehring, Deborah Lagos
Town: Bill Manning

ISSUE SUMMARY

- Growth Inducement and Cumulative Impacts:
 - Water Quality and Quantity
 - Land Use: livestock grazing
 - Recreation Management
 - Infrastructure Support Requirements
 - Access Roads
- Biological Resources: Sage Grouse, Mule Deer Migration
- Alternative – Bishop Airport

DISCUSSION NOTES

The prime contact for BLM should be Bill Dunkleberger.
The prime contact for LADWP should be Brian Tillemans.

A key concern will be changes in flight paths associated with the proposed project.

A discussion occurred regarding the level of analysis that would be required if the Bishop Airport were carried forward as an alternative.

Bill Fehring explained the need to identify contacts within the agencies from whom the EIS team can get information on land management plans and policies. The FAA requested that the contacts be identified with their formal scoping comments.

A key issue will be identifying growth-inducing influences. These would directly affect private parcels, but are likely to then cause requests for installation of support infrastructure on BLM lands. An example cited is the "Rovanna" development. A Land Use Plan controls BLM decisions.

URS

Page 2 of 2

LADWP owns 314,000 acres in the area and has similar issues with requests for development of "public" infrastructure on their lands. LADWP does not vacate their land – it is owned for watershed purposes.

LADWP will be concerned about water demand issues – related particularly to their water rights and water supply responsibilities. They expressed concern about increased costs resulting from management, maintenance and monitoring related to watershed withdrawal. Bill Manning indicated that the airport does not need another supply well – even with the proposed hotel/condo complex. The existing well is sufficient for full buildout.

LADWP is also concerned about recreational management. More visitors will require more intensive management activities. BLM has similar concerns over increased management requirements with increased visitation to the area – recreational use, camping, etc.

Expansion at the Bishop Airport is limited by Line Street to the south and Bishop Creek to the north. Mr. Donny McGhie was suggested as a point of contact for real estate issues.

The issue of mule deer is also of concern – they may become trapped on the highway by the security fencing.

In the discussion of prime and unique farmlands, the EIS should consider rangelands.

Drainage and stormwater treatment (e.g. oil/water separators) are issues to be considered.

Another issue will be overflights and disturbance of sage grouse on the lek near the airport. An increase in the number of visitors to the lek will result in increased management costs for LADWP. The possible listing of the sage grouse is being handled by the Reno office of the USFWS. The contact there is Lori Sada (775-861-6300); alternate contact is Kevin Kritz (775-861-6325). There have been multiple petitions and lawsuits on that issue.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Bishop Field Office
351 Pacu Lane, Suite 100.
Bishop, CA 93514
Phone: 760 872-5000
Fax: 760 872-5050
www.ca.blm.gov/bishop



Stew

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August 28, 2006

Camille Garibaldi
Environmental Protection Specialist
San Francisco Airports District Office
Federal Aviation Administration, Western-Pacific Region
831 Mitten Road, Room 210
Burlingame, CA 94010-1303

Dear Ms. Garibaldi:

Thank you for the opportunity to provide scoping comments on the preparation of an Environmental Impact Statement (EIS) for the proposed approval of Airlines Operations Specifications for Horizon Air to provide commercial airline service with regional jets into Mammoth Yosemite Airport, Mammoth Lakes, California. The intent of this letter is to briefly summarize our primary scoping issues and to express our continued interest in this project.

The Bishop Field Office of the Bureau of Land Management (BLM) is responsible for management of about 750,000 acres of public land in the Eastern Sierra region of California. The majority of this land is located in Mono County and includes 18,210 acres in Long Valley and the immediate vicinity of the airport. Over the past several years you have provided us with several opportunities to identify scoping issues related to potential impacts to adjacent public lands and resources associated with expanded airport operations. Review of the current scoping packet and subsequent attendance at the governmental and public agency scoping meeting on August 24, 2006 by Bishop Field Office staff has not revealed additional issues not identified in the past. Therefore, we request that you refer to issues identified during the scoping meeting held in our office on December 10, 2003 and cited in our letter dated December 29, 2003.

Public lands in the Eastern Sierra are known for their significant watershed, wildlife, cultural, scenic and recreation resources. The proposed action should be of sufficient detail to insure that a full and thoughtful analysis of potential off-site impacts to adjacent public lands and resources in Long Valley can be completed. Since potential off-site impacts are primarily associated with increased noise and/or visual disturbance, the proposed action should include specifics of airport operations not identified in the current Notice of Intent. These include a clearer description of low elevation flight lines over Long Valley as well as proposed aircraft arrival and departure times. In addition, current airport operations should serve as the baseline for comparison.

Public lands in the Eastern Sierra are also frequently subject to rights-of ways for road access and other infrastructure to support developments on adjacent private lands. Therefore, we request that any private land development scenarios identified in the EIS address the potential for impacts to adjacent public lands.

CARING FOR THE LAST VESTIGE OF WILD CALIFORNIA
CONSERVATION, EDUCATION, PARTNERSHIPS

As you know, sage grouse have been consistently identified as an important wildlife species occurring within and adjacent to the Mammoth Yosemite Airport that may be affected by airport operations. Potential impacts to the Long Valley sage grouse population is likely the most significant regional wildlife concern associated with the proposed air service. The U.S. Fish and Wildlife Service (FWS) is currently reviewing another petition to list sage grouse in Mono County under the Endangered Species Act. This recent petition specifically identifies airport operations at the Mammoth Yosemite Airport as a risk to the long-term survival of sage grouse in Long Valley. Any action perceived to significantly impact the Long Valley sage grouse population could influence future listing decisions by the FWS and have significant implications not only for the Mammoth Yosemite Airport but for all of Mono County. The current high level of interest in sage grouse populations requires that thoughtful mitigation measures be applied to reduce potential impacts.

Again, thanks for the opportunity to provide scoping comments on the preparation of an Environmental Impact Statement (EIS) for the proposed approval of Airlines Operations at Mammoth Yosemite Airport. As in the past, the Bishop Field Office is committed to providing you with the best available resource information to support your analysis. We encourage a full and thoughtful analysis of all of the proposed alternatives. Please direct any questions regarding range, wildlife, watershed or vegetation resources to Terry Russi (email trussi@ca.blm.gov, phone 760-872-5035). Questions regarding recreation, visual and cultural resources or realty actions should be directed to Joe Pollini (email jpollini@ca.blm.gov, phone 760-872-5028).

Sincerely,



Bill Dankelberger
Field Office Manager



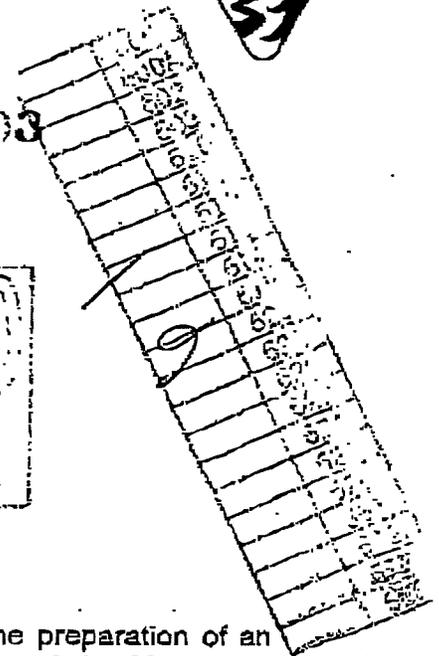
United States Department of the Interior

BUREAU OF LAND MANAGEMENT



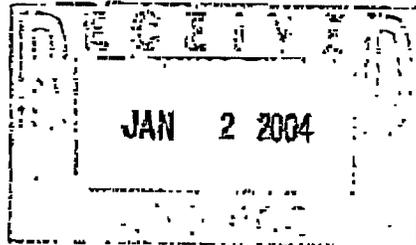
Bishop Field Office
351 Paci Lane, Suite 100.
Bishop, CA 93514
Phone: 760 872-5000
Fax: 760 872-5050
www.ca.blm.gov/blshop

SFO0003



December 29, 2003

Camille Garibaldi
Environmental Protection Specialist
U.S. Department of Transportation
Federal Aviation Administration
Airports District Office
831 Mitten Road, Room 210
San Francisco, CA 94010-1303



Dear Ms. Garibaldi:

Thank you for the opportunity to provide scoping comments on the preparation of an Environmental Impact Statement (EIS) for the proposed expansion of the Mammoth-Yosemite Airport. The meeting held in our office on December 10th, 2003, provided us with an excellent opportunity to share our scoping issues. I am confident my staff provided you with the information you need to address our concerns during development of the EIS. To date, subsequent review of the scoping packet by Bishop Field Office staff has not identified additional issues not discussed at that meeting. Therefore, lengthy comments are not provided here. The intent of this letter is to briefly summarize our primary scoping issues and to express our continued interest in this project.

The Bishop Field Office of the Bureau of Land Management (BLM) is responsible for management of about 750,000 acres of public land in the Eastern Sierra region of California. The majority of this land is located in Mono County and includes 18,210 acres in the immediate vicinity of the airport. As we currently understand the proposed action, none of the expansion activities would occur on BLM managed public lands. Therefore, our concerns are generally focused on the potential for off-site or growth-induced impacts to adjacent public lands and resources. (The Eastern Sierra is known for its significant watershed, wildlife, cultural and recreation resources. We believe the document must fully assess the direct, indirect and cumulative impacts of the proposed project on those resources.) This assessment should include an analysis of both on-site and off-site impacts. Furthermore, (the document must include adequate mitigation measures to eliminate or substantially reduce any potentially significant on-site or off-site impacts on those resources.)

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(Sage grouse and mule deer have been consistently identified as key wildlife species occurring within and adjacent to the project area. Both species require relatively large areas to support viable populations, which highlights the importance of evaluating and mitigating off-site as well as on-site impacts.) In addition, potential impact to the Long Valley sage grouse population is perhaps the most significant regional wildlife concern associated with the proposed project. To date, the U.S. Fish and Wildlife Service (FWS) has received several petitions to list the species under the Endangered Species Act. Any action perceived to significantly impact the Long Valley sage grouse population

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CARING FOR THE LAST VESTIGE OF WILD CALIFORNIA
CONSERVATION, EDUCATION, PARTNERSHIPS

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could influence future listing decisions by the FWS and have significant region-wide implications. (The current high level of interest in sage grouse populations requires that a thorough analysis of potential impacts be completed, and that thoughtful mitigation measures be applied to reduce potential impacts.) To that end, the Bishop Field Office remains committed to sharing all currently available information and expertise concerning the Long Valley sage grouse population.

12-1

As stated at the meeting, the potential for disposal or exchange of public lands in the region is limited by direction identified in the Bishop Resource Management Plan. However, public lands are frequently subject to rights-of ways for road access and other infrastructure to support developments on adjacent private lands. Therefore, we request that (any private land development scenarios identified in the EIS address the potential for impacts to adjacent public lands.)

25-4

Again, thanks for the opportunity to provide scoping comments on the preparation of an Environmental Impact Statement (EIS) for the proposed expansion of the Mammoth-Yosemite Airport. We encourage a full and thoughtful analysis of all of the proposed alternatives. Please direct any questions regarding range, wildlife, watershed or vegetation resources to Terry Russi (email trussi@ca.blm.gov, phone 760-872-5035). Questions regarding recreation and cultural resources or realty actions should be directed to Joe Pollini (email jpollini@ca.blm.gov, phone 760-872-5028).

Sincerely,

Bill Dunkelberger
Field Office Manager



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

May 9, 2007

Mr. Joe Pollini
Supervisory Resource Management Specialist
Bureau of Land Management
Bishop Field Office
351 Pacu Lane, Suite 100
Bishop, CA 93514

Dear Mr. Pollini:

**Mammoth Yosemite Airport, Mammoth Lakes, California
Draft Environmental Impact Statement for Proposed Operations
Specification Approval for Horizon Airlines - DOT Act Section 4(f)
Applicability of BLM Lands.**

The Federal Aviation Administration (FAA) is preparing a Draft Environmental Impact Statement (EIS) for the proposed approval of modifications to Horizon Air's Operations Specifications to Accommodate Proposed Scheduled Air Service into Mammoth Yosemite Airport (MMH), Mammoth Lakes, California. Horizon Air has proposed to initiate limited service into MMH from Los Angeles International Airport using the 78-passenger Bombardier Dash-8 Q400 turboprop aircraft. FAA is in receipt of Bureau of Land Management's (BLM) scoping comments dated August 28, 2006, as well as those from the scoping meeting held in your office on December 10, 2003 and cited in your letter dated December 29, 2003. In the August 28 letter, Mr. Bill Dunkelberger indicated that questions regarding recreation, visual, and cultural resources be directed to your attention.

Section 4(f) of the U.S. Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. 303 [c]) requires that the proposed use of any land from a significant publicly owned park or recreation area, wildlife and waterfowl refuge, or historic site that is on or eligible for inclusion into the National Register of Historic Places (NRHP) be given particular attention. As part of the EIS and Section 4(f) coordination process, FAA is in the process of determining the applicability of Section 4(f) to the following public lands and resources managed by the BLM:

- Fish Slough Area of Critical Environmental Concern,
- Owen's Valley Native Fish Sanctuary,
- Volcanic Tablelands,
- Red Rock Canyon,
- Chalk Bluff,
- Crowley Lake Campground,
- Horton Creek Campground,
- Chidago Canyon Petroglyph Site,
- Chalfant Petroglyph Site, and

- Yellow Jacket Petroglyphs.

The FAA is preparing a Noise Screening Assessment to:

- Define a study area, or Initial Area of Investigation (IAI);
- Perform an inventory of Section 4(f) resources within the IAI and determine if they are Section 4(f) properties where a quiet setting is a generally recognized purpose and attribute; and,
- Determine if further quantitative analysis beyond the standard FAA noise contour analysis is needed at each Section 4(f) property, and if so, the appropriate level of analysis for each Section 4(f) property.

The FAA has identified several representative locations within public lands and resources managed by BLM for our Noise Screening Assessment. These sites are shown on the enclosed map, and are described in the following table.

SITE ID	SITE NAME	ELEVATION (feet above MSL)
BLM-1	Horton Creek Campground	4,954
BLM-2	Chalk Bluff	4,444
BLM-3	Owens Valley Native Fish Sanctuary	4,290
BLM-4	Chidago Canyon Petroglyph Site	4,498
BLM-5	Red Rock Canyon	5,800
BLM-6	Volcanic Tablelands	5,791
BLM-7	Crowley Lake Campground	7,029

We understand there are two sites, Chalfant Petroglyph Site and Yellow Jacket Petroglyphs, which are listed on the National Register of Historic Places. We would like to include these sites in our Noise Screening Assessment. However, we have been unable to ascertain their locations, either from BLM staff or the NRHP website (which indicated the addresses were restricted). If you would provide the location of these two sites, we will include the results of our analysis in the Noise Screening Assessment, without disclosing the locations.

As the agency responsible for management of these public lands and resources, FAA requests the following information:

- What is (are) the primary use(s) of:
 - o Fish Slough Area of Critical Environmental Concern?
 - o Owen's Valley Native Fish Sanctuary?
 - o Volcanic Tablelands?
 - o Red Rock Canyon?
 - o Chalk Bluff?
 - o Crowley Lake Campground?
 - o Horton Creek Campground?
 - o Chidago Canyon Petroglyph Site
 - o Chalfant Petroglyph Site?

- o Yellow Jacket Petroglyphs?
 - Are any of these resources nationally, State, or locally significant?
 - If any are significant, what is the basis for this significance determination?
 - Is a quiet setting a generally recognized feature or attribute of any of these resources and their significance determination?
 - Do the listed sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources?
 - Are there any other sites of significance that we should include in our Noise Screening Assessment?

We would like to thank you for your assistance on this project and we look forward to our continued dialogue. If you have any questions about this information request, please call me at 310/725-3615.

Sincerely,

**ORIGINAL SIGNED BY
DAVID B. KESSLER**

David B. Kessler, AICP
Regional Environmental Protection Specialist

Cc: SFO-600, APP-600, AGC-620, AWP-7, URS Corp.

File: Mammoth Yosemite Airport, Mammoth Lakes, CA 2007 EIS Folder
AWP-610.1:D.B.Kessler:05/08/2007:MMH BLM 4(f) letter 5 9 07

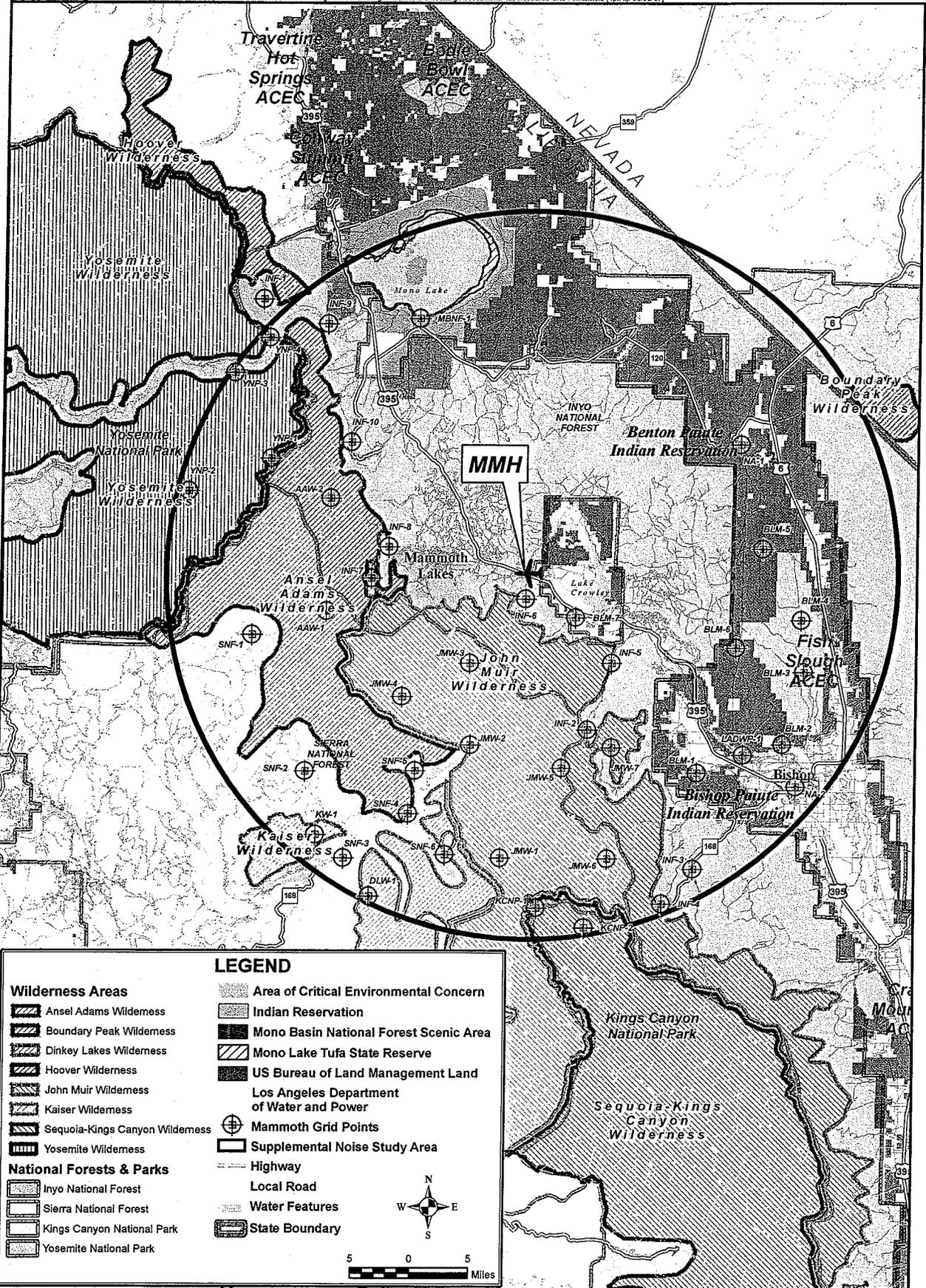


FIGURE 7

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

DRAFT



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operation Specification
Amendment Service to/from MMH



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Bishop Field Office
351 Pacu Lane, Suite 100
Bishop, CA 93514
Phone: 760 872-5000 Fax: 760 872-5050
www.ca.blm.gov/bishop



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US Dept of Transportation
Federal Aviation Administration
PO Box 92007
Los Angeles, CA 90009-2007

Attn: Dave Kessler

Dear Mr. Kessler:

The following information is in response to your inquiry dated May 9, 2007 requesting information about public lands resources as it relates to the proposed air service to the Mammoth Lakes airport.

Generally speaking, the public lands under our administration are managed to maintain semi-primitive settings and experiences for the many visitors who recreate on the public lands. The semi-primitive application provides vast settings of landscapes available to all recreation users where the public lands contain little to no facilities to guide or manage their experience. We strongly advocate self-exploration, self-inquiry, and self-discovery of the experiences public lands can offer. Part of the semi-primitive experience is to maintain the area's stillness and solitude to the greatest extent practicable. We request you consider this management philosophy in your upcoming EIS.

In review of your inquiry, the second page provides a table of various BLM sites located in the area of potential effect (APE). I noticed the table introduction identifies them as representative sites. I wish to point out that additional sites exist on public lands in the APE, not shown on the table, such as several popular bouldering areas, wilderness study areas, as well as hot springs/tub recreation sites - - - the first two are located in the Volcanic Tableland area, immediately south and east of the airport. The hot tub recreation sites are located in Long Valley, the APE around the airport itself. Quietness plays a major role in the experience visitors anticipate when using these areas.

The following identifies the sites and relevant issues to be considered in your upcoming analysis:

Cultural Resources

Insofar as cultural resources are concerned, the Volcanic Tableland contains numerous prehistoric and some historic sites of importance. Two sites are currently listed on the National Register of Historic Places (NRHP). Some of the more important and public visited sites such Chidago Petroglyph Site, Red Rock Canyon, Chalfant, Yellowjacket, and other unmentioned sites play a contextual role in the overall regional archeology which may lead to other NHRP eligibility nominations in the future.

Throughout the year, many rock art aficionados frequently visit the aforementioned sites. Part of the experience they seek is the quiet that embraces the area's remoteness and sense of vastness in the Volcanic Tableland. The area's stillness plays a pivotal role in maximizing the value of the outdoor experience they seek. Overall, we estimate these archeological/recreational sites receive several thousand visitors per year. I would also like to request that you contact the Bishop Paiute Tribe in Bishop and the Utu Utu Gwaitu Paiute Tribe in Benton, California to gain their perspectives of these sites, which represent their cultural and spiritual heritage.

For further information and locations, please contact Kirk Halford, our lead Archeologist at 760-872-5030 or by email at khalford@blm.gov.

Other Identified Recreation Resources

Besides the petroglyph sites, additional recreation resources identified in your inquiry include Horton Creek Campground, Red Rock Canyon, the Volcanic Tableland, Crowley Lake Campground, Chalk Bluff, and the Fish Slough Area of Critical Environmental Concern (ACEC). An additional site you identified, the Owen's Valley Native Fish Sanctuary, lies in the Fish Slough ACEC but is actually owned by the City of Los Angeles Dept. of Water and Power. The points presented below about the Fish Slough ACEC apply to the Fish Sanctuary as well.

Campgrounds

Obviously, the two campgrounds accommodate campers, many who lounge in the campground during their stay, while others fish, hike, climb, tour, etc., the eastern Sierra as part of their camping experience. Horton received about 2,500 campers, Crowley about 1000 visitors in 2006. Both campers draw visitors from throughout the country while Horton attracts more European visitors because of its proximity to premier bouldering and climbing areas.

The value of quiet likely plays an important role in the campers' experience although Crowley Lake Campground campers, due to its proximity to highways, etc., might expect the experience to be noisier than Horton Creek Campground. Horton Creek Campground is more isolated, physically embraced by broad scenic vistas where human sounds of civilization are nonexistent.

Volcanic Tableland

The Volcanic Tableland, which includes Chalk Bluff and the Fish Slough ACEC, is a broad volcanic desert plateau interspersed by long north-south linear fault scarps. The area totals some 50,000 acres. We estimate the area, including several bouldering sites sprinkled throughout the Tableland, receives about 32,000 visitors per year. A primitive campground, known as the Pleasant Valley Pit Campground, is located on the southwest edge of the Tableland. This campground was created around 1999 to accommodate the large increase in camping demand that occurred as a result of the area's newly found bouldering popularity in the Tableland. This campground received about 11,000 campers in 2006, predominantly climbers from throughout the United States as well as other countries.

Visitors to the Tableland generally consist of rock climbers, commercial livestock trail drives, hikers, vehicle users, campers, etc. The Fish Slough ACEC serves as living laboratory of nationally designated endangered wildlife species as well as plants. Within these nationally protected habitats, the ACEC is locally significant, at the very least. Education programs commonly occur in the ACEC for local and out of area students and teachers.

Additionally, several bouldering sites such as Happy and Sad Boulders, located in the Tableland are world renowned, attracting foreign tourists from many countries.

Finally, most of the Tableland is designated as Wilderness Study Areas (WSAs). Comprising four distinct units, the Tableland contained the prerequisite wilderness values of outstanding opportunities for solitude that strongly contributed to the designation of the WSAs. Although "outside sights and sounds impacts" such as aircraft, highways, etc. are not a determinant factor in designation of these areas as wilderness, we request you consider the role solitude, or quietness, plays in the physical setting of the Tableland and the experience of visitors to the area. The WSAs would be considered nationally significant if Congress designates them wilderness in the future.

For further information and locations, please contact Diana Pietrasanta, our Recreation Planner at 760-872-5028 or by email at diana_pietrasanta@blm.gov.

Other Recreation Resources Not Identified

The Long Valley area contains several BLM hot tub recreation sites located approximately several miles from the Mammoth Lakes airport facility. The hot tub recreation sites are popular. One, Wild Willies, experienced some 30,000 visitors in 2006. Quietness plays an essential role in the experience hot tub users anticipate when using these facilities in the area. All the hot tubs are located "off the beaten path", where the sights and sounds of manmade facilities is nonexistent further enhancing the role solitude plays in the recreation experience. These sites are not designated nationally

significant although they contribute to the diversity of outstanding semi-primitive recreation opportunities in the eastern Sierra region. They should be considered in your noise screening assessment.

For further information, please contact Diana Pietrasanta, our Recreation Planner at 760-872-5028 or by email at diana_pietrasanta@blm.gov.

Conclusion

As described above, BLM manages numerous resources in the APE where quietness plays a role in the use of the public lands. Recreation is a primary driving force of the local economy which is based on semi-primitive recreation management, intact habitats, unmarred scenery, and the vast isolation that pervades much of the eastern Sierra. We would encourage any future commercial flights through the Owens Valley use air space primarily above existing infrastructure developments. This means routing commercial air travel above the U.S, Highway 395 corridor or above the major utility power lines lacing portions of the Valley. This would confine the sights and sounds of commercial aviation to the least disruptive area of influence to area visitors.

Thank you for keeping us aware of your progress. If you have any further general questions, please contact Joe Pollini, our Assistant Field Manager, at 760-972-5020 or by email at jpollini@blm.gov.

Sincerely,

Bill Dunkelberger
Field Manager

CC: Diana Pietrasanta - BLM
Kirk Halford - BLM
Terry Russi - BLM



File Code: 1950-4

Date:

Camille Garibaldi
Environmental Protection Specialist
Federal Aviation Administration Airports District
Office
831 Mitten Road
Room 210
Burlingame, CA 94010-1303

Dear Camille,

The Inyo National Forest (INF) has identified the resources and facilities described below as 4(f) resources subject to the criteria of Section 4(f) of the Department of Transportation Act of 1966, Public Law 89-670, as amended by the Federal-Aid Highway Act of 1968, Public Law 90-495, Section 18.

These are publicly owned lands, open to the public, which serve a major purpose as recreation areas, parklands and wildlife refuges. Public land recreation is a significant resource in the Eastern Sierra, both as the economic backbone of the region and as an important recreation opportunity for residents of Southern California and other areas. Developed recreation facilities and concentrated use areas provide a critical resource in the delivery of diverse recreation opportunities to the public. 4(f) resources are identified within the framework of Inyo National Forest Land and Resource Management Plan.

Management Areas & Prescriptions

Management Prescriptions (Rx) are an overlay on Management Areas and provide more specific guidance for land management units within the Inyo National Forest. 4(f) is deemed to apply within all prescriptions where public recreation or protection of wildlife is the identified primary purpose of the land management unit designation. Emphasis is on Rx for developed, concentrated or high-use recreation areas and facilities, and on designated wilderness, wild and scenic rivers. Management Prescriptions identified as meeting 4(f) criteria are:

- Designated Wilderness (Rx 1)
- Proposed Wilderness (Rx 2)
- Mule Deer Habitat Rx 4)
- Mountain Sheep Habitat (Rx 3)
- Mono Basin National Forest Scenic Area (Rx 6)
- Wild and Scenic Rivers (Rx 8)
- Concentrated Recreation Area (Rx 12)
- Alpine Ski Area (Rx 13)



- Developed Recreation Site (Rx 15)

Designated Wilderness (Rx 1)

Designated wilderness areas (Rx 1) are listed below. The Inyo National Forest believes 4(f) applies to all wilderness areas and specifically to portions of designated wilderness which geographically overlap flight paths or other airport facilities. The purpose of this prescription is to protect wild lands and their wilderness values of natural ecological integrity and natural appearance.

This prescription applies to the Ansel Adams, Boundary Peak, Golden Trout, Hoover, Inyo Mountains, John Muir, and South Sierra Wilderness Areas.

Proposed Wilderness (Rx 2)

The Inyo National Forest believes 4(f) applies to all proposed wilderness areas and specifically to portions of designated wilderness which geographically overlap flight paths. The purpose of this prescription is to recognize and protect wilderness attributes of areas recommended for wilderness designation. This prescription applies to the Table Mountain and Tioga Lake Further Planning Areas and portions of the White Mountains and Paiute-Mazourka Further Planning Areas.

Mountain Sheep Habitat (Rx 3)

The purpose of this prescription is to provide high quality habitat for mountain sheep and to maintain or enhance existing populations. Lands within this prescription serve a primary purpose as refuge for mountain sheep and fall within 4(f) criteria.

Mule Deer Habitat (Rx 4)

The purpose of this prescription is to preserve or enhance key mule deer habitat in order to maintain or increase existing population levels. The emphasis is on key mule deer habitat, fawning areas, winter range, migration corridors and holding areas. Lands within this prescription serve a primary purpose as refuge for mule deer and fall within 4(f) criteria.

Mono Basin Scenic Area (Rx 6)

Established in 1984 as the nation's first scenic area, it area contains unique ecological and cultural resources around Mono Lake. The area is about 65 square miles and is primarily located north and east of Lee Vining community. Towering cinder cone mountains are located south of Mono Lake and east of U.S. 395. There are several hot springs and steam vents in the area, which are attributed to volcanic activity. Facilities include a visitor center, trails, and restrooms. Mono Basin is approximately 17 miles north of MMH and 47 miles northwest of BIH. A primary purpose of the Scenic are is recreational viewing of Tufa, birding, hiking and recreational boating.

Wild and Scenic River (Rx 8)

The purpose of this prescription is to maintain rivers that have been recommended or designated in a free-flowing condition. The emphasis is on maintenance of scenic, recreation, geologic, fish and wildlife, vegetation, and cultural values. The North Fork of the Kern River and South Fork of the Kern River are designated Wild and Scenic Rivers.

The Wild and Scenic Rivers Act requires that river segments be classified and administered as *Wild*, *Scenic*, or *Recreational* river segments, based on the condition of the river at the time of designation. 4(f) criteria apply to those Wild and Scenic River segments classified as Wild, Recreational or for which an Outstandingly Remarkable Value for recreation or opportunities for solitude has been identified.

Concentrated Recreation Areas (Rx 12)

The purpose of this prescription is to manage concentrated recreation areas to maintain or enhance major recreation values and opportunities.

Alpine Ski Area (Rx 13)

The purpose of this prescription is to maintain and manage existing downhill ski areas for public recreation us and applies to the area within the permit boundaries of Mammoth Mountain and June Mountain Ski Areas.

Concentrated Recreation Areas (Rx 15)

The purpose of this prescription is to maintain developed recreation facilities and is applied to all existing developed sites whether publicly or privately operated. The boundaries of developed recreation sites have not been mapped and are included as attachment A.

