CHAPTER 5.0
ENVIRONMENTAL CONSEQUENCES

5.1 INTRODUCTION

The potential environmental impacts resulting from the No-Action and Proposed Action Alternatives are presented in this section. The No-Action and Proposed Action Alternatives are examined for the study years 2011 and 2015. Calendar year 2011 was used because it is the first full year during which United Airlines would provide commercial air service operations into Mammoth Yosemite Airport (MMH) using the CRJ700 aircraft, operating one flight per day for the winter ski season. Calendar year 2015 was used because it represents the period of maximum operations of commercial air carrier service at MMH, which would total, but not exceed, a total of eight flights per day by the Q400 Dash 8 and CRJ700 aircraft. Details of the No-Action and Proposed Action Alternatives are provided below:

No-Action Alternative - The No-Action Alternative assumes the Federal Aviation Administration (FAA) would not approve the United Airlines' Operations Specifications Amendment pursuant to 14 CFR Part 119 that would allow United Airlines to provide scheduled commercial air service to MMH with a CRJ700 aircraft. However, commercial air carrier service operations at MMH would continue to grow with approximately 1,324 operations forecasted in 2011 and 2,244 operations forecast for 2015 (see **Figure 5.1-1**). Each flight to MMH would involve two operations – one landing and one takeoff. The FAA Terminal Area Forecast projects that operations by non-air carrier aircraft would remain at approximately 7,300 over the study period.

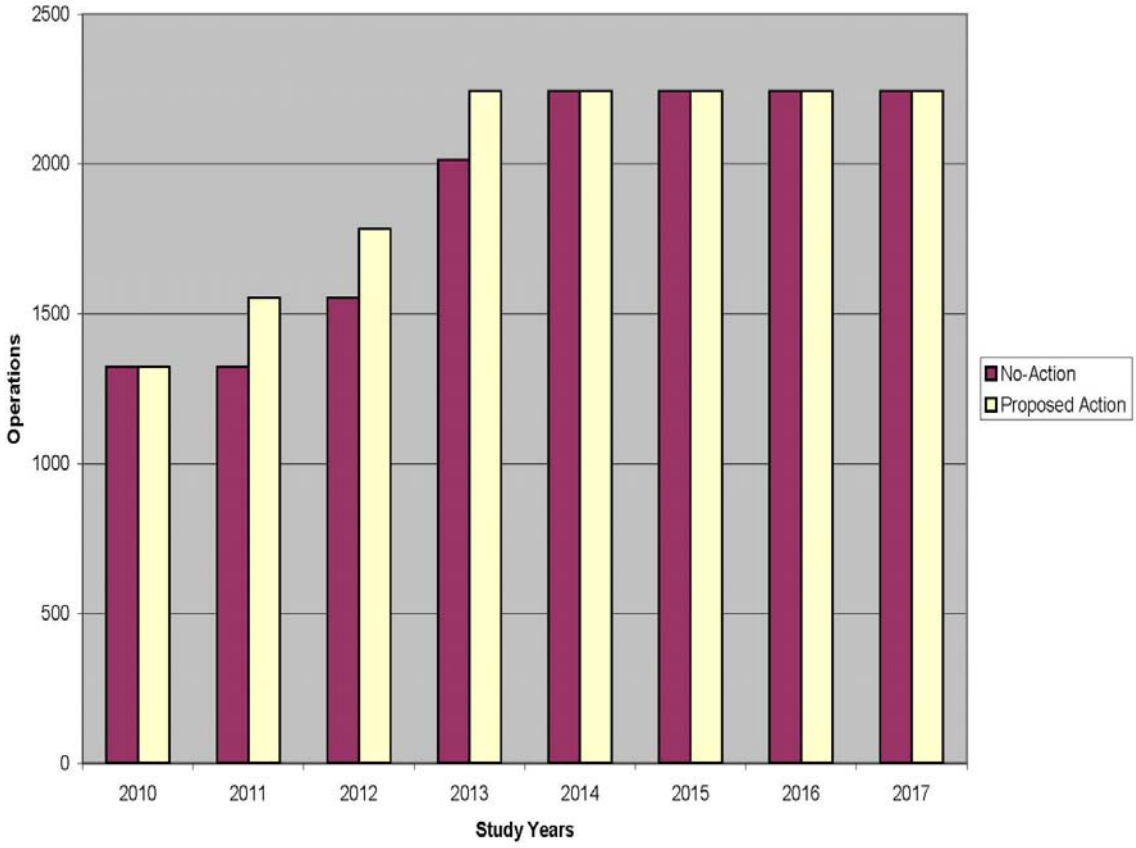
Proposed Action – Under this alternative, FAA would approve the United Airlines' Operations Specifications Amendment pursuant to 14 CFR Part 119 that would allow United Airlines to provide scheduled commercial air service to MMH with a CRJ700 aircraft. United Airlines would initiate scheduled regional air carrier service to MMH beginning in December 2010 with one flight per day from San Francisco International Airport (SFO) during the winter ski season (approximately December to April). This would result in an additional 230 annual operations in 2011, and resulting in a total of 1,554 annual commercial air carrier operations in 2011, and 2,244 annual air carrier operations in 2015. The FAA Terminal Area Forecast projection of future operations by non-air carrier aircraft would not be affected.

5.2 RESOURCE CATEGORIES NOT AFFECTED

The No-Action and Proposed Action Alternatives would not affect the following environmental resources for the reasons indicated:

- Coastal Resources – no resources in vicinity,
- Construction Impacts – no proposed construction,
- Farmlands – no physical changes and no resources in vicinity,
- Floodplains – no physical changes,

FIGURE 5.1-1
MMH COMMERCIAL OPERATIONS



- Light Emissions and Visual Impacts – no physical changes,
- Wetlands – no physical changes, and
- Wild and Scenic Rivers – no resources in vicinity that may be affected.

Therefore, using guidance within FAA Order 1050.1E, since potential impacts to these environmental resources would not occur as a result of the Proposed Action, they are not evaluated within this section of the EA.

Comparison of the No-Action and Proposed Action Alternatives, relative to the environmental impact categories described in FAA Order 1050.1E, show few differences in environmental impacts. **Table 3.3-1** provides a summary of environmental impacts associated with the implementation of the No-Action and Proposed Action Alternatives. These summary findings are discussed in further detail in the following subsections. Within this section of the EA, each subsection begins with a brief overview of impacts (printed in bold), followed by methodology and significance criteria, and 2011 and 2015 potential impacts if any.

5.3 NOISE

This section describes the existing and future aircraft noise environment in the vicinity of MMH and summarizes the methodology used to develop and execute the noise analysis. This section also discusses potential noise impacts from the No-Action and Proposed Action Alternatives in the Airport Study Area (ASA) in 2011 and 2015 as per FAA Order 1050.1E, Change 1, Appendix A, Section 14g(2). Potential constructive use impacts of noise on Department of Transportation Act Section 4(f) resources are addressed in **Section 5.8**. A more detailed description of aircraft noise prediction methodologies and terms is included in **Appendix B**.

Applicable Federal and state guidance and regulations for noise are summarized in **Section 5.3.2** and **Appendix B**.

5.3.1 Overview of Impacts

An ASA was established based on the estimated extent of the 2015 Proposed Action Alternative's Community Noise Equivalent Level (CNEL) 65 dBA noise contour. There are no noise-sensitive land uses within the ASA. The Proposed Action Alternative would not cause noise-sensitive areas to experience an increase in noise of CNEL 1.5 dBA or more at or above CNEL 65 dBA, when compared to the No-Action Alternative in either 2011 or 2015. Therefore, the Proposed Action Alternative would not cause a significant noise impact in the ASA.

There are several Federal and state park resources, wilderness areas, national forests, historic sites and Native American lands in the vicinity of the airport. Section 5.8 discusses the possible effects on DOT Section 4(f) resources.

5.3.2 Applicable Regulations

Aircraft noise exposure for the Existing Condition, No-Action, and Proposed Action Alternatives was predicted using the methodology described in **Appendix B**. Results were analyzed to determine if a significant noise impact (as defined by FAA Order 1050.1E, Change 1, Appendix A, Section 14.3) would result from implementation of the Proposed Action Alternative. A brief description of these analyses and results is provided in **Sections 5.3.4** through **5.3.6**, below.

FAA conducted the evaluation of the MMH noise environment using the methodologies developed by the FAA and published in FAA Order 1050.1E, Change 1. In accordance with FAA Order 1050.1E, Change 1, Appendix A, Section 14.3 and 14.4c, a proposed action would be considered to have a significant impact with regard to aviation noise, when compared to the No-Action Alternative for the same time frame, if it would:

- Cause noise sensitive areas located at or above CNEL 65 dB to experience a noise increase of at least CNEL 1.5 dB.
- Cause an increase of CNEL 1.5 dB that introduces new noise sensitive areas to exposure levels of CNEL 65 dB or more.

To comply with FAA's guidance provided in 1050.1E and the recommendations of the 1992 FICON, noise-sensitive areas between DNL 60 and 65 dB should be evaluated for increases of DNL 3.0 dB or greater if an increase of DNL 1.5 dB occurs at any noise-sensitive area within the DNL 65 dB contour. To comply with guidance provided in FAA Order 1050.1E, Change 1, for proposed air traffic actions above 3,000 feet above ground level (AGL), potential noise impacts resulting from changes in airport arrivals and departures should be disclosed. Noise-sensitive areas between DNL 45 and 60 dB should be evaluated for increases of DNL 5.0 dB or greater.

FAA Order 1050.1E, Change 1, paragraph 14.4i requires the following information be disclosed for the future conditions:

- The number of people living or residences within each noise contour above DNL 65 dB, including the net increase or decrease in the number of people or residences exposed to that level of noise, and
- The location and number of noise sensitive uses (e.g., schools, churches, hospitals, parks, recreation areas) exposed to DNL 65 dB or greater.

5.3.3 Methodology

5.3.3.1 Aircraft Noise Descriptors

In this EA, aircraft noise or sound levels are expressed in terms of A-weighted decibels (dBA). FAA Order 1050.1E Change 1, Appendix A, Paragraph 14.1a states: "For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL) as FAA's primary metric. The FAA recognizes CNEL (community noise equivalent level) as an alternative metric for California." CNEL is used in this EA for the discussion of noise conditions at MMH.

CNEL is a 24-hour time-weighted average noise metric expressed in dBA which accounts for the noise levels of all individual aircraft events, the number of times those events occur, and the time of day which they occur. CNEL has three time periods: daytime (7:00 a.m. to 6:59 p.m.), evening (7:00 p.m. to 9:59 p.m.), and nighttime (10:00 p.m. to 6:59 a.m.). In order to represent the added intrusiveness of sounds occurring during evening and nighttime hours, CNEL adds weights to events occurring during the evening and nighttime periods of 4.77 dBA and 10 dBA, respectively (CalTrans, 2002).

5.3.3.2 Aircraft Noise Prediction

In accordance with guidance contained in FAA Order 1050.1E, Change 1, Appendix A, Section 14, Paragraph 14.2b, detailed noise analyses must be performed through noise modeling using an FAA approved model. The Integrated Noise Model (INM) has been FAA's standard tool since 1978 for determining the predicted noise levels in the vicinity of airports. The INM v. 7.0b was used to produce noise contours and to analyze noise levels at sensitive sites. The data and methodologies used to develop the noise contours are provided in **Appendix B-3**.

The INM incorporates the number of annual average daily daytime, evening, and nighttime flight operations, flight paths, and flight profiles of the aircraft along with its extensive internal database of

aircraft noise and performance information, to calculate the CNEL at many points on the ground around an airport. From a grid of points, the INM contouring program draws contours of equal CNEL that are superimposed onto land use maps. For this document, CNEL contours of 65, 70, and 75 dBA were developed. CNEL contours are a graphical representation of how the noise from the airport's annual average daily aircraft operations is distributed over the surrounding area. The INM can also calculate sound levels at any specified point so that noise exposure at representative locations around an airport can be obtained.

The results of the INM analysis provide a relative measure of noise level around airports. 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 in aircraft operations. It allows noise levels to be predicted for a proposed action without the actual implementation and noise monitoring of those actions.

5.3.3.3 Operations

The future conditions aircraft noise analysis used the forecast of aviation operations for MMH presented in **Section 1.3**. The MMH forecast is presented in **Section 1.3** and was summarized in the introduction to this section.

For this EA the FAA utilized current arrival and departure flight tracks for both existing air traffic at MMH and proposed CRJ-700 aircraft operations. Air carrier and general aviation aircraft use somewhat different flight patterns as general aviation aircraft fly between MMH and a wider range of destinations. Topographic maps were reviewed to identify locations of high terrain, published U.S. Terminal Procedures were researched, and airport personnel were interviewed, to verify the location of the flight tracks of existing aircraft operations at MMH.

5.3.4 Baseline Condition

The existing aircraft noise conditions at MMH (2009) were developed using the INM with input data reflecting the existing airport layout, aircraft operations, and climate data. Details on these parameters can be found in **Appendix B-3.1**.

5.3.4.1 Data Sources

Data were collected during development of the FEIS (FAA, 2008) from multiple sources and upon verification they were utilized to ensure that this aircraft noise analysis provides an accurate depiction of the existing MMH aircraft noise environment. The data sources utilized in the FEIS (FAA, 2008) and verified 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;
- Final Report, Environmental Assessment, Mammoth Yosemite Airport Expansion Project, Appendix C, "Aircraft Noise Analysis" (Town of Mammoth Lakes, 2000); and
- Interviews with Airport personnel to verify data and assumptions.

The most recent FAA Airport Master Record, Form 5010 (December 17, 2009) was utilized for the Existing Condition number of aircraft operations. All of the other inputs were unchanged from those used in the FEIS (FAA, 2008), based on interviews in December 2009 with airport personnel.

5.3.4.2 Modeled Aircraft Operations

For the 2009 Existing Conditions, 7,505 operations, an average of approximately 20.6 operations per day, were modeled based on data retrieved from the FAA Airport Master Record, Form 5010. Jet operations accounted for approximately 11.1 percent of the total operations. Evening and nighttime operations accounted for 3.9 percent of the total operations.

Helicopters were also modeled for this EA, but they only account for approximately 1.4 percent of the total aircraft operations at MMH.

Modeled runway utilization percentages were derived from current airport operations in the FEIS (FAA, 2008) and remain unchanged in this EA, based on interviews in December 2009 with airport personnel. 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 allowable takeoff weight of an aircraft, pilots of larger commercial aircraft (jet and turboprop aircraft) tend to prefer departing on Runway 09. For this reason commercial aircraft have been modeled as landing on Runway 27 and departing on Runway 9 approximately 75 percent of the time as shown in **Table B-3.11** in **Appendix B-3**.

Flight tracks are the aircraft's actual path through the air projected vertically onto the ground. East flow tracks represent aircraft using Runway 09. West flow tracks represent aircraft using Runway 27. Based on discussions with MMH personnel during the EIS process, FAA determined that six arrival and six departure routes reasonably reflect the routes commonly used to and from MMH (see **Figures 5.3-1** and **5.3-2**). Because of the terrain surrounding the airport, it was assumed that helicopters would use the same flight tracks as fixed wing aircraft. The flight tracks remain unchanged from the FEIS (FAA, 2008).