Geographic boundaries of prescriptions identified above can be derived from GIS data previously provided to the FAA and your consultant.

I look forward to your review and our continued dialogue on determination of 4(f) resources. If you have any questions or need additional information please contact Michael Schlafmann, via email mschlafmann@fs.fed.us, or via telephone at 760.924.5503.

Sincerely,

JON C. REGELBRUGGE
District Ranger

ATTACHMENT A

CAMPGROUNDS

Horseshoe Meadows

Cottonwood Pass (Golden Trout)
Backpacker (walk-in)
Cottonwood Lakes Backpacker (walk-in)
Horseshoe Meadow Equestrian

Lone Pine Creek

Lone Pine
Lone Pine (group)
Whitney Portal
Whitney Portal (group)
Whitney Trailhead (walk-in)

Independence Creek

Lower Grays Meadow
Upper Grays Meadow
Onion Valley
Oak Creek

Big Pine Creek

Big Pine Creek
First Falls walk-in
Sage Flat
Upper Sage Flat
Palisade Glacier (group)
Clyde Glacier (group)

Bishop Creek

Big Trees
Bishop Park
Forks
Four Jeffrey
Intake 2 walk-in
Intake 2 (upper)
Mountain Glen
North Lake
Sabrina
Willow
Bishop Park (group)
Table Mountain (group)

Rock Creek

Big Meadow

East Fork
French Camp
Iris Meadow
Palisade
Pine Grove
Rock Creek Lake
Tuff
Upper Pine Grove
Holiday (Overflow)
Aspen (Group)
Rock Creek Lake (Group)
Mosquito Flat Trailhead walk-in (for backpackers)

McGee Creek

McGee Creek

White Mountains/Bristlecone Pine Forest Area

Grandview
Fossil (Group)
Juniper (Group)
Pinon (Group)
Poleta (Group)

Convict Lake

Convict Lake

Mammoth Village Area

New Shady Rest
Old Shady Rest
Sherwin Creek
Pine Glen (overflow)
Pine Glen (group)

Mammoth Lakes Basin

Coldwater
Twin Lakes
Lake George
Lake Mary
Pine City

Reds Meadow Area

Agnew Meadows
Minaret Falls
Reds Meadow

ATTACHMENT A

Pumice Flat
Upper Soda Springs
Agnew Meadows (group)
Pumice Flat (group)

Crestview Area Campgrounds

Big Springs
Deadman
Glass Creek
Hartley Springs
Obsidian Flat (Group)

June Lake Loop Campgrounds

Aerie Crag (RVs only/overflow)
Bloody Canyon Trailhead
Gull Lake
June Lake
Oh! Ridge
Reversed Creek
Silver Lake

Lee Vining Area Campgrounds

Aspen
Big Bend
Boulder
Cattleguard
Ellery Lake
Junction
Lower Lee Vining
Moraine
Sawmill walk-in
Saddlebag Lake (small trailers/RVs)
Trailhead Group (at Saddlebag Lake)
Tioga Lake (small trailers/RVs)

ATTACHMENT A

PACKSTATIONS

Bishop Pack Outfitters - Located on the North Fork of Bishop Creek

Cottonwood Pack Station - West of Lone Pine

Frontier Pack Train - On June Lake Loop

Glacier Pack Train - Pack trips and day rides; Big Pine Lakes/Palisade Glacier area

Mammoth Lakes Pack Outfit - Located in the Mammoth Lakes Basin

McGee Creek Pack Station - Located near McGee Creek Trailhead

Mt. Whitney Pack Trains - Service from Sawmill, Shepherd, Taboose & Olancho Pass trailheads

Pine Creek Pack Station - Located 20 miles northwest of Bishop

Rainbow Pack Outfitters - Located in the Bishop Creek drainage

Reds Meadow Resort and Pack Station - Located at Reds Meadow

Rock Creek Pack Station - Located in Rock Creek

LODGES & RESORTS

Big Rock Resort - Cabins, tackle shop and boat rentals located adjacent to June Lake

Boulder Lodge, Inc. - Motel rooms and suites located adjacent to June Lake

Crystal Crag Lodge - 21 housekeeping cabins overlooking Lake Mary

Glacier Lodge - General store, hiking, fishing, cabin rentals and full RV hookups

Kings Rock Creek Lakes Resort - Cabin rentals, general store, cafe, boat rentals located across from Rock Creek Lake

Parchers Resort/South Lake Boat Landing - Individual housekeeping cabins, general store and café, boat rentals at South Lake.

Red's Meadow Resort and Pack Station - Cabins, cafe and market

Rock Creek Lodge - Private cabins, general store, restaurant, rentals

ATTACHMENT A

Sierra Meadows Ranch - Sleigh rides and cross-country skiing; trail rides, hayrides, horse boarding; café

Silver Lake Resort - Housekeeping cabins, RV park, general store, cafe, and boat rentals on the north shore of Silver Lake

Tioga Pass Resort - Winter backcountry ski resort – Summer store, accomodations, gasoline, cafe and gifts

Twin Lakes General Store - Mammoth Lakes Basin

Whitney Portal Store – General store 13 miles west of Lone Pine

Wildyrie Resort - Cabin and room rentals, boat dock

Woods Lodge - Cabin rentals, boat dock with motor and rowboat rentals, launch ramp

DJ's Snowmobile Adventures - Snowmobile rentals located on Smokey Bear Flat

June Lake Marina - June Lake Marina, boat rentals, dock slips, tackle shop

Sledz's - Rope tow and tubes.



U.S Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

May 9, 2007

Mr. Mike Schlafmann
Winter Sports Specialist
USDA Forest Service
Pacific Southwest Region
Inyo National Forest
Mammoth Ranger Station
Highway 203, Box 148
Mammoth Lakes, CA 93546

Dear Mr. Schlafmann:

**Mammoth Yosemite Airport, Mammoth Lakes, California
Draft Environmental Impact Statement for
Proposed Operations Specification Approval for Horizon Airlines
DOT Act Section 4(f) Applicability of the Inyo National Forest**

The Federal Aviation Administration (FAA) is preparing a Draft Environmental Impact Statement (EIS) for the proposed approval of modifications to Horizon Air's Operations Specifications to Accommodate Proposed Scheduled Air Service into Mammoth Yosemite Airport (MMH), Mammoth Lakes, California. Horizon Air has proposed to initiate limited service into MMH from Los Angeles International Airport using the 78-passenger Bombardier Dash-8 Q400 turboprop aircraft. There is no new construction at the airport associated with the proposal. Therefore, the units of the Inyo National Forest would not be directly affected by the proposed action. FAA is in receipt of Inyo National Forest's scoping comments from Jon C. Regelbrugge. In the letter, Mr. Regelbrugge indicated that questions be directed to your attention.

Section 4(f) of the U.S. Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. 303 [c]) requires that the proposed use of any land from a significant publicly owned public park or recreation area, wildlife and waterfowl refuge, or historic site that is on or eligible for inclusion into the National Register of Historic Places (NRHP) be given particular attention. As part of the EIS and Section 4(f) coordination process, FAA has previously coordinated with the Inyo National Forest in determining the applicability of Section 4(f) to areas within the Inyo National Forest, including the portions of Ansel Adams and John Muir Wilderness Areas that are within the Inyo National Forest.

The FAA is preparing a Noise Screening Assessment to:

- Define a study area, or Initial Area of Investigation (IAI);
- Perform an inventory of Section 4(f) resources within the IAI and determine if they are Section 4(f) properties where a quiet setting is a generally recognized purpose and attribute; and,

- Determine if further quantitative analysis beyond the standard FAA noise contour analysis is needed at each Section 4(f) property, and if so, the appropriate level of analysis for each Section 4(f) property.

The Forest Service is responsible for management of the Inyo National Forest and the Mono Basin National Forest Scenic Area, as well as joint management of the John Muir Wilderness Area and the Ansel Adams Wilderness Area. The FAA has identified several **representative** locations within or adjacent to these resources for our Noise Screening Assessment. These sites are shown on the enclosed map, and are described in the following table.

SITE ID	SITE NAME	ELEVATION (feet above MSL)	WILDERNESS AREA
INF-1	Sawmill Campground	9,799	NA*
INF-2	Mosquito Flats Campground	10,382	Adjacent to John Muir
INF-3	Big Tress Campground	7,598	NA*
INF-4	North Lake Campground	9,803	Adjacent to John Muir
INF-5	Iris Meadow Campground	8,526	Adjacent to John Muir
INF-6	Convict Lake Campground	7,651	NA*
INF-7	Devils Postpile Lookout	7,761	Adjacent to Ansel Adams
INF-8	Minaret Vista	9,132	NA*
INF-9	Boulder Campground	7,398	NA*
INF-10	Silver Lake	7,398	NA*
AAW-2	John Muir Trail – Garnet Lake	9,822	Ansel Adams
MBNF-1	Mono Lake Lookout	6,431	NA*

*NA = Part of the Inyo National Forest but not within a designated Wilderness Area.

This list is not intended to be exhaustive. Rather these sites were chosen to be representative of particular resource uses in various portions of the Inyo National Forest. As the agency responsible for management of the Inyo National Forest and the Mono Basin National Forest Scenic Area, as well as joint management of the John Muir Wilderness Area and the Ansel Adams Wilderness Area, FAA requests that you provide the following information:

Do the listed sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources?

Are any of these sites significant, and what is the basis for this significance determination?

Is a quiet setting a generally recognized feature or attribute of these resources and their significance determination?

Are there any other sites of significance that we should include in our Noise Screening Assessment?

We would like to thank you for assistance in this project and we look forward to our continued dialogue regarding Section 4(f) resources. If you have any questions about this information request, please feel free to call me at (310) 725-3615.

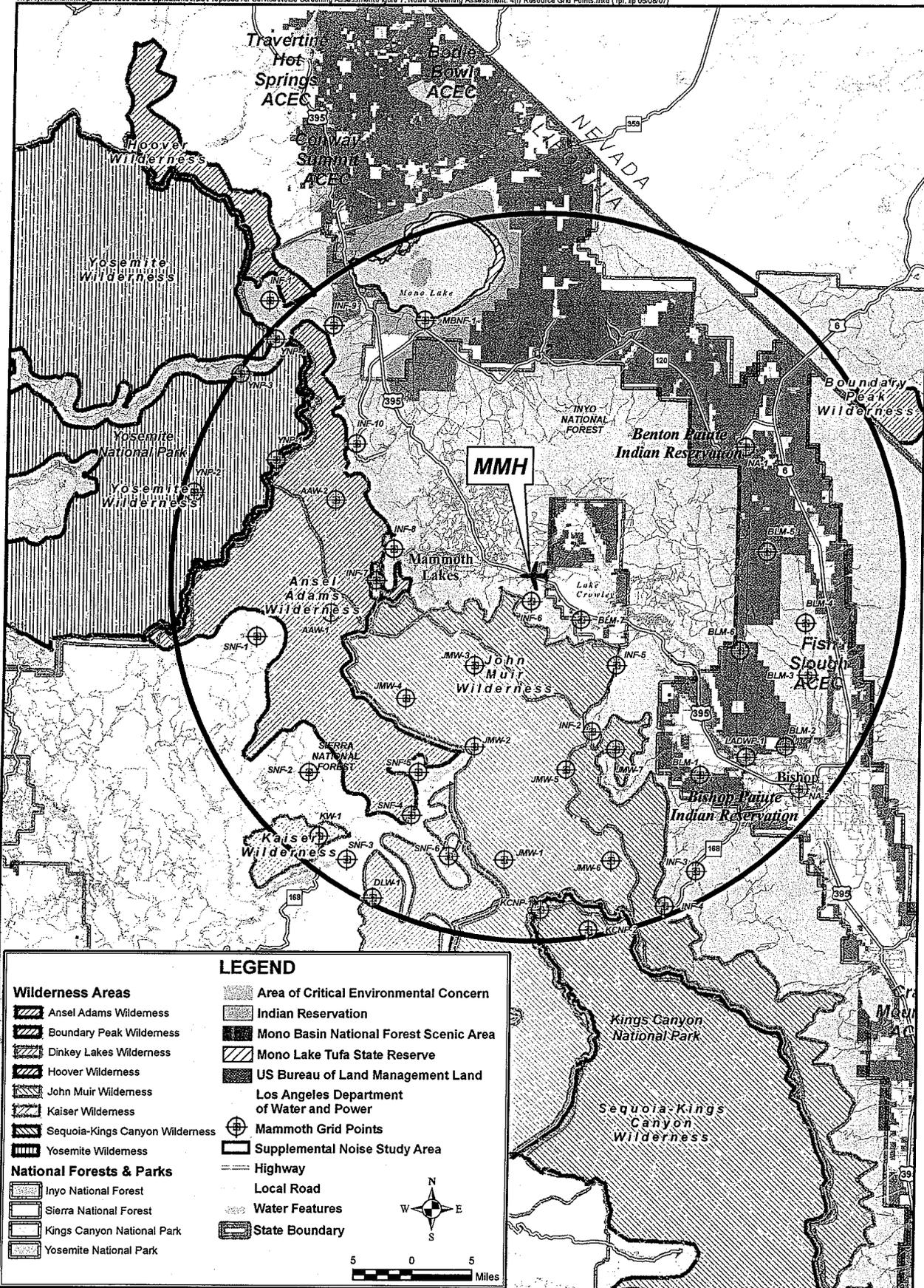
Sincerely,

ORIGINAL SIGNED BY
DAVID B. KESSLER

David B. Kessler, AICP
Regional Environmental Protection Specialist

Cc: SFO-600, APP-600, AGC-620, AWP-7, URS Corp.

File: Mammoth Yosemite Airport, Mammoth Lakes, CA 2007 EIS Folder
AWP-610.1:D.B.Kessler:05/09/2007:MMH Inyo Nat'l Forest 5 9 07



LEGEND

Wilderness Areas	Area of Critical Environmental Concern
Ansel Adams Wilderness	Indian Reservation
Boundary Peak Wilderness	Mono Basin National Forest Scenic Area
Dinkey Lakes Wilderness	Mono Lake Tufa State Reserve
Hoover Wilderness	US Bureau of Land Management Land
John Muir Wilderness	Los Angeles Department of Water and Power
Kaiser Wilderness	Mammoth Grid Points
Sequoia-Kings Canyon Wilderness	Supplemental Noise Study Area
Yosemite Wilderness	Highway
National Forests & Parks	Local Road
Inyo National Forest	Water Features
Sierra National Forest	State Boundary
Kings Canyon National Park	
Yosemite National Park	

FIGURE 7

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

DRAFT



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operation Specification
Amendment Service to/from MMH



File Code: *

Date: July 24, 2007

David Kessler
Regional Environmental Protection Specialist
Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA.
90009-2007

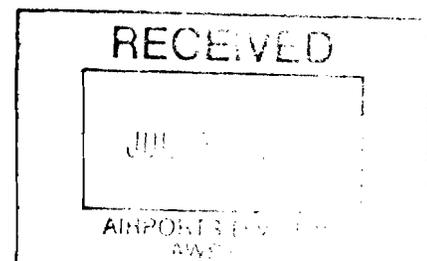
Mr. Kessler,

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for the proposed approval of modifications to Horizon Air's Operations Specifications to Accommodate Proposed Scheduled Air Service into Mammoth Yosemite Airport (MMH), Mammoth Lakes, California. Section 4(f) of the U.S. Department of Transportation Act (DOT Act) requires that the EIS consider impacts to significant publicly owned recreation areas.

For the purpose of satisfying Section 4(f) requirements, FAA has proposed the recreation sites listed below to be included in its Noise Screening Assessment. I concur that these recreation sites are *representative* of the various recreation use areas of the Inyo National Forest and should be included in the FAA's Noise Screening Assessment:

- Sawmill Campground
- Big Tress Campground
- Iris Meadow Campground
- Convict Lake Campground
- Devils Postpile Lookout
- Minaret Vista
- Cattleguard Campground (Boulder Campground currently closed)
- Silver Lake
- John Muir Trail – Garnet Lake
- Mono Lake Lookout

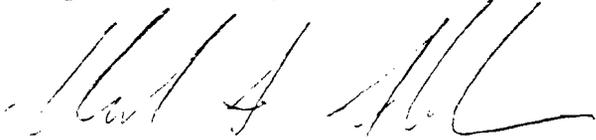
I find that these recreation areas provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the proposal. I find that no additional recreation areas are required in the Noise Screening Assessment.



In accordance with Section 4(f) I find that the following recreation sites are significant in that a quiet setting is a generally recognized feature and attribute:

- Devils Postpile Lookout
- Minaret Vista
- Silver Lake
- John Muir Trail – Garnet Lake
- Mosquito Flats Campground
- North Lake Campground

If you require additional information, please contact Jonathan Cook-Fisher at the Mammoth Ranger Station (760) 924-5503.



JON C. REGELBRUGGE
District Ranger
Mammoth/Mono Lake Ranger Districts



United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
1111 Jackson Street, Suite 700
Oakland, California 94607-4807



IN REPLY REFER TO:
N3615 (PWR-NR)

August 30, 2006

Ms. Camille Garibaldi
Environmental Protection Specialist
Federal Aviation Administration
Western-Pacific Region, San Francisco ADO
831 Mitten Road, Room 210
Burlingame, California 94010

Dear Ms. Garibaldi:

Thank you for the opportunity to comment on the Notice of Intent to issue an Environmental Impact Statement for the approval of Operation Specifications for Horizon Air to provide scheduled commercial airline service with regional jets into Mammoth Yosemite Airport, Mammoth Lakes, California. This proposal may affect the environment within and adjacent to several national park units. We understand the FAA is in the draft EIS scoping phase at this point. We appreciate the FAA's concern for our nation's human and natural environment. Please consider the information in this letter as well as the attachment, in the scoping process for this project.

The National Park Service evaluates federal actions which may impact the human and natural environment within our parks with respect to our Organic Act mandates, including "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations". In addition to the Organic Act, the Wilderness Act of 1964 governs how NPS manages federally designated wilderness. Wilderness areas are special places where the imprint of man's work is substantially unnoticeable and where people expect to find outstanding opportunities for solitude or a primitive and unconfined type of recreation. The NPS units nearby the Mammoth Yosemite Airport include Devils Postpile National Monument, Yosemite, Kings Canyon, Sequoia, and Death Valley National Parks and Manzanar National Historic Site. These parks, with the exception of Manzanar NHS, are comprised mostly of federally designated wilderness.

We are different from other federal land management agencies in that in addition to our national legislative mandates, most units of the national park system were established under separate legislative authority which identifies specific purposes for which the park was established and often includes the identification of key natural or cultural resources and values which define the integrity of the park. Park units not established by legislation were generally established under Presidential proclamation through the Antiquities Act which also articulates the specific resources and values being protected.

In all of these parks there has been a wide range and long history of human interaction with the land that has not included the sights and sounds of aircraft, and as such represents a cultural value of what a natural soundscape entails. Natural and cultural sounds are integral members of the suite of resources and values that National Park managers are charged with preserving, and restoring. Overall, ecosystem health depends on an area's ability to transmit ecologically significant sounds yet soundscapes free from anthropogenic intrusions have become rare in today's world. A soundscape refers to the total acoustic environment of an area. Soundscapes often vary in their character from day to night and from season to season and can be affected by changes in numbers of visitors who introduce human-caused sound into the environment. The soundscape of a national park, like air, water, scenery, or wildlife, is a valuable resource that can easily be degraded or destroyed by inappropriate sounds or sound levels. As a result, soundscapes require careful management if they are to remain unimpaired for future generations.

Our nation's parks host millions of residents from large urban communities who seek the ability to easily access park recreational opportunities of which the ability to experience the natural soundscape is considered a key component of a high quality experience (see 1994 Report to Congress, Natural Resource Year in Review 2004, pg 90, "Understanding Visitor Opinions of Park Resources"). For example, visitors who are walking along a trail, a park ranger presenting a guided nature hike or campfire program, listening to birds singing early in the morning, and/or hearing the cast from a fishing pole are all experiences that would likely be compromised by the sound of aircraft.

Additionally, these parks include congressionally designated wilderness that provides for protection of the areas primeval character and outstanding opportunities for solitude. The wildernesses along the Sierra Nevada constitute the largest contiguous chunk of wilderness in the U.S. outside of Alaska during the winter (when Tioga Pass is closed) and the second largest in the summer. The John Muir Trail system connecting Yosemite, Devils Postpile, and Sequoia Kings Canyon as well as the Pacific Crest Trail transecting the Sierra Nevada parks and wilderness areas provides for one of the longest continuous stretches of hiking and packing experiences within any mountain system in the world. There are so few places left in the mountains of North America that offer the possibility of this relatively pristine and superlative trail system. These wildernesses, nationally designated trails, and parks are icons of the West and the National Park Service. Minimizing both noise and visual intrusions of aircraft including contrails, in these areas can significantly increase the quality of the visitors' experience.

Protection of natural soundscapes is important for both visitor enjoyment and resource protection. Impacts from noise, in this case aircraft noise, on wildlife is a growing topic of scientific study. Several studies have shown that certain frequencies and decibel levels can drown out the communications between individuals in a species and also create lapses in communication among species. Noise can lead to increased physical stress in wildlife and/or increased vulnerability to predation.

With reference to FAA Order 1050.1E, we embrace the FAA's environmental policy toward:

- the identification of reasonable alternatives
- a rigorous analysis of the foreseeable direct, indirect, and cumulative environmental impacts of the proposed actions and alternatives
- comprehensive analysis for informed decision making
- identification and evaluation of mitigation measures
- ensuring appropriate mitigation measures are implemented
- ensuring compliance with applicable laws, regulations, policies

In order for us to provide a comprehensive and meaningful evaluation of resource and visitor experience impairment we will need information identified in the attachment.

This letter and its attachment capture much of what we would expect the scope of the EIS to incorporate. Our main interest is in assuring the fundamental natural and cultural resources and values of the area's national parks are appropriately dealt with in the analysis. The proposal to move Mammoth Yosemite Airport from a Class IV facility to a Class I facility, opening the door to scheduled large air carrier service must be studied in light of expected growth, cumulative impacts, and the impact of the same on the visitor experiences and natural and cultural resources of area national parks.

We appreciate the preliminary flight tracks analysis provided by FAA in the August 2006 EIS Newsletter shows an attempt at reducing impacts to Devils Postpile and Yosemite. However, we are concerned about impacts to Sequoia and Kings Canyon NPs where flight tracks cross the western portions of these parks. To avoid the sensitive airspace over Sequoia and Kings Canyon NP's flights would need to move further west into the central valley. In addition, we need flight path information and impact analysis data for Death Valley NP and Manzanar NHS for flights originating in and bound towards Las Vegas. We request that the flight tracks presented in the Final EIS reflect a binding agreement not to fly over the parks?

During the agency scoping meeting on August 24, 2006 and the meeting with Devils Postpile National Monument Superintendent Deanna Dulea on August 23, the FAA EIS team identified that Air Traffic Control considered these to be likely routings based on point to point navigational fixes. Also, the defined appropriate procedures of approach to Mammoth Yosemite airport from Bishop along the east side of the Owens Valley and Long Valley Caldera would steer the flights away from ascents and descents over the parks. These were described as defined procedures in order to maintain radar contact as long as possible as the flights ascend and descend on the east side of the Owens Valley

and Long Valley Caldera, and that the flights over the Sierra Nevada would always be at a minimum of 18,000 feet. Issues that we would like to see addressed include the specific requirements directed to pilots to ensure compliance with this minimum. Also, as the flights grow over the years from LA, Oakland and Las Vegas, and from winter to summer, what specific requirements will be in place to ensure that the flight tracks will not compromise the resources and visitor experience in Devils Postpile, Yosemite, Sequoia and Kings Canyon, Death Valley, and Manzanar?

The proposal area is listed as non attainment for air quality - air quality is an existing and growing national concern - particularly as it impacts our national parks. Also, in the 2000 EA the flight tracks would take aircraft just 10,000 feet lateral and less than 10,000 feet vertical from Hot Creek, which is listed as an eligible Wild and Scenic River. The aircraft at this distance would likely create audible and visual impacts. This EIS should include a comprehensive analysis of the potential impacts to this eligible Wild and Scenic River. And, a comprehensive analysis of the 4f impacts associated with the visitor use/resources of the area national parks should be included in the scope.

The comparative analysis of airports referenced in the year 2000 EA indicate a doubling and tripling of markets in just ten years with Vail, Colorado tripling enplanements in just four years. The projected service proposed in the NOI indicates that winter service would increase fourfold in three years. Our understanding of the information presented at the August 24th scoping meeting is that scheduled commercial service enplanements could reach nearly 70,000 in five years (from zero). The scope of the analysis must include a reasonable expectation and explanation of use and the impact associated with it, preferably over a twenty year time period.

We look forward to working with you to articulate a strategy for ensuring park resources and visitor experience are protected unimpaired for future generations against impacts of the proposed Operation Specifications for Horizon Air at Mammoth Yosemite Airport. Please contact Judy Rocchio of my staff, 510-817-1431 if you have any questions regarding our comments.

Sincerely,

Patricia A. Neubacher

Jonathan B. Jarvis
Regional Director, Pacific West Region

Attachment

cc:
Superintendents DEPO, YOSE, SEKI, DEVA, MANZ
Karen Trevino, NPS Natural Sounds Program

Attachment

Information NPS PWR Requested from FAA WPR for Evaluating the Environmental Impact Statement for the approval of Operation Specifications for Horizon Air to provide scheduled commercial airline service August, 2006

Please provide the following information as soon as possible:

- 1) The existing approved Airport Master Plan as well as any draft Master Plan which would reflect the proposed actions and related alternatives analysis. This will provide our agency the full context of the proposed action in light of existing and future planned activities on record.
- 2) The currently approved Airport Layout Plan as well as any Draft Airport Layout Plan currently under development. This will provide our agency a graphic representation of both approved and proposed development at the airport. This will also provide to us a graphic representation of the protected surfaces around the airport.
- 3) The existing planned development identified within the NPIAS database
- 4) The existing Terminal Area Forecasts for the Mammoth Yosemite Airport
- 5) The existing Flight Tracks within a 75 mile radius of the Mammoth Yosemite Airport

As you prepare the draft environmental documents we request that you include the information, documentation, and analysis that we will need in order for us to complete our evaluation. This would include specific information on:

- Purpose and need for the proposed action.
- Description of the proposed action.
- Preliminary alternatives identified to date; any alternatives considered and rejected to date.
- Affected environment.
- Agencies, organizations, tribes, and persons consulted.
- Environmental consequences of the proposed action and alternatives, specifically:
 - 4f, Land use compatibility (existing and planned land uses),
 - Ecosystem impacts
 - Wildlife impacts
 - Historic, architectural, archeological, and cultural resources
 - Air and Water quality
 - Natural Soundscapes
 - Lighting Impacts
- Determination of Area of Potential Effect and Survey of the Area.
- Cumulative impacts including effects of proposed use combined with military use.
- Airport and Airspace Specific Information:

- The airport design category by weight, wingspan, and approach speed (existing and proposed)
- The runway strength (current and proposed), Runway Length, New Runways, New Terminals
- Quiet Technology Employed
- Any proposed Modification to Design Standards which would impact operations
- Fleet Mix Changes, Type of use such as passenger vs. cargo
- Number of Aircraft Operations (existing, 5 year, 10 year, 20 year)
- Air Traffic Changes
- New Approaches
- Any airspace considerations
- Level/Altitude of flight
- Depiction of Flight Tracks (with changes)
- Depiction of Noise Contours
- Is this project subject to specific streamlining initiative?
- With recognition that the 65DNL standard does not apply within National Parks, please provide details on the noise assessment criteria used and any special consideration for noise impacts on unique and sensitive section 4f properties as well as noise effects on wildlife. Note 4f is the Common reference for 303c of USC.
- Noise analysis
 - Current and forecast conditions for all reasonable alternatives
 - Flight track maps, Noise contour maps
 - Mitigation measures in effect and there relationship to the proposal
 - Inclusion of data on background or ambient noise levels
 - Any supplemental noise analysis
- Methodology for identifying and avoiding adverse effect: on special areas near flight corridors, including NPS parks and wilderness, US Forest Service wilderness areas, US Fish and Wildlife Service refuges, and California State parks.



U.S. Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

May 9, 2007

Ms. Judy Rocchio
National Park Service
Pacific West Region
1111 Jackson Street, Suite 700
Oakland, CA 94607-4807

Dear Ms. Rocchio:

**Mammoth Yosemite Airport, Mammoth Lakes, California
Draft Environmental Impact Statement for Proposed Operations
Specification Approval for Horizon Airlines - DOT Act Section 4(f)
Applicability of Units of the National Park System.**

The Federal Aviation Administration (FAA) is preparing a Draft Environmental Impact Statement (EIS) for the proposed approval of modifications to Horizon Air's Operations Specifications to Accommodate Proposed Scheduled Air Service into Mammoth Yosemite Airport (MMH), Mammoth Lakes, California. Horizon Air has proposed to initiate limited service into MMH from Los Angeles International Airport using the 78-passenger Bombardier Dash-8 Q400 turboprop aircraft.

The proposal does not include any new construction at the airport. Therefore, the units of the National Park Service (NPS) would not be directly affected by the proposed action. FAA is in receipt of NPS's scoping comments dated August 30, 2006, as well as comments provided during the meeting with Devils Postpile National Monument Superintendent Deanna Dulen on August 23, 2006. In the August 30 letter, Mr. Jonathan Jarvis indicated that questions be directed to your attention.

Section 4(f) of the U.S. Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. 303 [c]) requires that the proposed use of any land from a significant publicly owned public park or recreation area, wildlife and waterfowl refuge, or historic site that is on or eligible for inclusion into the National Register of Historic Places (NRHP) be given particular attention. As part of the EIS and Section 4(f) coordination process, FAA has previously coordinated with the National Park Service in determining the applicability of Section 4(f) to units of the National Park Service.

The FAA is preparing a Noise Screening Assessment to:

- Define a study area, or Initial Area of Investigation (IAI);
- Perform an inventory of Section 4(f) resources within the IAI and determine if they are Section 4(f) properties where a quiet setting is a generally recognized purpose and attribute; and,

- Determine if further quantitative analysis beyond the standard FAA noise contour analysis is needed at each Section 4(f) property, and if so, the appropriate level of analysis for each Section 4(f) property.

The National Park Service is responsible for management of the Yosemite National Park, Yosemite Wilderness Area, Sequoia & Kings Canyon National Park, Sequoia-Kings Canyon Wilderness Area, and Devils Postpile National Monument, as well as joint management of the Ansel Adams Wilderness Area. The FAA has identified several **representative** locations within or adjacent to these resources for our Noise Screening Assessment. These sites are shown on the enclosed map, and are described in the following table.

SITE ID	SITE NAME	ELEVATION (feet above MSL)	WILDERNESS AREA
AAW-1	Cargyle Meadow	8,055	Ansel Adams
AAW-2	John Muir Trail - Garnet Lake	9,822	Ansel Adams
INF-7	Devils Postpile Lookout	7,761	Adjacent to Ansel Adams
KCNP-1	John Muir Trail - San Joaquin River	8,458	Sequoia-Kings Canyon
KCNP-2	John Muir Trail - McClure Meadow	9,799	Sequoia-Kings Canyon
YNP-1	John Muir Trail - Donuhue Pass	11,011	Adjacent to Yosemite and Ansel Adams
YNP-2	Washburn Lake	7,598	Yosemite
YNP-3	John Muir Trail - Lyell Canyon	8,805	Adjacent to Yosemite
YNP-4	Tioga Pass	10,000	Adjacent to Yosemite

This list is not intended to be exhaustive. Rather these sites were chosen to be representative of particular resource uses in various units of the National Parks. As the agency responsible for management of the Yosemite National Park, Yosemite Wilderness Area, Sequoia & Kings Canyon National Park, Sequoia-Kings Canyon Wilderness Area, and Devils Postpile National Monument, as well as joint management of the Ansel Adams Wilderness Area, FAA requests the following information:

Do the listed sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources in the parks?

Are any of these sites significant, and what is the basis for this significance determination?

Is a quiet setting a generally recognized feature or attribute of these resources and their significance determination?

Are there any other sites of significance that we should include in our Noise Screening Assessment?

We would like to thank you for assistance in this project and we look forward to our continued dialogue regarding Section 4(f) resources. If you have any questions about this information request, please call me at 310/725-3615.

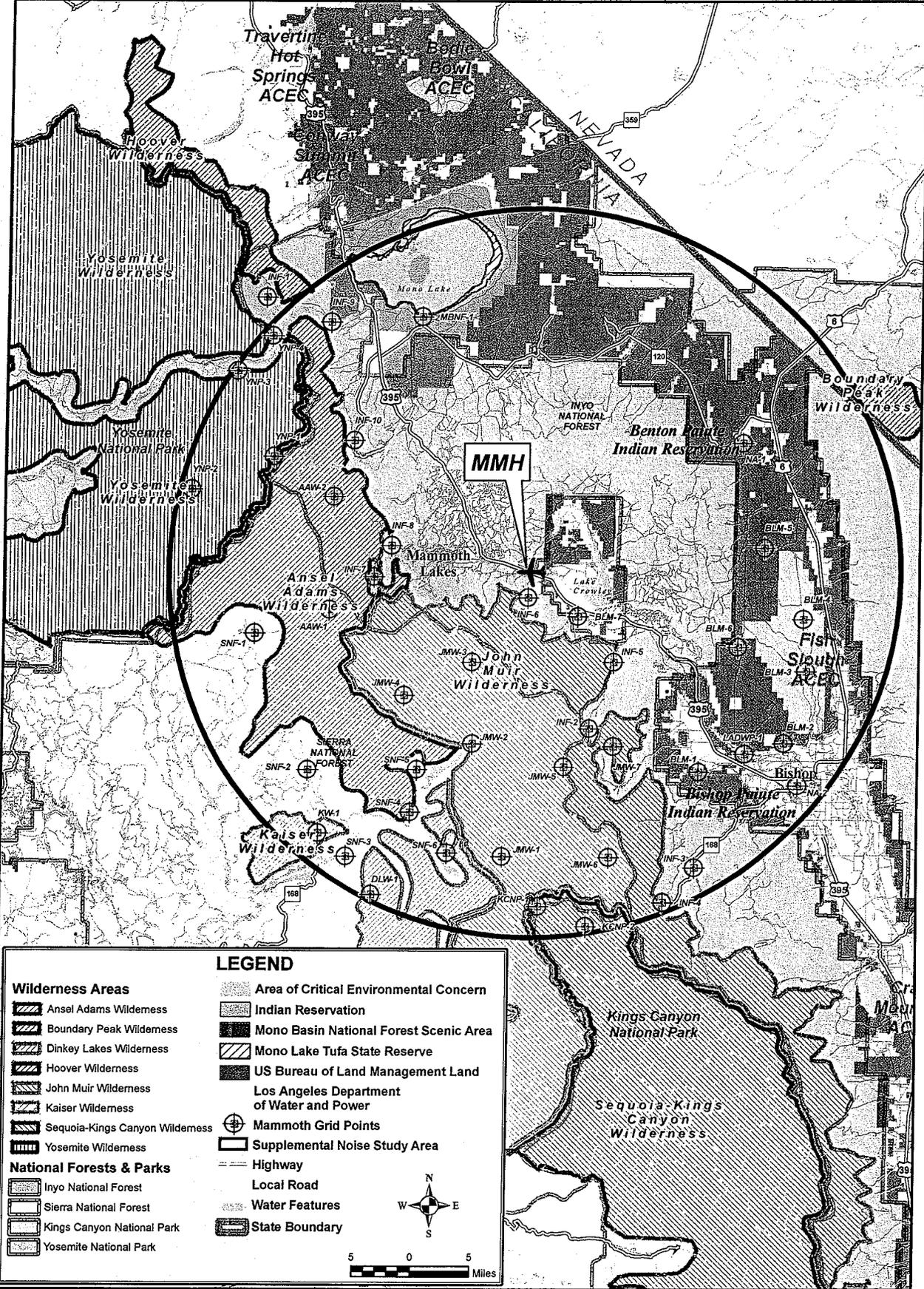
Sincerely,

ORIGINAL SIGNED BY
DAVID B. KESSLER

David B. Kessler, AICP
Regional Environmental Protection Specialist

Cc: SFO-600, APP-600, AGC-620, AWP-7, URS Corp.

File: Mammoth Yosemite Airport, Mammoth Lakes, CA 2007 EIS Folder
AWP-610.1:D.B.Kessler:05/08/2007:Sierra Nat'l Forest 5 8 07



LEGEND

- | | |
|-------------------------------------|-------------------------------------------|
| Wilderness Areas | Area of Critical Environmental Concern |
| Ansel Adams Wilderness | Indian Reservation |
| Boundary Peak Wilderness | Mono Basin National Forest Scenic Area |
| Dinky Lakes Wilderness | Mono Lake Tufa State Reserve |
| Hoover Wilderness | US Bureau of Land Management Land |
| John Muir Wilderness | Los Angeles Department of Water and Power |
| Kaiser Wilderness | Mammoth Grid Points |
| Sequoia-Kings Canyon Wilderness | Supplemental Noise Study Area |
| Yosemite Wilderness | Highway |
| National Forests & Parks | Local Road |
| Inyo National Forest | Water Features |
| Sierra National Forest | State Boundary |
| Kings Canyon National Park | |
| Yosemite National Park | |



FIGURE 7

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

DRAFT



**Environmental Impact Statement
Mammoth Yosemite Airport
Horizon Air Operation Specification
Amendment Service to/from MMH**



United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
1111 Jackson Street, Suite 700
Oakland, California 94607-4807



IN REPLY REFER TO:
N3615 (PWR-NR)

June 28, 2007

David B. Kessler, AICP
Regional Environmental Protection Specialist
Federal Aviation Administration
Western-Pacific Region, Airports Division
P.O. Box 92007
Los Angeles, CA 90009-2007

Dear Mr. Kessler:

We received your letter dated May 9, 2007 regarding the Noise Screening Assessment you are planning as part of the Draft Environmental Impact Statement (DEIS) for the expansion of operations at Mammoth Yosemite Airport, Mammoth Lakes, California. According to the letter the Noise Screening Assessment will: a) define the study area, or initial area of investigation, for the DEIS; b) provide an inventory of Section 4(f) (DOT Act) areas; and c) determine if further analysis beyond standard FAA noise contour analysis is needed. Responses to the four questions posed in your letter to National Park managers are below. The answers represent responses from Devils Postpile National Monument, Death Valley National Park, Manzanar National Historic Site, Sequoia and Kings Canyon National Parks, and Yosemite National Park. In addition the NPS Natural Sounds Program provides the following noise metric recommendations for use in the noise assessment.

Noise Analysis Metrics

We recommend the following metrics be included in your noise analysis methods:

Lmax: Maximum sound pressure level expressed as dBA in a given period.
% Time Audible (natural ambient)
Time Above natural ambient + 3 dBA
Time Above natural ambient + 10 dBA
Time Above 52 dBA
Time Above 60 dBA.

This suite of metrics will provide information regarding the intensity, temporal distribution, and context of aircraft noise impacts. If Lmax is above 52 dBA or 60 dBA, aircraft noise would be loud enough to interrupt conversational speech or educational programs. Percent Time Audible and Time Above natural ambient will provide

information regarding aircraft noise impacts on solitude. We need to know how often this happens, for how long, and what the intervals are between these events. The NPS Natural Sounds Program may have natural ambient sound data for some of the grid locations proposed in your analysis.

We believe the standard FAA noise contour analysis is insufficient because it is very difficult to relate long-term Leq (a calculated energy equivalent sound level) or DNL (Day-Night Average Sound Level) measurements to visitor experience or wildlife impacts. Neither people nor wildlife perceives sound as long-term integrals of sound energy. DOT has extensive studies relating Leq and DNL to the percent of citizens who are highly annoyed by transportation noise, but this criterion is not appropriate for park units where enjoyment and appreciation of natural resources is the purpose for which they were established, or for wilderness areas that are to provide outstanding opportunities for solitude and primitive or unconfined recreation. Change in exposure for Leq or DNL is not useful either, because the metrics themselves are uninformative for park and wilderness purposes and values.

Responses to FAA questions:

1) Do the listed sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources in the parks?

At this time we would like to see the Supplemental Noise Study Area boundary expanded to include Manzanar NHS and Death Valley NP to the East. In addition please list Devils Postpile NM on the grid points map. Representative grid points should include the most and least noisy locations (taking aircraft routes into consideration) for each park or wilderness area. This approach will provide information regarding the range of impacts. We cannot adequately judge if the locations listed in the letter will provide a valid range without information on the current and proposed flight tracks.

Yosemite – concurs with collecting sound data at four sites proposed:

Donahue Pass and Washburn Lake are both locations in the Yosemite Wilderness where sound data has not yet been collected. Collecting data at these locations would fill in an important data gap. Near Tioga Pass, sound data has been collected in the Gaylor Lakes Basin in Yosemite NP Wilderness. We recommend that data is collected at the same location for comparison purposes. In Lyell Canyon, sound data has been collected. We recommend that data is collected at the same location for comparison purposes. This location is in the Yosemite Wilderness.

2) Are any of these sites significant, and what is the basis for this significance determination?

All sites listed are significant (as is the whole of the parks and their included Wilderness) in that they are within the second largest contiguous Wilderness in the US outside of Alaska. They are on two major Wilderness trail systems, the Pacific Crest National Scenic Trail, and the John Muir Trail. Each of these trails receive thousands of visitors each year and the trails are known for the high quality of their scenery and Wilderness

Character, i.e. they are untrammeled, undeveloped, natural, and provide outstanding opportunities for solitude and primitive or unconfined recreation.

In addition please include the northwest portion of Death Valley NP in the study area. Death Valley NP is approximately 95 percent Wilderness located in Mojave and Colorado Desert eco-regions. Also, please include Manzanar NHS for its historic and cultural significance.

3) Is a quiet setting a generally recognized feature or attribute of these resources and their significance determination?

Natural quiet is a generally recognized and valued feature and attribute of wilderness. The Wilderness Act of 1964 states that part of its purpose is to assure that "... growing mechanization... does not occupy and modify all areas within the United States . . . leaving no lands designated for preservation and protection in their natural condition ..". The lands of the National Parks are recognized for their naturalness, of which natural quiet is a notable and significant component. The determination of significance is codified in law as parks and wilderness areas are established by Congress.

Natural Sounds are a natural resource managed by the NPS and in many cases also have cultural resource significance. Manzanar NHS lands have been witness to a War Relocation Center, an apple farming community, a cattle ranch, and home of the Owens Valley Paiute Tribe. Together, these occupations illustrate Manzanar's long history of recurring human settlement, habitation, and displacement. It is a place people visit for solitude and quiet contemplation. Therefore a quiet setting is essential for maintaining the historic and cultural setting and providing appropriate visitor experiences at Manzanar NHS.

4) Are there any other sites of significance that we should include in our Noise Screening Assessment?

Park staffs need to review current and proposed flight tracks before final site suitability can be determined. While we are still assessing whether Death Valley NP and Manzanar NHS should be included in the assessment, we ask they be included within the boundary of the potential study area on the map. We may wish to add grid points in those parks if the flight paths assessment warrants them.

Yosemite NP Recommends adding two sites to the list of those proposed:

- 1) Chain Lakes in the southeast corner of the park in close proximity to potential flight paths up the San Joaquin drainage. Chain Lakes is in the Yosemite Wilderness. Sound data has not been collected at this location.
- 2) Olmsted Point along the Tioga Road is a very popular destination for visitors. Sound data has been collected here and we recommend that data is collected at the same location for comparison purposes. Olmsted Point is also a culturally important vista point the National Park Service is interested in protecting from excessive noise and scenic impacts.

Death Valley NP's northwestern most lands (Eureka and Saline Valleys, and the Saline Range) are approximately 60 to 70 miles from Mammoth Airport. The issue which

Death Valley NP is most interested is the potential for the Mammoth Airport proposal to result in a substantial increase in flights between Las Vegas, NV and Mammoth, CA. Death Valley NP has official low level military training airspace over the northwest portion of the park and therefore, commercial traffic is not routed into that area except at very high altitudes. Delineation of the military training airspace may be useful on the grid map.

In conclusion, please provide us with the current and proposed flight tracks in and out of the Mammoth Airport. This information will allow us to provide you with a better estimate of significant noise analysis grid locations. We also request that you (or your contractor) obtain the required approvals for placement of scientific equipment in National Park units, including National Environmental Policy Act and National Historic Preservation Act approvals, a research permit, and (as necessary) a Wilderness Act minimum tool requirement analysis for data collection. Park staff can assist with the preparation of these required documents.

Thank you for the opportunity to comment of the Noise Screening Assessment. If you have any questions regarding our recommended noise analysis metrics please contact Vicki McCusker at the NPS Natural Sounds Program, at 970-267-2117. For questions regarding the park responses to your questions or for park contact information please contact Judy Rocchio, Regional Natural Sounds Program, at 510-817-1431.

Sincerely,

/s/ Jonathan B. Jarvis

Jonathan B. Jarvis
Regional Director, Pacific West Region

cc:
Superintendents DEPO, YOSE, SEKI, DEVA, MANZ
Karen Trevino, NPS Natural Sounds Program



U.S Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

May 9, 2007

Ms. Terry Drivas
Recreation and Lands Staff Officer
USDA Forest Service
Pacific Southwest Region
Sierra National Forest
1600 Tollhouse Road
Clovis, CA 93611

Dear Ms. Drivas:

**Mammoth Yosemite Airport, Mammoth Lakes, California
Draft Environmental Impact Statement for
Proposed Operations Specification Approval for Horizon Airlines
DOT Act Section 4(f) Applicability of the Sierra National Forest**

The Federal Aviation Administration (FAA) is preparing a Draft Environmental Impact Statement (EIS) for the proposed approval of modifications to Horizon Air's Operations Specifications to Accommodate Proposed Scheduled Air Service into Mammoth Yosemite Airport (MMH), Mammoth Lakes, California. Horizon Air has proposed to initiate limited service into MMH from Los Angeles International Airport using the 78-passenger Bombardier Dash-8 Q400 turboprop aircraft. The Sierra National Forest, located approximately 22 miles from the airport location, would not be directly affected by the proposed action.

Section 4(f) of the U.S. Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. 303 [c]) requires that the proposed use of any land from a significant publicly owned public park or recreation area, wildlife and waterfowl refuge, or historic site that is on or eligible for inclusion into the National Register of Historic Places (NRHP) be given particular attention.

As part of the EIS and Section 4(f) coordination process, FAA is in the process of determining the applicability of Section 4(f) to the Sierra National Forest, including the portions of the following Wilderness Areas that are within the Sierra National Forest:

- Ansel Adams,
- Dinkey Lakes,
- Kaiser, and
- John Muir.

The FAA is preparing a Noise Screening Assessment to:

- Define a study area, or Initial Area of Investigation (IAI);
- Perform an inventory of Section 4(f) resources within the IAI and determine if they are Section 4(f) properties where a quiet setting is a generally recognized purpose and attribute; and,
- Determine if further quantitative analysis beyond the standard FAA noise contour analysis is needed at each Section 4(f) property, and if so, the appropriate level of analysis for each Section 4(f) property.

The FAA has identified several representative locations within the Sierra National Forest for our Noise Screening Assessment. These sites are shown on the enclosed map, and are described in the following table.

SITE ID	SITE NAME	ELEVATION (feet above MSL)	WILDERNESS AREA
AAW-1	Cargyle Meadow	8,055	Ansel Adams
AAW-2	John Muir Trail - Garnet Lake	9,822	Ansel Adams
DLW-1	California Riding/Hiking Trail	8,599	Dinkey Lakes
JMW-1	John Muir Trail - Sallie Keyes Lakes	10,362	John Muir
JMW-2	John Muir Trail - Quail Meadows	7,798	John Muir
JMW-3	John Muir Trail - Lake Virginia	10,397	John Muir
JMW-4	Rainbow Lake	9,996	John Muir
JMW-5	Mount Abbot	13,341	John Muir
JMW-6	Desolation Lake	11,399	John Muir
JMW-7	Tamarack Lakes	11,603	John Muir
KW-1	Upper Twin Lake	8,671	Kaiser
SNF-1	Granite Creek Campground	7,112	NA*
SNF-2	Mount Tom Lookout	8,901	NA*
SNF-3	Badger Flat Campground	8,201	NA*
SNF-4	Mono Hot Springs Campground	6,600	Adjacent to Ansel Adams
SNF-5	Vermillion Campground	7,669	NA*
SNF-6	Jackass Meadow Campground	7,198	Adjacent to Dinkey Lakes

*NA = Part of the Sierra National Forest but not within a designated Wilderness Area.

As the agency responsible for management of the Sierra National Forest, as well as all or portions of the Ansel Adams, Dinkey Lakes, Kaiser, and John Muir Wilderness Areas, FAA requests the following information:

- What is (are) the primary use(s) of:
 - o The Sierra National Forest?
 - o The Ansel Adams Wilderness Area?
 - o The Dinkey Lakes Wilderness Area?
 - o The Kaiser Wilderness Area?
 - o The John Muir Wilderness Area?
- Are any of these resources nationally, State, or locally significant?
- If any are significant, what is the basis for this significance determination?
- Is a quiet setting a generally recognized feature or attribute of any of these resources and their significance determination?
- Do the listed sites provide an adequate sample for estimating the potential noise impacts of aircraft overflights associated with the new service on potential 4(f) resources?
- Are there any other sites of significance that we should include in our Noise Screening Assessment?

We would like to thank you for assistance in this project and we look forward to meeting you and working with you on this EIS. If you have any questions about this information request, please call me at 310/725-3615.

Sincerely,

**ORIGINAL SIGNED BY
DAVID B. KESSLER**

David B. Kessler, AICP
Regional Environmental Protection Specialist

Cc: SFO-600, APP-600, AGC-620, AWP-7, URS Corp.

File: Mammoth Yosemite Airport, Mammoth Lakes, CA 2007 EIS Folder
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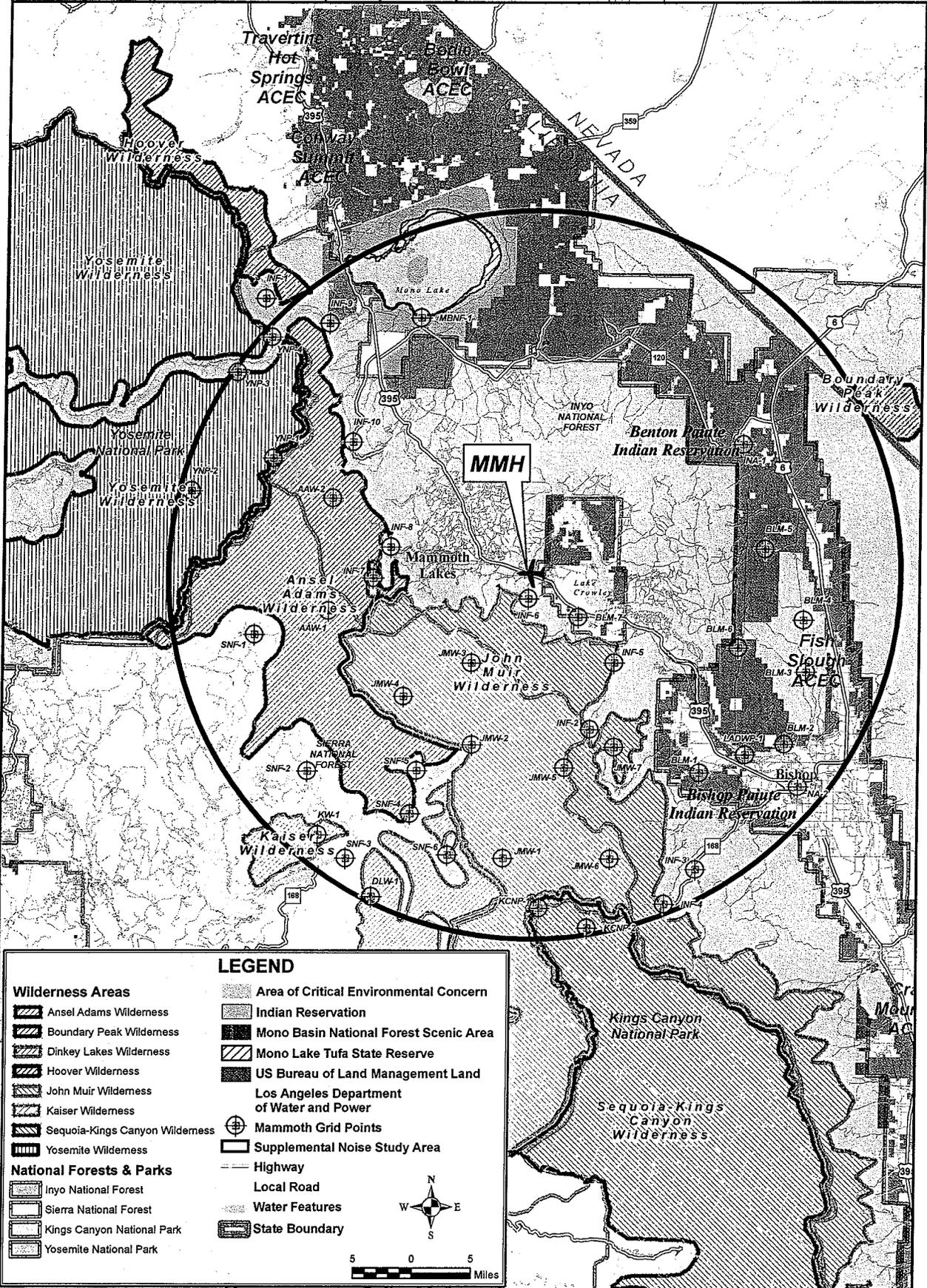


FIGURE 7

**NOISE SCREENING ASSESSMENT:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

DRAFT



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operation Specification
Amendment Services to/from MMH

APPENDIX D

Aircraft Operational Data Information

APPENDIX D

Aircraft Operational Data Information

This appendix details the aircraft operational data used to prepare the Mammoth Yosemite Airport 2015 Future Condition aircraft noise exposure for No-Action and Proposed-Action Alternatives. This appendix describes the sources, methodologies, and assumptions used.

Existing Modeled Aircraft Operations

This section describes in detail the sources and derivation of the INM input data for the existing (2005) conditions including airport layout, weather, flight operations, runway use, flight tracks, track use, and flight profiles.

Data Sources

Data was collected from multiple sources, examined, and utilized to ensure that this aircraft noise analysis provides an accurate depiction of the existing MMH aircraft noise environment. The data sources utilized for this analysis included:

- Aircraft Arrival & Check in Sheets (January through December, 2005), provided by Hot Creek Aviation, which included time of day, aircraft type, and N-number (registration number), for all arriving aircraft,
- USDOT, FAA Airport Master Record, Form 5010 (August 03, 2006), and
- Final Report, Environmental Assessment, Mammoth Yosemite Airport Expansion Project, Appendix C, "Aircraft Noise Analysis" (Town of Mammoth Lakes, December 2000)

Airport Layout

MMH has a single runway, which is designated as Runway 09/27. It is 7,000 feet long by 100 feet wide. A full parallel taxiway system, 50 feet wide, supports this runway. The field elevation at MMH is approximately 7,128 feet. Apron and hangar facilities are available for both based and transient aircraft. **Figure D-1** shows the airport location at MMH.

Weather and Climate

The average temperature in Lee Vining, the closest monitoring station, is 47.9 degrees (NOAA Climatology of the United States No. 81, 2002), humidity for the average annual day in Bishop, CA (National Climatic Data Center, 2004) was determined to be 35.5 percent. The INM default airport pressure is 29.92 inches of mercury because atmospheric pressure is referred to sea level. The default average headwind is 8 knots, which is the value used in the SAE-AIR 1845 equations. The INM default for pressure and headwind was not changed in the model. INM uses temperature, pressure, and headwind when computing procedural profiles. Humidity is only used in calculating atmospheric absorption.

Flight Operations

Annual operations for the 2005 existing conditions totaled 12,800 operations, which is approximately 35.1 daily operations. Evening and nighttime operations accounted for 4.1 percent of the total operations. Helicopters were also modeled for this EIS. Since helicopter operations accounted for approximately 1.5 percent of the total aircraft operations at MMH, several helicopter types were selected for the modeling using the data from the Heliport Noise Model (HNM), Version 2.2.

It was ultimately determined that the average annual day does not provide an accurate representation of operations at MMH. Because of the variability of seasonal operations at MMH, it was concluded that seasonal peak month, average day would be a more accurate representation. As shown in **Tables D-1** and **D-2**, INM modeled winter and summer peak month, average days. These were calculated by using the busiest month in the winter and summer; March and July, respectively. The Hot Creek Aviation fuel logs from March and July were used to determine a fleet mix in each season. The fleet mix was then increased based on the proportion that the annual fuel logs needed to be increased in order to match the 2005 Form 5010 data. Evening and nighttime operations accounted for 1.5 percent of the total operations in the winter and 5.6 percent in the summer.

Runway Use

A summary of the modeled annual average daily utilization of MMH's runway is presented in **Table D-3**. The percentages shown in the table are derived from Table C-8 of the Environmental Assessment (Town of Mammoth Lakes, 2000). The airport confirmed those percentages are still valid for the 2005 existing condition. Approximately 68 percent of the arrivals use Runway 27 and most of the departures (67 percent for jet aircraft and turboprop) use Runway 09 due to high terrain west of the airport. Because of terrain northwest of the airport that can affect the takeoff weight allowable for an aircraft, larger aircraft (jet and turboprop aircraft) tend to prefer departing on Runway 09.

Flight Tracks

Flight tracks are the aircraft's actual path through the air projected vertically onto the ground. **Figures D-2** and **D-3** depict modeled east and west flow tracks. East flow tracks represent aircraft using Runway 09. West flow tracks represent aircraft using Runway 27. During the development of flight tracks, topographic maps were reviewed to identify location of mountains, published U.S. Terminal Procedures were reviewed, and airport personnel were interviewed to accurately establish the location of flight tracks.

Track Use

Utilization percentages of the flight tracks are tabulated in **Table D-4** for arrivals and departures. It was assumed that there would be six arrival and six departure predominant routes to and from MMH. Because of the terrain surrounding the airport, it was assumed that helicopters would use the same flight tracks as fixed wing aircraft.

Flight Profiles

Flight profiles model the vertical paths of aircraft during departure and arrival to determine the altitude, speed, and engine thrust or power of an aircraft at any point along a flight track. INM uses this information to calculate noise exposure on the ground. Profiles are unique to each aircraft type and vary with temperature, barometric pressure, headwind, and aircraft weight. Standard INM departure and arrival profiles were used for this analysis. Stage (or trip) length information determined the standard profile to be used for each departing aircraft. See **Table D-5** for the definition of stage length. Departing aircraft were modeled beginning with takeoff roll and ending when the aircraft reached an altitude of 10,000 feet Above Field Elevation (AFE). Arriving aircraft were modeled beginning at an altitude of 6,000 feet AFE and ending with the aircraft touchdown and roll-out on the runway.

Radar data is typically used to aide in developing flight profiles; however, due to the mountainous terrain surrounding MMH radar data coverage was not available. The mountains surrounding the airport block the radar signal, thus no data can be transmitted.

Land Use Surrounding MMH

The Detailed Study Area for MMH has been defined as the current boundary of the airport. Virtually all the land surrounding MMH is within the Inyo National Forest and administered by the USDA Forest Service.

The MMH environs include open spaces used for agriculture, resource management areas, and recreation. Small parcels in close proximity to MMH are used for industrial, public agency, and residential uses. Hot Creek is located on the western side of MMH, with the abandoned Mammoth Lakes Elementary School and Sierra Quarry a bit further west. Approximately 1 mile north of MMH is Hot Creek Ranch, a privately owned fishing camp with cabins for rent, and the Hot Creek Fish Hatchery, which produces 11 million trout eggs for distribution throughout California. Also located north of MMH, between the airport and Hot Creek Ranch, is a FS gravel/borrow pit. Approximately 1 mile east of MMH is the Whitmore Recreational Area and Mono County Animal Shelter. The recreation area has several athletic fields and a swimming pool, while the animal shelter assists with welfare issues. A little further to the east is a BLM gravel pit area that is adjacent to U.S. 395. The Sierra Nevada Aquatic Research Laboratory (SNARL) is located about 1 mile southeast of MMH and south of U.S. 395. This facility is part of the University of California Natural Reserve System that studies stream ecology. The building locally known as the "Green Church" (High Sierra Community Church) is located on the north side of U.S. 395, but is part of the SNARL campus. Approximately 2 miles due south of MMH is the Convict Lake Recreation Area, which is an Inyo National Forest Campground.

Lands to the north, northwest, and south of MMH are Federally owned and within the Inyo National Forest. The lands northeast of MMH are owned by BLM and undeveloped. Eastern portions of MMH, including lands under a portion of the runway are owned by LADWP. The Town of Mammoth Lakes is currently in the process of acquiring this land.

Planned land use development within the MMH environs include the Sierra Business Park at the site formerly used by Sierra Quarry and the public-private partnership between the Town of Mammoth Lakes and a local developer to make the airport self sustaining. The Sierra Business Park would consist of 37 tracts of land for industrial development. The public-private partnership would consist of airside developments (hangers, terminal improvements, and fuel storage) and landside developments (hotel/condominium complex, a recreational vehicle park, restaurants, and retail stores) within the MMH property.

Future Modeled Aircraft Operations

Opening Year 2009 Aircraft Operations and Fleet Mix

The aircraft noise analysis for 2009 is based on the 2005 Existing Condition and Aviation Demand Forecasts developed by URS based on the FAA Aerospace Forecasts for nationwide GA growth and growth anticipated by aircraft operating at MMH.

The forecast provides the projected number of aircraft operations in 2009. According to the forecast, 13,801 operations are projected to occur in the 2009 No-Action Alternative. The forecast also provides the projected number of Q400 aircraft operations in 2009 for the Proposed Action Alternative. According to the forecast, 14,249 operations are projected to occur in the 2009 Proposed Action Alternative.

As previously discussed, average daily operations does not provide an accurate representation of the conditions at MMH. Therefore, the winter fuel log fleet mix was increased by the same growth rate used to increase the existing condition fuel log fleet mix to the approved 2009 forecast. Tables **D-6** and **D-7** depicts the Peak Month, Average Daily Operations for the opening year winter season; No-Action and Proposed Action Alternatives. Only winter operations were calculated because the Q400 operations are not projected to begin until the winter of 2009. Runway utilization for the Future Conditions is shown in **Table D-8**.

Figures D-4 and **D-5** depict the east and west flow Q400 tracks for the 2009 and 2015 Proposed Action. The additional air carrier tracks that appear in the future years result from the introduction of flights to/from Las Vegas and Oakland/San Francisco. Flight track utilization for the 2009 winter season Proposed Action is shown in **Table D-9**.

During the development of these flight tracks, topographic maps were reviewed to identify location of mountains, published U.S. Terminal Procedures were reviewed, and airport personnel were interviewed to accurately establish the location of flight tracks. The air carrier tracks were developed in coordination with the FAA and NPS, and were approved by the airport and FAA.

All other assumptions and conditions remained the same as the existing year.

Year 2015 Aircraft Operations and Fleet Mix

The aircraft noise analysis for 2015 is based on the 2005 Existing Condition and Aviation Demand Forecasts developed by URS based on the FAA Aerospace Forecasts for nationwide GA growth and growth anticipated by aircraft operating at MMH.

The forecast provides the projected number of aircraft operations in 2015. According to the forecast, 15,451 operations are projected to occur in the 2015 No-Action Alternative. The forecast also provides the projected number of Q400 aircraft operations in 2015, for the Proposed Action Alternative. According to the forecast, 17,483 operations are projected to occur in the 2015 Proposed Action Alternative.