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.

5.3.4.3 2009 Aircraft Noise Exposure within the Airport Study Area

The ASA encompasses the area within the projected 2015 CNEL 65 dBA contour at the airport. **Figure 5.3-3** shows the ASA.

Environmental Assessment
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Amendment Service to/from MMH

2009 EXISTING CONDITIONS EAST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 09

FIGURE 5.3-1

LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks
- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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, 2009

N W E S

5 0 5 Miles

1:400,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-1, 2009 Existing Conditions East Flow Flight Tracks - Aircraft Using Runway 09.mxd, {rpf, hde, 03/16/10}

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Amendment Service to/from MMH

2009 EXISTING CONDITIONS WEST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 27

FIGURE 5.3-2

LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks
- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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

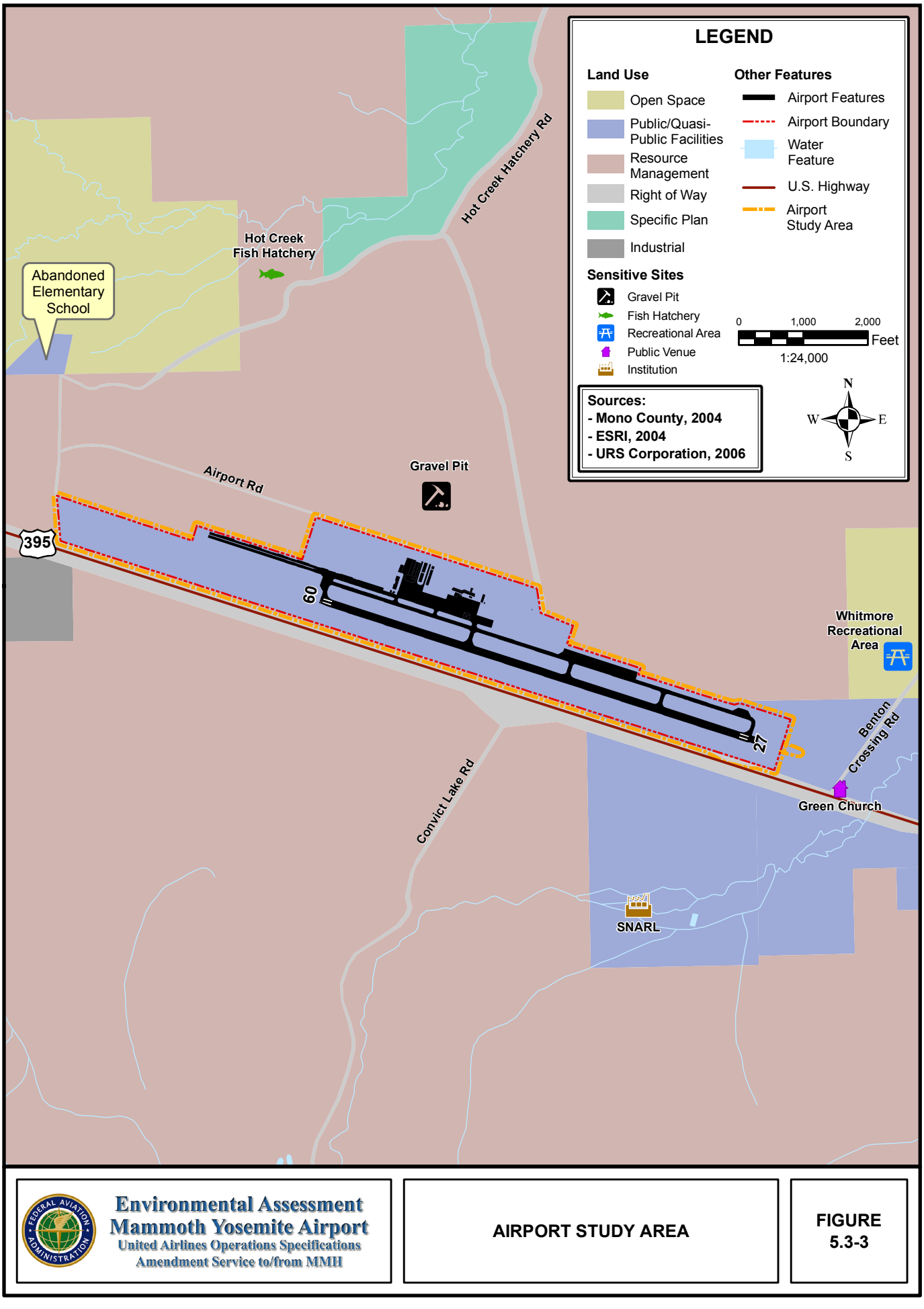
Sources:
- FAA , 2004
- ESRI, 2004
- URS Corporation, 2009

N W E S

5 0 5 Miles

1:400,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-2, 2009 Existing Conditions West Flow Flight Tracks - Aircrafts Using Runway 27.mxd, {mf, hde, 03/16/10}



H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-3, Airport Study Area.mxd {rpf, hde, 03/16/10}

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

AIRPORT STUDY AREA

FIGURE 5.3-3

Noise exposure resulting from 2009 aircraft operations at MMH is depicted on **Figure 5.3-4** as CNEL 65, 70, and 75 dBA contours, superimposed over the local land use map of Mammoth Lakes. There are no residential land uses or noise-sensitive sites within the existing CNEL 65 dB or greater noise contour.

5.3.5 No-Action Alternative

For the No-Action Alternative, 8,714 operations are projected to occur in 2011, and 9,850 operations are projected to occur in 2015. This includes 662 air carrier flights in 2011 and 1,121 air carrier flights in 2015. Modeled average daily operations for 2011 are shown in **Table B-3.7**, while those for 2015 are shown in **Table B-3.9**; both are in **Appendix B-3**. Runway and flight track use is projected to remain the same as in 2009, with the exception of additional air carrier traffic servicing other origins/destinations resulting from projected growth. The arrival and departure flight tracks are shown in **Figures 5.3-5** through **5.3-8**, for 2011 and 2015 respectively.

Noise exposure resulting from 2011 aircraft operations at MMH is depicted as CNEL 65, 70, and 75 dBA contours, superimposed over a local land use map, on **Figure 5.3-9**. Noise contours for 2015 are shown in **Figure 5.3-10**. There are no noise-sensitive land uses within the CNEL 65 dBA contour in either the 2011 or 2015 No-Action Alternative. There would be no housing units or people residing within the CNEL 65 dBA contour.

5.3.6 Proposed Action

For the Proposed Action Alternative there would be a total of 777 air carrier flights in 2011. The proposed United Airlines CRJ-700 flights would add 115 additional flights to the number of operations projected under the No-Action Alternative. Therefore, the 2011 Proposed Action Alternative includes a total of 8,944 annual operations. Modeled average daily operations for 2011 are shown in **Table B-3.8** in **Appendix B-3**.

For 2015 there would be a total of 1,121 air carrier flights. The Proposed Action Alternative would not result in any additional operations when compared to the No-Action Alternative. The 2015 Proposed Action Alternative would replace one Q400 flight with one CRJ-700 flight. The 2015 Proposed Action Alternative includes a total of 9,850 annual operations. Modeled average daily operations for 2015 are shown in **Table B-3.10** in **Appendix B-3**.

Runway and flight track use is projected to remain the same as in 2009, with the exception of additional air carrier traffic servicing other origins/destinations resulting from projected growth, since the CRJ-700 would use the same flight tracks as the Q400. The No-Action Alternative arrival and departure routes shown in **Figures 5.3-5** through **5.3-8** would remain in use.

There are no noise-sensitive land uses within the CNEL 65 dBA contour in either the 2011 or 2015 Proposed Action Alternative, shown on **Figures 5.3-9** and **5.3-10**. The changes in the 65 dBA contour for 2011 and 2015 are shown in **Figures 5.3-9** and **5.3-10**. Compared to the respective No-Action Alternative, less than one additional acre would be exposed to CNL 65 dBA or higher noise levels. There would be no housing units or people residing within the CNEL 65 dBA contour. The Proposed Action Alternative would not cause noise-sensitive areas to experience an increase in noise of CNEL 1.5 dBA or

more at or above CNEL 65 dBA, when compared to the No-Action Alternative. Therefore, the Proposed Action Alternative would not cause a significant noise impact.

5.3.7 Mitigation

Since the Proposed Action Alternative would not result in significant noise impacts, no mitigation is required or proposed.

5.4 COMPATIBLE LAND USE

There are no residences, or other noise-sensitive land uses, within the ASA (i.e., the 2015 CNEL 65 dBA contour) for either the No-Action or Proposed Action Alternatives in 2011 and 2015. Since there are no noise-sensitive land uses within the CNEL 65 dBA contour in either of the alternatives and there is no property acquisition or construction associated with either alternative, there would be no compatible land use impacts associated with the Proposed Action Alternative.

5.5 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

5.5.1 Overview of Impacts

Under the No-Action Alternative, regional air carrier service to MMH by United Airlines using a CRJ700 aircraft would not be implemented. Regional air carrier service to MMH by Horizon Air using Q400 aircraft would continue as evaluated in the 2008 FEIS. A total of 662 air carrier flights would occur in 2011 and a total of 1122 air carrier flights air carrier flights would occur in 2015. The No-Action Alternative would not result in any residential or business acquisitions or relocations, division or disruption of established communities, alteration of surface traffic patterns, disruption of orderly planned development, environmental justice impacts, or impacts to environmental health or safety risks to children.

Under the Proposed Action, beginning in 2011 United Airlines would operate one additional flight per day to MMH. A total of 777 air carrier flights would occur in 2011 and a total of 1122 air carrier flights air carrier flights would occur in 2015. The number of annual enplanements would increase by approximately 5 percent in 2011 when compared to the No-Action Alternative. By 2015 the number of annual passenger enplanements would be approximately 2.5 percent lower when compared to the No-Action Alternative. The Proposed Action would not result in any residential or business acquisitions or relocations, division or disruption of established communities, alteration of surface traffic patterns, environmental justice impacts, or impacts to environmental health or safety risks to children. In addition, the Proposed Action would not result in any disruption of orderly planned development within the Socioeconomic Study Area.

Airport Rd

65

70

75

65

27

Benton Crossing Rd

Green Church

SNARL

LEGEND

2009 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, 2009

N W E S

1,000 0 Feet

1:12,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-4, 2009 Existing Condition Noise Contours.mxd, {mf, hde, 03/16/10}

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2009 EXISTING CONDITION NOISE CONTOURS

FIGURE 5.3-4

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Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2011 NO-ACTION & PROPOSED EAST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 09

FIGURE 5.3-5

LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks
- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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

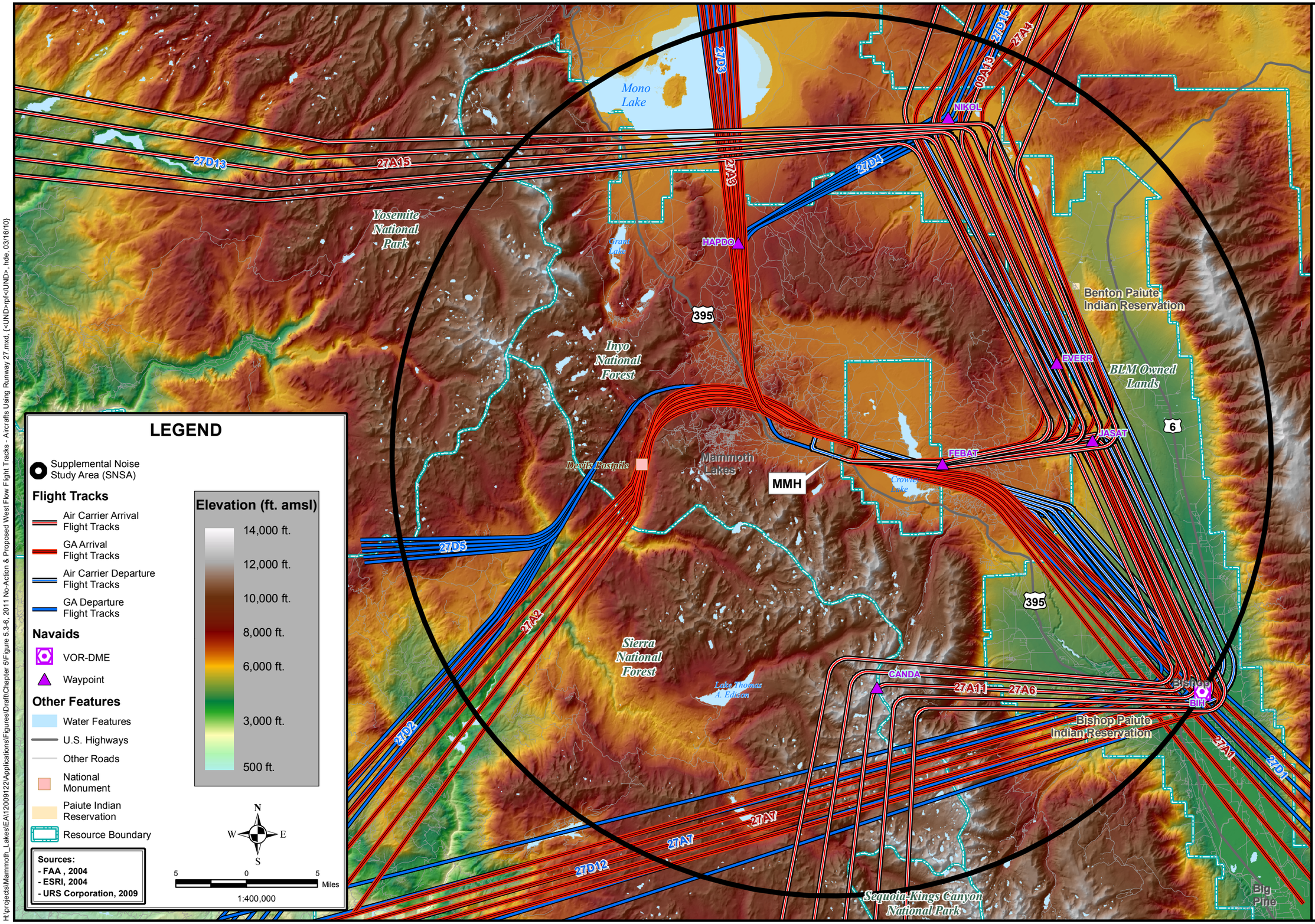
Sources:
- FAA , 2004
- ESRI, 2004
- URS Corporation, 2009

N W E S

5 0 5 Miles

1:400,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-5, 2011 No-Action & Proposed East Flow Flight Tracks - Aircraft Using Runway 09.mxd, {<UND>rpl</UND>, hde, 03/16/10}



LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks

- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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, 2009

N W E S

5 0 5 Miles

1:400,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-6, 2011 No-Action & Proposed West Flow Flight Tracks - Aircrafts Using Runway 27.mxd, {<UND>rpf</UND>, hde, 03/16/10}