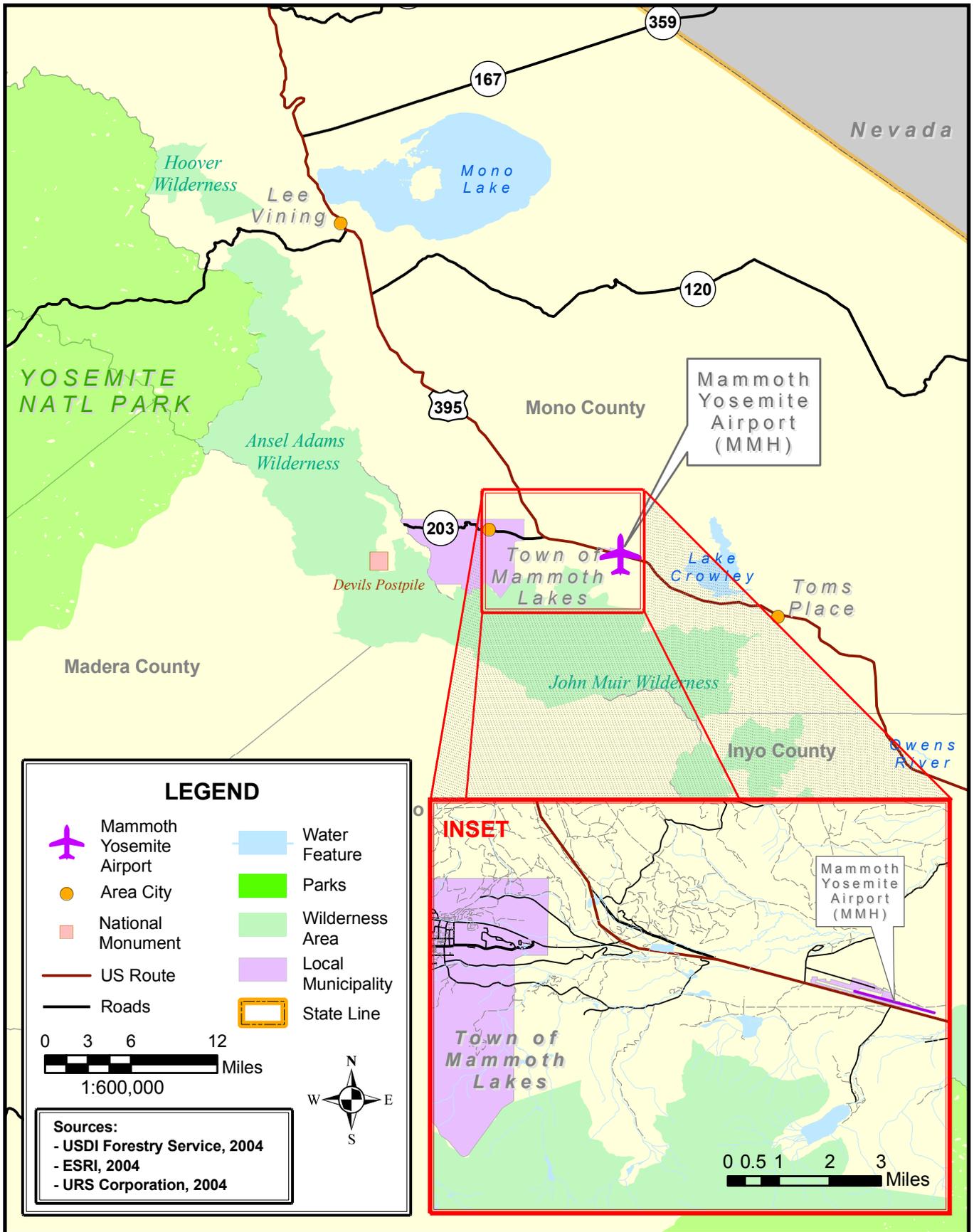
As previously discussed, average daily operations does not provide an accurate representation of the conditions at MMH. Therefore, the summer and winter fuel log fleet mixes were increased by the same growth rate used to increase the existing condition fuel log fleet mix to the approved 2015 forecast. Tables **D-10** through **D-13** show the Peak Month, Average Daily Operations for the summer and winter; No-Action and Proposed Action Alternatives. Runway utilization for the Future Conditions is shown in **Table D-8**.

Figures D-4 and **D-5** depict the east and west flow Q400 tracks for the 2009 and 2015 Proposed Action. The additional air carrier tracks that appear in the Future Conditions result from the introduction of flights to/from Las Vegas and Oakland/San Francisco. Flight track utilization for the 2015 Proposed Action is shown in **Tables D-14** and **D-15**.

During the development of these flight tracks, topographic maps were reviewed to identify location of mountains, published U.S. Terminal Procedures were reviewed, and airport personnel were interviewed to accurately establish the location of flight tracks. The air carrier tracks were developed in coordination with the FAA and NPS, and were approved by the airport and FAA.

All other assumptions and conditions remained the same as the existing year.

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Figure 1.5-1-1 - Airport Location Map.mxd (flp, 10/28/05)

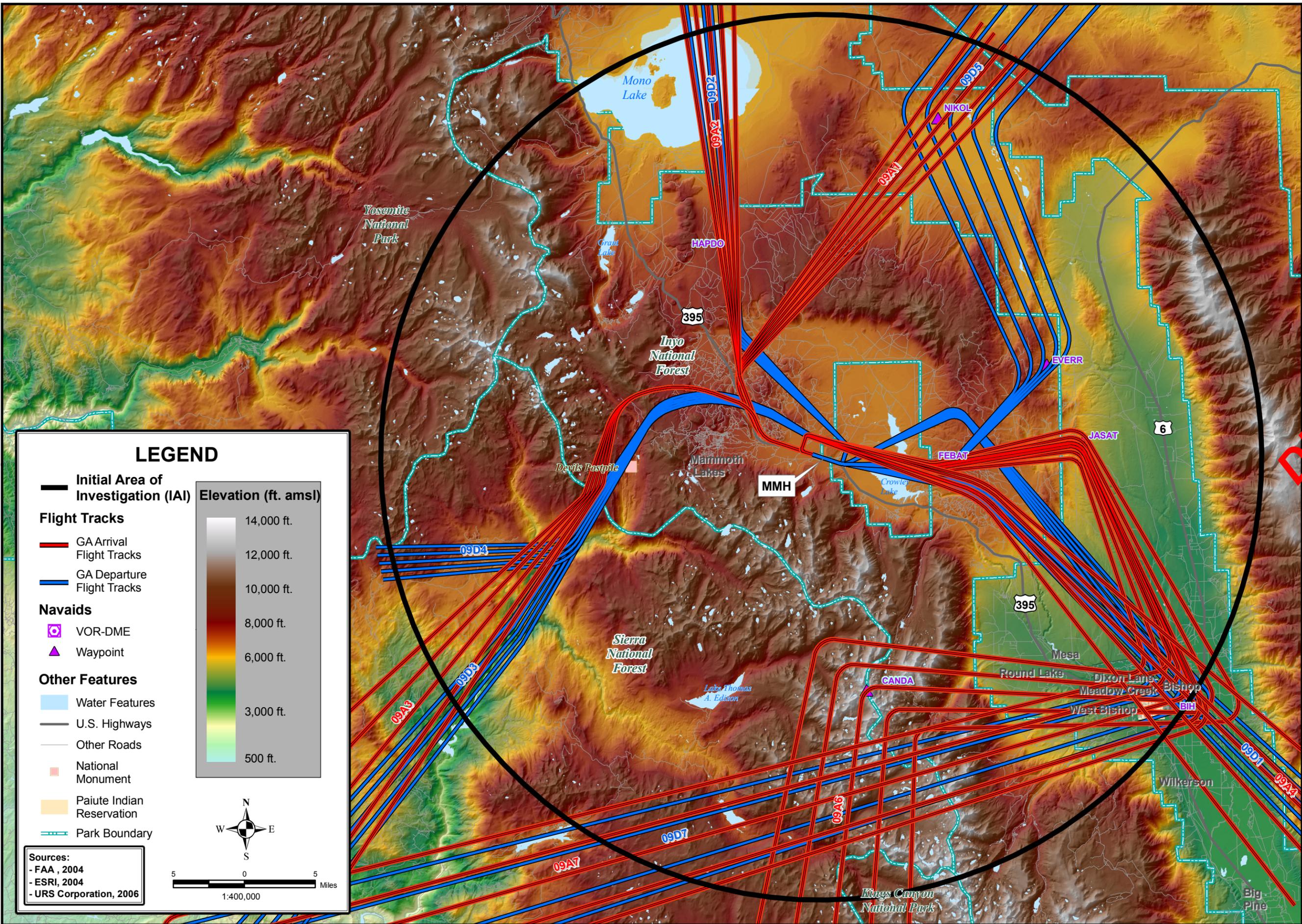


**Environmental Impact Statement
 Mammoth Yosemite Airport
 Proposed Expansion Project**

MMH AIRPORT LOCATION

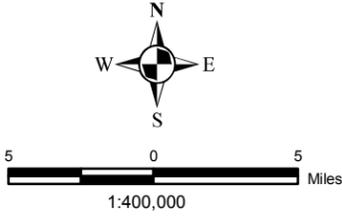
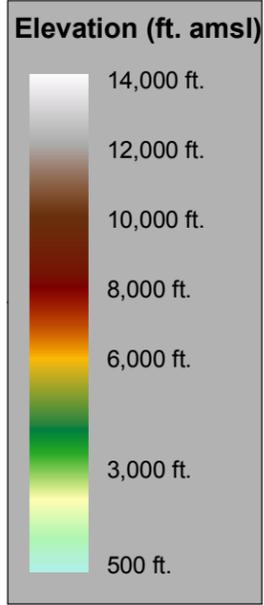
**FIGURE
 1.5.1-1**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Services\Noise Screening Assessment\Figure D-2, Noise Screening Assessment: Existing and No-Action Alternative Flight Tracks for Runway 09 - East Flow.mxd, (pdf, lrp, hde, 08/17/07)



LEGEND

- Initial Area of Investigation (IAI)**
- Flight Tracks**
 - GA Arrival Flight Tracks
 - GA Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Park Boundary



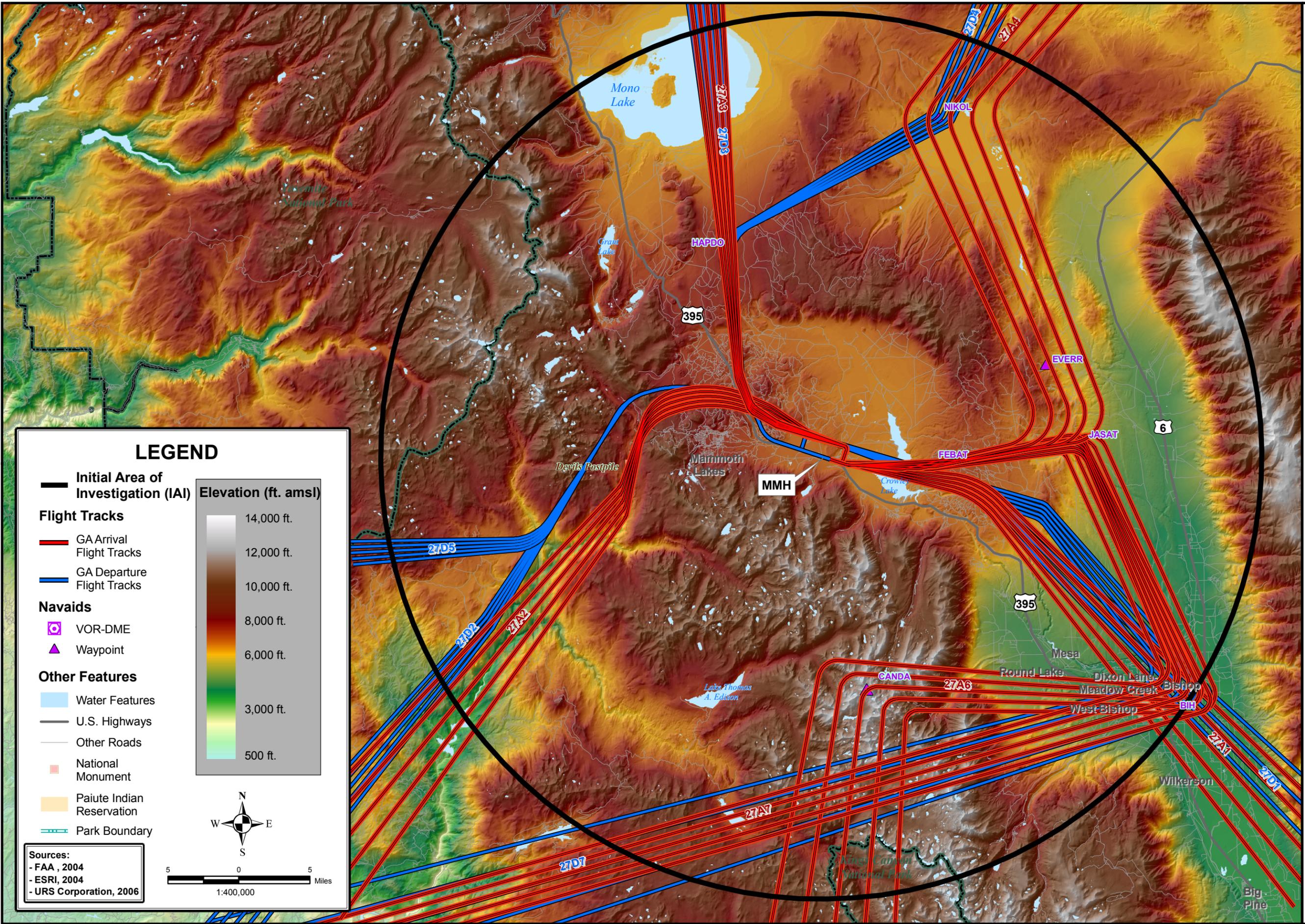
Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2006



DRAFT

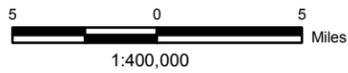
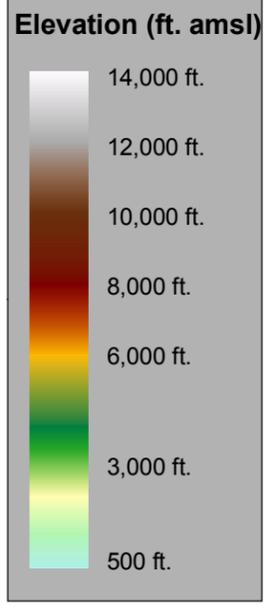
**NOISE SCREENING ASSESSMENT:
 EXISTING AND NO-ACTION ALTERNATIVE
 FLIGHT TRACKS FOR RUNWAY 09
 - EAST FLOW**

**FIGURE
 D-2**



LEGEND

- Initial Area of Investigation (IAI)
- Flight Tracks**
 - GA Arrival Flight Tracks
 - GA Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - ▲ Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Park Boundary



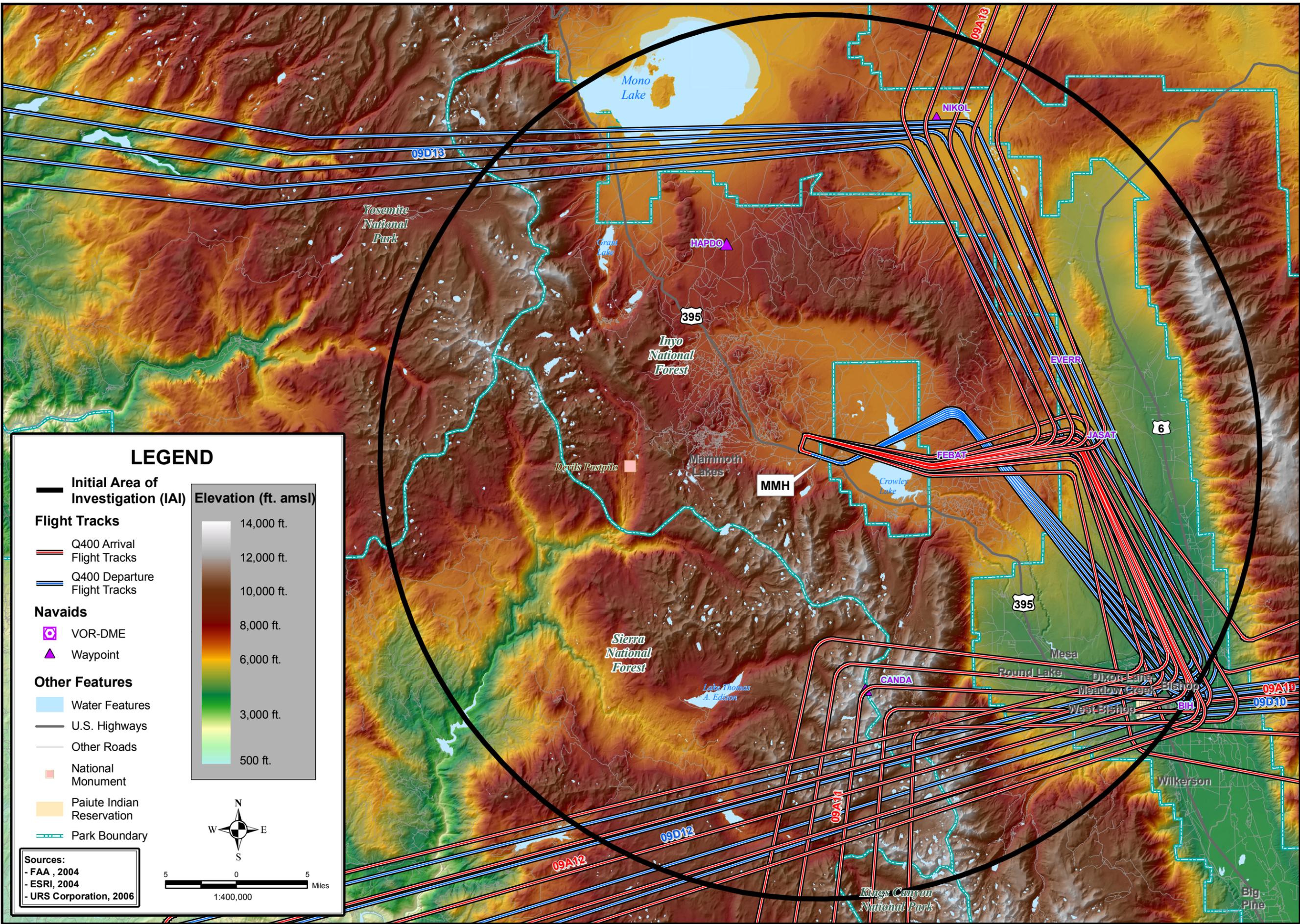
Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2006



**NOISE SCREENING ASSESSMENT:
 EXISTING AND NO-ACTION ALTERNATIVE
 FLIGHT TRACKS FOR RUNWAY 27
 - WEST FLOW**

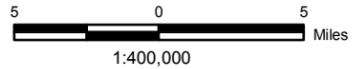
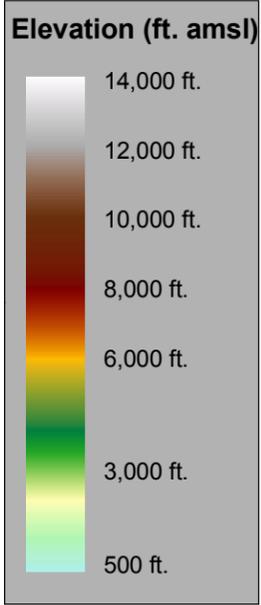
FIGURE
D-3

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix\Figure D-4, Noise Screening Assessment - Proposed Q400 Flight Tracks for Runway 09.mxd, (rpt. lp. bde.08/17/07)



LEGEND

- Initial Area of Investigation (IAI)**
- Flight Tracks**
 - Q400 Arrival Flight Tracks
 - Q400 Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Park Boundary



Sources:

- FAA, 2004
- ESRI, 2004
- URS Corporation, 2006

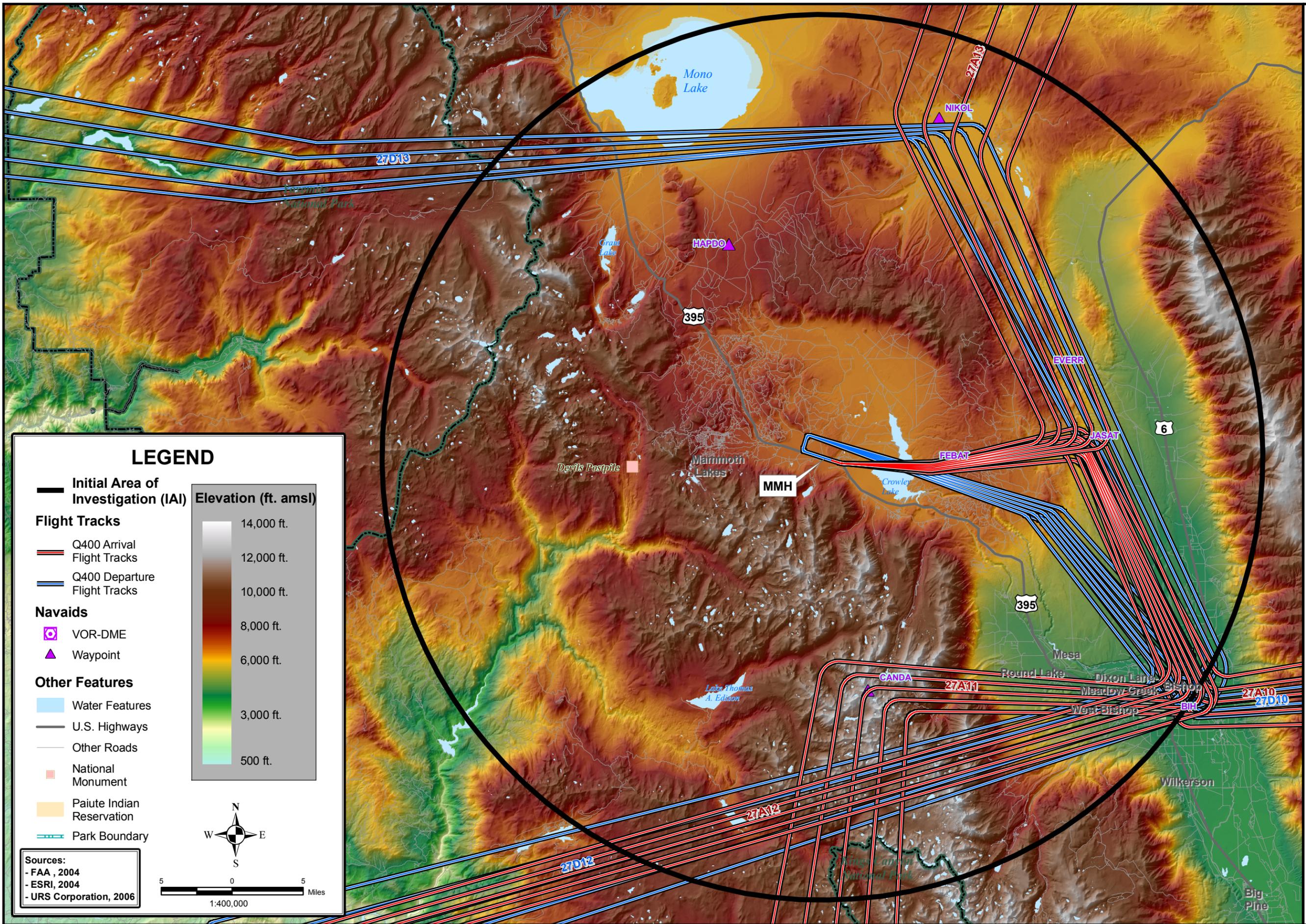
Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH



NOISE SCREENING ASSESSMENT:
PROPOSED Q400 FLIGHT TRACKS
FOR RUNWAY 09 - EAST FLOW

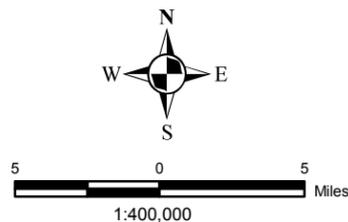
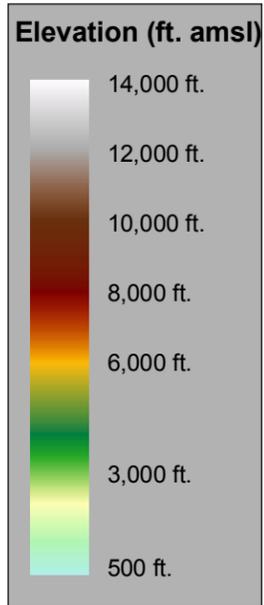
FIGURE D-4

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Service\Appendix\Figure D-5, Noise Screening Assessment - Proposed Q400 Flight Tracks for Runway 27 - West Flow.mxd, [rpt, ip_bde,08/17/07]



LEGEND

- Initial Area of Investigation (IAI)**
- Flight Tracks**
 - Q400 Arrival Flight Tracks
 - Q400 Departure Flight Tracks
- Nav aids**
 - VOR-DME
 - Waypoint
- Other Features**
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Park Boundary



Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2006

Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operation Specification
 Amendment Service to/from MMH



**NOISE SCREENING ASSESSMENT:
 PROPOSED Q400 FLIGHT TRACKS
 FOR RUNWAY 27 - WEST FLOW**

FIGURE D-5

**TABLE D-1
2005 SUMMER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	9	0.14	0.00	0.00	0.14	0.14	0.00	0.00	0.14
CNA500		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
GIV		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
IA1125		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
LEAR25		12	0.19	0.00	0.00	0.19	0.19	0.00	0.00	0.19
LEAR35		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
MU3001		65	1.01	0.05	0.00	1.06	1.01	0.05	0.00	1.06
Jet Total		104	1.63	0.05	0.00	1.68	1.63	0.05	0.00	1.68
BEC58P	P	271	4.08	0.29	0.00	4.37	4.08	0.29	0.00	4.37
CNA172		33	0.43	0.10	0.00	0.53	0.43	0.10	0.00	0.53
CNA206		229	3.45	0.24	0.00	3.69	3.45	0.24	0.00	3.69
GASEPF		80	1.30	0.00	0.00	1.30	1.30	0.00	0.00	1.30
GASEPV		321	4.89	0.24	0.05	5.18	4.89	0.24	0.05	5.18
PA31		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
Prop Total		940	14.25	0.86	0.05	15.16	14.25	0.86	0.05	15.16
C130	T	3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
CNA441		80	1.25	0.05	0.00	1.30	1.25	0.05	0.00	1.30
DHC6		101	1.53	0.10	0.00	1.63	1.53	0.10	0.00	1.63
Turboprop Total		184	2.83	0.14	0.00	2.97	2.83	0.14	0.00	2.97
S65	H	3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Helicopter Total		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
GRAND TOTAL		1,231	18.76	1.06	0.05	19.86	18.76	1.06	0.05	19.86

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-2
2005 WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIIB		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIV		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
IA1125		9	0.14	0.00	0.00	0.14	0.14	0.00	0.00	0.14
LEAR25		27	0.43	0.00	0.00	0.43	0.43	0.00	0.00	0.43
LEAR35		18	0.29	0.00	0.00	0.29	0.29	0.00	0.00	0.29
MU3001		187	3.02	0.00	0.00	3.02	3.02	0.00	0.00	3.02
Jet Total		256	4.13	0.00	0.00	4.13	4.13	0.00	0.00	4.13
BEC58P	P	286	4.60	0.00	0.00	4.60	4.60	0.00	0.00	4.60
CNA172		12	0.19	0.00	0.00	0.19	0.19	0.00	0.00	0.19
CNA206		217	3.36	0.10	0.05	3.50	3.36	0.10	0.05	3.50
GASEPF		48	0.72	0.05	0.00	0.77	0.72	0.05	0.00	0.77
GASEPV		372	5.90	0.10	0.00	6.00	5.90	0.10	0.00	6.00
PA31		18	0.29	0.00	0.00	0.29	0.29	0.00	0.00	0.29
Prop Total		952	15.06	0.24	0.05	15.35	15.06	0.24	0.05	15.35
C130	T	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
CNA441		125	2.01	0.00	0.00	2.01	2.01	0.00	0.00	2.01
DHC6		190	2.97	0.10	0.00	3.07	2.97	0.10	0.00	3.07
Turboprop Total		321	5.08	0.10	0.00	5.18	5.08	0.10	0.00	5.18
B206L	H	21	0.00	0.00	0.34	0.34	0.00	0.00	0.34	0.34
Helicopter Total		21	0.00	0.00	0.34	0.34	0.00	0.00	0.34	0.34
GRAND TOTAL		1,549	24.27	0.34	0.38	24.99	24.27	0.34	0.38	24.99

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-3
2005 EXISTING CONDITION RUNWAY UTILIZATION**

ARRIVAL				
Runway	Business Jets	Commuter	Turboprop	Props/ Helos
09	31.60%	31.60%	31.60%	31.70%
27	68.40%	68.40%	68.40%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%
DEPARTURE				
Runway	Business Jets	Commuter	Turboprop	Props/ Helos
09	67.10%	67.10%	67.10%	31.70%
27	32.90%	32.90%	32.90%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%

Source: Mammoth Yosemite Environmental Assessment,
2002.

**TABLE D-4
2005 EXISTING CONDITION FLIGHT TRACK UTILIZATION**

ARRIVAL				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
DEPARTURE				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

Sources: Federal Aviation Administration, 2004.
Mammoth Yosemite Airport, 2004.
URS Corporation, 2006.

**TABLE D-5
INM STAGE LENGTHS**

Stage	Distance (NM)
1	Less Than 500
2	501 - 1,000
3	1,001 - 1,500
4	1,501 - 2,500
5	2,501 - 3,500
6	3,501 - 4,500
7	4,501-5,500
8	5,501-6,500
9	Greater Than 6,501

Source: Integrated Noise Model (INM) 6.2

TABLE D-6

2009 NO-ACTION ALTERNATIVE WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIIB		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIV		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
IA1125		10	0.16	0.00	0.00	0.16	0.16	0.00	0.00	0.16
LEAR25		29	0.47	0.00	0.00	0.47	0.47	0.00	0.00	0.47
LEAR35		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
MU3001		202	3.26	0.00	0.00	3.26	3.26	0.00	0.00	3.26
Jet Total		276	4.45	0.00	0.00	4.45	4.45	0.00	0.00	4.45
BEC58P	P	308	4.96	0.00	0.00	4.96	4.96	0.00	0.00	4.96
CNA172		13	0.21	0.00	0.00	0.21	0.21	0.00	0.00	0.21
CNA206		234	3.62	0.10	0.05	3.78	3.62	0.10	0.05	3.78
GASEPF		51	0.78	0.05	0.00	0.83	0.78	0.05	0.00	0.83
GASEPV		401	6.36	0.10	0.00	6.46	6.36	0.10	0.00	6.46
PA31		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Prop Total		1,026	16.24	0.26	0.05	16.55	16.24	0.26	0.05	16.55
C130	T	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
CNA441		135	2.17	0.00	0.00	2.17	2.17	0.00	0.00	2.17
DHC6		205	3.21	0.10	0.00	3.31	3.21	0.10	0.00	3.31
Turboprop Total		346	5.48	0.10	0.00	5.59	5.48	0.10	0.00	5.59
B206L	H	22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
Helicopter Total		22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
GRAND TOTAL		1,671	26.53	0.36	0.05	26.95	26.53	0.36	0.05	26.95

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-7
2009 ACTION ALTERNATIVE WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIIB		6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
GIV		3	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05
IA1125		10	0.16	0.00	0.00	0.16	0.16	0.00	0.00	0.16
LEAR25		29	0.47	0.00	0.00	0.47	0.47	0.00	0.00	0.47
LEAR35		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
MU3001		202	3.26	0.00	0.00	3.26	3.26	0.00	0.00	3.26
Jet Total		276	4.45	0.00	0.00	4.45	4.45	0.00	0.00	4.45
BEC58P	P	308	4.96	0.00	0.00	4.96	4.96	0.00	0.00	4.96
CNA172		13	0.21	0.00	0.00	0.21	0.21	0.00	0.00	0.21
CNA206		234	3.62	0.10	0.05	3.78	3.62	0.10	0.05	3.78
GASEPF		51	0.78	0.05	0.00	0.83	0.78	0.05	0.00	0.83
GASEPV		401	6.36	0.10	0.00	6.46	6.36	0.10	0.00	6.46
PA31		19	0.31	0.00	0.00	0.31	0.31	0.00	0.00	0.31
Prop Total		1,026	16.24	0.26	0.05	16.55	16.24	0.26	0.05	16.55
C130	T	6	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.10
CNA441		135	2.17	0.00	0.00	2.17	2.17	0.00	0.00	2.17
DHC6		205	3.21	0.10	0.00	3.31	3.21	0.10	0.00	3.31
Q400		124	2.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00
Turboprop Total		470	7.48	0.10	0.00	7.59	7.48	0.10	0.00	7.59
B206L	H	22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
Helicopter Total		22	0.36	0.00	0.00	0.36	0.36	0.00	0.00	0.36
GRAND TOTAL		1,795	28.53	0.36	0.05	28.95	28.53	0.36	0.05	28.95

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-8
2009 & 2015 FUTURE CONDITION RUNWAY UTILIZATION**

ARRIVALS				
Runway	Air Carrier Jets	Business Jets	Commuter/ Turboprop	Props/ Helos
09	25.00%	31.60%	31.60%	31.70%
27	75.00%	68.40%	68.40%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%
DEPARTURES				
Runway	Air Carrier Jets	Business Jets	Commuter/ Turboprop	Props/ Helos
09	75.00%	67.10%	67.10%	31.70%
27	25.00%	32.90%	32.90%	68.30%
TOTAL	100.00%	100.00%	100.00%	100.00%

Source: Mammoth Yosemite Environmental Assessment,
2002.