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2011 NO-ACTION & PROPOSED WEST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 27

FIGURE 5.3-6

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2015 NO-ACTION & PROPOSED EAST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 09

FIGURE 5.3-7

LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks
- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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, 2009

N W E S

5 0 5 Miles

1:400,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\[Figure 5.3-7, 2015 No-Action & Proposed East Flow Flight Tracks - Aircraft Using Runway 09.mxd, {<UND>rpl</UND>, hde, 03/16/10}

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2015 NO-ACTION & PROPOSED WEST FLOW FLIGHT TRACKS - AIRCRAFT USING RUNWAY 27

FIGURE 5.3-8

LEGEND

Supplemental Noise Study Area (SNSA)

Flight Tracks
- Air Carrier Arrival Flight Tracks
- GA Arrival Flight Tracks
- Air Carrier Departure 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

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, 2009

N W E S

5 0 5 Miles

1:400,000

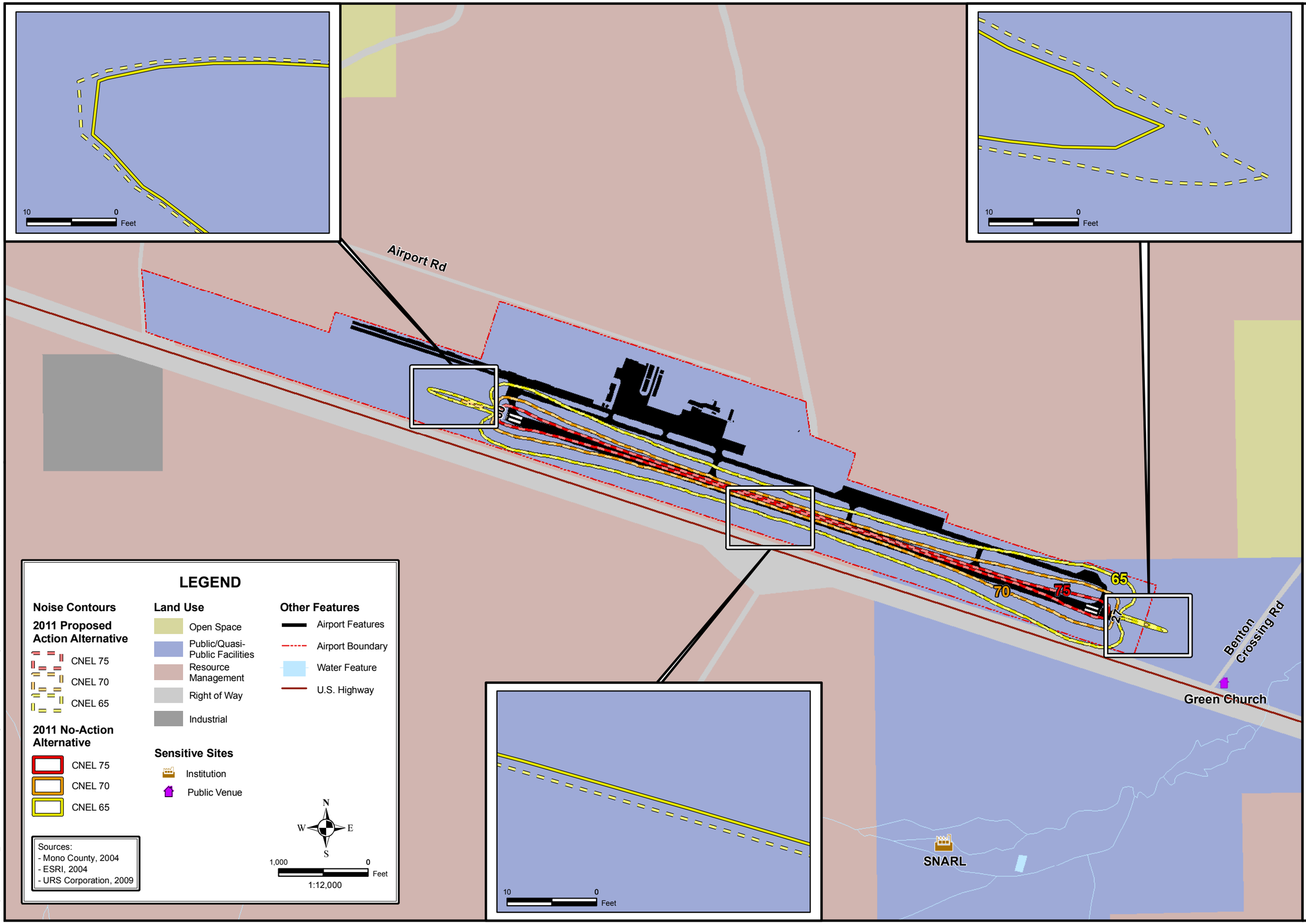
H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-8, 2015 No-Action & Proposed West Flow Flight Tracks - Aircrafts Using Runway 27.mxd, {<UND>rpf</UND>, hde, 03/16/10}

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-9, 2011 No-Action and Proposed Action Alternative Noise Contours.mxd, {rpf, hde, 04/16/10}

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2011 NO-ACTION AND PROPOSED ACTION ALTERNATIVE NOISE CONTOURS

FIGURE
5.3-9



Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

2015 NO-ACTION AND PROPOSED ACTION ALTERNATIVE NOISE CONTOURS

FIGURE
5.3-10

Airport Rd

Benton Crossing Rd

Green Church

SNARL

65

70

75

21

10 0 Feet

10 0 Feet

10 0 Feet

LEGEND

Noise Contours

2015 Proposed Action Alternative
- CNEL 75
- CNEL 70
- CNEL 65

2015 No-Action Alternative
- CNEL 75
- CNEL 70
- CNEL 65

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

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

Sensitive Sites
- Institution
- Public Venue

Sources:
- Mono County, 2004
- ESRI, 2004
- URS Corporation, 2009

N W E S

1,000 0 Feet

1:12,000

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.3-10, 2015 No-Action and Proposed Action Alternative Noise Contours.mxd, {tpf, hde, 04/16/10}

5.5.2 Applicable Regulations

The following statutes must be considered in the evaluation of potential impacts in this environmental category:

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994).
- Executive Order13045, Protection of Children from Environmental Health Risks and Safety Risks (62 CFR 19883, April 23, 1997).
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 [42 U.S.C. 4601] [PL 91-528 amended by the Surface Transportation and Uniform Relocation Act Amendments of 1987, PL 100-117]

Executive Order (EO) 12898 requires that Federal agencies include environmental justice as part of their mission by identifying and addressing as appropriate, the potential for disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations, low-income populations, and Native American tribes. Environmental justice refers to the right to a safe and healthy environment for all and the conditions in which such a right can be freely exercised regardless of race, ethnicity, and socioeconomic status. Environmental justice applies to all environmental resources. Therefore, a disproportionately high and adverse human health or environmental effects on minority and low-income populations may represent a significant impact.

Executive Order 13045 requires federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children and ensure that their actions address any disproportionate impacts. Environmental health and safety risks are defined as risks to health or safety that are attributable to products or substances that a child is likely to come in contact with or ingest. Therefore, a disproportionate health and safety risk to children may represent a significant impact.

5.5.3 Methodology

Socioeconomic impacts were determined through the evaluation of the following criteria with respect to the areas potentially affected by each alternative.

- Residential and business acquisitions and relocations,
- Division or disruption of established communities,
- Disruption of orderly planned development,
- Alteration of surface transportation patterns,
- Environmental justice considerations, and
- Environmental health and safety risks to children.

The ASA is identified as the area within the 2015 CNEL 65 dBA noise contour and/or airport boundary. The Proposed Action does not include construction of new facilities. U.S. Bureau of Census demographic data (1990 and 2000), State of California Department of Finance Demographic Data, and U.S. Department of Commerce employment data were used to determine the demographic characteristics of potentially affected areas.

Potential impacts of the Proposed Action to the surface transportation systems in the vicinity of MMH in 2011 and 2015 were based on the review of the traffic assessment included in the 2008 FEIS, review of the results of a 2008 traffic study prepared for the Town of Mammoth Lakes CEQA process for the development of the current terminal at MMH (LBA Associates, 2008), and review of data from CALTRANS and General Plans from Mono and Inyo Counties and associated municipalities.

The comparison population or the baseline demographic for comparison used in the analysis of disproportionate impacts was defined by the population within Mono and Inyo counties. Mono and Inyo counties encompass the area where social and environmental justice conditions could potentially be influenced as a result of the alternatives. For purposes of this analysis, minority populations and low-income populations were defined as follows:

Minority - Individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Minority population - Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

Low-income population - Low-income populations are identified using the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty.

According to FAA Order 1050.1E, the factors to be considered regarding socioeconomic impacts may include, but are not limited to:

- Extensive relocation of residents is required, but sufficient replacement housing is unavailable.
- Extensive relocation of community businesses that would create severe economic hardship for the affected communities.
- Disruptions of local traffic patterns that substantially reduce the levels of service of the roads serving the airport and its surrounding communities.
- A substantial loss in community tax base.

5.5.4 Baseline Conditions

The baseline demographic and economic conditions used in the evaluation for this environmental category in the 2008 FEIS and for this EA are summarized in **Section 4.2.3**.

The primary surface roadway providing access to and egress from MMH is U.S. 395. The level of service along U.S. 395 in the vicinity of MMH is rated "A" (excellent operations) by CALTRANS with no capacity-related issues (see 2008 FEIS, Appendix E-4, Table E4.1). The 2008 traffic study prepared for the Town of Mammoth Lakes CEQA process for the development of the current terminal at MMH indicates that at the present time the intersection of U.S. 395 and Hot Creek Road (which provides access to the airport) operates at an acceptable Levels of Service (LOS) of B (LBA Associates, 2008).

5.5.5 No-Action Alternative

Under the No-Action Alternative, FAA would not approve the proposed modification to the United Airlines operational specifications, and scheduled regional air carrier service by United Airlines using CRJ700 aircraft would not be implemented. In 2011 and 2015, under the No-Action Alternative, there would be no residential or business acquisitions or relocations, division or disruption of established communities, disruption of orderly planned development, environmental justice impacts, or impacts to environmental health or safety risks to children associated with the Proposed Action.

Based on the revised MMH aviation forecast (see **Table 1.3-1**), under the No-Action Alternative there would be 662 air carrier flights to MMH in 2011. Total enplanements are estimated to be approximately 41,500 in 2011. By 2015 the total annual number of air carrier flights is projected to increase to 1,122, with a projected total of approximately 70,775 enplanements, very similar to the number of enplanements analyzed for the 2008 FEIS. The projected numbers of passengers accessing the airport in 2011 and 2015 is not expected to significantly degrade the existing level of service along U.S. 395 or the intersection of U.S. 395 and Hot Creek Road (LBA Associates, 2008). Town of Mammoth Lakes transportation officials anticipate that airline passengers will be transported to their final destinations by a mixture of hotel vans, rental cars, taxicabs, or other private transportation (Personal Communication, 2007).

5.5.6 Proposed Action

Residential and Business Acquisitions and Relocations

No residential properties or businesses would be acquired or relocated as part of the Proposed Action.

Division or Disruption of Established Communities

Because there would be no construction actions associated with the Proposed Action, and there would be no property acquisition or relocations. Implementation of this alternative would not result in the division or disruption of established communities within the SSA established for this EA

Alteration of Surface Traffic Patterns

Implementation of the Proposed Action would not require the closure or relocation of any existing roadways. Based on the revised MMH aviation forecast (see **Table 1.3-1**), under the Proposed Action Alternative there would be 777 air carrier flights to MMH in 2011. Total enplanements are estimated to be approximately 43,425 in 2011, an increase of approximately 4.5 percent when compared to the No-Action Alternative. By 2015 the total annual number of air carrier flights is projected to increase to 1,122 (the same as under the No-Action Alternative), with a projected total of approximately 68,875 enplanements. The projected change in total enplanements reflects the slightly smaller capacity of the CRJ700 aircraft when compared to the Q400 aircraft. The projected numbers of passengers accessing the airport in 2011 and 2015 is not expected to significantly degrade the existing level of service along U.S. 395 or other local roads. Town of Mammoth Lakes transportation officials anticipate that airline passengers would continue to be transported to their final destinations by a mixture of hotel vans, rental cars, taxicabs, or other private transportation (Personal Communication, 2007).

Disruption of Orderly Planned Development

The Proposed Action would involve no new construction or associated development actions at MMH. The Proposed Action would not adversely impact characteristics of non-airport development within the Mono and Inyo Counties.

Environmental Justice Considerations

The Proposed Action would have no significant impacts. There would be no impacts to minority or low-income populations residing in areas adjacent to or in the vicinity of the airport. No residential properties, minority or Hispanic businesses, or tribal nation properties would be acquired as a result of the Proposed Action. The year 2011 and 2015 CNEL 65 dBA noise contour for the Proposed Action are located primarily on airport property and any off-airport land is compatible in terms of FAA land use compatibility guidelines. There would be no disproportionately high and adverse direct impacts to minorities, ethnic groups, tribal nations, or low-income households.

Environmental Health and Safety Risks to Children

The Proposed Action would not result in the acquisition or relocation of any schools or child care centers. The Proposed Action is not anticipated to increase environmental health and safety risks or exposures to children in the surrounding community. There would be no disproportionate health and safety risks to children resulting from the Proposed Action.

5.5.7 Mitigation

Since the Proposed Action would not have significant socioeconomic impacts, environmental justice impacts or impacts on environmental health and safety risks or exposures to children, no mitigation is required or proposed.

5.6 SECONDARY (INDUCED) IMPACTS

5.6.1 Overview of Impacts

The Proposed Action would not result in any substantial changes in enplanements at MMH when compared to the No-Action Alternative. Therefore, it is not anticipated that the Proposed Action would have significant secondary or induced impacts on economic activity, land use, or surface transportation activity when compare to the No-Action Alternative.

5.6.2 Applicable Regulations

There are no Federal statutes or FAA guidelines establishing specific significance criteria for secondry or induced impacts. FAA Order 1050.1E, Appendix A, Section 15 states that: "Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. When such potential exists, the EA shall describe in general terms such factors. Examples include: shifts in patterns of population movement and growth; public service demands; and changes in business and economic activity to the extent influenced by the airport development. Induced impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use, or direct social impacts…."

5.6.3 Methodology

The 2008 FEIS prepared for the FAA approval of the introduction of commercial air carrier service to MMH included an extensive analysis of social and economic characteristics of the two counties, and extensive modeling of the projected direct and secondary economic impacts of the introduction of air service to MMH by Horizon Air. For this EA the assumptions and results of the analyses in the FEIS were examined to determine if underlying conditions had changed substantially, and examination of the potential impacts of introduction of additional air service using a CRJ700 aircraft on overall enplanements at MMH and related induced economic activity in Mono and Inyo Counties.

5.6.4 Baseline Condition

Section 4.3.2 of this EA presents a summary of existing economic activity in Mono and Inyo counties.

5.6.5 No-Action Alternative

Under the No-Action Alternative future enplanements at MMH are projected to reach approximately 41,500 in 2011 and approximately 70,800 in 2015. These levels are comparable to those assumed and modeled in the economic modeling conducted for the 2008 FEIS. **Section 5.11** of the FEIS, indicates that in 2015 this number of enplanements would represent approximately 2.5 percent of the total annual visitor days to Mammoth Lakes. This component of the total visitation level could potentially support approximately 1,150 full-time and part-time job opportunities within Mono and Inyo counties. This level of employment could in turn support approximately 1,550 individuals within the total resident population of the two counties, requiring approximately 1,100 housing units. The potential job opportunities and associated resident population would be distributed throughout the two counties and would not represent

a significant impact when considered in the context of on-going development in the region and the adopted general plans of local jurisdictions. Impacts to recreational or natural resources associated with the projected level of visitation and resident population would not be significant.

5.6.6 Proposed Action

Under the Proposed Action Alternative future enplanements at MMH are projected to reach approximately 43,500 in 2011 and approximately 68,900 in 2015. These levels do not differ substantially from those projected under the No-Action Alternative or evaluated in the 2008 FEIS. Therefore, it is anticipated that the Proposed Action would not have a significant effect on secondary or induced economic activity, land use, or surface transportation activity when compare to the No-Action Alternative.

5.6.7 Mitigation

Since the Proposed Action would result in significant secondary or induced effects, no mitigation is required or proposed.

5.7 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

5.7.1 Overview of Impacts

There are no historical, architectural, archaeological, or cultural resources contained within the Area of Potential Affect (APE); therefore, FAA has determined that there would be no effect on these resources under either the No-Action or Proposed Action Alternatives. The State Historic Preservation Officer has been requested to concur with the FAA's determination in a letter which is included in the EIS. A copy of the letter is provided in Appendix A-2.

5.7.2 Applicable Regulations

The following regulations apply to the evaluation of impacts to Historic, Architectural, Archaeological, and Cultural Resources:

- Section 106 of the National *Historic Preservation Act* (NHPA),
- Title 36 CFR, Part 800 implementing Section 106,
- Archaeological Resources Protection Act of 1979 (ARPA),
- Archaeological and Historic Preservation Act of 1974 (AHPA),
- Native American Graves Protection and Repatriation Act (NTGPRA),
- 49 U.S.C, Section 303.c, formerly Section 4(f) of the U.S. Department of Transportation Act.

The discussion of significant impact thresholds contained in FAA Order 1050.1E indicates that the NHPA Section 106 consultation process includes consideration of alternatives to avoid adverse effects on National Register listed or eligible properties; of mitigation measures; and of accepting adverse effects. The Order states that in all cases, the FAA makes the final determination on the level of effect. No specific criteria on the level of effect that indicates significant impact are provided in the Order.

5.7.3 Methodology

The methodology for determining the potential environmental impacts of the alternatives on archaeological and historic resources was to apply the guidance of Section 106 of the National Historic Preservation Act (NHPA). According to Section 106, a proposed action has an effect on a historic property when the action may alter characteristics of the property that may qualify it for inclusion in the NRHP (36 CFR, Part 800.9[a]). An effect is considered adverse when it may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects include the physical destruction of all or part of the property, changes to significant aspects of the property's setting, or alteration of character-defining features (36 CFR, Part 800.9[b]).

5.7.4 Baseline Conditions

The baseline conditions for historical, architectural, archaeological, or cultural resources are presented in **Section 4.2.4** of this EA. As discussed in **Section 4.2.4**, the APE consists of the airport boundary and the 2015 CNEL 65 dBA noise contour. No listed or eligible for listing properties in the NRHP are within the APE.

5.7.5 No-Action Alternative

Since there are no historical, architectural, archaeological, or cultural resources contained within the APE, FAA has determined that there would be no effect on these resources under the No-Action Alternative.

5.7.6 Proposed Action

In a letter dated February 9, 2010, the SHPO was requested to concur that there has been no changes to the listed historic resources in the vicinity of MMH since the preparation of the FEIS, and that the determination provided for the Horizon Air commercial air carrier service would be the same for the current Proposed Action. A copy of the letter is provided in **Appendix A-2**. Since there are no historical, architectural, archaeological, or cultural resources contained within the APE, FAA has tentatively determined that there would be no effect on these resources if the Proposed Action were implemented.

5.7.7 Mitigation

Since there would be no effect on historical, architectural, archaeological, or cultural resources, no mitigation is required or proposed.

5.8 DEPARTMENT OF TRANSPORTATION ACT SECTION 4(f) RESOURCES AND SECTION 6(f) RESOURCES

5.8.1 Overview of Impacts

As required in 1050.1E, potential impacts on 4(f) resources were evaluated for the No-Action and the Proposed Action Alternatives. No direct uses of potential Section 4(f) properties would occur for the No-Action or the Proposed Action Alternatives because neither involves any land acquisition or construction activities. Implementation of the Proposed Action Alternative does not result in a change of aircraft noise exposure to noise sensitive sites such as national parks, wilderness areas, and other recreational resources where a quiet setting is a generally recognized purpose and attribute. No Native American traditional cultural properties, or historic properties, within the AI were identified during FAA consultation with appropriate Federal, state, and local agencies, and tribal representatives.

For the FEIS (FAA, 2008), prepared to assess the potential impacts of the now-existing commercial air service to MMH, the FAA conducted a supplemental noise assessment to evaluate potential constructive impacts on 4(f) resources. The supplemental noise assessment included a Noise Screening Assessment that indicated there would be a 3 dBA increase over certain noise sensitive areas in 2015 when using the Lmax metric to compare the now-existing air service scenario to the No-Action Alternative. As a result, FAA conducted additional analyses that compared the projected impacts of the now-existing air service scenario and the No-Action Alternative while considering projected noise associated with aviation activity not associated with MMH (e.g., military, commercial, and general aviation aircraft transiting the area). That analysis showed that when the now-existing air service scenario was considered with existing non-MMH aircraft operations, there is no longer a 3 dBA increase in Lmax and that any noise from the now-existing air service is masked by noise from the aviation activity not associated with MMH.

For this EA an updated analysis was conducted of projected noise associated with the proposed air service (including use of the CRJ700 aircraft) and the No-Action Alternative. The result of this analysis indicates no change of aircraft noise exposure resulting from aviation activity associated with MMH. Therefore, the Proposed Action Alternative would not result in substantial impairment of activities, features, or attributes of the potential Section 4(f) resources that contribute to their significance or enjoyment and no constructive use would occur. Additional cumulative analysis of aviation noise for aviation activity not associated with MMH was not necessary.

5.8.2 Applicable Regulations

The Department of Transportation Act, Section 4(f), which is codified and renumbered as Section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land from an historic site of national, state, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible

planning to minimize harm resulting from the use. The policies Section 4(f) engendered are widely referred to as "Section 4(f)" matters (FAA, 2006a).

Where Federal lands are administered for multiple uses, the Federal official having jurisdiction over the lands shall determine whether the subject lands are in fact being used for park, recreation, wildlife, waterfowl, or historic purposes. National wilderness areas may serve similar purposes and shall be considered subject to Section 4(f) unless the controlling agency specifically determines that for Section 4(f) purposes the lands are not being used (FAA, 2006a). While an area of public land that falls under wilderness categorization and/or is located in a national forest or on BLM lands and is managed primarily for recreational or wildlife habitat preservation purposes may receive Section 4(f) protection, entire wilderness areas, forests, and BLM lands may not.

Section 4(f) may also apply to archaeological resources; however, the Proposed Action which is the subject of this EA does not include ground disturbance. Therefore, archaeological resources are not addressed in this section.

“Use” within the meaning of Section 4(f) includes not only actual physical takings of such lands but also adverse indirect impacts (“constructive use”) as well. When there is no physical taking, but there is the possibility of constructive use, the FAA must determine if the impacts would substantially impair the use of the Section 4(f) resource. If there would be no substantial impairment, the action would not constitute a constructive use and would not, therefore, invoke Section 4(f) of the DOT Act (FAA, 2006a).

An example of constructive use could be a major increase in noise levels at a park due to aircraft overflights where the noise is loud enough to substantially impair the intended use of the park, even though the park property is not directly affected through acquisition or physical development. In this instance, the noise would have to be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or portion of a park for transportation purposes (FAA, 2006a).

5.8.3 Methodology

This section describes how the Section 4(f) properties were evaluated to determine if a direct or constructive use would occur as a result of the Proposed Action. The criteria evaluated to determine direct impacts included land acquisition and physical development of the resource resulting from the alternatives. In order to determine constructive use, the potential Section 4(f) properties were identified and FAA determined whether a quiet setting is considered a generally recognized feature or attribute. Constructive use (indirect impact) of the resources was determined by evaluating projected noise effects that could substantially impair or diminish the activities, features, or attributes of the resource. Constructive use of Section 4(f) resources where a quiet setting is a generally recognized purpose and attribute of the site’s significance occurs when a *substantial impairment* would occur as a result of the Proposed Action. FAA Order 1050.1E, Change 1, Appendix A, Paragraph 6.2f states:

“Substantial impairment occurs only when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. A project which respects a park’s territorial integrity may still, by means of noise, air pollution, or otherwise, dissipate its aesthetic value,

harm its wildlife, defoliate its vegetation, and take it in every sense. For Section 4(f) purposes, the impairment must be substantial. With respect to aircraft noise, for example, the noise must be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or portion of a park for transportation uses."

The indirect use analysis for this EA consisted of a standard noise contour analysis for the immediate vicinity of the airport environs, an update of the prior analysis conducted for the Noise Screening Assessment associated with the FEIS (FAA, 2008) for potential 4(f) resources located at a distance from the airport but potentially impacted by noise associated with the Proposed Action Alternative.

5.8.3.1 Noise Analysis for 4(f) Areas in the Vicinity of the Airport

As an initial step, an inventory of 4(f) properties in the ASA was performed to determine if any Section 4(f) resources would be directly or indirectly impacted by the Proposed Action Alternative. As described in **Chapter 4.0**, the ASA was established based on the estimated extent of the 2015 Proposed Action Alternative's CNEL 65 dBA noise contour. Aircraft noise exposure for the No-Action and Proposed Action Alternatives was predicted using the methodology described in **Appendix B-3**. Results were analyzed to determine if a significant noise impact (as defined by FAA Order 1050.1E, Change 1, Appendix A, Section 14.3) would result from implementation of the Proposed Action Alternative. In this analysis, FAA utilized the *Land Use Compatibility Guidelines* as contained in Title 14 CFR part 150.

5.8.3.2 Noise Analysis for MMH Operations Potentially Affecting 4(f) Areas with Quiet Settings

The second step in the 4(f) evaluation was to update the FEIS supplemental noise analysis 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, as required under FAA Order 1050.1E, Change 1, Appendix A, Section 14.5g. FAA Order 1050.1E, Change 1, Appendix A, Section 6.2i goes on to say: "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." As further guidance, the FAA issued *Guidance on Procedures for Evaluating the Potential Noise Impacts of Airport Improvement Projects on National Parks and Other Sensitive Park Environments* (Guidance Document) (FAA, 2007a).

In accordance with FAA Order 1050.1E and the Guidance Document, for the FEIS (FAA, 2008) FAA prepared the *Noise Screening Assessment for the Request for Operations Specifications Amendment by Horizon Air to Provide Scheduled Air Service to Mammoth Yosemite Airport* (FAA, 2007b) (see Appendix C-2 of the FEIS). The Noise Screening Assessment (NSA) presented a methodical, technical approach to determining the possible effect of the now-existing commercial air service at MMH on national parks, national wildlife refuges, and historic sites including traditional cultural properties where a quiet setting is a generally recognized purpose and attribute. The methodology for the NSA included the definition of a study area (now represented by the 4fSA), an inventory of confirmed and 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 confirmed and potential Section 4(f) properties both with and without the now-existing air service.

As an initial screening test for the NSA, a uniform grid was established 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 confirmed and potential Section 4(f) property. The same grid points were used for the noise analyses conducted for this EA. **Figure 5.8-1** displays the location of the individual Section 4(f) grid points, while **Figure 5.8-2** displays the uniform grid. The INM was used to calculate results for each noise metric at each uniform and individual grid point location, both with and without the then-proposed air service. This analysis was updated for this EA using the updated forecast of aviation activity approved by the FAA as well as updated flight tracks and flight track utilization reflecting current and projected operations of flights to and from MMH.

In order to consider a variety of noise conditions that could occur as a result of the current Proposed Action Alternative, a combination of average noise metrics and single-event noise metrics were used in the updated supplemental noise analysis. As recommended in the FAA Guidance Document, the noise metrics in this assessment included the Equivalent Sound Level (L_{eq}), Community Noise Equivalent Level (CNEL), the Maximum A-Weighted Sound Level (L_{max}), and Time Above Ambient using the natural ambient sound level ($TAA_{natural}$).

As recommended in the FAA Guidance Document, the "change" in exposure between the No-Action and Proposed Action Alternatives should be determined. The Change of Exposure (COE) criteria developed by FAA utilizes the CNEL, $Leq_{(Day)}$, $Leq_{(24\ hour)}$, $L_{max,}$ and $TAA_{natural}$ noise metrics. The COE criteria do not constitute a threshold for a determination of impacts, significant impacts, adverse effects or constructive use. FAA's criteria indicate that the change of noise exposure (either an increase or a decrease) must be equal to, or greater than, 3 dBA of CNEL, L_{eq}, or L_{max} (and exceed the natural ambient sound level), when the No-Action Alternative is compared to the Proposed Action Alternative. FAA tracks changes in $TAA_{natural}$ but does not have specific COE criteria for time-based results.

As described in **Chapter 1.0** of this EA, under the No-Action Alternative, in 2011 Horizon Air is projected to operate four flights per day between MMH and LAX, SJR, and RNO for the winter ski season (115 days from mid-December through mid-April), and one flight per day between MMH and LAX for the summer season (202 days). There would be 23.87 average daily aircraft operations at MMH for the 2011 No-Action Alternative. Under the Proposed Action Alternative there would be one additional daily flight between MMH and SFO utilizing a CRJ700 aircraft during the winter season only. There would be 24.50 average daily aircraft operations at MMH for the 2011 Proposed Action Alternative.

In 2015, the forecast indicates that under the No-Action Alternative Horizon Air would operate eight flights per day for a 115-day winter season utilizing Q400 aircraft, including flights from Los Angeles, San Francisco, Reno, San Jose, Las Vegas, and San Diego. It is also forecast that in 2015 Horizon Air would operate one flight per day to Los Angeles during a 202-day summer season. Under the Proposed Action Alternative scenario one of the Horizon Air flights during the winter season would be replaced by a United Airlines flight utilizing a CRJ700 aircraft. The 2015 No-Action Alternative and the Proposed Action Alternative both consist of approximately 27 average daily operations.

5.8.3.3 Additional Noise Analysis Including Non-MMH Operations Potentially Affecting 4(f) Areas with Quiet Settings.

In accordance with the FAA Guidance Document, where a 3 dBA COE was identified, additional analyses should be conducted to assess the impacts of the Proposed Action Alternative considering the noise environment associated with non-MMH aviation activity transiting the area. The initial assessment of MMH related aviation activity did not result in a COE within the IA, therefore the criteria for performing additional noise analysis of non-MMH related aviation activity were not met and as such, no additional noise analysis was necessary.