**TABLE D-9
2009 WINTER FUTURE CONDITION FLIGHT TRACK UTILIZATION**

ARRIVAL				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
DEPARTURE				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

AIR CARRIER ARRIVAL		
Runway	Track	Jet
09	09A10	0.00%
	09A11	50.00%
	09A12	50.00%
	09A13	0.00%
	TOTAL	100.00%
27	27A10	0.00%
	27A11	50.00%
	27A12	50.00%
	TOTAL	100.00%
AIR CARRIER DEPARTURE		
Runway	Track	Jet
09	09D10	0.00%
	09D12	100.00%
	09D13	0.00%
	TOTAL	100.00%
27	27D10	0.00%
	27D12	100.00%
	TOTAL	100.00%

Sources: Federal Aviation Administration, 2004.
Mammoth Yosemite Airport, 2004.
URS Corporation, 2006.

**TABLE D-10
2015 NO-ACTION ALTERNATIVE SUMMER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
CNA500		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GIV		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
IA1125		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
LEAR25		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
LEAR35		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
MU3001		79	1.22	0.06	0.00	1.27	1.22	0.06	0.00	1.27
Jet Total			126	1.97	0.06	0.00	2.03	1.97	0.06	0.00
BEC58P	P	327	4.92	0.35	0.00	5.27	4.92	0.35	0.00	5.27
CNA172		39	0.52	0.12	0.00	0.64	0.52	0.12	0.00	0.64
CNA206		276	4.17	0.29	0.00	4.46	4.17	0.29	0.00	4.46
GASEPF		97	1.56	0.00	0.00	1.56	1.56	0.00	0.00	1.56
GASEPV		388	5.91	0.29	0.06	6.25	5.91	0.29	0.06	6.25
PA31		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
Prop Total			1,134	17.20	1.04	0.06	18.30	17.20	1.04	0.06
C130	T	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
CNA441		97	1.51	0.06	0.00	1.56	1.51	0.06	0.00	1.56
DHC6		122	1.85	0.12	0.00	1.97	1.85	0.12	0.00	1.97
Turboprop Total		223	3.42	0.17	0.00	3.59	3.42	0.17	0.00	3.59
S65	H	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
Helicopter Total		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GRAND TOTAL		1,486	22.64	1.27	0.06	23.97	22.64	1.27	0.06	23.97

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-11
2015 ACTION ALTERNATIVE SUMMER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
CNA500		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GIV		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
IA1125		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
LEAR25		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
LEAR35		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
MU3001		79	1.22	0.06	0.00	1.27	1.22	0.06	0.00	1.27
Jet Total		126	1.97	0.06	0.00	2.03	1.97	0.06	0.00	2.03
BEC58P	P	327	4.92	0.35	0.00	5.27	4.92	0.35	0.00	5.27
CNA172		39	0.52	0.12	0.00	0.64	0.52	0.12	0.00	0.64
CNA206		276	4.17	0.29	0.00	4.46	4.17	0.29	0.00	4.46
GASEPF		97	1.56	0.00	0.00	1.56	1.56	0.00	0.00	1.56
GASEPV		388	5.91	0.29	0.06	6.25	5.91	0.29	0.06	6.25
PA31		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
Prop Total		1,134	17.20	1.04	0.06	18.30	17.20	1.04	0.06	18.30
C130	T	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
CNA441		97	1.51	0.06	0.00	1.56	1.51	0.06	0.00	1.56
DHC6		122	1.85	0.12	0.00	1.97	1.85	0.12	0.00	1.97
Q400		124	2.00	0.00	0.00	2.00	2.00	0.00	0.00	2.00
Turboprop Total		347	5.42	0.17	0.00	5.59	5.42	0.17	0.00	5.59
S65	H	4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
Helicopter Total		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
GRAND TOTAL		1,610	24.64	1.27	0.06	25.97	24.64	1.27	0.06	25.97

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-12
2015 NO-ACTION ALTERNATIVE WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIIB		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIV		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
IA1125		11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
LEAR25		32	0.52	0.00	0.00	0.52	0.52	0.00	0.00	0.52
LEAR35		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
MU3001		226	3.65	0.00	0.00	3.65	3.65	0.00	0.00	3.65
Jet Total		309	4.98	0.00	0.00	4.98	4.98	0.00	0.00	4.98
BEC58P	P	345	5.56	0.00	0.00	5.56	5.56	0.00	0.00	5.56
CNA172		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
CNA206		262	4.05	0.12	0.06	4.23	4.05	0.12	0.06	4.23
GASEPF		57	0.87	0.06	0.00	0.93	0.87	0.06	0.00	0.93
GASEPV		449	7.12	0.12	0.00	7.24	7.12	0.12	0.00	7.24
PA31		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
Prop Total		1,149	18.18	0.29	0.06	18.53	18.18	0.29	0.06	18.53
C130	T	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
CNA441		151	2.43	0.00	0.00	2.43	2.43	0.00	0.00	2.43
DHC6		230	3.59	0.12	0.00	3.71	3.59	0.12	0.00	3.71
Turboprop Total		388	6.14	0.12	0.00	6.25	6.14	0.12	0.00	6.25
B206L	H	25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
Helicopter Total		25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
GRAND TOTAL		1,870	29.70	0.41	0.06	30.17	29.70	0.41	0.06	30.17

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-13
2015 ACTION ALTERNATIVE WINTER PEAK MONTH AVERAGE DAILY AIRCRAFT OPERATIONS**

INM Aircraft	Body Type	Peak Month Operations	Arrivals				Departures SL 1 (0-500nm)			
			Day	Evening	Night	Total	Day	Evening	Night	Total
CL600	J	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIIB		7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
GIV		4	0.06	0.00	0.00	0.06	0.06	0.00	0.00	0.06
IA1125		11	0.17	0.00	0.00	0.17	0.17	0.00	0.00	0.17
LEAR25		32	0.52	0.00	0.00	0.52	0.52	0.00	0.00	0.52
LEAR35		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
MU3001		226	3.65	0.00	0.00	3.65	3.65	0.00	0.00	3.65
Jet Total		309	4.98	0.00	0.00	4.98	4.98	0.00	0.00	4.98
BEC58P	P	345	5.56	0.00	0.00	5.56	5.56	0.00	0.00	5.56
CNA172		14	0.23	0.00	0.00	0.23	0.23	0.00	0.00	0.23
CNA206		262	4.05	0.12	0.06	4.23	4.05	0.12	0.06	4.23
GASEPF		57	0.87	0.06	0.00	0.93	0.87	0.06	0.00	0.93
GASEPV		449	7.12	0.12	0.00	7.24	7.12	0.12	0.00	7.24
PA31		22	0.35	0.00	0.00	0.35	0.35	0.00	0.00	0.35
Prop Total		1,149	18.18	0.29	0.06	18.53	18.18	0.29	0.06	18.53
C130	T	7	0.12	0.00	0.00	0.12	0.12	0.00	0.00	0.12
CNA441		151	2.43	0.00	0.00	2.43	2.43	0.00	0.00	2.43
DHC6		230	3.59	0.12	0.00	3.71	3.59	0.12	0.00	3.71
Q400		496	8.00	0.00	0.00	8.00	8.00	0.00	0.00	8.00
Turboprop Total		884	14.14	0.12	0.00	14.25	14.14	0.12	0.00	14.25
B206L	H	25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
Helicopter Total		25	0.41	0.00	0.00	0.41	0.41	0.00	0.00	0.41
GRAND TOTAL		2,366	37.70	0.41	0.06	38.17	37.70	0.41	0.06	38.17

J - Jet, P - Prop, T - Turboprop, H - Helicopter

Day = 7:00 a.m. to 6:59 p.m.
 Evening = 7:00 p.m. to 9:59 p.m.
 Night = 10:00 p.m. to 6:59 a.m.
 SL = Stage Length
 Source: URS Corp., 2006

**TABLE D-14
2015 WINTER FUTURE CONDITION FLIGHT TRACK UTILIZATION**

ARRIVAL				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
DEPARTURE				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

AIR CARRIER ARRIVAL		
Runway	Track	Jet
09	09A10	22.05%
	09A11	27.95%
	09A12	27.95%
	09A13	22.05%
	TOTAL	100.00%
27	27A10	22.05%
	27A11	27.95%
	27A12	27.95%
	27A13	22.05%
TOTAL	100.00%	
AIR CARRIER DEPARTURE		
Runway	Track	Jet
09	09D10	22.05%
	09D12	55.90%
	09D13	22.05%
	TOTAL	100.00%
27	27D10	22.05%
	27D12	55.90%
	27D13	22.05%
TOTAL	100.00%	

Sources: Federal Aviation Administration, 2004.
Mammoth Yosemite Airport, 2004.
URS Corporation, 2006.

**TABLE D-15
2015 SUMMER FUTURE CONDITION FLIGHT TRACK UTILIZATION**

ARRIVAL				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09A1	5.00%	5.00%	5.00%
	09A2	5.00%	5.00%	5.00%
	09A3	0.00%	0.00%	20.00%
	09A4	0.00%	0.00%	70.00%
	09A6	70.00%	70.00%	0.00%
	09A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27A1	0.00%	0.00%	70.00%
	27A2	0.00%	0.00%	20.00%
	27A3	5.00%	5.00%	5.00%
	27A4	5.00%	5.00%	5.00%
	27A6	70.00%	70.00%	0.00%
	27A7	20.00%	20.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
DEPARTURE				
Runway	Track	Business Jets	Turboprop	Prop/Helo
09	09D1	0.00%	0.00%	70.00%
	09D2	5.00%	5.00%	5.00%
	09D3	10.00%	10.00%	10.00%
	09D4	10.00%	10.00%	10.00%
	09D5	5.00%	5.00%	5.00%
	09D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%
27	27D1	0.00%	0.00%	70.00%
	27D2	10.00%	10.00%	10.00%
	27D3	5.00%	5.00%	5.00%
	27D4	5.00%	5.00%	5.00%
	27D5	10.00%	10.00%	10.00%
	27D7	70.00%	70.00%	0.00%
	TOTAL	100.00%	100.00%	100.00%

AIR CARRIER ARRIVAL		
Runway	Track	Jet
09	09A10	0.00%
	09A11	50.00%
	09A12	50.00%
	09A13	0.00%
	TOTAL	100.00%
27	27A10	0.00%
	27A11	50.00%
	27A12	50.00%
	TOTAL	100.00%
AIR CARRIER DEPARTURE		
Runway	Track	Jet
09	09D10	0.00%
	09D12	100.00%
	09D13	0.00%
	TOTAL	100.00%
27	27D10	0.00%
	27D12	100.00%
	27D13	0.00%
	TOTAL	100.00%

Sources: Federal Aviation Administration, 2004.
Mammoth Yosemite Airport, 2004.
URS Corporation, 2006.

Appendix C-3

Supplemental Noise Analysis

The purpose of this Appendix is to evaluate the potential supplemental aircraft noise impact of the Proposed Action for the Mammoth Yosemite Airport and other aircraft overflying the area that are not related to the Proposed Action. This analysis considers aircraft operating at Mammoth Yosemite, in conjunction with other aircraft activity occurring within the Area of Investigation. This appendix contains a description of noise analysis methodology, aircraft activity, including aircraft overflights within the Area of Investigation, and potential noise impacts on noise sensitive sites, including potential Section 4(f) resources within the Area of Investigation.

APPENDIX C-3 CUMULATIVE NOISE ANALYSIS

C-3.1 OBJECTIVE

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for the proposed introduction of Bombardier 76 seat de Havilland Dash 8 Series Q400 regional turboprop airliner operations at Mammoth Yosemite Airport (MMH) in northern California. The existing airport is within the vicinity of Federal and state park resources, and Native American land. Therefore, the EIS must assess potential impacts to these areas as prescribed in FAA Order 1050.1E. A detailed discussion of the requirements of FAA Order 1050.1E is provided in the Noise Screening Assessment provided in **Appendix C-2**.

In June 2007, the FAA distributed *Guidance on Procedures for Evaluating the Potential Noise Impacts of Airport Improvement Projects on National Parks and Other Sensitive Park Environments* (FAA, 2007). This Cumulative Noise Analysis is prepared in accordance with the Guidance.

The Noise Screening Assessment only considered the change of exposure resulting from aircraft departing from or arriving to MMH. Therefore, a Cumulative Noise Analysis was conducted to help determine if any noise sensitive sites, including potential Section 4(f) resources, experience any change of exposure from the Proposed Action when all aircraft operating within the Area of Investigation (AI) are considered.

The objectives of this Cumulative Noise Analysis are:

- To inventory all aircraft operations occurring within the AI, including overflights;
- To perform a noise analysis to include aircraft operating at MMH and all aircraft transitioning the AI, and,
- To determine if the Proposed Action causes a Change of Exposure (as defined in the Guidance).

The following sections summarize the methodology, results, and conclusion of the Cumulative Noise Analysis for the Mammoth EIS.

C-3.2 METHODOLOGY

This Cumulative Noise Analysis presents a methodical, technical approach to determining the potential effect of the Proposed Action, in conjunction with all aircraft operations occurring within the AI, on noise-sensitive Section 4(f) properties located in the vicinity of the Mammoth Yosemite Airport. The methodology includes the compilation of aircraft operational data for aircraft transitioning through the AI, and an assessment of future noise levels within the AI both with and without the Proposed Action.

The Cumulative Noise Analysis is designed to identify noise sensitive locations, including confirmed and potential Section 4(f) resources, in the vicinity of MMH that could experience increased or decreased noise levels as a result of the Proposed Action. The Cumulative Noise Analysis builds upon the work in

the Noise Screening Assessment and provides an analysis of predicted aircraft noise exposure resulting from all aircraft operating within the AI, including aircraft not associated with MMH.

C-3.3 EVALUATION OF THE PROPOSED ACTION

The Proposed Action is the introduction of Bombardier 76 seat de Havilland Dash 8 Series Q400 regional turboprop airline operations at MMH. The FAA's Integrated Noise Model (INM) Version 6.2a was utilized in this Cumulative Noise Analysis to evaluate the potential impacts of the Proposed Action.

C-3.4 MAMMOTH EIS STUDY AREA DEFINITION

The AI for the MMH EIS was developed by estimating the distance that the proposed Q400 air carrier aircraft would need to climb to 10,000 feet altitude above field elevation (AFE) from MMH. For the purposes of this Cumulative Noise Analysis, the study area is termed the Area of Investigation (AI) and is shown in **Figure C-3.1**. A detailed discussion of the development of the MMH EIS AI is provided in **Appendix C-2**. This discussion includes information used to create aircraft flight profiles for aircraft operating to and from MMH.

This Cumulative Noise Analysis includes all aircraft operating within the AI, including aircraft operations directly attributed to MMH. This data, obtained from 14 days of radar data, from October 22, 2006 through November 5, 2006, provided by the FAA Oakland Air Route Traffic Control Center (ARTCC), included flight track information, aircraft types, aircraft altitude, and aircraft speed data. This data was processed using a Geographic Information System (GIS), and the resultant flight tracks are shown in **Figure C-3.2**. Due to the high number of flight tracks occurring within the AI, GIS was used to develop density plots of the raw radar flight tracks to determine if there are predominate flight paths used by aircraft within the AI. As shown in these density plots provided in **Figure C-3.3**, there are six dominate aircraft overflight paths through the AI. These six flights paths were used in the INM, with a track dispersion of five miles to each side of the primary track to represent all aircraft transitioning through the AI, excluding operations to or from MMH. The INM aircraft overflight tracks are shown in **Figure C-3.4**.

A detailed discussion of flight tracks used by aircraft operating to and from MMH is provided in **Appendix C-1 and C-2**.

C-3.5 INVENTORY OF POTENTIAL SECTION 4(F) RESOURCES WITHIN THE AI

The Federal statute that governs potential impacts to park resources is commonly known as the Department of Transportation (DOT) Act, Section 4(f) provisions. Section 4(f) of the Department of Transportation Act, as amended, now resides in the United States Code at 49 U.S.C. 303.

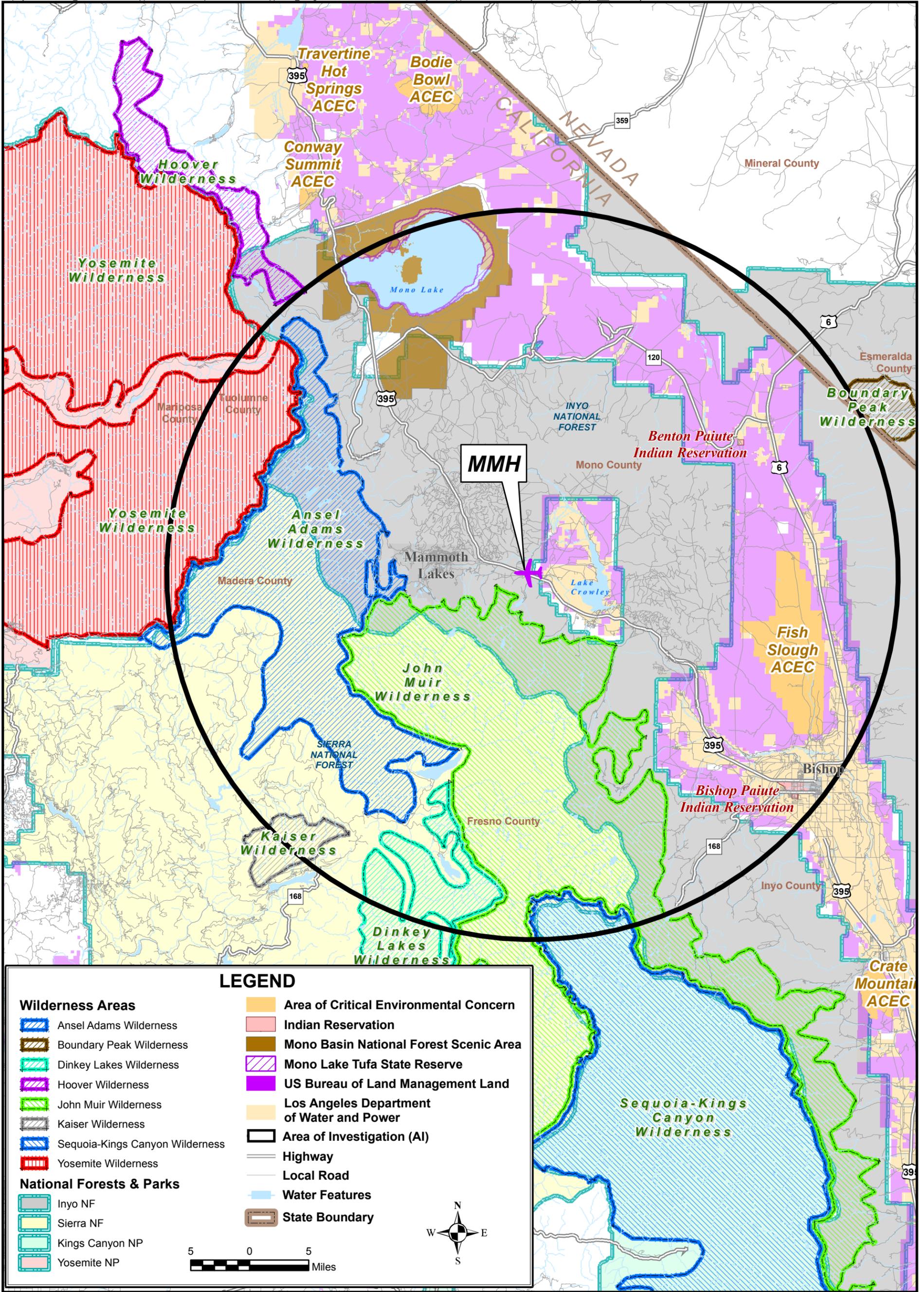


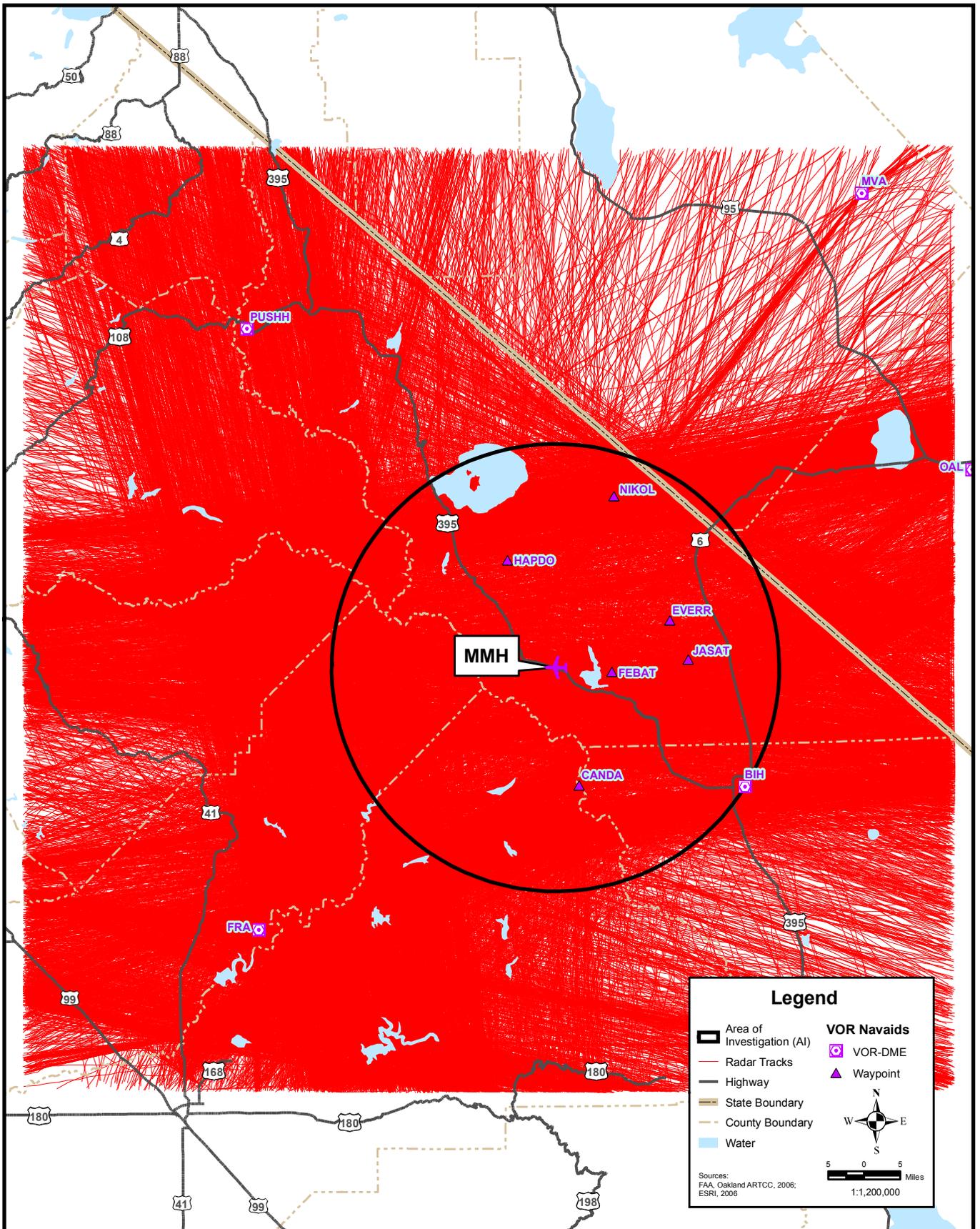
FIGURE C-3.1

**CUMULATIVE NOISE ANALYSIS:
AREA OF INVESTIGATION (AI)**



**Environmental Impact Statement
Mammoth Yosemite Airport**
Horizon Air Operations Specifications
Amendment Service to/from MMH

H:\projects\Mammoth_Lakes\1200426\9\Applications\mxd\Proposed Air Services\Appendix_C\Figure C-3.2_Cumulative Noise Analysis - Raw Radar Data Overflight Tracks.mxd (lde: 11/01/07)

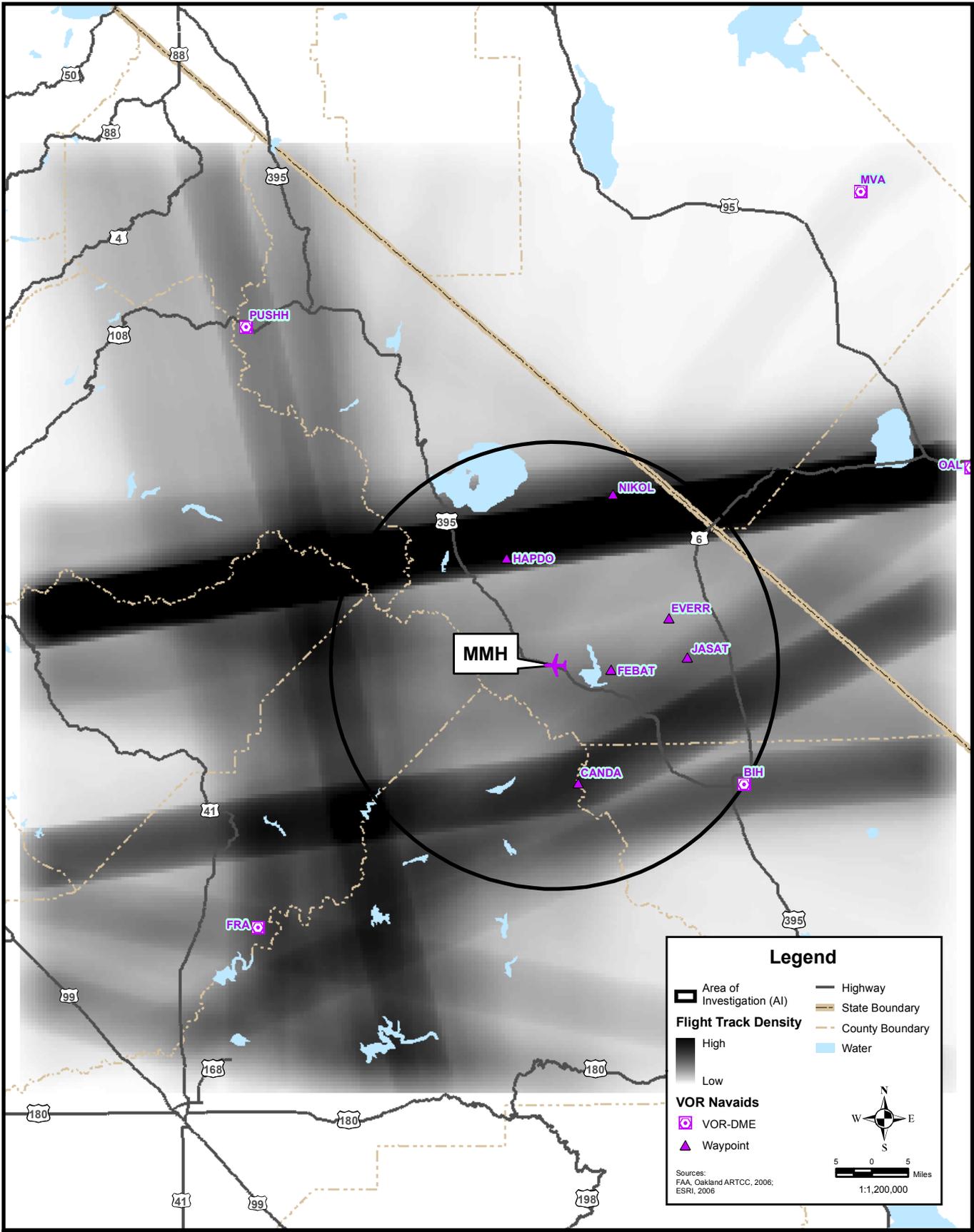


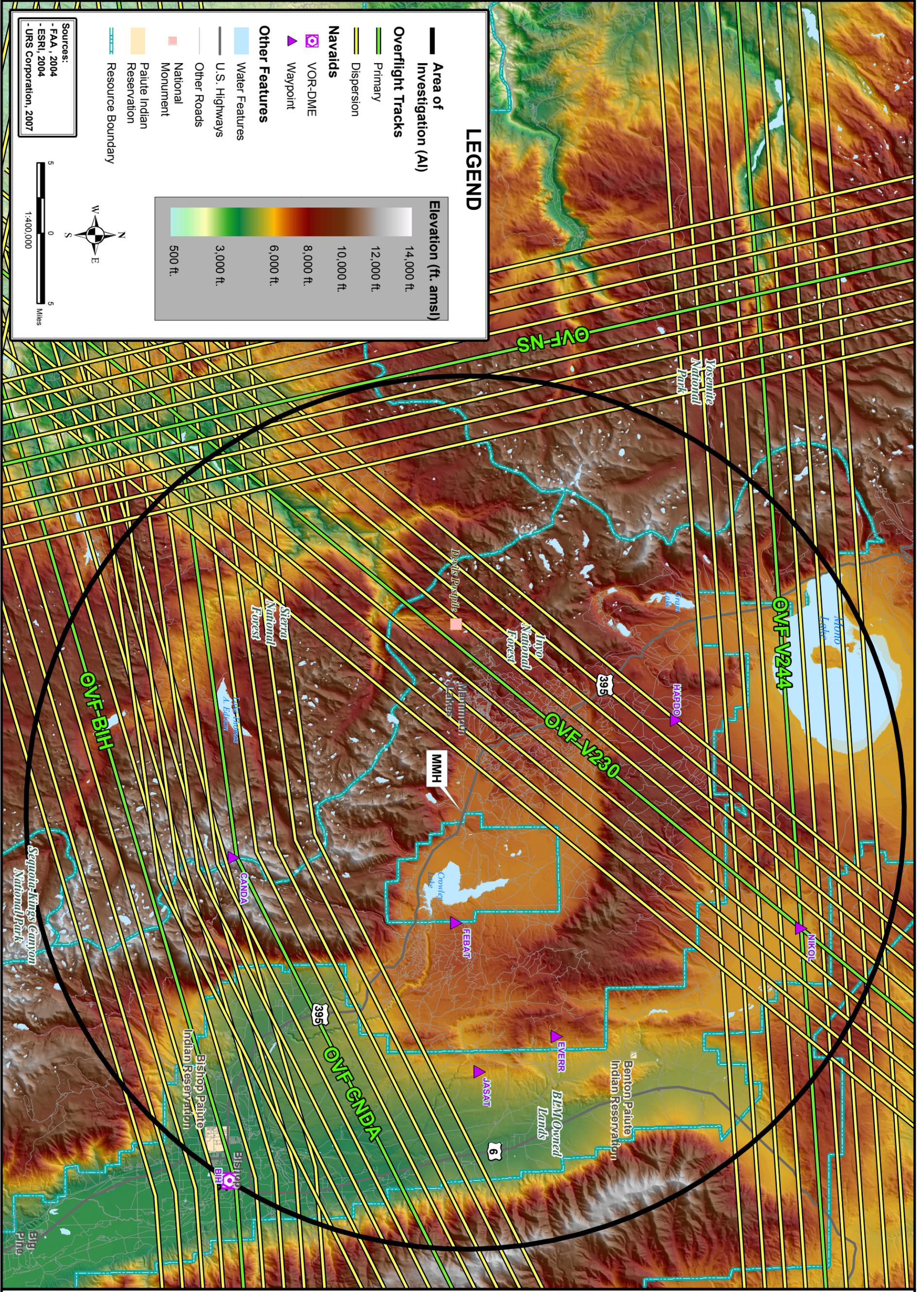
Environmental Impact Statement
Mammoth Yosemite Airport
Horizon Air Operations Specifications
Amendment Service to/from MMH

**CUMULATIVE NOISE ANALYSIS:
RAW RADAR DATA
OVERFLIGHT TRACKS**

**FIGURE
C-3.2**

H:\projects\Mammoth_Lakes\12004269\Applications\mxd\Proposed Air Services\Appendix_C\Figure C-3.3_Cumulative Noise Analysis - Density Plots of Raw Radar Data Flight Tracks.mxd (prf. lrp. lde. 11/01/07)





LEGEND

Area of Investigation (AI)
 - Investigation (AI)

Overflight Tracks
 - Primary
 - Dispersion

Nav aids
 - VOR-DME
 - Waypoint

Other Features
 - Water Features
 - U.S. Highways
 - Other Roads
 - National Monument
 - Paiute Indian Reservation
 - Resource Boundary

Elevation (ft. amsl)
 14,000 ft.
 12,000 ft.
 10,000 ft.
 8,000 ft.
 6,000 ft.
 3,000 ft.
 500 ft.