5.8.4 Baseline Conditions

The existing areas containing Section 4(f) resources in the vicinity of MMH are described in **Section 4.2.5**. For the FEIS (FAA, 2008), FAA conducted ambient sound level monitoring at two sites in the Inyo National Forest (as shown in Figure 10 of Appendix C-2 of the FEIS). A total of 10 days of noise monitoring data was gathered at each site (from October 23 through November 3, 2006). The results of this noise monitoring and subsequent data analysis effort indicate that the natural ambient sound level (based on the L_{50} sound pressure level) was measured to be 28.6 dBA at the quieter of the two locations (Mosquito Flats). Therefore, the updated supplemental noise analysis for this EA utilized the natural ambient sound level of 28.6 dBA for the entire 4fSA, in order to produce a more conservative estimate of potential noise impacts.

5.8.5 No-Action Alternative

No Section 4(f) resources are located within the ASA, therefore no direct or constructive use of Section 4(f) resources would occur in the ASA as a result of the No-Action Alternative. Furthermore, because no construction will occur, there is no potential for direct use of any Section 4(f) resource, and direct use will therefore not be addressed further.

No constructive use of any Section 4(f) resources would occur as a result of the No-Action Alternative in the years 2011 or 2015 because there would be no change to the operation of the airport other than the growth in operations forecast for the No-Action Alternative and evaluated previously in the FEIS (FAA, 2008).

5.8.6 Proposed Action Alternative

No Section 4(f) resources are located within the ASA, therefore no direct or constructive use of Section 4(f) resources would occur in the ASA as a result of the Proposed Action Alternative. Furthermore, because no construction will occur, there is no potential for direct use of any Section 4(f) resource, and direct use will therefore not be addressed further.

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.8-1, Potential 4(f) Resource Grid Points.mxd, {rpf, hde, 02/09/10}

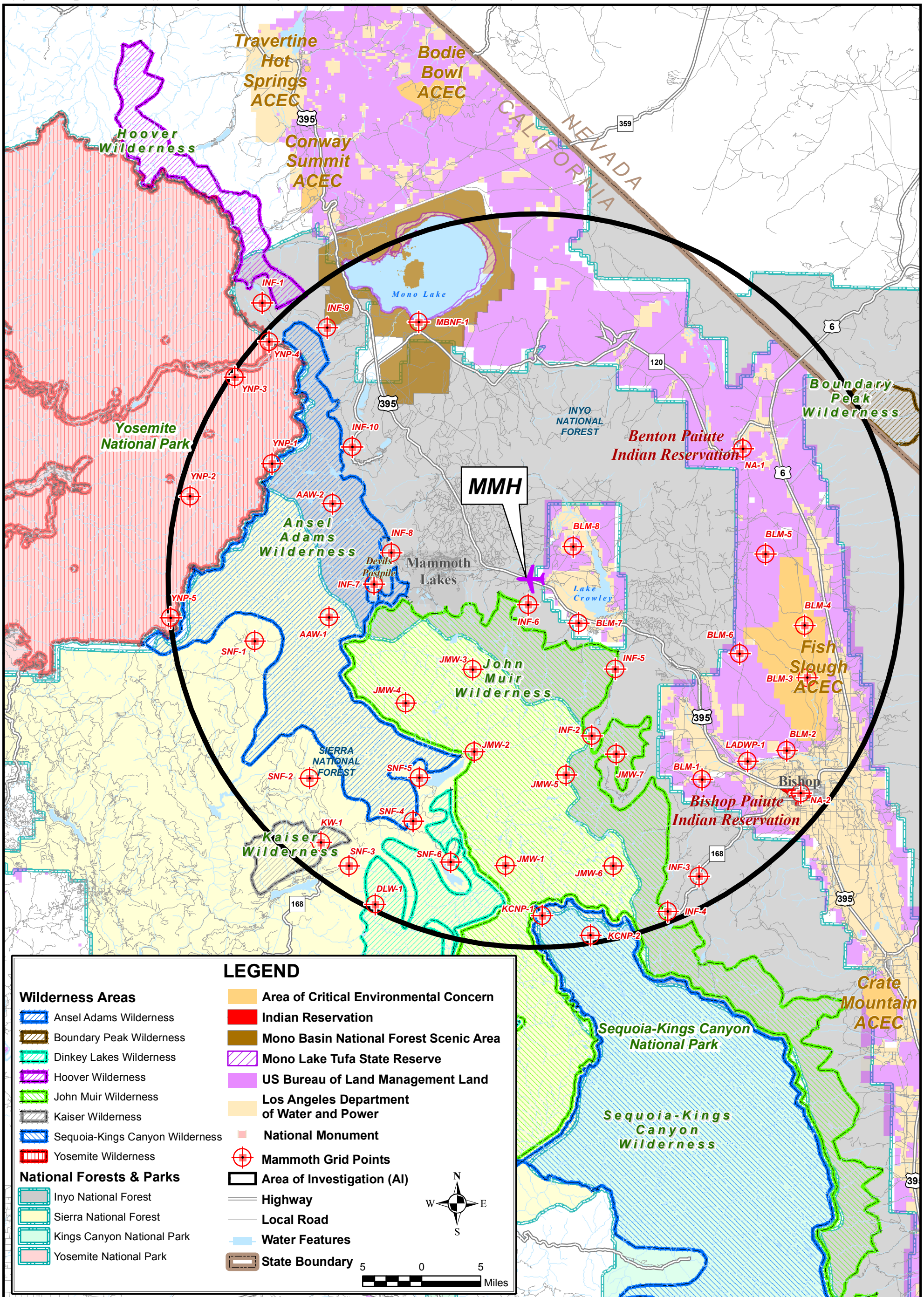


FIGURE 5.8-1

POTENTIAL 4 (f) RESOURCE GRID POINTS

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.8-2, INM Uniform Grid.mxd, { rpf, hde, 02/09/10}

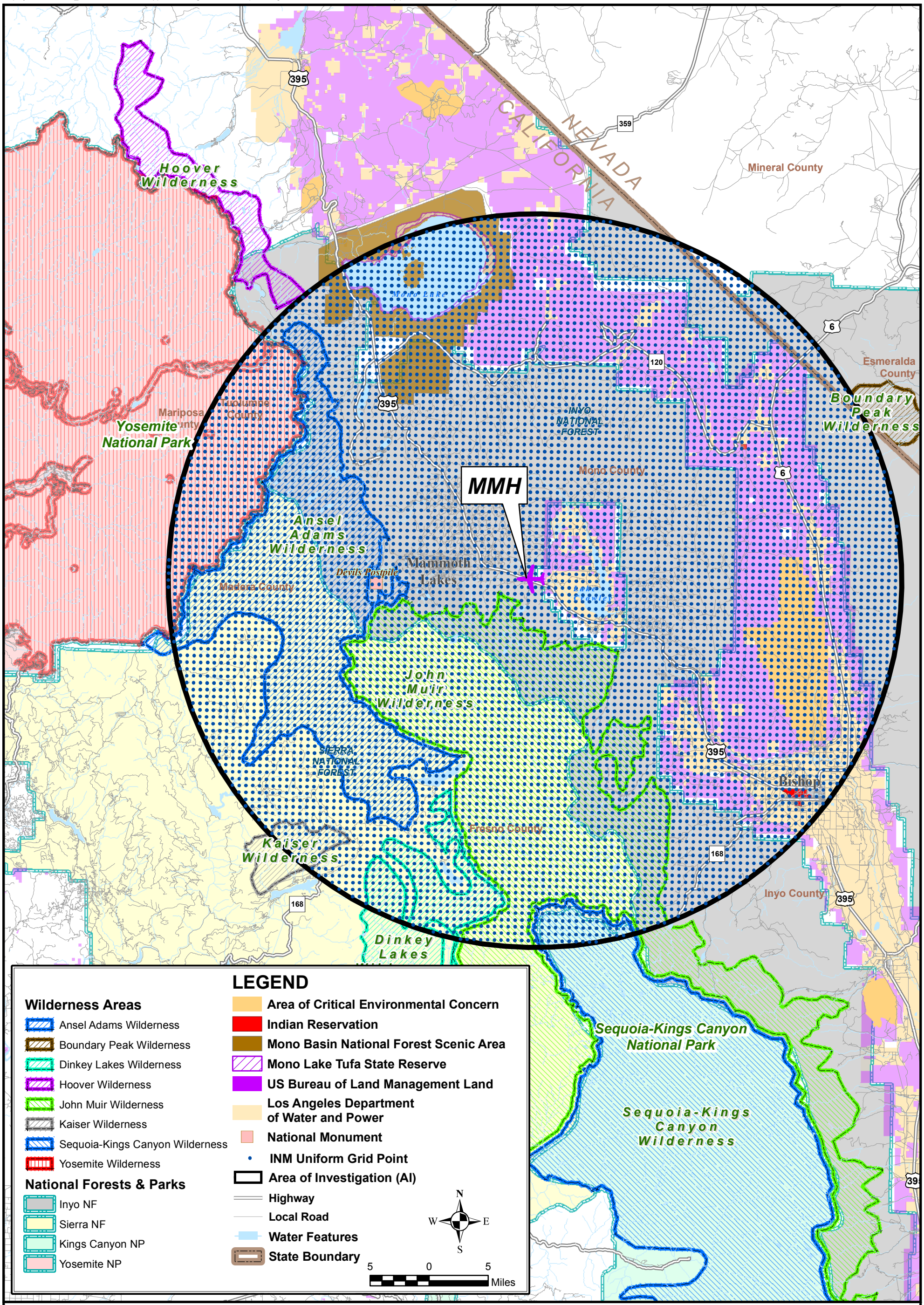


FIGURE 5.8-2

INM UNIFORM GRID

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

For this EA the potential for constructive use of Section 4(f) properties where a quiet setting is a recognized feature or attribute to the property's significance was re-evaluated utilizing the methodology contained in the FAA Guidance Document and utilized for the NSA reported in the FEIS (FAA, 2008). The updated analyses revealed that there would be no Change of Exposure (COE) greater than 3.0 dBA in CNEL, L_{eq}, or L_{max} in year 2011 or year 2015, shown in **Figure 5.8-3**, for the Proposed Action Alternative, when compared to the No-Action Alternative. The use of COE 3.0 dBA DNL for screening for constructive use is a conservative application of the screening criteria used by the FAA to analyze noise levels below 65 dBA DNL in NEPA documents and is consistent with Federal Highway Administration and Federal Transit Administration (formerly Urban Mass Transit Administration) regulations defining constructive use under 23 C.F.R. §771.135.[1]. Therefore, it has been concluded that no additional quantitative analysis was required and the change in noise would not result in a constructive use of the Section 4(f) resources with quiet settings in year 2011 or year 2015.

5.8.7 Mitigation

Since the Proposed Action would not result in significant noise impacts, no mitigation is required or proposed.

5.9 AIR QUALITY

5.9.1 Overview of Impacts

The 2008 FEIS for the introduction of air carrier service to MMH using Q400 aircraft projected that in 2015 the air carrier service under consideration would result in small increases in emissions of criteria pollutants, based on a total of approximately 17,500 total annual operations at MMH (see Table 5.7-2 of the FEIS). The revised forecast for MMH projects total annual operations of approximately 8,700 in 2015. The Proposed Action would result in an increase in air carrier operations of 17 percent in 2011. The total number of aircraft operations at MMH would increase approximately 2.5 percent during 2011 – 2013. The Proposed Action would not affect the number of air carrier operations or total annual operations at MMH after 2013. It is anticipated that the Proposed Action would not have any significant impact on regional air quality, and that the conclusions of the 2008 FEIS in regard to air quality remain valid.

5.9.2 Applicable Regulations

Pursuant to the requirements of the CAA, the U.S. Environmental Protection Agency (EPA) establishes and enforces the National Ambient Air Quality Standards (NAAQS), defined as a series of ambient (i.e. outdoor) air concentrations that, within an adequate margin of safety, safeguard human health, especially

1 As noted in the *Record of Decision for the New York/New Jersey/Philadelphia Metropolitan Area Airspace Redesign* (FAA, September 5, 2007), FAA has adopted the recommendations of the Federal Interagency Committee on Noise (FICON) to broaden the scope of airport noise analysis to address increases of 3 dBA or more between DNL 60 and 65 dBA, which is clearly perceptible between these sound levels, in its NEPA documents. Although changes of 5 dBA in noise exposure between DNL 45 and 60 dBA are identified within populated areas (for air traffic airspace actions where the study area is larger than the immediate area of the airport per FAA Order 1050.1E, Change 1, Appendix A, Section 14.5e), FAA has used the 3 dBA threshold at much lower noise levels to provide special consideration for Section 4(f) resources with quiet setting attributes. The FICON guidance concerning DNL 3 dBA is more directly relevant here than the FHWA constructive use regulations, which relate to traffic noise exposure measured in hourly or 12 hour equivalent sound levels.

as it pertains to sensitive elements of the population such as children, asthmatics and the elderly (primary NAAQS), as well as promote environmental welfare (secondary NAAQS).

The NAAQS have been established for a group of "criteria" pollutants that EPA has identified as being especially detrimental to ambient air quality, and include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb),[2] particulate matter possessing a mean aerodynamic diameter of 10 micrometers or less (PM_{10}) and particulate matter possessing a mean aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$).

California has additional pollutant standards and ambient air quality standards that are more restrictive than the U.S. EPA standards. The NAAQS are summarized in **Table 5.9-1**.

TABLE 5.9-1
NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant	Averaging Time	NAAQS		California Standards
		Primary	Secondary	
Ozone (O_3)	1 Hour 8 Hour[1]	-- 0.075 ppm	-- Same as Primary	0.09 ppm 0.070 ppm
Carbon Monoxide (CO)	1 Hour[2] 8 Hour[2]	35 ppm 9.0 ppm	– –	20 ppm 9.0 ppm
Nitrogen Dioxide (NO_2)	1 Hour Annual	0.053 ppm	Same as Primary	0.18 ppm 0.030 ppm
Sulfur Dioxide (SO_2)	1 Hour 3 Hour[2] 24 Hour[2] Annual	-- – 0.14 ppm 0.03 ppm	-- 0.5 ppm Same as Primary Same As Primary	0.25 ppm 0.04 ppm
Respirable Particulate Matter (PM_{10})	24 Hour[3] Annual	150 µg/m^3 --	Same as Primary --	50 ug/m^3 20 ug/m^3
Fine Particulate Matter ($PM_{2.5}$)	24 Hour[4] Annual[5]	35 µg/m^3 15 µg/m^3	Same as Primary Same as Primary	35 µg/m^3 12 µg/m^3
Lead (Pb)	3 Month[6]	0.15 µg/m^3	Same as Primary	--

[1] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm.
[2] Not to be exceeded more than once per year.
[3] Not to be exceeded more than once per year on average over 3 years.
[4] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m^3.
[5] To attain this standard, the 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m^3.
[6] Corresponds to a rolling 3-month average.
ppm = parts per million; µg/m^3 = micrograms per cubic meter
Sources: US Environmental Protection Agency, http://www.epa.gov/air/criteria.html, accessed Jan 13, 2010; http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm, accessed Jan 13, 2010.

[2] Although lead is identified as a "criteria" pollutant under the CAA, airports are not considered to be a significant source of lead concentrations in the ambient air. Hence, lead is excluded from further discussion

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LEGEND

- Area of Investigation (AI)
- Grid Points Exceeding 3 dBA L_{MAX} COE Criteria *
- Proposed Action Departure Tracks
- No-Action Departure Tracks

Navaids
- VOR-DME
- Waypoint

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

* **Note:**
No grid points exceed COE criteria.

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

N W E S

5 0 5 Miles

1:400,000

27D13/09D13
27D3/09D2
09D5
27D4
27D5/09D4
27D2
09D3
27D7/09D7
27D12/09D12
27D10
27D1/09D1

Mono Lake
Yosemite National Park
Grant Lake
HAPDO
NIKOL
395
Inyo National Forest
Devils Postpile
Mammoth Lakes
MMH
Crowley Lake
FEBAT
EVERR
JASAT
6
Benton Paiute Indian Reservation
BLM Owned Lands
Sierra National Forest
Lake Thomas A. Edison
CANDA
Bishop
BIH
Bishop Paiute Indian Reservation
Sequoia-Kings Canyon National Park
Big Pine

2015 GRID POINTS EXCEEDING 3 dBA L_{MAX} COE CRITERIA

FIGURE 5.8-3

H:\projects\Mammoth_Lakes\EA\120091222\Applications\Figures\Draft\Chapter 5\Figure 5.8-3, 2015 Grid Points Exceeding 3 dB COE Criteria.mxd, {rpt, hde, 04/13/10}

An area possessing ambient air concentrations in excess of the applicable NAAQS is said to be "non-attainment" of the NAAQS; an area with ambient air concentrations lower than the NAAQs are considered to be in "attainment" of the NAAQS. Moreover, the term "maintenance" as it applies to the NAAQS signifies that an area was previously in non-attainment of one or more NAAQS, but has since begun a transition to "attainment" status. As part of the 1990 amendments of the federal CAA, the Conformity Rule (40 CFR, Part 93.150) stipulates that all federal activities must conform to the goals of the applicable SIP. By conforming to the SIP, the federal action would not cause or contribute to any new violation of any standard, worsen (i.e., increase the frequency or severity) an existing violation of any standard, nor delay the timely attainment of any standard or other SIP-mandated milestone.

The CAA Conformity Rule is subdivided into two sections: Transportation Conformity, which applies to federally-approved surface transportation (i.e., highways and roadways) and transit (rail) projects, and General Conformity, which applies to all other federal activities (including actions at airports). In both cases, the requirements of the CAA Conformity Rule apply to U.S. EPA-designated nonattainment areas (i.e., areas that do not meet the NAAQS) and maintenance areas (i.e., areas that have transitioned from nonattainment to attainment). Since the Proposed Action at MMH does not involve the federal approval, funding, or construction of any off-site (i.e., off-airport) roadways or transit systems, the CAA Transportation Conformity Rule does not apply to the Proposed Action.

5.9.3 Methodology

Because the projected annual activity levels at MMH will not exceed 180,000 operations, FAA requires no quantification of air emissions related to airport operation, including emissions inventories or dispersion analysis for this EA (FAA, 2007 – *Desk Reference*). However, the 2008 FEIS prepared in regard to the then-proposed introduction of air carrier service to MMH by Horizon Air using Q400 aircraft included a detailed quantitative assessment of future criteria pollutant emissions as well as assessment of the then-proposed air service in terms of General Conformity.

For this EA, the assessment has focused on determining if the Proposed Action would result in different levels of aircraft and other transportation operations such that the findings reported in the FEIS would no longer be applicable. Utilizing EDMS Version 5.1.2, a comparison was developed for the annual emissions resulting from air carrier flights to MMH in 2015 using all Q400 aircraft, and from using CRJ700 aircraft for 115 annual flights and Q400 aircraft for the remainder.

5.9.4 Baseline Condition

As reported in the 2008 FEIS, the Great Basin Valley air shed (which includes Mono County and MMH) has been designated as being in attainment for all of the "criteria" air pollutants except for PM_{10}. The current attainment/nonattainment designations for Mono County, as identified in the U.S. EPA's Green Book database (U.S. EPA, 2010) are summarized in **Table 5.9-2**.

The historical concerns about levels of PM_{10} are related to soot from wood combustion, road dust, and snow removal equipment within the central part of the Town of Mammoth Lakes. The area near the airport has not historically been considered a nonattainment area.

TABLE 5.9-2
ATTAINMENT/NONATTAINMENT DESIGNATIONS FOR MONO COUNTY

Pollutant	Federal Designation
Carbon Monoxide (CO)	Attainment
Lead (Pb)	Attainment
Nitrogen Oxides (NO_x)	Attainment
Ozone (O_3) (1-Hour)	N/A*
Ozone (O_3) (8-Hour)	Attainment
Particulate Matter (PM_{10})	Nonattainment (Moderate)
Particulate Matter ($PM_{2.5}$)	Attainment

* Federal standard revoked June 15, 2005.
Source: U.S. EPA, 2010.

The Great Basin Unified Air Pollution Control District operates several ambient air monitoring stations in California as part of the state and local air monitoring programs. These stations are intended to sample and record outdoor levels of the U.S. EPA criteria air pollutants listed above. No air monitoring stations are located directly on, or adjacent to, MMH. The nearest monitoring station to MMH is located approximately 7.5 miles away at Highway 203 and Old Mammoth Road at the Do-It Center in Mammoth Lakes. This site monitors PM_{10} and $PM_{2.5}$ concentrations. **Table 5.9-3** contains the detailed site information (site location, distance, and direction from MMH) and the measured PM_{10} and $PM_{2.5}$ data from the Do-It Center Site for 2005.

TABLE 5.9-3
MAMMOTH LAKES 2008 AIR QUALITY MONITORING DATA – SUMMARY FOR PM_{10}

Site ID	Monitoring Station	Distance from MMH	Pollutant Measured	Averaging Period	Highest Recorded Concentrations	Federal Standard	California Standard
6051001	Do-It Center, Highway 203 and Old Mammoth Road, Mammoth Lakes	7.6 Miles West	PM_{10}	Max 24-Hour	97 µg/m^3	150 µg/m^3	50 µg/m^3
				Annual Mean	23 µg/m^3	N/A	20 µg/m^3

Source: U.S. EPA AirData, 2008, accessed January 13, 2010.

As shown in **Table 5.9-3**, PM_{10} concentrations are below the federal standard but exceed the California standards.

5.9.5 No-Action Alternative

Under the No-Action Alternative United Airlines would not introduce additional air service between MMH and SFO using the CRJ700 aircraft. The number of annual air carrier flights into MMH in 2011 would be the same as in 2010 (662), and would increase to 1122 flights by 2015. There would be no impacts to previously-projected future levels of criteria pollutant emissions from changes in the number of aircraft operations associated with the Proposed Action or from construction activities.

5.9.6 Proposed Project

When compared to the No-Action Alternative, the Proposed Action would result in an increase in the number of air carrier operations at MMH in 2011 of 230 (17 percent). By 2013 the difference in air carrier operations as compared to the No-Action Alternative would decrease to 11 percent. After 2013 the Proposed Action would not result in a change in the number of air carrier operations when compared to the No-Action Alternative. The changes in air carrier operations would result in comparable changes in the levels of ground transportation operations associated with passenger levels. However, the increase in air carrier operations during 2011-2013 would represent only 2.5 percent of the total aircraft operations at MMH during that period.

The Proposed Action would, in 2015, result in a change of aircraft type for 115 of 1122 air carrier flights. **Table 5.9-4** compares the total annual emissions for air carrier flights using all Q400 aircraft with using CRJ700 aircraft for 115 flights and Q400 aircraft for the remainder. The Proposed Action would result in small increases in annual emissions of CO, NO_x, and SO_x, and a small decrease in annual emissions of VOC. The change of aircraft type would affect only 230 of 9,740 annual aircraft operations at MMH. **Table 5.9-4** also presents the total and aircraft-only annual emissions reported in the 2008 FEIS. The Proposed Action would result in only minor changes in the overall emissions related to airport operations, and would not result in any of the NAAQS being exceeded in 2011 or 2015.

Currently, there are no federal requirements for calculating or reporting Greenhouse Gas (GHG) emissions in the Clean Air Act. There are no widely accepted methodologies for calculating GHG emissions from transportation sources generally and airport-related sources in particular. There are also no significant impact levels for assessing impacts of GHG emissions. Information concerning state GHG legislation and local Town of Mammoth Lakes global warming and GHG strategies is located in Appendix D of the FEIS.

TABLE 5.9-4
IMPACT OF AIRCRAFT SUBSTITUTION

	Pollutant (tons per year)				
	CO	**VOC**	**NO_x**	**$PM_{10}/PM_{2.5}$**	**SO_x**
All Q400	4.312	2.098	0.761		0.215
Q400 + CRJ700	4.380	1.917	1.126		0.256
Difference	0.068	-0.181	0.365		0.041
Aircraft Emissions (FEIS)	69.44	1.76	3.15	0.81	0.38*
Total Emissions (FEIS)	92.41	5.41	4.34	0.93	0.49*

* Reported as SO_2 in the EIS.

5.9.7 Mitigation

The Proposed Action would not result in any of the NAAQS being exceeded in 2011 or 2015, and therefore would not exceed the significant impact thresholds for air quality identified in Section 2.3 of Appendix A of FAA Order 1050.1E. No mitigation for air quality impacts is proposed.

5.10 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

5.10.1 Overview of Impacts

The use of aviation fuel at MMH would increase slightly under both the No-Action and Proposed Action scenarios, commensurate with the slight projected growth in general aviation activity. Since air carrier aircraft would not refuel at MMH, the short-term increase in annual air carrier operations would not affect fuel use. The Proposed Action is not projected to have a significant effect on the generation of hazardous materials at MMH.

The Proposed Action would result in a small increase in the projected number of enplanements at MMH in 2011 when compared to the No-Action Alternative, and is projected to result in a very slight decrease in enplanements in 2015. Thus, the Proposed Action would not have any significant impact on the generation of solid waste at MMH.

5.10.2 Applicable Regulations

The U.S. Environmental Protection Agency (EPA) promulgates and enforces a series of laws and regulations that when taken together guide the process of pollution prevention and hazardous/solid waste management. Applicable Federal regulations are listed in **Table 5.10-1**.

TABLE 5.10-1
FEDERAL REGULATIONS PERTAINING TO HAZARDOUS MATERIALS MANAGEMENT

Regulation	Description
Clean Air Act (CAA) Title I	Addresses the release of hazardous or toxic contaminants into the atmosphere
Clean Water Act (CWA)	Regulates levels of hazardous materials and other contaminants in the drinking water and groundwater
Emergency Planning and Community Right to Know Act (EPCRA)	Informs the public and emergency officials about the presence and dangers of hazardous materials in their surrounding areas
Comprehensive Environmental Response Compensation and Liability Act (CERCLA, or "Superfund")	Allocates government funds and resources to ensure timely remediation of accidental or unintentional release of hazardous material and environmental contaminants
Federal Insecticide Fungicide and Rodenticide Act (FIFRA)	Guides management and regulation of toxics associated with pest and weed control
Hazardous Materials Transportation Act (HMTA)	Manages safe transport of hazardous waste
Pollution Prevention Act of 1990	Requires that pollution shall be prevented or reduced at the source wherever feasible
Resource Conservation and Recovery Act (RCRA)[1]	Sets important standards and practices regarding the generation and management of hazardous materials from "cradle to grave"
Safe Drinking Water Act (SDWA)	Regulates levels of hazardous materials and other contaminants in the drinking water
Toxic Substances Control Act (TSCA)	Guides the process of introducing new toxic contaminants into the environment

[1] Includes the Hazardous and Solid Waste Amendments (HSWA) of 1984

5.10.3 Methodology

For the 2008 FEIS the process of identifying sites and facilities of known, suspected, or with the potential to contain hazardous substances and/or environmental contamination was accomplished with: 1) visual field survey of MMH facilities; 2) review of available documents, and 3) an electronic database search of federal and state regulatory agency records (EDR, 2006). For this EA coordination with airport personnel was undertaken to confirm that the conditions described in Sections 4.8 and 5.8 of the 2008 FEIS have not changed.

The potential impacts of the No-Action and Proposed Action on long-term generation of solid waste at the airport were evaluated. Future estimated airport solid waste generation was measured against projected landfill capacities to estimate: 1) the airport's contribution to the county-wide solid waste stream, and 2) the ability of the Benton Crossing Sanitary Landfill to accommodate the estimated solid waste generation associated with the Proposed Action.

Pursuant to the methodology used for the 2008 FEIS, future solid waste generation was estimated using a rate of 0.5 pounds per passenger, and 1.5 passengers per operation for general aviation activity. For air carrier activity a rate of 0.64 pounds per enplanement was used. FAA guidance states that additional information or analysis is required only if problems are anticipated with respect to meeting applicable local, state, tribal, or federal laws and regulations relating to hazardous or solid waste management. Actions involving properties listed (or potentially listed) on the National Priorities List (NPL) are considered significant by definition.

According to FAA AC 150/5200-33A, waste disposal sites having the potential to attract birds are considered incompatible if located within 10,000 feet (1.9 statute miles) of any runway used or planned to be used by turbine-powered aircraft. FAA also recommends a distance of 5 statute miles between the farthest edge of the airport's operation area and the hazardous wildlife attractant if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

5.10.4 Baseline Condition

5.10.4.1 Hazardous Materials

In 2002, a subsurface environmental investigation was conducted that indicated the presence of petroleum hydrocarbon contamination in soil and groundwater beneath most of the area near the former hangar at MMH (TEAM, 2005, 2006a, and 2006b). Subsequent investigations at the site have been conducted to delineate the extent of the soil and groundwater contamination and to implement interim remedial measures to minimize the impact from the release. Coordination with MMH personnel indicates that the monitoring of groundwater contamination continues at the present time.

There are two 12,000-gallon above ground fuel tanks located at the airport for the storage of fuel products. These above ground storage tanks are situated on a concrete pad located east of the hangars. The tanks have double walls and are surrounded by a secondary containment system (MMH, 2002). The airport has prepared a Spill Prevention Control and Countermeasure Plan (SPCC Plan) to effectively respond to any leaks or other issues associated with these tanks or other hazardous materials issues (MMH, 2002). The SPCC plan establishes procedures, methods and equipment, and other requirements to prevent discharge of oil or other hazardous materials from the airport. Total aviation fuel sales in 2009 at MMH included approximately 48,000 gallons of avgas and 165,000 gallons of jet fuel.

Chemicals used for equipment maintenance and other materials are stored in the maintenance/operations building that is completely enclosed. In addition, containment structures are installed at fueling areas.