Sources:
 - FAA, 2004
 - ESRI, 2004
 - URS Corporation, 2007

Scale: 1:400,000
 0 to 5 Miles

**CUMULATIVE NOISE ANALYSIS:
 INM AI OVERFLIGHT TRACKS**

FIGURE
 C-3.4

As shown in **Figure C-3.1**, a variety of public lands are located within the Mammoth EIS AI with different ownership/management designations (Federal, State, and Native American) and attributes. These areas include National Park Lands, National Forest Lands, National Wilderness Areas, Bureau of Land Management (BLM) lands, California State Reserve Areas and Native American Tribal Lands and Reservations. A detailed discussion of these lands is provided in **Appendix C-2**.

C-3.6 INVENTORY OF AIRCRAFT OPERATIONS WITHIN THE AI

An inventory of all aircraft operations that occurred within the AI was conducted to determine potential aviation noise effects on noise sensitive sites, including potential Section 4(f) properties within the AI. The Noise Screening Assessment, **Appendix C-2**, provides a detailed discussion and analysis of aircraft arriving to and departing from MMH. The following discussion provides information on the development of the aircraft operations inventory for those aircraft operating within the AI, but not operating at MMH.

Aircraft operational data for aircraft transitioning through the AI was gathered from the two weeks of radar data obtained from the FAA Oakland ARTCC. The data included all aircraft operating within the AI, and in constant radar contact with the Oakland ARTCC. This data covers the period from October 22, 2006 through November 5, 2006, which was inclusive of the dates when noise monitoring was conducted. In addition to providing flight track information, this data also provided operational counts, fleet mix, aircraft altitudes, and aircraft speeds.

Using these existing overflight aircraft operations as a basis, future average day aircraft operations within the AI were forecast using the growth rate, by aircraft category, provided in the *FAA Forecasts of IFR Aircraft Handled by FAA Air Route Traffic Control Centers, FY 2006-2017*. This forecast predicts an average annual compound growth rate of 2.2, 2.6, 3.9, and 0.4 percent for Air Carrier, Air Taxi/Commuter, GA, and Military aircraft operations, respectively. A summary of annual overflight operations is provided in **Table C-3.1**. **Tables C-3.2** through **C-3.7** provide the number of average daily aircraft operations, by aircraft type, for each overflight track for the Existing Condition, 2009 and 2015.

**TABLE C-3.1
SUMMARY OF ANNUAL OVERFLIGHT AIRCRAFT OPERATIONS**

Track	2005	2009	2015
OVF_CNDA	17,937	19,339	23,341
OVF_NS	39,420	42,555	51,353
OVF_BIH	16,269	17,490	20,786
OVF_V230	6,309	6,827	8,156
OVF_EW	16,034	17,248	20,633
OVF_V244	52,065	55,597	65,003
TOTAL	148,034	159,056	189,272

Source: URS, 2007.

It is important to note the following aspects of the MMH overflight operational data:

- The fleet mix (types of aircraft) for overflights within the AI would be the same for both the No-Action and Proposed Action Alternatives,
- The number of overflight aircraft operations within the AI would be the same under both the No-Action and Proposed Action Alternatives, and
- There will be no changes in overflight flight tracks within the AI between the No-Action and Proposed Action Alternatives.

**TABLE C-3.2
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVFL_CNDA**

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
727200	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
737300	AC	2.500	0.643	0.143	2.659	0.684	0.152	3.066	0.788	0.175
737500	AC	0.643	0.714	0.000	0.684	0.760	0.000	0.788	0.876	0.000
737700	AC	1.571	0.071	0.000	1.671	0.076	0.000	1.927	0.088	0.000
737800	AC	0.286	0.643	0.000	0.304	0.684	0.000	0.350	0.788	0.000
757300	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
767300	AC	0.786	0.071	0.286	0.836	0.076	0.304	0.964	0.088	0.350
767400	AC	0.000	0.000	0.143	0.000	0.000	0.152	0.000	0.000	0.175
737N17	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
757PW	AC	1.857	1.000	0.000	1.975	1.063	0.000	2.278	1.226	0.000
757RR	AC	0.643	0.000	0.000	0.684	0.000	0.000	0.788	0.000	0.000
767CF6	AC	0.000	0.000	0.714	0.000	0.000	0.760	0.000	0.000	0.876
A319	AC	1.214	1.357	0.714	1.291	1.443	0.760	1.489	1.664	0.876
A320	AC	2.571	0.071	0.000	2.734	0.076	0.000	3.154	0.088	0.000
A32023	AC	2.929	1.500	0.214	3.114	1.595	0.228	3.591	1.840	0.263
DC1010	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
DC1030	AC	0.643	0.000	0.571	0.684	0.000	0.608	0.788	0.000	0.701
DC870	AC	0.000	0.000	0.571	0.000	0.000	0.608	0.000	0.000	0.701
MD11GE	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
MD82	AC	3.000	0.857	0.000	3.190	0.911	0.000	3.679	1.051	0.000
MD83	AC	1.214	0.857	0.071	1.291	0.911	0.076	1.489	1.051	0.088
MD9028	AC	0.500	0.714	0.000	0.532	0.760	0.000	0.613	0.876	0.000
CL600	AT	0.929	0.286	0.000	1.007	0.310	0.000	1.199	0.369	0.000
CL601	AT	0.214	0.071	0.000	0.232	0.077	0.000	0.277	0.092	0.000
DHC6	AT	0.143	0.000	0.000	0.155	0.000	0.000	0.184	0.000	0.000
EMB145	AT	0.143	0.000	0.000	0.155	0.000	0.000	0.184	0.000	0.000
BEC58P	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
CIT3	GA	0.071	0.071	0.000	0.079	0.079	0.000	0.105	0.105	0.000
CL600	GA	0.857	0.143	0.143	0.952	0.159	0.159	1.261	0.210	0.210
CNA441	GA	0.500	0.000	0.000	0.555	0.000	0.000	0.735	0.000	0.000
CNA500	GA	0.357	0.071	0.071	0.397	0.079	0.079	0.525	0.105	0.105
CNA750	GA	1.643	0.357	0.214	1.824	0.397	0.238	2.416	0.525	0.315
FAL20	GA	0.000	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000
GASEPF	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GASEPV	GA	0.143	0.000	0.071	0.159	0.000	0.079	0.210	0.000	0.105
GII	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
GIIB	GA	0.214	0.071	0.000	0.238	0.079	0.000	0.315	0.105	0.000
GIV	GA	0.714	0.000	0.071	0.793	0.000	0.079	1.051	0.000	0.105
GV	GA	2.357	0.143	0.357	2.617	0.159	0.397	3.467	0.210	0.525
IA1125	GA	0.286	0.000	0.000	0.317	0.000	0.000	0.420	0.000	0.000
LEAR25	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
LEAR35	GA	2.714	0.429	0.000	3.014	0.476	0.000	3.992	0.630	0.000
MU3001	GA	1.357	0.357	0.143	1.507	0.397	0.159	1.996	0.525	0.210
PA30	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
EA6B	MIL	0.000	0.000	0.071	0.000	0.000	0.074	0.000	0.000	0.075
TOTAL		33.995	10.568	4.568	36.743	11.330	4.912	44.686	13.405	5.855

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

**TABLE C-3.3
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVF_NS**

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
727200	AC	0.071	0.000	0.071	0.076	0.000	0.076	0.088	0.000	0.088
737300	AC	1.357	0.000	0.000	1.443	0.000	0.000	1.664	0.000	0.000
737400	AC	7.286	3.643	0.286	7.748	3.874	0.304	8.935	4.467	0.350
737500	AC	0.286	0.000	0.000	0.304	0.000	0.000	0.350	0.000	0.000
737700	AC	11.071	2.214	1.000	11.774	2.355	1.063	13.578	2.716	1.226
737800	AC	1.214	1.143	0.071	1.291	1.215	0.076	1.489	1.402	0.088
747400	AC	0.357	0.071	0.000	0.380	0.076	0.000	0.438	0.088	0.000
767300	AC	0.429	0.643	0.357	0.456	0.684	0.380	0.526	0.788	0.438
777200	AC	0.500	0.000	0.000	0.532	0.000	0.000	0.613	0.000	0.000
777300	AC	0.143	0.000	0.000	0.152	0.000	0.000	0.175	0.000	0.000
737N17	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
74720B	AC	0.286	0.000	0.000	0.304	0.000	0.000	0.350	0.000	0.000
757PW	AC	0.429	0.071	0.071	0.456	0.076	0.076	0.526	0.088	0.088
757RR	AC	0.000	0.571	0.000	0.000	0.608	0.000	0.000	0.701	0.000
A30062	AC	0.000	0.357	0.929	0.000	0.380	0.987	0.000	0.438	1.139
A319	AC	4.143	0.571	0.143	4.406	0.608	0.152	5.081	0.701	0.175
A320	AC	0.000	0.143	0.000	0.000	0.152	0.000	0.000	0.175	0.000
A32023	AC	1.000	0.071	0.071	1.063	0.076	0.076	1.226	0.088	0.088
A32123	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
A33034	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
A340	AC	0.143	0.000	0.000	0.152	0.000	0.000	0.175	0.000	0.000
DC1010	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
DC93LW	AC	0.357	0.714	0.500	0.380	0.760	0.532	0.438	0.876	0.613
MD11PW	AC	0.429	0.429	0.143	0.456	0.456	0.152	0.526	0.526	0.175
MD81	AC	0.071	0.071	0.000	0.076	0.076	0.000	0.088	0.088	0.000
MD82	AC	1.143	0.143	0.071	1.215	0.152	0.076	1.402	0.175	0.088
MD83	AC	10.643	2.786	0.571	11.318	2.962	0.608	13.052	3.416	0.701
CL600	AT	0.214	0.000	0.000	0.232	0.000	0.000	0.277	0.000	0.000
CL601	AT	1.571	0.143	0.000	1.705	0.155	0.000	2.029	0.184	0.000
DHC6	AT	1.929	0.071	0.071	2.092	0.077	0.077	2.490	0.092	0.092
DHC8	AT	0.071	0.000	0.000	0.077	0.000	0.000	0.092	0.000	0.000
DHC830	AT	7.429	2.286	2.214	8.058	2.480	2.402	9.591	2.951	2.859
EMB145	AT	0.071	0.000	0.000	0.077	0.000	0.000	0.092	0.000	0.000
BEC58P	GA	2.214	0.143	0.286	2.459	0.159	0.317	3.257	0.210	0.420
CIT3	GA	0.286	0.000	0.000	0.317	0.000	0.000	0.420	0.000	0.000
CL600	GA	1.214	0.071	0.000	1.348	0.079	0.000	1.786	0.105	0.000
CNA206	GA	0.786	0.000	0.000	0.872	0.000	0.000	1.156	0.000	0.000
CNA441	GA	1.929	0.071	0.071	2.142	0.079	0.079	2.836	0.105	0.105
CNA500	GA	1.714	0.000	0.143	1.904	0.000	0.159	2.521	0.000	0.210
CNA750	GA	0.857	0.000	0.071	0.952	0.000	0.079	1.261	0.000	0.105
FAL20	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GASEPF	GA	0.500	0.000	0.000	0.555	0.000	0.000	0.735	0.000	0.000
GASEPV	GA	1.071	0.000	0.000	1.190	0.000	0.000	1.576	0.000	0.000
GIV	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
GV	GA	8.071	1.571	1.071	8.963	1.745	1.190	11.871	2.311	1.576
IA1125	GA	0.714	0.000	0.000	0.793	0.000	0.000	1.051	0.000	0.000
LEAR25	GA	0.429	0.000	0.071	0.476	0.000	0.079	0.630	0.000	0.105
LEAR35	GA	2.500	0.143	0.214	2.776	0.159	0.238	3.677	0.210	0.315
MU3001	GA	3.429	0.143	0.214	3.807	0.159	0.238	5.042	0.210	0.315
PA28	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
PA30	GA	0.000	0.000	0.071	0.000	0.000	0.079	0.000	0.000	0.105
PA31	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000

TABLE C-3.3 (Continued)
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVF_NS

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
C17	MIL	0.286	0.000	0.000	0.295	0.000	0.000	0.298	0.000	0.000
C9A	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
EA6B	MIL	0.857	0.000	0.000	0.886	0.000	0.000	0.895	0.000	0.000
F15E29	MIL	0.143	0.000	0.000	0.148	0.000	0.000	0.149	0.000	0.000
P3C	MIL	0.286	0.000	0.000	0.295	0.000	0.000	0.298	0.000	0.000
TOTAL		80.926	18.283	8.781	87.493	19.602	9.495	106.122	23.111	11.464

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

TABLE C-3.4
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVF_BIH

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
737300	AC	7.071	0.643	0.071	7.520	0.684	0.076	8.672	0.788	0.088
737700	AC	6.214	0.786	0.429	6.608	0.836	0.456	7.621	0.964	0.526
757300	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
767300	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
757RR	AC	0.357	0.000	0.000	0.380	0.000	0.000	0.438	0.000	0.000
A30062	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
A319	AC	3.429	0.714	0.286	3.646	0.760	0.304	4.205	0.876	0.350
A32023	AC	4.643	1.143	0.429	4.937	1.215	0.456	5.694	1.402	0.526
MD82	AC	0.929	0.000	0.000	0.987	0.000	0.000	1.139	0.000	0.000
MD83	AC	1.071	0.143	0.000	1.139	0.152	0.000	1.314	0.175	0.000
1900D	AT	2.143	0.714	0.000	2.325	0.775	0.000	2.767	0.922	0.000
CL600	AT	0.071	0.071	0.000	0.077	0.077	0.000	0.092	0.092	0.000
CL601	AT	0.143	0.357	0.000	0.155	0.387	0.000	0.184	0.461	0.000
DHC6	AT	0.571	0.000	0.000	0.620	0.000	0.000	0.738	0.000	0.000
EMB120	AT	4.286	0.286	0.214	4.649	0.310	0.232	5.534	0.369	0.277
BEC58P	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
CIT3	GA	0.286	0.071	0.000	0.317	0.079	0.000	0.420	0.105	0.000
CL600	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
CNA206	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
CNA441	GA	0.714	0.071	0.071	0.793	0.079	0.079	1.051	0.105	0.105
CNA500	GA	0.500	0.071	0.000	0.555	0.079	0.000	0.735	0.105	0.000
CNA750	GA	0.500	0.071	0.000	0.555	0.079	0.000	0.735	0.105	0.000
FAL20	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GASEPF	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GASEPV	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GIIB	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
GIV	GA	0.643	0.143	0.000	0.714	0.159	0.000	0.945	0.210	0.000
GV	GA	0.357	0.000	0.000	0.397	0.000	0.000	0.525	0.000	0.000
IA1125	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
LEAR35	GA	0.786	0.071	0.000	0.872	0.079	0.000	1.156	0.105	0.000
MU3001	GA	1.714	0.071	0.000	1.904	0.079	0.000	2.521	0.105	0.000
PA30	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
PA31	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
KC135R	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
TOTAL		37.637	5.426	1.500	40.481	5.829	1.603	48.190	6.889	1.872

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

**TABLE C-3.5
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVFL_V230**

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
737400	AC	0.214	0.000	0.000	0.228	0.000	0.000	0.263	0.000	0.000
737700	AC	0.143	0.071	0.000	0.152	0.076	0.000	0.175	0.088	0.000
777200	AC	0.143	0.000	0.000	0.152	0.000	0.000	0.175	0.000	0.000
737N17	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
A319	AC	0.286	0.000	0.000	0.304	0.000	0.000	0.350	0.000	0.000
A340	AC	0.143	0.000	0.000	0.152	0.000	0.000	0.175	0.000	0.000
CL601	AT	4.929	1.357	1.071	5.346	1.472	1.162	6.364	1.752	1.383
DHC6	AT	0.571	0.000	0.071	0.620	0.000	0.077	0.738	0.000	0.092
DHC830	AT	0.571	0.429	0.500	0.620	0.465	0.542	0.738	0.553	0.646
SD330	AT	0.071	0.000	0.000	0.077	0.000	0.000	0.092	0.000	0.000
BEC58P	GA	0.214	0.071	0.071	0.238	0.079	0.079	0.315	0.105	0.105
CIT3	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
CL600	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
CNA441	GA	0.571	0.000	0.000	0.635	0.000	0.000	0.840	0.000	0.000
CNA500	GA	0.429	0.071	0.000	0.476	0.079	0.000	0.630	0.105	0.000
GASEPF	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
GASEPV	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GIV	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
GV	GA	0.214	0.071	0.000	0.238	0.079	0.000	0.315	0.105	0.000
LEAR35	GA	0.643	0.000	0.000	0.714	0.000	0.000	0.945	0.000	0.000
MU3001	GA	1.000	0.000	0.143	1.110	0.000	0.159	1.471	0.000	0.210
EA6B	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
F-18	MIL	2.143	0.143	0.000	2.216	0.148	0.000	2.237	0.149	0.000
KC135R	MIL	0.214	0.000	0.000	0.222	0.000	0.000	0.224	0.000	0.000
TOTAL		13.212	2.213	1.856	14.285	2.398	2.019	17.050	2.857	2.436

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

**TABLE C-3.6
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVF_EW**

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
727200	AC	0.000	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000
737300	AC	5.929	2.429	0.929	6.305	2.583	0.987	7.271	2.978	1.139
737700	AC	3.357	1.357	1.643	3.570	1.443	1.747	4.117	1.664	2.015
737800	AC	0.000	0.000	0.143	0.000	0.000	0.152	0.000	0.000	0.175
727QF	AC	0.000	0.000	0.500	0.000	0.000	0.532	0.000	0.000	0.613
757RR	AC	0.143	0.071	0.000	0.152	0.076	0.000	0.175	0.088	0.000
A30062	AC	0.429	0.000	0.286	0.456	0.000	0.304	0.526	0.000	0.350
A319	AC	1.071	1.143	0.357	1.139	1.215	0.380	1.314	1.402	0.438
A32023	AC	1.643	1.143	1.643	1.747	1.215	1.747	2.015	1.402	2.015
DC1010	AC	0.000	0.071	0.071	0.000	0.076	0.076	0.000	0.088	0.088
MD82	AC	4.143	0.643	0.000	4.406	0.684	0.000	5.081	0.788	0.000
MD83	AC	1.000	0.071	0.071	1.063	0.076	0.076	1.226	0.088	0.088
1900D	AT	0.143	0.000	0.000	0.155	0.000	0.000	0.184	0.000	0.000
CL600	AT	0.214	0.000	0.000	0.232	0.000	0.000	0.277	0.000	0.000
CL601	AT	1.143	0.786	0.000	1.240	0.852	0.000	1.476	1.014	0.000
DHC6	AT	0.429	0.000	0.286	0.465	0.000	0.310	0.553	0.000	0.369
BEC58P	GA	0.500	0.000	0.000	0.555	0.000	0.000	0.735	0.000	0.000
CIT3	GA	0.071	0.071	0.000	0.079	0.079	0.000	0.105	0.105	0.000
CL600	GA	0.500	0.143	0.000	0.555	0.159	0.000	0.735	0.210	0.000
CNA172	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
CNA206	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
CNA441	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
CNA500	GA	0.143	0.071	0.143	0.159	0.079	0.159	0.210	0.105	0.210
CNA750	GA	0.500	0.143	0.071	0.555	0.159	0.079	0.735	0.210	0.105
FAL20	GA	0.071	0.071	0.000	0.079	0.079	0.000	0.105	0.105	0.000
GASEPF	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
GASEPV	GA	0.429	0.000	0.000	0.476	0.000	0.000	0.630	0.000	0.000
GII	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
GIIB	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
GIV	GA	0.714	0.071	0.143	0.793	0.079	0.159	1.051	0.105	0.210
GV	GA	0.429	0.214	0.214	0.476	0.238	0.238	0.630	0.315	0.315
LEAR25	GA	0.000	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000
LEAR35	GA	1.857	0.214	0.143	2.062	0.238	0.159	2.731	0.315	0.210
MU3001	GA	2.071	0.071	0.214	2.300	0.079	0.238	3.046	0.105	0.315
F15E29	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
F-18	MIL	0.143	0.000	0.000	0.148	0.000	0.000	0.149	0.000	0.000
KC135R	MIL	0.000	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000
TOTAL		28.071	8.996	6.857	30.273	9.638	7.343	36.517	11.355	8.655

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

**TABLE C-3.7
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVF_V230**

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
737300	AC	1.071	0.786	0.643	1.139	0.836	0.684	1.314	0.964	0.788
737500	AC	0.714	0.000	0.071	0.760	0.000	0.076	0.876	0.000	0.088
737700	AC	2.357	0.643	0.071	2.507	0.684	0.076	2.891	0.788	0.088
737800	AC	5.429	1.857	1.286	5.773	1.975	1.367	6.657	2.278	1.577
747200	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
747400	AC	0.857	0.143	0.143	0.911	0.152	0.152	1.051	0.175	0.175
757300	AC	1.429	0.071	0.000	1.519	0.076	0.000	1.752	0.088	0.000
767300	AC	9.857	2.143	0.643	10.482	2.279	0.684	12.088	2.628	0.788
767400	AC	1.429	0.000	0.429	1.519	0.000	0.456	1.752	0.000	0.526
777200	AC	3.143	1.214	0.143	3.342	1.291	0.152	3.854	1.489	0.175
727QF	AC	1.429	0.071	0.071	1.519	0.076	0.076	1.752	0.088	0.088
757PW	AC	21.143	5.429	1.500	22.484	5.773	1.595	25.929	6.657	1.840
757RR	AC	5.929	1.714	0.286	6.305	1.823	0.304	7.271	2.102	0.350
767CF6	AC	3.000	0.071	0.714	3.190	0.076	0.760	3.679	0.088	0.876
A30062	AC	0.071	0.000	0.071	0.076	0.000	0.076	0.088	0.000	0.088
A319	AC	12.000	3.857	1.286	12.761	4.102	1.367	14.716	4.730	1.577
A320	AC	2.214	1.000	0.714	2.355	1.063	0.760	2.716	1.226	0.876
A32023	AC	3.071	1.643	0.571	3.266	1.747	0.608	3.767	2.015	0.701
A32123	AC	5.214	1.143	0.000	5.545	1.215	0.000	6.395	1.402	0.000
DC1010	AC	1.071	0.000	1.714	1.139	0.000	1.823	1.314	0.000	2.102
DC1030	AC	0.786	0.071	0.143	0.836	0.076	0.152	0.964	0.088	0.175
DC870	AC	0.000	0.000	0.071	0.000	0.000	0.076	0.000	0.000	0.088
MD11GE	AC	0.214	0.000	0.071	0.228	0.000	0.076	0.263	0.000	0.088
MD81	AC	0.071	0.000	0.000	0.076	0.000	0.000	0.088	0.000	0.000
MD82	AC	1.500	0.429	0.071	1.595	0.456	0.076	1.840	0.526	0.088
MD83	AC	5.857	2.286	1.214	6.229	2.431	1.291	7.183	2.803	1.489
CL600 AT	AT	0.857	0.071	0.000	0.930	0.077	0.000	1.107	0.092	0.000
CL601	AT	0.214	0.000	0.000	0.232	0.000	0.000	0.277	0.000	0.000
DHC6	AT	0.500	0.000	0.000	0.542	0.000	0.000	0.646	0.000	0.000
EMB145	AT	0.143	0.143	0.000	0.155	0.155	0.000	0.184	0.184	0.000
BEC58P	GA	0.429	0.000	0.000	0.476	0.000	0.000	0.630	0.000	0.000
CIT3	GA	0.286	0.000	0.000	0.317	0.000	0.000	0.420	0.000	0.000
CL600 GA	GA	0.929	0.071	0.143	1.031	0.079	0.159	1.366	0.105	0.210
CNA206	GA	0.357	0.000	0.000	0.397	0.000	0.000	0.525	0.000	0.000
CNA441	GA	0.214	0.000	0.000	0.238	0.000	0.000	0.315	0.000	0.000
CNA500	GA	0.286	0.000	0.071	0.317	0.000	0.079	0.420	0.000	0.105
CNA750	GA	0.857	0.143	0.071	0.952	0.159	0.079	1.261	0.210	0.105
FAL20	GA	0.143	0.000	0.000	0.159	0.000	0.000	0.210	0.000	0.000
GASEPF	GA	0.214	0.000	0.071	0.238	0.000	0.079	0.315	0.000	0.105
GASEPV	GA	0.643	0.000	0.000	0.714	0.000	0.000	0.945	0.000	0.000
GII	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
GIIB	GA	0.286	0.000	0.000	0.317	0.000	0.000	0.420	0.000	0.000
GIV	GA	0.500	0.000	0.071	0.555	0.000	0.079	0.735	0.000	0.105
GV	GA	1.571	0.071	0.214	1.745	0.079	0.238	2.311	0.105	0.315
IA1125	GA	0.143	0.000	0.143	0.159	0.000	0.159	0.210	0.000	0.210

TABLE C-3.7 (Continued)
AVERAGE DAILY OVERFLIGHT AIRCRAFT OPERATIONS
TRACK OVFL_V230

INM Aircraft Type	Aircraft Category	2005			2009			2015		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
LEAR25	GA	0.071	0.000	0.000	0.079	0.000	0.000	0.105	0.000	0.000
LEAR35	GA	3.143	0.571	0.071	3.490	0.635	0.079	4.622	0.840	0.105
MU3001	GA	1.000	0.214	0.143	1.110	0.238	0.159	1.471	0.315	0.210
C130	MIL	0.214	0.000	0.000	0.222	0.000	0.000	0.224	0.000	0.000
C17	MIL	0.143	0.071	0.000	0.148	0.074	0.000	0.149	0.075	0.000
C5A	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
EA6B	MIL	0.143	0.000	0.000	0.148	0.000	0.000	0.149	0.000	0.000
F-18	MIL	0.071	0.000	0.000	0.074	0.000	0.000	0.075	0.000	0.000
KC135R	MIL	0.214	0.071	0.000	0.222	0.074	0.000	0.224	0.075	0.000
TOTAL		103.64	25.997	12.924	110.752	27.701	13.797	129.784	32.136	16.101

Notes: AC – Air Carrier, AT – Air Taxi, GA – General Aviation, MIL – Military.
D - Day: 7:00 a.m. to 6:59 p.m., E - Evening: 7:00 p.m. to 9:59 p.m., N - Night: 10:00 p.m. to 6:59 a.m.
Source: URS Corporation, 2007.

C-3.7 DETERMINATION OF NOISE LEVELS AT NOISE SENSITIVE SITES WITHIN THE AI

Information from **Sections C-3.2 through C-3.6** was used to assess potential future noise effects as a result of the proposed air carrier service at Mammoth Yosemite Airport on noise sensitive sites, including Section 4(f) properties with quiet settings, within the AI. The FAA’s Integrated Noise Model (INM) Version 6.2a was used to conduct the Cumulative Noise Analysis. INM Version 6.2a has enhancements that enable it to produce more accurate noise predictions than previous versions. Such enhancements allow analysts to consider the effects of airfield elevation and average temperature upon noise propagation and aircraft performance. In addition, terrain elevation data allows the model to adjust the observer-to-aircraft distances when computing noise levels. These features were utilized in this analysis. The Cumulative Noise Analysis includes not only aircraft operations associated with MMH, but all aircraft operations within the AI. In addition to the INM inputs associated with aircraft operations, the INM input included data on the analysis locations, noise metrics, and the ambient noise level. These inputs are described in the following sections.

C-3.7.1 Analysis Locations

A uniform grid was set up as an initial screening test, with points spaced 0.5 nautical miles (nm) apart over the entire AI. In addition to the uniform grid, individual grid points were placed at representative locations within each Section 4(f) property (see **Table C.3-7**). **Figure C.3-5** illustrates the uniform grid over the AI, while **Figure C.3-6** displays the location of the individual Section 4(f) grid points.