5.10.4.2 Solid Waste

Municipal solid waste (MSW) generated by the Town is collected by Mammoth Disposal, Inc. and is transferred to the Benton Crossing Landfill. The Benton Crossing Landfill is owned and operated by Mono County and is located approximately five miles east of MMH. As reported in the 2008 FEIS, the landfill receives an average of 108 tons per day (tpd) of nonhazardous and hazardous solid waste, with a maximum daily permitted throughput of 500 tpd. The Benton Crossing Landfill has a remaining capacity of 1.7 million cubic yards of compacted waste. The projected closure date of the landfill is December 2023.

Based on the methodology described above, the total of 5,148 passenger enplanements and 7,285 general aviation operations at MMH is estimated to have generated approximately 4.38 tons of solid waste during 2009.

5.10.5 No-Action Alternative

Under the No-Action Alternative the types of hazardous materials and other regulated materials currently used at the airport would not change. The quantity of fuel used would increase slightly under the No-Action Alternative from 2009 to 2011 and 2015 consistent with the FAA forecast for general aviation operations. Since air carrier aircraft do not refuel at MMH, the projected increase in air carrier flights would not affect fuel use at MMH.

For the No-Action Alternative it is projected that in 2011 there would be approximately 41,500 enplanements and 7,390 general aviation operations, resulting in the annual generation of approximately 16 tons of solid waste. In 2015 the projected approximately 70,775 enplanements and 7,606 general aviation operations would generate approximately 25.5 tons of solid waste annually.

5.10.6 Proposed Project

With the Proposed Action the types of hazardous materials and other regulated materials currently used at the airport would not change. The quantity of fuel used would increase slightly with the Proposed Action from 2009 to 2011 and 2015 consistent with the FAA forecast for general aviation operations. Since air carrier aircraft do not refuel at MMH, the projected increase in air carrier flights would not affect fuel use at MMH. Thus, it is projected that the Proposed Action would have no significant impact on fuel use at MMH when compared to the No-Action Alternative.

With the Proposed Action it is projected that in 2011 there would be approximately 43,425 enplanements and 7,390 general aviation operations, resulting in the annual generation of approximately 16.7 tons of solid waste. In 2015 the projected approximately 68,870 enplanements and 7,606 general aviation operations would generate approximately 24.9 tons of solid waste annually. Thus, it is projected that the Proposed Action would have no significant impact on solid waste generation when compared to the No-Action Alternative.

5.10.7 Mitigation

Since the Proposed Action would not have a significant impact on the generation of hazardous wastes or solid wastes, mitigation is not required or proposed.

5.11 FISH, WILDLIFE, AND PLANTS

5.11.1 Overview of Impacts

The Proposed Action would not result in any construction activities at MMH and would not have any direct or indirect impacts on biological resources. The Proposed Action is not projected to have any significant secondary or induced impacts on wildlife resources or populations.

5.11.2 Applicable Regulations

FAA Order 1050.1E, Appendix A, Section 8 identifies the following statues and other guidance that must be considered in the preparation of this EA:

- Endangered Species Act of 1973 [16 U.S.C. §§1531-1544] [PL 93-205]
- Marine Mammal Protection Act of 1972 [16 U.S.C. §§1361-1421h]
- Related Essential Fish Habitat Requirements of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act [16 U.S.C. §1855(b)(2)]
- Sikes Act Amendments of 1974 [PL 93-452]
- Fish and Wildlife Coordination Act of 1958 [16 U.S.C. §§661-666c] [PL 85-624]
- Fish and Wildlife Conservation Act of 1980 [16 U.S.C. §§2901-2912] [PL 96-366]
- Executive Order 13112, Invasive Species (64 FR 6183, February 8, 1999)
- Migratory Bird Treaty Act of 1981 [16 U.S.C. §§703-712]
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds [66 FR 3853, January 17, 2001]
- Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federally Landscaped Grounds (April 26, 1994)
- Executive Order 13148, Greening the Government Through Leadership in Environmental Management (April 22, 2000)
- The Animal Damage Control Act of 1931[7 U.S.C. 426-426c] [46 stat. 1468]

5.11.3 Methodology

For this EA the description of existing biotic communities contained in the 2008 FEIS were reviewed. Limited field inspection of the airport environs indicates that conditions have not changed measurably

since the investigations for the FEIS were completed. Responses from area resource agencies received during the Early Notification process indicated that the conditions described in the 2008 FEIS have not changed since the field investigations conducted for the FEIS were completed.

5.11.4 Baseline Conditions

The general existing conditions for this environmental category are described in **Section 4.3.3** of this EA.

5.11.5 No-Action Alternative

The No-Action Alternative under consideration in this EA includes no construction activities associated with the continued provision of the existing and projected air carrier service to MMH, and therefore no direct impacts to biological resources. There would be no impacts on listed or candidate endangered or threatened species such as bighorn sheep or sage grouse. There would be no impacts to other species of concern such as mule deer, pigmy rabbits, Owens sucker, or bald eagles.

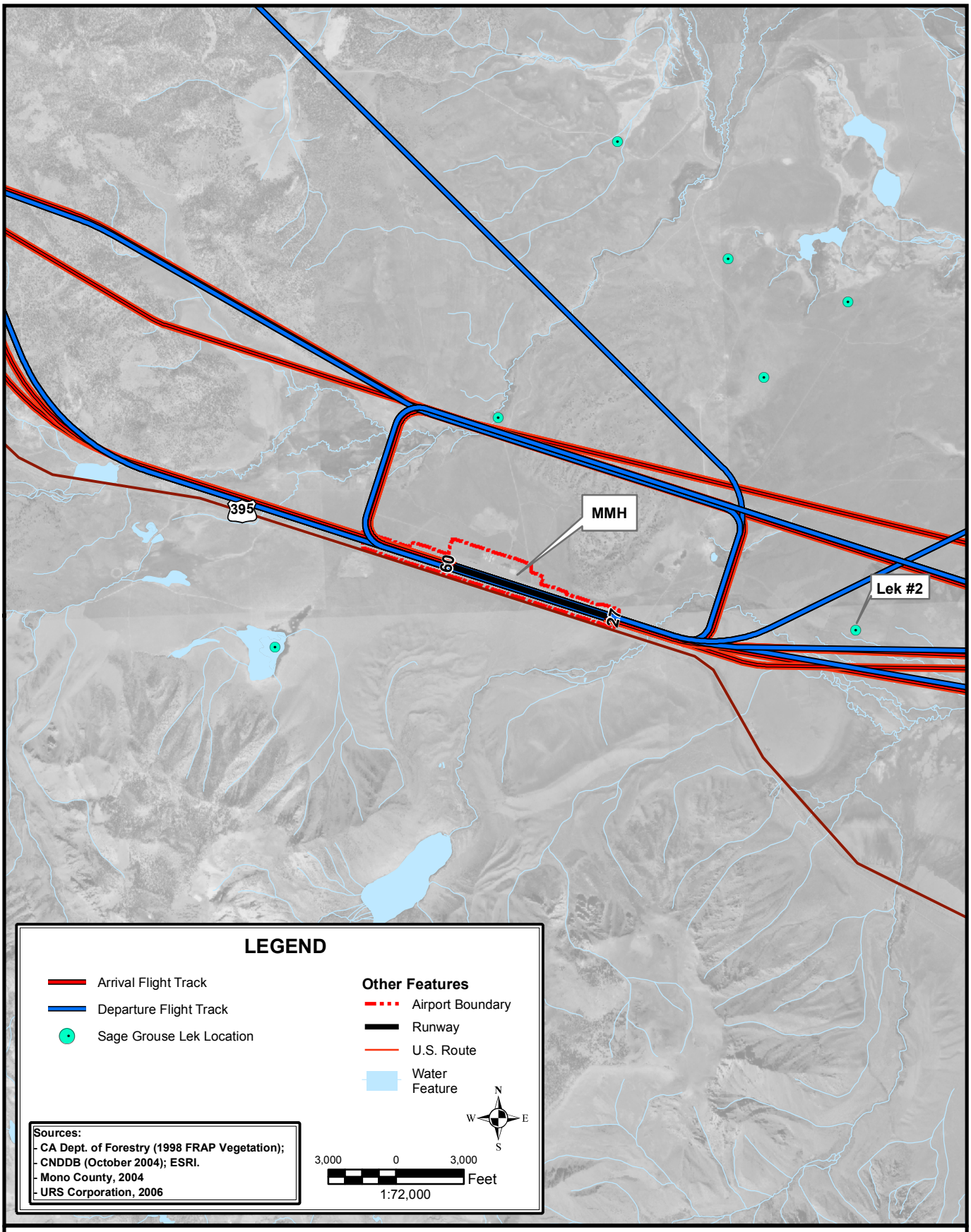
Aviation activities would continue to occur at MMH. Under the No-Action Alternative the number of air carrier operations at MMH would increase from 220 operations in 2009 to 1,324 operation in 2011, and would increase to a total of 2,244 operations in 2015 and thereafter. These numbers of air carrier operations are very similar to the numbers assessed in the 2008 FEIS. The 2009 FAA Terminal Area Forecast for MMH indicates that the number of annual general aviation operations would remain at 7,285 over this period.

There would be no change in the limited potential for secondary impacts on sage grouse resulting from noise associated with aircraft activity at MMH. **Figure 5.11-1** indicates the location of the existing and future flight tracks of aircraft arriving and departing from MMH, in relation to Grouse Lek #2. As indicated in **Table 5.11-1**, under the No-Action Alternative in 2011 the aviation-related noise levels at Lek #2 are projected to increase to an average day L_{eq} of 41.6. In 2015 the average day L_{eq} at Lek #2 is projected to be 41.9 dBA. The measured L_{eq} levels at the northwest edge of Grouse Lek # 2 measured for the 2008 FEIS ranged from 39.7 dBA to 50.6 dBA **(**see Appendix H-3 of the FEIS**)**. Potential impacts would be limited to a possible increase in premature daily departure of some grouse from the lek in response to any increase in early morning (prior to 9:00 AM) overflights during the lekking season (December through May).

TABLE 5-11.1
L_{EQ} AND L_{MAX} NOISE LEVELS AT SAGE GROUSE LEK #2

Metric	2009 Base Year	2011 No-Action	2011 Proposed Action	2011 Change of Exposure	2015 No-Action	2015 Proposed Action	2015 Change of Exposure
$L_{eq\ (day)}$ (dBA)	41.3	41.6	41.7	0.1	41.9	42.0	0.1
$L_{eq\ (24\ hr)}$ (dBA)	43.3	43.6	43.7	0.1	43.9	44.0	0.1
CNEL (dBA)	42.0	42.2	42.4	0.2	42.5	42.6	0.1
$L_{(max)}$	93.7	93.7	93.7	0.0	93.7	93.7	0.0

Sources: FAA INM 7.0b, 2010. URS, 2010



H:\projects\Mammoth_Lakes\EA\12009122\Applications\Figures\Draft\Chapter 5\Figure 5.11-1, Lek #2 Location with Flight Tracks.mxd {jb, rpf, hde, 03/10/10}

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LEK #2 LOCATION WITH FLIGHT TRACKS

FIGURE 5.11-1

As indicated in the 2008 FEIS, no significant impacts on biological communities, or endangered or threatened species, are projected to occur under the No-Action Alternative.

5.11.6 Proposed Action

There are no construction activities associated with the Proposed Action. Similar to the No-Action Alternative, there would be no direct impacts on fish, wildlife, or plant resources. There would be no impacts to mule deer, pigmy rabbits, Owens sucker, or bald eagles. There would similarly be no direct impact on listed or candidate endangered or threatened species such as bighorn sheep or sage grouse. As indicated in **Section 5.12**, Water Quality, the Proposed Action would not result in changes to the quality of surface waters in the vicinity of MMH, and therefore would not impact local fish habitat or populations.

The potential for secondary impacts resulting from increased aircraft noise associated with the Proposed Action on listed or candidate species such as bighorn sheep or sage grouse would be minimal. As indicated in **Section 5.3**, the noise contours at the airport would be essentially unchanged by the Proposed Action. As indicated in **Section 5.8**, the grid point analysis of future noise levels throughout a 2,200 square mile study area indicate that no location would experience a Change of Exposure equal to or greater than 3.0 dBA for any of the analyzed metrics as a result of the analysis of the Proposed Action.

As indicated in **Figure 5.11-1**, air carrier aircraft would continue to utilize the existing approach and departure tracks to provide service to MMH. Based on the approved forecast, under the Proposed Action scenario the number of air carrier operations at MMH would increase from 220 operations in 2009 to 1,554 operation in 2011, and would increase to a total of 2,244 operations in 2014 and thereafter As indicated in **Table 5.11-1**, under the Proposed Action scenario in 2011 the aviation-related noise levels at sage grouse Lek #2 are projected to increase to an average day L_{eq} of 41.7, only 0.1 dBA greater than that projected for the No-Action Alternative. In 2015 the average day L_{eq} at Lek #2 is projected to be 42.0 dBA, again only 0.1 dBA higher than that projected under the No-Action Alternative (42.0 dBA as compared to 41.9 dBA). The Proposed Action would also have no impact on the highest aircraft-related noise levels at Lek #2, as those levels are associated with the on-going general aviation activities at MMH.

5.11.7 Mitigation

The Proposed Action would not result in any significant impacts to fish, wildlife, or plant resources. Therefore, no statutory or regulatory requirements for mitigation are applicable to this action. However, resource agency personnel have, during the prior EIS process and in response to the Early Notification for this EA, expressed concern regarding possible impacts of aircraft operations on the early spring use of the grouse lek east of the airport. The Town and United Airlines are aware of these concerns and have indicated that, to the extent practical, early morning flights into and out of MMH would be avoided. A letter from the United Airlines indicating their knowledge of the concern and an indication that they will endeavor to avoid early morning arrivals and departures is included in **Appendix A-1**. The Town has indicated that it will continue to evaluate these concerns as the number of daily flights increases, and will, as necessary, work to identify practical and enforceable methods for reducing adverse impacts on the use of the lek by sage grouse that are associated with aviation overflights prior to 9:00 AM.

5.12 WATER QUALITY

5.12.1 Overview of Impacts

Neither the Proposed Action nor the No-Action Alternative is projected to involved construction of new facilities at MMH. Existing stormwater management and deicing systems would not be changed. Future levels of aircraft operations and enplanements at MMH would not differ substantially between the No-Action Alternative and the Proposed Action Alternative, and would remain similar to levels evaluated in the 2008 FEIS prepared for the introduction of air carrier service to MMH by Horizon Air. Therefore, water resources or water quality would not be affected by the Proposed Action.

5.12.2 Applicable Regulations

FAA Order 1050.1E, Appendix A, Section 17, indicates that normally applicable water quality regulations and issuance of applicable permits will identify water quality issues and the significance of potential impacts associated with a Proposed Action. The key federal statute regarding water quality is the Federal Water Pollution Control Act (known as the Clean Water Act), as amended by the Clean Water Floodplains and Floodways Act of 1977, 33 USC Chapter 26. Section 401 of the Act (33 USC Section 1341) addresses state issuance of water quality certificates. Section 402 of the Act (33 USC Section 1342) addresses issuance of National Pollutant Discharge Elimination System (NPDES) permits, including permits for stormwater discharges. Section 404 if the Act (33 USC Section 1344) establishes requirements for permits for dredge and fill activities in Waters of the United States, including wetlands. Airport project proponents applying for a NPDES permit from EPA or a Section 404 permit from the U.S. Army Corps of Engineers (USACE) must obtain a water quality certificate from the appropriate state agency to comply with Section 401 of the Act.