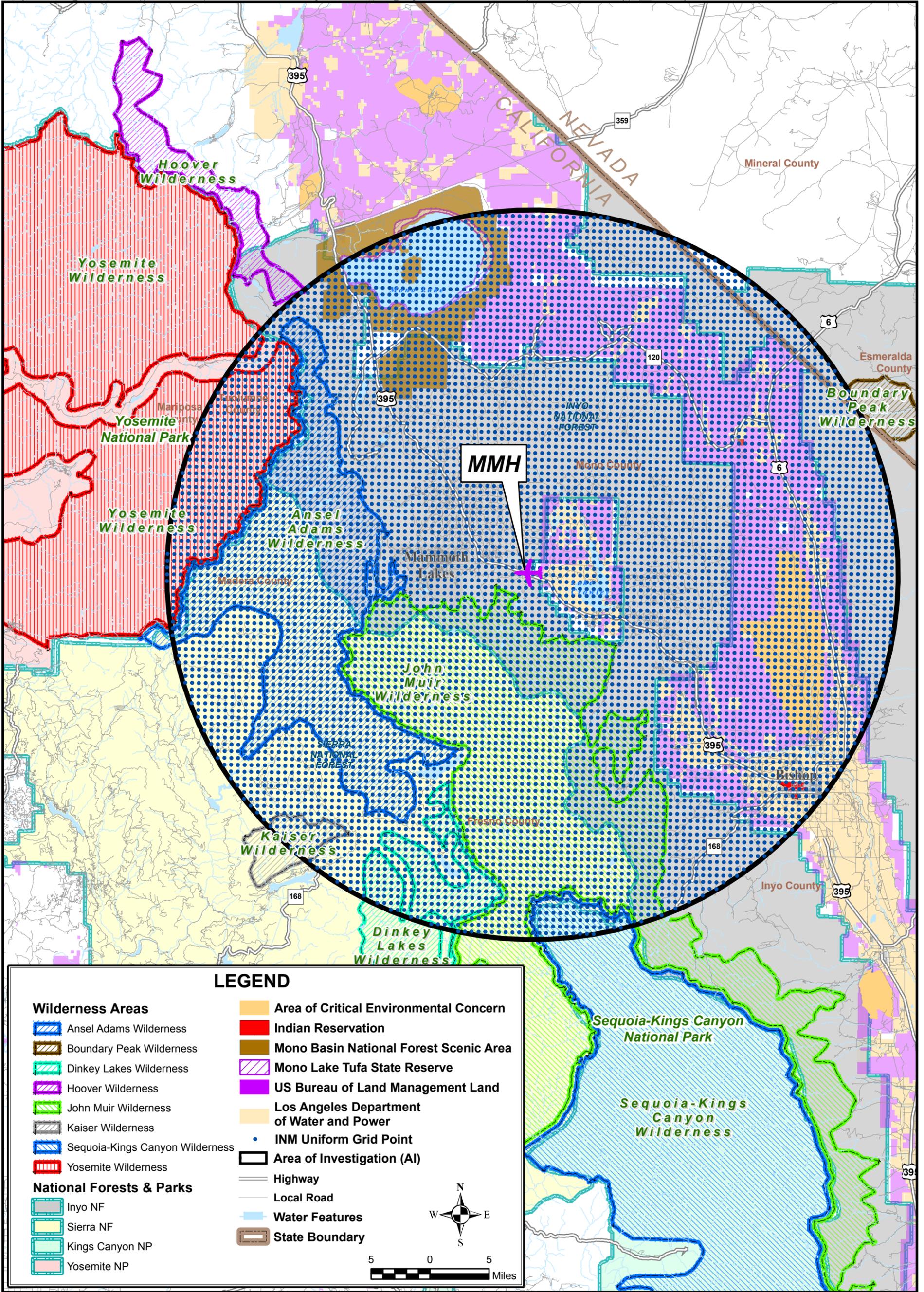
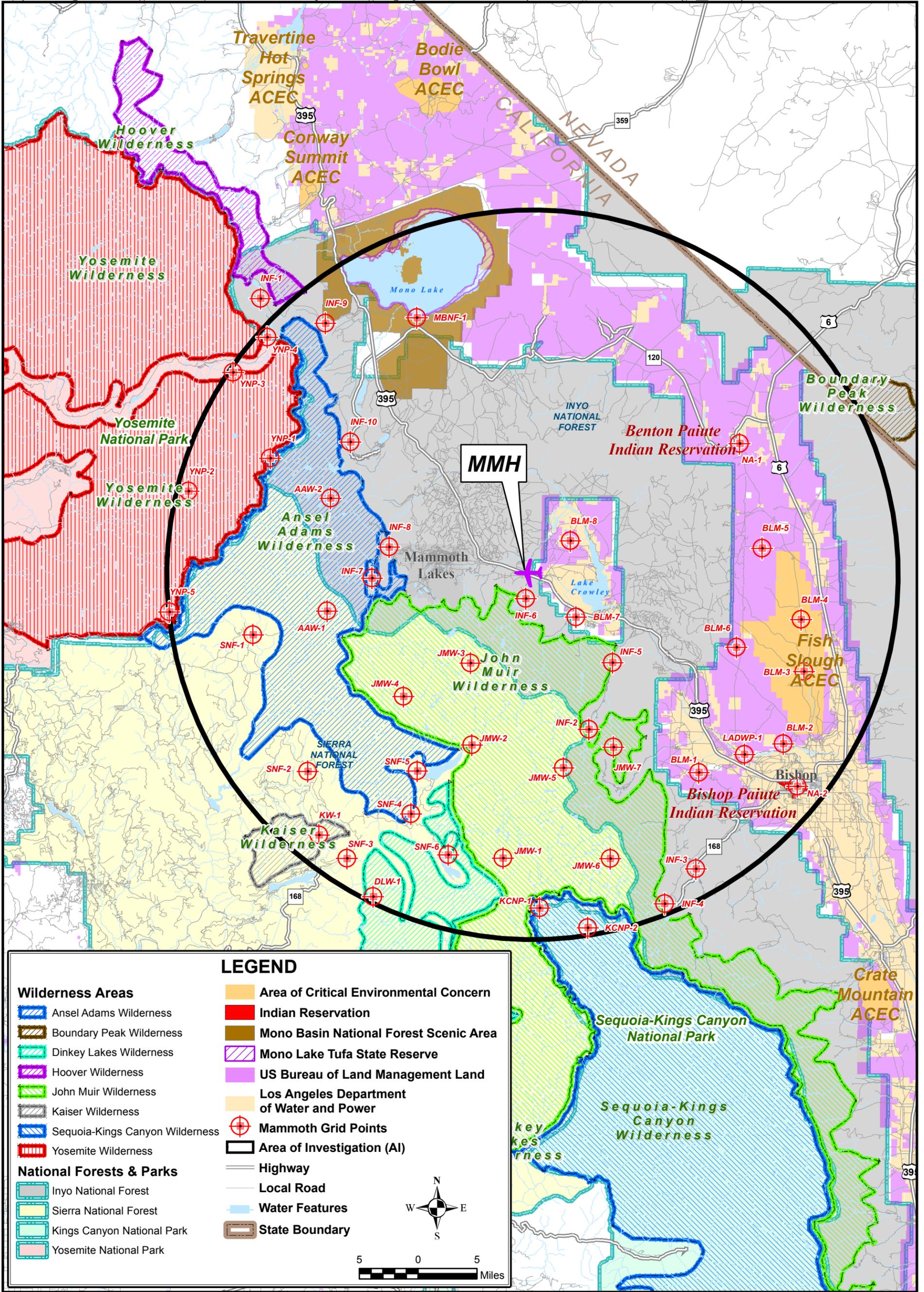


FIGURE C-3.5

CUMULATIVE NOISE ANALYSIS: INM UNIFORM GRID



Environmental Impact Statement
Mammoth Yosemite Airport
 Horizon Air Operations Specifications
 Amendment Service to/from MMH



LEGEND

Wilderness Areas	Area of Critical Environmental Concern
Ansel Adams Wilderness	Indian Reservation
Boundary Peak Wilderness	Mono Basin National Forest Scenic Area
Dinkey Lakes Wilderness	Mono Lake Tufa State Reserve
Hoover Wilderness	US Bureau of Land Management Land
John Muir Wilderness	Los Angeles Department of Water and Power
Kaiser Wilderness	Mammoth Grid Points
Sequoia-Kings Canyon Wilderness	Area of Investigation (AI)
Yosemite Wilderness	Highway
National Forests & Parks	Local Road
Inyo National Forest	Water Features
Sierra National Forest	State Boundary
Kings Canyon National Park	
Yosemite National Park	

FIGURE C-3.6

**CUMULATIVE NOISE ANALYSIS:
POTENTIAL 4 (f) RESOURCE
GRID POINTS**

**TABLE C-3.7
POTENTIAL SECTION 4(f) ANALYSIS LOCATIONS**

No	Site Name	Elevation	Land Area	Wilderness Area
AAW-1	Cargyle Meadow	8,055	Sierra NF	Ansel Adams
AAW-2	JMT - Garnet Lake	9,822	Inyo NF	Ansel Adams
BLM-1	Horton Creek Campground	4,954	BLM	None
BLM-2	Chalk Bluff in the Volcanic Tablelands	4,444	BLM	None
BLM-3	Fish Sanctuary	4,290	BLM	None
BLM-4	Chidago Canyon	4,498	BLM	None
BLM-5	Red Rock Canyon	5,800	BLM	None
BLM-6	Volcanic Tablelands	5,791	BLM	None
BLM-7	Crowley Lake Campground	7,029	BLM	None
BLM-8	Crowley (Wild Willy's) Hot Spring	6,889	BLM	None
DLW-1	California Riding/Hiking Trail	8,599	Sierra NF	Dinkey Lakes
INF-1	Sawmill Campground	9,799	Inyo NF	None
INF-2	Mosquito Flats Campground	10,382	Inyo NF	John Muir ¹
INF-3	Big Trees Campground	7,598	Inyo NF	None
INF-4	North Lake Campground	9,803	Inyo NF	John Muir ¹
INF-5	Iris Meadow Campground	8,526	Inyo NF	None
INF-6	Convict Lake Campground	7,651	Inyo NF	John Muir ¹
INF-7	Devils Postpile Lookout	7,761	Inyo NF	Ansel Adams ¹
INF-8	Minaret Vista	9,132	Inyo NF	None
INF-9	Boulder Campground	7,398	Inyo NF	None
INF-10	Silver Lake	7,398	Inyo NF	None
JMW-1	JMT - Sallie Keyes Lakes	10,362	Sierra NF	John Muir
JMW-2	JMT - Quail Meadows	7,798	Sierra NF	John Muir
JMW-3	JMT - Lake Virginia	10,397	Sierra NF	John Muir
JMW-4	Rainbow Lake	9,996	Sierra NF	John Muir
JMW-5	Mount Abbot	13,341	Sierra NF	John Muir
JMW-6	Desolation Lake	11,399	Sierra NF	John Muir
JMW-7	Tamarack Lakes	11,603	Inyo NF	John Muir
KCNP-1	JMT - San Joaquin River	8,458	Kings Canyon NP	Sequoia-Kings Canyon
KCNP-2	JMT - McClure Meadow	9,799	Kings Canyon NP	Sequoia-Kings Canyon
KW-1	Upper Twin Lake	8,671	Sierra NF	Kaiser
LADWP-1	Pleasant Valley Campground	4,399	LADWP	None
MBNF-1	Mono Lake Lookout	6,431	Mono Basin NF	None
NA-1	Benton Paiute Indian Reservation	5,386	Native American	None
NA-2	Bishop Paiute Indian Reservation	4,227	Native American	None
SNF-1	Granite Creek Campground	7,112	Sierra NF	None
SNF-2	Mount Tom Lookout	8,901	Sierra NF	None
SNF-3	Badger Flat Campground	8,201	Sierra NF	None
SNF-4	Mono Hot Springs Campground	6,600	Sierra NF	Ansel Adams ¹
SNF-5	Vermillion Campground	7,669	Sierra NF	None
SNF-6	Jackass Meadow Campground	7,198	Sierra NF	Ansel Adams ¹
YNP-1	JMT-Donohue Pass	11,011	Yosemite NP	Ansel Adams ¹ , Yosemite ¹
YNP-2	Washburn Lake	7,598	Yosemite NP	Yosemite
YNP-3	JMT - Lyell Canyon	8,805	Yosemite NP	Yosemite ¹
YNP-4	Tioga Pass	10,000	Yosemite NP	Yosemite ¹
YNP-5	Chain Lakes	9,396	Yosemite NP	Yosemite

¹ Site is adjacent to Wilderness Area
Source: URS Corporation, 2007.

C-3.7.2 Noise Metrics

In order to consider a variety of noise conditions as a result of the Proposed Action, a combination of cumulative (average) and single-event noise metrics were used in the Cumulative Noise Analysis. The noise metrics included in this analysis include the Equivalent Sound Level (L_{eq}), Community Noise Equivalent Level (CNEL), the Maximum A-Weighted Sound Level (L_{max}), and the Time Above Ambient Sound Level (TAA). These noise metrics are described further in **Appendix C-1** (Noise Screening Assessment).

C-3.7.3 Determination of Ambient Sound Levels

Ambient sound level monitoring was conducted by the FAA at Mosquito Flats and Sawmill Campgrounds. A total of 10 days of noise monitoring data was gathered at each site (from October 23 through November 3, 2006).

The L_{50} sound pressure level is that which is exceeded 50 percent of the time, or the fiftieth percentile. It is considered the median noise level and is therefore used to define ambient or background noise levels. The L_{50} for the following ambient sound levels was calculated for the MMH ambient sound level study:

- *Existing Ambient* – All sounds in a study area, including all natural sounds as well as all mechanical, electrical and other human-caused sounds (including the source of interest: aircraft).
- *Natural Ambient* – The natural sound conditions found in a study area, including all sounds of nature (e.g., wind, streams, wildlife, etc.), and excluding all electrical, mechanical, and other human-produced sounds.

A detailed discussion of the determination of Existing Ambient and Natural Ambient sound levels for the AI is provided in **Appendix C-2**.

This Cumulative Noise Analysis utilized the Natural Ambient sound level of 28.6 dBA (measured at Mosquito Flats) for the entire study area.

C-3.7.4 Change of Exposure (COE) Criteria

In order to determine the appropriate level of analysis for the any noise sensitive sites, including Section 4(f) resources within the AI, the “change” in noise exposure between the Proposed Action and the No-Action Alternatives should be determined. The change of exposure (COE) criteria developed by FAA utilizes the CNEL, L_{eq} , and L_{max} noise metrics.

FAA’s criteria indicate that the change of noise exposure (either an increase or decrease) must be equal to, or greater than, 3 dBA of CNEL, L_{eq} , or L_{max} , when the No-Action Alternative is compared to the Proposed Action. Increases and decreases in noise exposure are defined as follows:

- If the No-Action and Proposed Action Alternatives noise levels are both below the natural ambient sound level, any change of noise exposure would be considered masked by ambient sounds and would not be considered an increase or decrease.

- An increase would occur if the No-Action Alternative noise level is below the natural ambient sound level and the change of noise exposure (3 dBA) as a result of the Proposed Action exceeds the natural ambient sound level.
- If the No-Action and Proposed Action Alternatives noise levels are both above the natural ambient sound level, a change of noise exposure (3 dBA) would occur in the direction of change (increase or decrease).
- A decrease would occur if the No-Action Alternative noise level is above the natural ambient sound level and the change of noise exposure (3 dBA) as a result of the Proposed Action results in noise levels below the ambient sound level.

C-3.8 RESULTS

This section summarizes the results of the Cumulative Noise Analysis for the uniform grid over the entire AI, and for the representative individual grid locations at Section 4(f) properties and potential Section 4(f) properties within the AI.

All GA aircraft would be operating on the same arrival and departure flight track routes in both the No-Action and Proposed Action Alternatives. However, the Proposed Action Alternative would introduce air carrier service resulting in two new flight tracks: departure tracks 09D13 and 27D13. Since there are no existing flight tracks to/from MMH in the vicinity of these tracks, it is anticipated that noise levels could increase in the vicinity of these tracks as a result of the Proposed Action when compared to the No-Action Alternative.

C-3.8.1 Uniform Grid Analysis

A uniform grid analysis was modeled as part of the Cumulative Noise Analysis, in order to determine the effects of the Proposed Action versus No-Action Alternatives. Based on the change of exposure criteria described in **Section C-3.7.4**, there were no changes of exposure as a result of the Proposed Action.

C-3.8.2 Individual Grid Point Analysis

The results of the Cumulative Noise Analysis at the individual grid point locations are described in the following sections.

C-3.8.2.1 Yosemite National Park

The results of the Cumulative Noise Analysis at the four grid point locations within Yosemite National Park are listed in **Tables C-3.7 and C-3.8**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.7 and C-3.8** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at JMT – Donohue Pass (YNP-1), Washburn Lake (YNP-2), JMT – Lyell Canyon (YNP-3), Tioga Pass (YNP-4), or Chain Lakes (YNP-5).

C-3.8.2.2 Sequoia & Kings Canyon National Park

The results of the Cumulative Noise Analysis at the two grid point locations within Sequoia & Kings Canyon National Park are listed in **Tables C-3.9 and C-3.10**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.9 and C-3.10** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at JMT – San Joaquin River (KCNP-1) or JMT – McClure Meadow (KCNP-2).

C-3.8.2.3 Devils Postpile National Monument

The results of the Cumulative Noise Analysis at the two grid point locations closest to the Devils Postpile (INF-7 and INF-8) are also included in **Section 3.2.6**, Inyo National Forest. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.11 and C-3.12** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Devils Postpile Lookout (INF-7) or Minaret Vista (INF-8).

C-3.8.2.4 Mono Basin National Forest Scenic Area

The results of the Cumulative Noise Analysis at the grid point location within the Mono Basin National Forest Scenic Area are listed in **Tables C-3.13 and C-3.14**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.13 and C-3.14** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Mono Lake Lookout (MBNF-1).

C-3.8.2.5 Sierra National Forest

The results of the Cumulative Noise Analysis at the six grid point locations within the Sierra National Forest are listed in **Tables C-3.15 and C-3.16**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.15 and C-3.16** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Granite Creek Campground (SNF-1), Mount Tom Lookout (SNF-2), Badger Flat Campground (SNF-3), Mono Hot Springs Campground (SNF-4), Vermilion Campground (SNF-5), or Jackass Meadow Campground (SNF-6).

C-3.8.2.6 Inyo National Forest

The results of the Cumulative Noise Analysis at the ten grid point location within the Inyo National Forest are listed in **Tables C-3.17 and C-3.18**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.17 and C-3.18** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Sawmill Campground (INF-1), Mosquito Flats Campground (INF-2), Big Trees Campground (INF-3) and North Lake Campground (INF-4), Iris Meadow Campground (INF-5), Convict Lake Campground (INF-6), Devils Postpile Lookout (INF-7), Minaret Vista (INF-8), Boulder Campground (INF-9), or Silver Lake (INF-10).

C-3.8.2.7 Ansel Adams Wilderness

The results of the Cumulative Noise Analysis at the two grid point locations within the Ansel Adams Wilderness are listed in **Tables C-3.19 and C-3.20**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.19 and C-3.20** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric at either Cargyle Meadow (AAW-1) or Garnet Lake (AAW-2) as a result of the Proposed Action.

C-3.8.2.8 Dinkey Lakes Wilderness

The results of the Cumulative Noise Analysis at the grid point location within the Dinkey Lakes Wilderness are listed in **Tables C-3.19 and C-3.20**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.21 and C-3.22** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at the California Riding/Hiking Trail (DLW-1).

C-3.8.2.9 John Muir Wilderness

The results of the Cumulative Noise Analysis at the seven grid point locations within the John Muir Wilderness are listed in **Tables C-3.23 and C-3.24**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.23 and C-3.24** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Sallie Keyes Lakes (JMW-1), Quail Meadows (JMW-2), Lake Virginia (JMW-3), Rainbow Lake (JMW-4), Mount Abbot (JMW-5), Desolation Lake (JMW-6), or Tamarack Lakes (JMW-7).

C-3.8.2.10 Kaiser Wilderness

The results of the Cumulative Noise Analysis at the grid point location within the Kaiser Wilderness are listed in **Tables C-3.25 and C-3.26**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.25 and C-3.26** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Upper Twin Lake (KW-1).

C-3.8.2.11 Bureau of Land Management (BLM)

The results of the Cumulative Noise Analysis at the seven grid point locations identified by the BLM are listed in **Tables C-3.27 and C-3.28**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.27 and C-3.28** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Horton Creek Campground (BLM-1), Chalk Bluff in the Volcanic Tablelands (BLM-2), Fish Sanctuary (BLM-3), Chidago Canyon (BLM-4), Red Rock Canyon (BLM-5), Volcanic Tablelands (BLM-6), Crowley Lake Campground (BLM-7), or Crowley (Wild Willy's) Hot Spring (BLM-8).

C-3.8.2.12 Mono Lake Tufa State Reserve

The results of the Cumulative Noise Analysis at the grid point location within the Mono Lake Tufa State Reserve (MBNF-1) are listed in **Tables C-3.29 and C-3.30**, and is also included in Section 3.2.4, Mono Basin National Forest Scenic Area. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.29 and C-3.30** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Mono Lake Lookout (MBNF-1).

C-3.8.2.13 Native American Reservations

The results of the Cumulative Noise Analysis at the two grid point locations near or within Native American Reservations are listed in **Tables C-3.31 and C-3.32**. Utilizing the COE criteria detailed in **Section 2.4.4, Tables C-3.31 and C-3.32** list the change in noise exposure that would occur as a result of the Proposed Action.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Benton Paiute Indian Reservation (NA-1) or the Bishop Paiute Indian Reservation (NA-2).

C-3.8.2.14 Los Angeles Department of Water & Power (LADWP)

The results of the Cumulative Noise Analysis at the grid point location at LADWP Pleasant Valley Pit Campground are listed in **Tables C-3.33 and C-3.34**. Utilizing the COE criteria detailed in **Section 2.4.4**, **Tables C-3.33 and C-3.34** list the change in noise exposure that would occur as a result of the Proposed Action at Pleasant Valley Campground.

When compared to the No-Action Alternative, no change in noise exposure would occur in any metric as a result of the Proposed Action at Pleasant Valley Campground (LADWP-1).

**TABLE C-3.7
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
YOSEMITE NATIONAL PARK**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
YNP-1	Leq _(Day) (dBA)	26.3	26.3	0.0	None
	Leq _(24 hour) (dBA)	24.5	24.5	0.0	None
	CNEL (dBA)	27.3	27.3	0.0	None
	L _{max} (dBA)	66.8	66.8	0.0	None
	TAA (minutes)	80.3	80.3	0.0	Not Applicable ¹
YNP-2	Leq _(Day) (dBA)	36.4	36.4	0.0	None
	Leq _(24 hour) (dBA)	35.0	35.0	0.0	None
	CNEL (dBA)	39.1	39.1	0.0	None
	L _{max} (dBA)	66.6	66.6	0.0	None
	TAA (minutes)	142.0	142.0	0.0	Not Applicable ¹
YNP-3	Leq _(Day) (dBA)	32.7	32.7	0.0	None
	Leq _(24 hour) (dBA)	31.0	31.0	0.0	None
	CNEL (dBA)	34.1	34.1	0.0	None
	L _{max} (dBA)	72.4	72.4	0.0	None
	TAA (minutes)	159	159	0.0	Not Applicable ¹
YNP-4	Leq _(Day) (dBA)	34.5	34.5	0.0	None
	Leq _(24 hour) (dBA)	32.9	32.9	0.0	None
	CNEL (dBA)	35.9	35.9	0.0	None
	L _{max} (dBA)	72.7	72.7	0.0	None
	TAA (minutes)	167.5	167.5	0.0	Not Applicable ¹
YNP-5	Leq _(Day) (dBA)	41.2	41.2	0.0	None
	Leq _(24 hour) (dBA)	39.9	39.9	0.0	None
	CNEL (dBA)	44.3	44.3	0.0	None
	L _{max} (dBA)	68.3	68.3	0.0	None
	TAA (minutes)	150.0	150.0	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA. Source: URS Corporation, 2007.

**TABLE C-3.8
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
YOSEMITE NATIONAL PARK**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
YNP-1	Leq _(Day) (dBA)	27.0	27.0	0.0	None	27.0	27.0	0.0	None
	Leq _(24 hour) (dBA)	25.2	25.2	0.0	None	25.2	25.2	0.0	None
	CNEL (dBA)	27.9	27.9	0.0	None	27.9	27.9	0.0	None
	L _{max} (dBA)	66.8	66.8	0.0	None	66.8	66.8	0.0	None
	TAA (minutes)	92.3	92.3	0.0	Not Applicable ¹	92.3	92.3	0.0	Not Applicable ¹
YNP-2	Leq _(Day) (dBA)	37.1	37.1	0.0	None	37.1	37.1	0.0	None
	Leq _(24 hour) (dBA)	35.7	35.7	0.0	None	35.7	35.7	0.0	None
	CNEL (dBA)	39.8	39.8	0.0	None	39.8	39.8	0.0	None
	L _{max} (dBA)	66.6	66.6	0.0	None	66.6	66.6	0.0	None
	TAA (minutes)	167.6	167.6	0.0	Not Applicable ¹	167.5	167.5	0.0	Not Applicable ¹
YNP-3	Leq _(Day) (dBA)	33.5	33.5	0.0	None	33.5	33.5	0.0	None
	Leq _(24 hour) (dBA)	31.8	31.8	0.0	None	31.8	31.8	0.0	None
	CNEL (dBA)	34.8	34.8	0.0	None	34.8	34.8	0.0	None
	L _{max} (dBA)	72.4	72.4	0.0	None	72.4	72.4	0.0	None
	TAA (minutes)	186.0	186.8	0.8	Not Applicable ¹	185.9	185.9	0.0	Not Applicable ¹
YNP-4	Leq _(Day) (dBA)	35.3	35.3	0.0	None	35.3	35.3	0.0	None
	Leq _(24 hour) (dBA)	33.6	33.6	0.0	None	33.6	33.6	0.0	None
	CNEL (dBA)	36.6	36.6	0.0	None	36.6	36.6	0.0	None
	L _{max} (dBA)	72.7	72.7	0.0	None	72.7	72.7	0.0	None
	TAA (minutes)	196.1	197.9	1.8	Not Applicable ¹	196.0	196.0	0.0	Not Applicable ¹
YNP-5	Leq _(Day) (dBA)	42.0	42.0	0.0	None	42.0	42.0	0.0	None
	Leq _(24 hour) (dBA)	40.7	40.7	0.0	None	40.6	40.6	0.0	None
	CNEL (dBA)	45.1	45.1	0.0	None	45.1	45.1	0.0	None
	L _{max} (dBA)	68.3	68.3	0.0	None	68.3	68.3	0.0	None
	TAA (minutes)	178.3	178.3	0.0	Not Applicable ¹	177.4	177.4	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.9
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
SEQUOIA & KINGS CANYON NATIONAL PARK**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
KCNP-1	Leq _(Day) (dBA)	26.1	26.2	0.1	None
	Leq _(24 hour) (dBA)	24.1	24.2	0.1	None
	CNEL (dBA)	25.7	25.8	0.1	None
	L _{max} (dBA)	67.0	67.0	0.0	None
	TAA (minutes)	51.2	53.7	2.5	Not Applicable ¹
KCNP-2	Leq _(Day) (dBA)	21.6	21.7	0.1	None
	Leq _(24 hour) (dBA)	19.7	19.8	0.1	None
	CNEL (dBA)	21.5	21.5	0.0	None
	L _{max} (dBA)	64.3	64.3	0.0	None
	TAA (minutes)	27.3	27.8	0.5	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.10
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
SEQUOIA & KINGS CANYON NATIONAL PARK**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
KCNP-1	Leq _(Day) (dBA)	26.8	27.0	0.2	None	26.3	26.4	0.1	None
	Leq _(24 hour) (dBA)	24.9	25.0	0.1	None	24.4	24.5	0.1	None
	CNEL (dBA)	26.5	26.6	0.1	None	26.1	26.2	0.1	None
	L _{max} (dBA)	67.0	67.0	0.0	None	67.0	67.0	0.0	None
	TAA (minutes)	59.2	64.3	5.1	Not Applicable ¹	51.6	54.1	2.5	Not Applicable ¹
KCNP-2	Leq _(Day) (dBA)	22.3	22.4	0.1	None	21.8	21.9	0.1	None
	Leq _(24 hour) (dBA)	20.4	20.5	0.1	None	19.9	20.0	0.1	None
	CNEL (dBA)	22.2	22.3	0.1	None	21.9	21.9	0.0	None
	L _{max} (dBA)	64.3	64.3	0.0	None	64.3	64.3	0.0	None
	TAA (minutes)	31.5	32.6	1.1	Not Applicable ¹	28.8	29.4	0.6	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.11
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
DEVILS POSTPILE NATIONAL MONUMENT**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
INF-7	Leq _(Day) (dBA)	39.6	39.6	0.0	None
	Leq _(24 hour) (dBA)	37.8	37.8	0.0	None
	CNEL (dBA)	39.9	39.9	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None
	TAA (minutes)	74.2	74.2	0.0	Not Applicable ¹
INF-8	Leq _(Day) (dBA)	40.4	40.4	0.0	None
	Leq _(24 hour) (dBA)	38.6	38.6	0.0	None
	CNEL (dBA)	40.6	40.6	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None
	TAA (minutes)	73.0	73.0	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.12
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
DEVILS POSTPILE NATIONAL MONUMENT**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
INF-7	Leq _(Day) (dBA)	39.8	39.8	0.0	None	39.6	39.6	0.0	None
	Leq _(24 hour) (dBA)	38.0	38.0	0.0	None	37.8	37.8	0.0	None
	CNEL (dBA)	40.3	40.3	0.0	None	40.2	40.2	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None	71.4	71.4	0.0	None
	TAA (minutes)	84.1	84.1	0.0	Not Applicable ¹	80.3	80.3	0.0	Not Applicable ¹
INF-8	Leq _(Day) (dBA)	40.6	40.6	0.0	None	40.3	40.3	0.0	None
	Leq _(24 hour) (dBA)	38.8	38.8	0.0	None	38.5	38.5	0.0	None
	CNEL (dBA)	41.0	41.0	0.0	None	40.8	40.8	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None	74.1	74.1	0.0	None
	TAA (minutes)	82.5	82.5	0.0	Not Applicable ¹	77.2	77.2	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.13
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
MONO BASIN NATIONAL FOREST SCENIC AREA**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
MBNF-1	Leq _(Day) (dBA)	34.2	34.2	0.0	None
	Leq _(24 hour) (dBA)	32.5	32.5	0.0	None
	CNEL (dBA)	35.5	35.5	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None
	TAA (minutes)	148.0	148.0	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.14
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
MONO BASIN NATIONAL FOREST SCENIC AREA**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
MBNF-1	Leq _(Day) (dBA)	35.0	35.0	0.0	None	35.0	35.0	0.0	None
	Leq _(24 hour) (dBA)	33.3	33.3	0.0	None	33.3	33.3	0.0	None
	CNEL (dBA)	36.2	36.2	0.0	None	36.2	36.2	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None	72.0	72.0	0.0	None
	TAA (minutes)	173.1	175.6	2.5	Not Applicable ¹	172.2	172.2	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.15
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
SIERRA NATIONAL FOREST**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
SNF-1	Leq _(Day) (dBA)	32.3	32.3	0.0	None
	Leq _(24 hour) (dBA)	30.5	30.5	0.0	None
	CNEL (dBA)	33.4	33.4	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None
	TAA (minutes)	109.6	109.6	0.0	Not Applicable ¹
SNF-2	Leq _(Day) (dBA)	32.1	32.1	0.0	None
	Leq _(24 hour) (dBA)	30.4	30.4	0.0	None
	CNEL (dBA)	33.2	33.2	0.0	None
	L _{max} (dBA)	72.2	72.2	0.0	None
	TAA (minutes)	82.4	82.4	0.0	Not Applicable ¹
SNF-3	Leq _(Day) (dBA)	28.2	28.2	0.0	None
	Leq _(24 hour) (dBA)	26.4	26.4	0.0	None
	CNEL (dBA)	29.0	29.1	0.1	None
	L _{max} (dBA)	72.0	72.0	0.0	None
	TAA (minutes)	44.8	47.3	2.5	Not Applicable ¹
SNF-4	Leq _(Day) (dBA)	30.8	30.8	0.0	None
	Leq _(24 hour) (dBA)	29.0	29.0	0.0	None
	CNEL (dBA)	31.7	31.7	0.0	None
	L _{max} (dBA)	71.7	71.7	0.0	None
	TAA (minutes)	61.0	61.8	0.8	Not Applicable ¹
SNF-5	Leq _(Day) (dBA)	31.7	31.7	0.0	None
	Leq _(24 hour) (dBA)	29.9	29.9	0.0	None
	CNEL (dBA)	32.7	32.7	0.0	None
	L _{max} (dBA)	71.9	71.9	0.0	None
	TAA (minutes)	65.9	65.9	0.0	Not Applicable ¹
SNF-6	Leq _(Day) (dBA)	29.8	29.8	0.0	None
	Leq _(24 hour) (dBA)	27.9	28.0	0.1	None
	CNEL (dBA)	30.0	30.0	0.0	None
	L _{max} (dBA)	71.8	71.8	0.0	None
	TAA (minutes)	65.8	68.9	3.1	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA. Source: URS Corporation, 2007.

**TABLE C-3.16
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
SIERRA NATIONAL FOREST**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
SNF-1	Leq _(Day) (dBA)	32.9	32.9	0.0	None	32.7	32.7	0.0	None
	Leq _(24 hour) (dBA)	31.1	31.1	0.0	None	31.0	31.0	0.0	None
	CNEL (dBA)	34.1	34.1	0.0	None	34.0	34.0	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None	64.7	64.7	0.0	None
	TAA (minutes)	127.9	127.9	0.0	Not Applicable ¹	125.5	125.5	0.0	Not Applicable ¹
SNF-2	Leq _(Day) (dBA)	33.0	33.0	0.0	None	33.0	33.0	0.0	None
	Leq _(24 hour) (dBA)	31.3	31.3	0.0	None	31.3	31.3	0.0	None
	CNEL (dBA)	34.0	34.0	0.0	None	34.0	34.0	0.0	None
	L _{max} (dBA)	72.2	72.2	0.0	None	72.2	72.2	0.0	None
	TAA (minutes)	97.9	97.9	0.0	Not Applicable ¹	97.5	97.5	0.0	Not Applicable ¹
SNF-3	Leq _(Day) (dBA)	29.1	29.2	0.1	None	29.0	29.0	0.0	None
	Leq _(24 hour) (dBA)	27.3	27.4	0.1	None	27.2	27.2	0.0	None
	CNEL (dBA)	29.9	29.9	0.0	None	29.8	29.8	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None	72.0	72.0	0.0	None
	TAA (minutes)	52.8	57.7	4.9	Not Applicable ¹	49.0	51.4	2.4	Not Applicable ¹
SNF-4	Leq _(Day) (dBA)	31.7	31.7	0.0	None	31.7	31.7	0.0	None
	Leq _(24 hour) (dBA)	29.9	29.9	0.0	None	29.9	29.9	0.0	None
	CNEL (dBA)	32.5	32.5	0.0	None	32.5	32.5	0.0	None
	L _{max} (dBA)	71.7	71.7	0.0	None	71.7	71.7	0.0	None
	TAA (minutes)	72.7	74.3	1.6	Not Applicable ¹	70.9	71.7	0.8	Not Applicable ¹
SNF-5	Leq _(Day) (dBA)	32.6	32.6	0.0	None	32.6	32.6	0.0	None
	Leq _(24 hour) (dBA)	30.8	30.8	0.0	None	30.8	30.8	0.0	None
	CNEL (dBA)	33.5	33.5	0.0	None	33.5	33.5	0.0	None
	L _{max} (dBA)	71.9	71.9	0.0	None	71.9	71.9	0.0	None
	TAA (minutes)	78.6	78.6	0.0	Not Applicable ¹	78.5	78.5	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.16, CONTINUED
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
SIERRA NATIONAL FOREST**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
SNF-6	Leq _(Day) (dBA)	30.6	30.7	0.1	None	30.4	30.5	0.1	None
	Leq _(24 hour) (dBA)	28.7	28.9	0.2	None	28.5	28.6	0.1	None
	CNEL (dBA)	30.8	30.8	0.0	None	30.6	30.7	0.1	None
	L _{max} (dBA)	71.8	71.8	0.0	None	71.8	71.8	0.0	None
	TAA (minutes)	77.3	83.5	6.2	Not Applicable ¹	71.0	74.1	3.1	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.17
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
INYO NATIONAL FOREST**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
INF-1	Leq _(Day) (dBA)	34.9	34.9	0.0	None
	Leq _(24 hour) (dBA)	33.3	33.3	0.0	None
	CNEL (dBA)	36.3	36.3	0.0	None
	L _{max} (dBA)	72.7	72.7	0.0	None
	TAA (minutes)	171.8	171.8	0.0	Not Applicable ¹
INF-2	Leq _(Day) (dBA)	31.9	31.9	0.0	None
	Leq _(24 hour) (dBA)	30.2	30.2	0.0	None
	CNEL (dBA)	33.0	33.0	0.0	None
	L _{max} (dBA)	72.5	72.5	0.0	None
	TAA (minutes)	71.0	71.3	0.3	Not Applicable ¹
INF-3	Leq _(Day) (dBA)	25.2	25.2	0.0	None
	Leq _(24 hour) (dBA)	23.3	23.3	0.0	None
	CNEL (dBA)	24.9	25.0	0.1	None
	L _{max} (dBA)	66.0	66.0	0.0	None
	TAA (minutes)	43.0	44.8	1.8	Not Applicable ¹
INF-4	Leq _(Day) (dBA)	21.9	22.0	0.1	None
	Leq _(24 hour) (dBA)	20.0	20.1	0.1	None
	CNEL (dBA)	21.9	21.9	0.0	None
	L _{max} (dBA)	63.9	63.9	0.0	None
	TAA (minutes)	25.1	25.3	0.2	Not Applicable ¹
INF-5	Leq _(Day) (dBA)	28.1	28.1	0.0	None
	Leq _(24 hour) (dBA)	26.3	26.3	0.0	None
	CNEL (dBA)	28.8	28.8	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None
	TAA (minutes)	59.3	59.4	0.1	Not Applicable ¹
INF-6	Leq _(Day) (dBA)	30.6	30.6	0.0	None
	Leq _(24 hour) (dBA)	28.6	28.6	0.0	None
	CNEL (dBA)	29.3	29.3	0.0	None
	L _{max} (dBA)	64.1	64.1	0.0	None
	TAA (minutes)	110.6	113.1	2.5	Not Applicable ¹
INF-7	Leq _(Day) (dBA)	39.6	39.6	0.0	None
	Leq _(24 hour) (dBA)	37.8	37.8	0.0	None
	CNEL (dBA)	39.9	39.9	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None
	TAA (minutes)	74.2	74.2	0.0	Not Applicable ¹
INF-8	Leq _(Day) (dBA)	40.4	40.4	0.0	None
	Leq _(24 hour) (dBA)	38.6	38.6	0.0	None
	CNEL (dBA)	40.6	40.6	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None
	TAA (minutes)	73.0	73.0	0.0	Not Applicable ¹
INF-9	Leq _(Day) (dBA)	34.3	34.3	0.0	None
	Leq _(24 hour) (dBA)	32.6	32.6	0.0	None
	CNEL (dBA)	35.7	35.7	0.0	None
	L _{max} (dBA)	72.2	72.2	0.0	None
	TAA (minutes)	157.7	157.7	0.0	Not Applicable ¹
INF-10	Leq _(Day) (dBA)	26.7	26.7	0.0	None
	Leq _(24 hour) (dBA)	25.0	25.0	0.0	None
	CNEL (dBA)	27.5	27.5	0.0	None
	L _{max} (dBA)	68.4	68.4	0.0	None
	TAA (minutes)	77.0	77.0	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA. Source: URS Corporation, 2007.

**TABLE C-3.18
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
INYO NATIONAL FOREST**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
INF-1	Leq _(Day) (dBA)	35.7	35.7	0.0	None	35.7	35.7	0.0	None
	Leq _(24 hour) (dBA)	34.0	34.0	0.0	None	34.0	34.0	0.0	None
	CNEL (dBA)	37.0	37.0	0.0	None	37.0	37.0	0.0	None
	L _{max} (dBA)	72.7	72.7	0.0	None	72.7	72.7	0.0	None
	TAA (minutes)	201.3	202.9	1.6	Not Applicable ¹	201.3	201.3	0.0	Not Applicable ¹
INF-2	Leq _(Day) (dBA)	32.9	32.9	0.0	None	32.8	32.8	0.0	None
	Leq _(24 hour) (dBA)	31.1	31.1	0.0	None	31.0	31.1	0.1	None
	CNEL (dBA)	33.8	33.8	0.0	None	33.8	33.8	0.0	None
	L _{max} (dBA)	72.5	72.5	0.0	None	72.5	72.5	0.0	None
	TAA (minutes)	84.8	85.4	0.6	Not Applicable ¹	83.0	83.3	0.3	Not Applicable ¹
INF-3	Leq _(Day) (dBA)	26.0	26.1	0.1	None	25.6	25.7	0.1	None
	Leq _(24 hour) (dBA)	24.0	24.1	0.1	None	23.7	23.8	0.1	None
	CNEL (dBA)	25.7	25.8	0.1	None	25.5	25.5	0.0	None
	L _{max} (dBA)	66.0	66.0	0.0	None	66.0	66.0	0.0	None
	TAA (minutes)	50.1	53.6	3.5	Not Applicable ¹	45.9	47.6	1.7	Not Applicable ¹
INF-4	Leq _(Day) (dBA)	22.8	22.8	0.0	None	22.6	22.6	0.0	None
	Leq _(24 hour) (dBA)	20.8	20.9	0.1	None	20.7	20.7	0.0	None
	CNEL (dBA)	22.6	22.7	0.1	None	22.5	22.5	0.0	None
	L _{max} (dBA)	63.9	63.9	0.0	None	63.9	63.9	0.0	None
	TAA (minutes)	29.2	29.7	0.5	Not Applicable ¹	28.2	28.4	0.2	Not Applicable ¹
INF-5	Leq _(Day) (dBA)	29.0	29.0	0.0	None	28.9	28.9	0.0	None
	Leq _(24 hour) (dBA)	27.2	27.2	0.0	None	27.1	27.1	0.0	None
	CNEL (dBA)	29.7	29.7	0.0	None	29.6	29.6	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None	72.1	72.1	0.0	None
	TAA (minutes)	68.6	68.9	0.3	Not Applicable ¹	65.4	65.5	0.1	Not Applicable ¹
INF-6	Leq _(Day) (dBA)	31.1	31.2	0.1	None	30.1	30.2	0.1	None
	Leq _(24 hour) (dBA)	29.1	29.2	0.1	None	28.1	28.2	0.1	None
	CNEL (dBA)	29.8	29.9	0.1	None	29.2	29.3	0.1	None
	L _{max} (dBA)	64.1	64.1	0.0	None	64.1	64.1	0.0	None
	TAA (minutes)	124.4	134.5	10.1	Not Applicable ¹	103.8	106.4	2.6	Not Applicable ¹

TABLE C-3.18 (Continued)
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
INYO NATIONAL FOREST

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
INF-7	Leq _(Day) (dBA)	39.8	39.8	0.0	None	39.6	39.6	0.0	None
	Leq _(24 hour) (dBA)	38.0	38.0	0.0	None	37.8	37.8	0.0	None
	CNEL (dBA)	40.3	40.3	0.0	None	40.2	40.2	0.0	None
	L _{max} (dBA)	76.6	76.6	0.0	None	71.4	71.4	0.0	None
	TAA (minutes)	84.1	84.1	0.0	Not Applicable ¹	80.3	80.3	0.0	Not Applicable ¹
INF-8	Leq _(Day) (dBA)	40.6	40.6	0.0	None	40.3	40.3	0.0	None
	Leq _(24 hour) (dBA)	38.8	38.8	0.0	None	38.5	38.5	0.0	None
	CNEL (dBA)	41.0	41.0	0.0	None	40.8	40.8	0.0	None
	L _{max} (dBA)	81.6	81.6	0.0	None	74.1	74.1	0.0	None
	TAA (minutes)	82.5	82.5	0.0	Not Applicable ¹	77.2	77.2	0.0	Not Applicable ¹
INF-9	Leq _(Day) (dBA)	35.1	35.1	0.0	None	35.1	35.1	0.0	None
	Leq _(24 hour) (dBA)	33.4	33.4	0.0	None	33.4	33.4	0.0	None
	CNEL (dBA)	36.4	36.4	0.0	None	36.4	36.4	0.0	None
	L _{max} (dBA)	72.2	72.2	0.0	None	72.2	72.2	0.0	None
	TAA (minutes)	184.7	187.0	2.3	Not Applicable ¹	184.6	184.6	0.0	Not Applicable ¹
INF-10	Leq _(Day) (dBA)	27.4	27.4	0.0	None	27.4	27.4	0.0	None
	Leq _(24 hour) (dBA)	25.6	25.6	0.0	None	25.6	25.6	0.0	None
	CNEL (dBA)	28.2	28.2	0.0	None	28.2	28.2	0.0	None
	L _{max} (dBA)	68.4	68.4	0.0	None	68.4	68.4	0.0	None
	TAA (minutes)	88.3	88.3	0.0	Not Applicable ¹	87.9	87.9	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.19
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
ANSEL ADAMS WILDERNESS**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
AAW-1	Leq _(Day) (dBA)	38.9	38.9	0.0	None
	Leq _(24 hour) (dBA)	37.1	37.1	0.0	None
	CNEL (dBA)	39.2	39.2	0.0	None
	L _{max} (dBA)	74.3	74.3	0.0	None
	TAA (minutes)	85.8	85.8	0.0	Not Applicable ¹
AAW-2	Leq _(Day) (dBA)	26.7	26.7	0.0	None
	Leq _(24 hour) (dBA)	24.8	24.8	0.0	None
	CNEL (dBA)	26.9	26.9	0.0	None
	L _{max} (dBA)	66.4	66.4	0.0	None
	TAA (minutes)	59.8	59.8	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.20
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
ANSEL ADAMS WILDERNESS**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
AAW-1	Leq _(Day) (dBA)	39.1	39.1	0.0	None	39.0	39.0	0.0	None
	Leq _(24 hour) (dBA)	37.3	37.3	0.0	None	37.2	37.2	0.0	None
	CNEL (dBA)	39.6	39.6	0.0	None	39.5	39.5	0.0	None
	L _{max} (dBA)	74.3	74.3	0.0	None	71.2	71.2	0.0	None
	TAA (minutes)	97.6	97.6	0.0	Not Applicable ¹	94.1	94.1	0.0	Not Applicable ¹
AAW-2	Leq _(Day) (dBA)	27.1	27.1	0.0	None	27.0	27.0	0.0	None
	Leq _(24 hour) (dBA)	25.2	25.2	0.0	None	25.2	25.2	0.0	None
	CNEL (dBA)	27.4	27.4	0.0	None	27.3	27.3	0.0	None
	L _{max} (dBA)	66.4	66.4	0.0	None	66.4	66.4	0.0	None
	TAA (minutes)	68.1	68.1	0.0	Not Applicable ¹	66.9	66.9	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.21
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
DINKEY LAKES WILDERNESS**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
DLW-1	Leq _(Day) (dBA)	25.8	26.1	0.3	None
	Leq _(24 hour) (dBA)	23.9	24.2	0.3	None
	CNEL (dBA)	26.0	26.2	0.2	None
	L _{max} (dBA)	70.2	70.2	0.0	None
	TAA (minutes)	39.0	42.4	3.4	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.22
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
DINKEY LAKES WILDERNESS**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
DLW-1	Leq _(Day) (dBA)	26.6	27.0	0.4	None	25.8	26.1	0.3	None
	Leq _(24 hour) (dBA)	24.8	25.2	0.4	None	24.0	24.3	0.3	None
	CNEL (dBA)	26.8	27.1	0.3	None	26.4	26.5	0.1	None
	L _{max} (dBA)	70.2	70.2	0.0	None	70.2	70.2	0.0	None
	TAA (minutes)	45.2	52.0	6.8	Not Applicable ¹	39.3	42.7	3.4	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.23
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
JOHN MUIR WILDERNESS**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
JMW-1	Leq _(Day) (dBA)	31.1	31.2	0.1	None
	Leq _(24 hour) (dBA)	29.2	29.3	0.1	None
	CNEL (dBA)	30.8	30.9	0.1	None
	L _{max} (dBA)	72.1	72.1	0.0	None
	TAA (minutes)	75.1	78.9	3.8	Not Applicable ¹
JMW-2	Leq _(Day) (dBA)	31.0	31.0	0.0	None
	Leq _(24 hour) (dBA)	29.3	29.3	0.0	None
	CNEL (dBA)	32.0	32.0	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None
	TAA (minutes)	62.9	62.9	0.0	Not Applicable ¹
JMW-3	Leq _(Day) (dBA)	25.7	25.7	0.0	None
	Leq _(24 hour) (dBA)	23.8	23.8	0.0	None
	CNEL (dBA)	26.1	26.1	0.0	None
	L _{max} (dBA)	70.2	70.2	0.0	None
	TAA (minutes)	31.7	31.7	0.0	Not Applicable ¹
JMW-4	Leq _(Day) (dBA)	29.3	29.3	0.0	None
	Leq _(24 hour) (dBA)	27.5	27.5	0.0	None
	CNEL (dBA)	29.9	29.9	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None
	TAA (minutes)	49.8	49.8	0.0	Not Applicable ¹
JMW-5	Leq _(Day) (dBA)	33.4	33.4	0.0	None
	Leq _(24 hour) (dBA)	31.6	31.6	0.0	None
	CNEL (dBA)	34.4	34.4	0.0	None
	L _{max} (dBA)	73.3	73.3	0.0	None
	TAA (minutes)	79.1	79.9	0.8	Not Applicable ¹
JMW-6	Leq _(Day) (dBA)	29.7	29.8	0.1	None
	Leq _(24 hour) (dBA)	27.8	27.9	0.1	None
	CNEL (dBA)	29.2	29.2	0.0	None
	L _{max} (dBA)	71.1	71.1	0.0	None
	TAA (minutes)	59.6	62.8	3.2	Not Applicable ¹
JMW-7	Leq _(Day) (dBA)	32.8	32.8	0.0	None
	Leq _(24 hour) (dBA)	31.0	31.0	0.0	None
	CNEL (dBA)	33.8	33.8	0.0	None
	L _{max} (dBA)	72.8	72.8	0.0	None
	TAA (minutes)	78.2	78.9	0.7	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA. Source: URS Corporation, 2007.

**TABLE C-3.24
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
JOHN MUIR WILDERNESS**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
JMW-1	Leq _(Day) (dBA)	31.9	32.1	0.2	None	31.5	31.5	0.0	None
	Leq _(24 hour) (dBA)	30.0	30.1	0.1	None	29.5	29.6	0.1	None
	CNEL (dBA)	31.6	31.7	0.1	None	31.3	31.3	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None	72.1	72.1	0.0	None
	TAA (minutes)	87.8	95.3	7.5	Not Applicable ¹	78.5	82.2	3.7	Not Applicable ¹
JMW-2	Leq _(Day) (dBA)	32.0	32.0	0.0	None	32.0	32.0	0.0	None
	Leq _(24 hour) (dBA)	30.2	30.2	0.0	None	30.2	30.2	0.0	None
	CNEL (dBA)	32.8	32.8	0.0	None	32.8	32.8	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None	72.0	72.0	0.0	None
	TAA (minutes)	74.5	74.5	0.0	Not Applicable ¹	74.2	74.2	0.0	Not Applicable ¹
JMW-3	Leq _(Day) (dBA)	26.3	26.4	0.1	None	26.3	26.3	0.0	None
	Leq _(24 hour) (dBA)	24.5	24.5	0.0	None	24.5	24.5	0.0	None
	CNEL (dBA)	26.8	26.8	0.0	None	26.8	26.8	0.0	None
	L _{max} (dBA)	70.2	70.2	0.0	None	70.2	70.2	0.0	None
	TAA (minutes)	36.4	36.4	0.0	Not Applicable ¹	36.2	36.2	0.0	Not Applicable ¹
JMW-4	Leq _(Day) (dBA)	29.9	29.9	0.0	None	29.9	29.9	0.0	None
	Leq _(24 hour) (dBA)	28.1	28.1	0.0	None	28.1	28.1	0.0	None
	CNEL (dBA)	30.6	30.6	0.0	None	30.6	30.6	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None	72.0	72.0	0.0	None
	TAA (minutes)	57.8	57.8	0.0	Not Applicable ¹	57.6	57.6	0.0	Not Applicable ¹
JMW-5	Leq _(Day) (dBA)	34.3	34.3	0.0	None	34.2	34.2	0.0	None
	Leq _(24 hour) (dBA)	32.5	32.5	0.0	None	32.4	32.4	0.0	None
	CNEL (dBA)	35.2	35.2	0.0	None	35.1	35.1	0.0	None
	L _{max} (dBA)	73.3	73.3	0.0	None	73.3	73.3	0.0	None
	TAA (minutes)	94.1	95.8	1.7	Not Applicable ¹	89.9	90.7	0.8	Not Applicable ¹
JMW-6	Leq _(Day) (dBA)	30.5	30.6	0.1	None	29.7	29.9	0.2	None
	Leq _(24 hour) (dBA)	28.5	28.7	0.2	None	27.8	27.9	0.1	None
	CNEL (dBA)	29.9	30.0	0.1	None	29.4	29.5	0.1	None
	L _{max} (dBA)	71.1	71.1	0.0	None	71.1	71.1	0.0	None
	TAA (minutes)	69.5	75.9	6.4	Not Applicable ¹	61.5	64.7	3.2	Not Applicable ¹
JMW-7	Leq _(Day) (dBA)	33.7	33.7	0.0	None	33.6	33.7	0.1	None
	Leq _(24 hour) (dBA)	31.9	31.9	0.0	None	31.9	31.9	0.0	None
	CNEL (dBA)	34.6	34.6	0.0	None	34.6	34.6	0.0	None
	L _{max} (dBA)	72.8	72.8	0.0	None	72.8	72.8	0.0	None
	TAA (minutes)	93.4	94.7	1.3	Not Applicable ¹	90.5	91.2	0.7	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.25
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
KAISER WILDERNESS**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
KW -1	Leq _(Day) (dBA)	30.2	30.3	0.1	None
	Leq _(24 hour) (dBA)	28.5	28.5	0.0	None
	CNEL (dBA)	31.3	31.3	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None
	TAA (minutes)	51.7	52.3	0.6	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.26
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
KAISER WILDERNESS**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
KW -1	Leq _(Day) (dBA)	31.2	31.2	0.0	None	31.2	31.2	0.0	None
	Leq _(24 hour) (dBA)	29.4	29.4	0.0	None	29.4	29.4	0.0	None
	CNEL (dBA)	32.1	32.1	0.0	None	32.1	32.1	0.0	None
	L _{max} (dBA)	72.1	72.1	0.0	None	72.1	72.1	0.0	None
	TAA (minutes)	61.7	62.9	1.2	Not Applicable ¹	60.4	61.0	0.6	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.27
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
BUREAU OF LAND MANAGEMENT**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
BLM-1	Leq _(Day) (dBA)	30.3	30.4	0.1	None
	Leq _(24 hour) (dBA)	28.5	28.5	0.0	None
	CNEL (dBA)	30.7	30.7	0.0	None
	L _{max} (dBA)	71.4	71.4	0.0	None
	TAA (minutes)	95.1	98.0	2.9	Not Applicable ¹
BLM-2	Leq _(Day) (dBA)	34.1	34.2	0.1	None
	Leq _(24 hour) (dBA)	32.2	32.2	0.0	None
	CNEL (dBA)	33.2	33.2	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None
	TAA (minutes)	149.7	155.6	5.9	Not Applicable ¹
BLM-3	Leq _(Day) (dBA)	32.2	32.2	0.0	None
	Leq _(24 hour) (dBA)	30.3	30.4	0.1	None
	CNEL (dBA)	32.6	32.6	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None
	TAA (minutes)	118.6	122.7	4.1	Not Applicable ¹
BLM-4	Leq _(Day) (dBA)	30.7	30.7	0.0	None
	Leq _(24 hour) (dBA)	28.9	28.9	0.0	None
	CNEL (dBA)	31.4	31.4	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None
	TAA (minutes)	81.9	83.6	1.7	Not Applicable ¹
BLM-5	Leq _(Day) (dBA)	25.2	25.2	0.0	None
	Leq _(24 hour) (dBA)	23.3	23.4	0.1	None
	CNEL (dBA)	25.7	25.7	0.0	None
	L _{max} (dBA)	69.6	69.6	0.0	None
	TAA (minutes)	39.4	40.0	0.6	Not Applicable ¹
BLM-6	Leq _(Day) (dBA)	35.5	35.5	0.0	None
	Leq _(24 hour) (dBA)	33.5	33.6	0.1	None
	CNEL (dBA)	34.7	34.7	0.0	None
	L _{max} (dBA)	73.9	73.9	0.0	None
	TAA (minutes)	135.3	138.7	3.4	Not Applicable ¹
BLM-7	Leq _(Day) (dBA)	27.6	27.7	0.1	None
	Leq _(24 hour) (dBA)	25.7	25.7	0.0	None
	CNEL (dBA)	27.0	27.0	0.0	None
	L _{max} (dBA)	68.0	68.0	0.0	None
	TAA (minutes)	92.8	94.5	1.7	Not Applicable ¹
BLM-8	Leq _(Day) (dBA)	29.7	29.8	0.1	None
	Leq _(24 hour) (dBA)	27.7	27.8	0.1	None
	CNEL (dBA)	28.5	28.6	0.1	None
	L _{max} (dBA)	61.8	61.8	0.0	None
	TAA (minutes)	103.5	107.1	3.6	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA. Source: URS Corporation, 2007.

**TABLE C-3.28
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
BUREAU OF LAND MANAGEMENT**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
BLM-1	Leq _(Day) (dBA)	31.2	31.3	0.1	None	31.0	31.0	0.0	None
	Leq _(24 hour) (dBA)	29.3	29.4	0.1	None	29.1	29.2	0.1	None
	CNEL (dBA)	31.5	31.5	0.0	None	31.3	31.3	0.0	None
	L _{max} (dBA)	71.4	71.4	0.0	None	71.4	71.4	0.0	None
	TAA (minutes)	111.0	116.8	5.8	Not Applicable ¹	102.2	105.1	2.9	Not Applicable ¹
BLM-2	Leq _(Day) (dBA)	34.8	34.9	0.1	None	34.2	34.3	0.1	None
	Leq _(24 hour) (dBA)	32.8	32.9	0.1	None	32.3	32.3	0.0	None
	CNEL (dBA)	33.8	33.9	0.1	None	33.6	33.6	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None	71.3	71.3	0.0	None
	TAA (minutes)	171.6	191.7	20.1	Not Applicable ¹	152.9	158.9	6.0	Not Applicable ¹
BLM-3	Leq _(Day) (dBA)	33.0	33.2	0.2	None	32.8	32.8	0.0	None
	Leq _(24 hour) (dBA)	31.2	31.3	0.1	None	30.9	30.9	0.0	None
	CNEL (dBA)	33.4	33.5	0.1	None	33.3	33.3	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None	71.3	71.3	0.0	None
	TAA (minutes)	137.9	155.0	17.1	Not Applicable ¹	126.1	130.2	4.1	Not Applicable ¹
BLM-4	Leq _(Day) (dBA)	31.6	31.7	0.1	None	31.5	31.5	0.0	None
	Leq _(24 hour) (dBA)	29.8	29.9	0.1	None	29.7	29.7	0.0	None
	CNEL (dBA)	32.3	32.3	0.0	None	32.2	32.2	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None	71.3	71.3	0.0	None
	TAA (minutes)	96.1	104.2	8.1	Not Applicable ¹	88.9	90.6	1.7	Not Applicable ¹
BLM-5	Leq _(Day) (dBA)	26.0	26.4	0.4	None	25.8	25.8	0.0	None
	Leq _(24 hour) (dBA)	24.2	24.5	0.3	None	24.0	24.0	0.0	None
	CNEL (dBA)	26.5	26.7	0.2	None	26.4	26.4	0.0	None
	L _{max} (dBA)	69.6	69.6	0.0	None	69.6	69.6	0.0	None
	TAA (minutes)	45.5	51.0	5.5	Not Applicable ¹	41.8	42.4	0.6	Not Applicable ¹
BLM-6	Leq _(Day) (dBA)	36.1	36.3	0.2	None	34.9	35.0	0.1	None
	Leq _(24 hour) (dBA)	34.2	34.4	0.2	None	33.0	33.0	0.0	None
	CNEL (dBA)	35.3	35.5	0.2	None	34.6	34.6	0.0	None
	L _{max} (dBA)	73.9	73.9	0.0	None	71.6	71.6	0.0	None
	TAA (minutes)	155.9	170.9	15.0	Not Applicable ¹	141.2	144.6	3.4	Not Applicable ¹

TABLE C-3.28 (Continued)
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
BUREAU OF LAND MANAGEMENT

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
BLM-7	Leq _(Day) (dBA)	28.3	28.4	0.1	None	27.6	27.7	0.1	None
	Leq _(24 hour) (dBA)	26.3	26.5	0.2	None	25.7	25.8	0.1	None
	CNEL (dBA)	27.6	27.7	0.1	None	27.3	27.3	0.0	None
	L _{max} (dBA)	68.0	68.0	0.0	None	68.0	68.0	0.0	None
	TAA (minutes)	104.6	111.6	7.0	Not Applicable ¹	89.6	91.4	1.8	Not Applicable ¹
BLM-8	Leq _(Day) (dBA)	30.2	30.4	0.2	None	29.0	29.1	0.1	None
	Leq _(24 hour) (dBA)	28.2	28.4	0.2	None	27.0	27.1	0.1	None
	CNEL (dBA)	29.0	29.2	0.2	None	28.2	28.3	0.1	None
	L _{max} (dBA)	61.8	61.8	0.0	None	61.8	61.8	0.0	None
	TAA (minutes)	116.2	130.4	14.2	Not Applicable ¹	95.6	99.2	3.6	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

TABLE C-3.29
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
MONO LAKE TUFA STATE RESERVE

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
MBNF-1	Leq _(Day) (dBA)	34.2	34.2	0.0	None
	Leq _(24 hour) (dBA)	32.5	32.5	0.0	None
	CNEL (dBA)	35.5	35.5	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None
	TAA (minutes)	148.0	148.0	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.30
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
MONO LAKE TUFA STATE RESERVE**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
MBNF-1	Leq _(Day) (dBA)	35.0	35.0	0.0	None	35.0	35.0	0.0	None
	Leq _(24 hour) (dBA)	33.3	33.3	0.0	None	33.3	33.3	0.0	None
	CNEL (dBA)	36.2	36.2	0.0	None	36.2	36.2	0.0	None
	L _{max} (dBA)	72.0	72.0	0.0	None	72.0	72.0	0.0	None
	TAA (minutes)	173.1	175.6	2.5	Not Applicable ¹	172.2	172.2	0.0	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.31
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
NATIVE AMERICAN RESERVATIONS**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
NA-1	Leq _(Day) (dBA)	25.1	25.1	0.0	None
	Leq _(24 hour) (dBA)	23.4	23.4	0.0	None
	CNEL (dBA)	25.8	25.8	0.0	None
	L _{max} (dBA)	71.9	71.9	0.0	None
	TAA (minutes)	53.0	53.0	0.0	Not Applicable ¹
NA-2	Leq _(Day) (dBA)	32.1	32.2	0.1	None
	Leq _(24 hour) (dBA)	30.1	30.2	0.1	None
	CNEL (dBA)	31.0	31.1	0.1	None
	L _{max} (dBA)	69.4	69.4	0.0	None
	TAA (minutes)	137.0	142.9	5.9	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.32
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
NATIVE AMERICAN RESERVATIONS**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
NA-1	Leq _(Day) (dBA)	25.9	26.0	0.1	None	25.8	25.8	0.0	None
	Leq _(24 hour) (dBA)	24.1	24.2	0.1	None	24.0	24.0	0.0	None
	CNEL (dBA)	26.5	26.6	0.1	None	26.5	26.5	0.0	None
	L _{max} (dBA)	71.9	71.9	0.0	None	66.8	66.8	0.0	None
	TAA (minutes)	60.7	63.6	2.9	Not Applicable ¹	60.1	60.1	0.0	Not Applicable ¹
NA-2	Leq _(Day) (dBA)	32.7	32.9	0.2	None	32.0	32.1	0.1	None
	Leq _(24 hour) (dBA)	30.7	30.9	0.2	None	30.1	30.1	0.0	None
	CNEL (dBA)	31.7	31.8	0.1	None	31.3	31.3	0.0	None
	L _{max} (dBA)	69.4	69.4	0.0	None	69.4	69.4	0.0	None
	TAA (minutes)	156.6	173.1	16.5	Not Applicable ¹	140.4	146.3	5.9	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.33
CUMULATIVE NOISE ANALYSIS FOR YEAR 2009
PLEASANT VALLEY PIT CAMPGROUND**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
LADWP-1	Leq _(Day) (dBA)	31.5	31.6	0.1	None
	Leq _(24 hour) (dBA)	29.6	29.7	0.1	None
	CNEL (dBA)	31.3	31.3	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None
	TAA (minutes)	138.3	142.7	4.4	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

**TABLE C-3.34
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015
PLEASANT VALLEY PIT CAMPGROUND**

Grid ID	Noise Metric	Winter				Summer			
		Future No-Action	Proposed Action	Difference	Change of Exposure	Future No-Action	Proposed Action	Difference	Change of Exposure
LADWP-1	Leq _(Day) (dBA)	32.3	32.4	0.1	None	32.0	32.0	0.0	None
	Leq _(24 hour) (dBA)	30.4	30.5	0.1	None	30.1	30.1	0.0	None
	CNEL (dBA)	32.1	32.1	0.0	None	32.0	32.0	0.0	None
	L _{max} (dBA)	71.3	71.3	0.0	None	71.3	71.3	0.0	None
	TAA (minutes)	159.2	171.7	12.5	Not Applicable ¹	144.2	148.6	4.4	Not Applicable ¹

¹ Change of exposure criteria does not apply to Time Above Ambient. The Natural Ambient Sound Level was 28.6 dBA.
Source: URS Corporation, 2007.

C-3.9 CONCLUSION

As stated previously, the objective of this Cumulative Noise Analysis is to evaluate the potential for increases or decreases in noise levels within the AI due to aircraft operations associated with MMH, the Proposed Action, and other aircraft operating within the AI that are not associated with MMH. This section summarizes the conclusions for the representative Section 4(f) resources within the AI based on a comparison of noise levels between the No-Action Alternative and the Proposed Action utilizing the COE criteria.

Results of the No-Action Alternative and Proposed Action noise levels utilizing the COE criteria are provided in **Section C-3.8, Results**, for the individual grid locations that were analyzed. Based on the Year 2015 L_{max} findings of the NSA (see **Appendix C-2**), locations within the following park resources required the additional aircraft noise analysis:

- Yosemite National Park (National Park Service) in the general vicinity of Tioga Pass (YNP-4), and
- Inyo National Forest (Forest Service) in the general vicinity of Sawmill Campground (INF-1).

Table C-3.35 summarizes the results of the cumulative aircraft noise analysis for these locations.

**TABLE C-3.35
CUMULATIVE NOISE ANALYSIS FOR YEAR 2015**

Grid ID	Noise Metric	Winter			
		Future No-Action	Proposed Action	Difference	Change of Exposure
YNP-4	L_{max} (dBA)	72.7	72.7	0.0	None
INF-1	L_{max} (dBA)	72.7	72.7	0.0	None

Source: URS Corporation, 2007.

The results summarized in **Table C-3.35** show that aircraft not associated with MMH or the Proposed Action dominate the L_{max} at these locations. The Proposed Action would not change the L_{max} at these locations when considering all aviation activity within the AI.

Based on the combined results of the NSA and this cumulative noise analysis, no uniform grid locations or representative Section 4(f) locations would result in exceedances of the COE criteria. Therefore, FAA does not recommend further quantitative analysis at representative Section 4(f) locations within the AI.