Other statues and regulations that must be considered in regard to water quality for this EA include:

- Oil Pollution Act of 1990 (33 USC Section 1252),
- Safe Drinking Water Act (42 USC Section 300.f, *et seq*.),
- Fish and Wildlife Coordination Act of 1980 (16 USC Section 661, *et seq*.), and
- State water quality standards and permit requirements.

5.12.3 Methodology

Potential impacts to surface and groundwater resources were evaluated using local geologic and hydrologic maps and review of existing site documentation. Existing documentation on soil and groundwater contamination in the vicinity of the airport was reviewed to assess areas of concern. Additionally, the increased need for potable water and domestic wastewater to accommodate the forecasted growth in passenger enplanements was evaluated.

The following criteria were applied to evaluate whether the No-Action and Proposed Action Alternatives would result in impacts to water quality/resources.

- Modification of any stream or other body of water,
- Violation of any water quality standards or waste discharge requirements,
- Substantial depletion of groundwater supplies,
- Substantial alteration of existing drainage patterns, and
- Creation of or contribution to excessive stormwater water runoff.

Specific thresholds to determine potential significance of water resources are not established in FAA Order 1050.1E. However, the order states that consideration should be given to the potential for a project to exceed water quality standards, result in problems that cannot be avoided or successfully mitigated, or that may indicate difficulties in acquiring needed permits. Under such circumstances preparation of an EIS may be warranted.

5.12.4 Baseline Conditions

A general description of the water resources within the study areas for this EA is provided in **Section 4.3.1**.

5.12.4.1 Surface Water Management at MMH

MMH currently complies with the NPDES Industrial General Permit issued by the Regional Water Quality Control Board (RWQCB) (Personal Communication, 2005). Stormwater discharges from the airport are regulated under the airport National Pollutant Discharge Elimination System (NPDES) General Industrial Stormwater permit (State Water Board, 1992). MMH has prepared a Storm Water Pollution Prevention Plan (SWPPP) (Triad/Holmes, 2006) that identifies and evaluates sources of pollutants present at the airport that may affect the quality of stormwater discharge, and identifies best management practices (BMPs) to reduce or prevent discharge of pollutants. Potential pollutants include: fuel for aircraft, trash, sediment, and chemicals used for equipment maintenance. Aircraft maintenance is not performed at MMH and there are no facilities for washing aircraft.

MMH does not discharge stormwater into waters of the U.S. since stormwater runoff infiltrates to the ground or evaporates. Stormwater runoff from the runway and taxiways drains as sheet flow from the pavement to the infield areas and then infiltrates into the ground. There generally is no ponding on the site. During snowstorms when the ground becomes frozen, snow accumulates in the infield areas. Snow from runways and taxiways is plowed and placed in the infield areas. Some temporary localized ponding (no more than approximately 6 inches deep and no more than two days) has been observed within the infield area between the runway and taxiway after significant snowmelt periods. No water has been observed flowing beyond the airport boundary during heavy rain storms or snowmelt (Personal Communication, 2005; Town of Mammoth Lakes, 2000; and Triad/Holmes, 2006).

Stormwater runoff from the aircraft parking apron and aircraft storage hangars is collected by a system of inlet structures and slot drains and conveyed via underground drainage pipes to an existing infiltration trench located north of the maintenance/operations building. Water that collects in the trench is allowed to infiltrate into the subsurface. There are several infiltration trenches on the site that vary in width, depth, and length. The largest in size is approximately 8 feet deep and 30 feet long. The water table is at approximately 32 to 46 feet bgs; therefore, the bottom of the infiltration trench is generally more than 20 feet above the water table. Based on observations by MMH operations personnel, it generally takes less than one day for the trench to empty, even after periods of significant snowmelt runoff (Personal Communication, 2005).

For 2008-2009, Horizon Air operated 110 winter season flights at MMH. Deicing operations were required for less than 10 percent of the Horizon Air flights during this period. Deicing is generally accomplished by the use of glycol diluted to a 50 percent solution by water (Town of Mammoth Lakes, 2000). Both ethylene glycol and propylene glycol, which form the base chemical of deicing fluid, have a low toxic potential for aquatic and other animal life; however, both are highly biodegradable and therefore can reduce dissolved oxygen levels in receiving waters. Each deicing event requires approximately 50 gallons or less of deicing fluid. Deicing operations are the responsibility of the airline. A deicing plan has been developed in accordance with FAA's AC 150/5200-30A requirements (FAA, 1991) and in accordance with FAA's AC 150/5300-14 (FAA, 2000).

All aircraft are deiced at the same location on the aircraft parking apron. The location of the deicing pad is shown in **Figure 5.12-1**. The deiced area slopes to a curbed containment area which collects the fluids and then flows to a drop inlet collection basin. The outlet valve of the collection basin is closed during deicing operations. During normal operations, without deicing fluid, the outlet valve is open such that stormwater runoff is discharged into an infiltration trench. When deicing operations are being performed and the outlet is plugged, all of the deicing fluids is pumped using a mobile motorized pump to a portable holding tank. The existing inlet collection basin has sufficient holding capacity to store the spent deicing fluid until it can be collected for disposal. The collected deicing fluid runoff is transported off site for disposal or recycling at a permitted facility.

5.12.4.2 Water Supply

There are three groundwater supply wells at MMH (see **Figure 5.12-2**). One well (referred to as MYA) was installed in 1989. This well is approximately 70 feet deep and is screened from 52 to 66 feet, which is approximately elevation 7,045 feet to 7,030 feet. This well has a capacity of approximately 50 gallons per minute (gpm) and supplies the airport management offices, the terminal building, and landscaping (TEAM, 2004 and personal communication with airport staff). Two wells (referred to as HCA-W and HCA-E) were installed in 1999. Each has a capacity of approximately 500 gpm. These two wells are 143 feet deep and are screened from 100 to 140 feet bgs or from approximately elevation 6,995 feet to 6,952 feet (TEAM, 2004). Groundwater from these wells is pumped to a storage tank for fire suppression use throughout the airport, including the hangars.

Environmental Assessment
Mammoth Yosemite Airport
United Airlines Operations Specifications
Amendment Service to/from MMH

Fixed Base Operator (FBO)

TERMINAL BUILDING

7,000' x 100'

Legend

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

200 0 200 Feet

Scale: 1" = 200' (at 11"x17")

N W E S

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

DEICING PAD

FIGURE 5.12-1

H:\projects\Mammoth_Lakes\EA\120091222\Applications\Figures\Draft\Chapter 5\Figure 5.12-1, Deicing Pad.mxd, {tpl, hde, 04/19/10}

Mammoth Creek

Hot Creek

Hot Creek Fish Hatchery

Original Airport Supply Well (MYA)

Hot Creek Aviation Supply Wells (HCA-W & HCA-E)

395

Convict Creek

LEGEND

Groundwater Supply Well

Surface Water Divide

Highlighted Hydrologic Features

Airport Features

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

N W E S

1,000 0 1,000 Feet

Scale: 1 inch = 1,000 feet

H:\projects\Mammoth_Lakes\EA\120091222\Applications\Figures\Draft\Chapter 5\Figure 5.12-2, Groundwater Wells and Flow Direction in Vicinity of MMH.mxd, {rpf, llp, hde, 02/09/10}

Environmental Assessment
Mammoth Yosemite Airport

United Airlines Operations Specifications
Amendment Service to/from MMH

GROUNDWATER WELLS AND GROUND WATER BASINS IN VICINITY OF MMH

FIGURE 5.12-2

5.12.4.3 Wastewater Treatment

Wastewater at MMH is currently handled by a septic system consisting of a septic tank and leach trenches. The septic system is located east of the airport's terminal building.

5.12.5 No-Action Alternative

5.12.5.1 Surface Waters

Under the No-Action Alternative there would be no construction at MMH. Existing stormwater management and deicing systems would not be affected. Based on the experience of the 2008-2009 winter season, deicing operations may be required for up to 10 percent of the annual winter season flights, requiring application of an average of approximately 140 gallons of deicing fluid per week in 2011 and an average of approximately 280 gallons per week in 2015. Runoff from the deicing area would be collected and disposed at an approved facility. The collection and disposal system can handle substantially greater volumes than projected, as indicated in the 2008 FEIS. Therefore, impacts to surface water quality due to deicing operations are not anticipated under the No-Action Alternative.

5.12.5.2 Groundwater

The aquifer below MMH is used as a community drinking water supply, and MMH extracts water from this aquifer for use at its facilities. The No-Action Alternative does not have the potential to result in contamination of this aquifer. As no construction would occur as part of the No-Action Alternative, there would be no increase in impervious areas and no change in the rate of groundwater recharge.

The No-Action Alternative would not affect groundwater levels in the vicinity of MMH or the nearby Hot Creek Fishery. The amount of additional groundwater extracted from the airport's existing water supply wells to provide drinking water and water for the portable toilet system for airline passengers while in the terminal facility would be within the existing capacity of the water supply aquifer. There would be no change in groundwater levels or flow direction. Based on historical groundwater monitoring data, MMH is located downgradient from the Hot Creek Fishery.

Two former gasoline underground storage tanks (USTs) and one former diesel UST were removed from a fueling facility located west of the airport terminal building in October 1998. There have been no impacts to groundwater supply wells from the former USTs. Under the No-Action Alternative, monitoring and remedial activities, as necessary, would continue at these sites until remedial objectives are achieved (TEAM, 2005, 2006a, and 2006b).

5.12.5.3 Water Supply

Under the No-Action Alternative, MMH would continue the current practice of extracting groundwater from onsite wells for water supply use. Water consumption at MMH would increase in response to the forecast levels of passenger enplanements and associated levels of airport staff. Under the No-Action Alternative enplanements are forecast to be approximately 41,500 in 2011 and 70,775 in 2015. The existing water supply well and storage tank system at MMH would be adequate to supply the projected potable water

needs at the airport. There would be no depletion of groundwater supplies or lowering of the local groundwater table level due to the No-Action Alternative.

5.12.5.4 Wastewater

Under the No-Action Alternative, wastewater generation associated with the operation of the airport terminal at MMH would increase in response to the forecast levels of passenger enplanements and associated levels of airport staff. Under the No-Action Alternative enplanements are forecast to be approximately 41,500 in 2011 and 70,775 in 2015. Wastewater from the toilets in the terminal building would be discharged to a permitted septic system. It is estimated that with 4 flights per day during the 2011 winter air service period approximately 800 gallons per day of additional domestic waste would be generated, and with 8 flights per day in 2015 approximately 1,800 gallons per day would be generated.

5.12.6 Proposed Action

5.12.6.1 Surface Waters

The Proposed Action does not involve any new construction at MMH. Existing stormwater management and deicing systems would not be affected. Based on the experience of the 2008-2009 winter season, deicing operations may be required for up to 10 percent of the annual winter season flights, requiring application of an average of approximately 175 gallons of deicing fluid per week in 2011 and an average of 280 gallons per week in 2015. Runoff from the deicing area would be collected and disposed at an approved facility. The collection and disposal system can handle substantially greater volumes than projected, as indicated in the 2008 FEIS. Therefore, impacts to surface water quality due to deicing operations are not anticipated as a result of the Proposed Action.

5.12.6.2 Groundwater

The aquifer below MMH is used as a community drinking water supply, and MMH extracts water from this aquifer for use at its facilities. The Proposed Action does not have the potential to result in contamination of this aquifer. As no construction would occur as part of the Proposed Action, there would be no increase in impervious areas and no change in the rate of groundwater recharge.

The Proposed Action would not affect groundwater levels in the vicinity of MMH or the nearby Hot Creek Fishery. The amount of additional groundwater extracted from the airport's existing water supply wells to provide drinking water and water for the portable toilet system for airline passengers while in the terminal facility would be within the existing capacity of the water supply aquifer. There would be no change in groundwater levels or flow direction. Based on historical groundwater monitoring data, MMH is located downgradient from the Hot Creek Fishery.

Two former gasoline underground storage tanks (USTs) and one former diesel UST were removed from a fueling facility located west of the airport terminal building in October 1998. There have been no impacts to groundwater supply wells from the former USTs. While not part of the Proposed Action, monitoring and remedial activities, as necessary, would continue at these sites until remedial objectives are achieved (TEAM, 2005, 2006a, and 2006b).

5.12.6.3 Water Supply

Under the Proposed Action, MMH would continue the current practice of extracting groundwater from onsite wells for water supply use. Water consumption at MMH would increase in response to the forecast levels of passenger enplanements and associated levels of airport staff. Under the Proposed Action Alternative enplanements are forecast to be approximately 43,425 in 2011 and 68,867 in 2015 – which do not differ substantially from the levels projected for the No-Action Alternative. The existing water supply well and storage tank system at MMH would be adequate to supply the projected potable water needs at the airport. There would be no depletion of groundwater supplies or lowering of the local groundwater table level due to the Proposed Action.

5.12.6.4 Wastewater

Under the Proposed Action Alternative, wastewater generation associated with the operation of the airport terminal at MMH would increase in response to the forecast levels of passenger enplanements and associated levels of airport staff. Under the No-Action Alternative enplanements are forecast to be approximately 43,425 in 2011 and 68,867 in 2015. Wastewater from the toilets in the terminal building would be discharged to a permitted septic system. It is estimated that with 5 flights per day during the 2010 winter air service period approximately 1,000 gallons per day of additional domestic waste would be generated, and with 8 flights per day in 2015 approximately 1,800 gallons per day would be generated.

5.12.7 Mitigation

Since the Proposed Action is not projected to have any impacts on water quality or water resources, no mitigation activities are proposed.

5.13 NATURAL RESOURCES AND ENERGY SUPPLY

5.13.1 Overview of Impacts

The demand for aviation fuel would marginally increase under the Proposed Action when compared to the No-Action Alternative during 2010-2013 due to the projected increase in aircraft activity, associated with the introduction of the additional passenger services at MMH using a turbojet aircraft. The increased demand for fuel is considered small and would be supplied by existing service providers and infrastructure without an impact to the supply or capacity of the resources. According to the Town of Mammoth Lakes General Plan Update, Southern California Edison is able to supply the region with enough electricity to accommodate the needs of the region. Since the Proposed Action would create a small demand for energy that would be accommodated within the existing energy supply, the Proposed Action would not result in a significant impact.

There are no known sources of mineral or energy resources on MMH that would be adversely affected by the Proposed Action. Implementation of the Proposed Action would not require the use of unusual materials or those that are in short supply in the Town of Mammoth Lakes area.

5.13.2 Applicable Regulations

There are no special purpose laws for natural resources and energy supply. Specific thresholds regarding the potential for significant impact to natural resources and energy supply are not provided in FAA Order 1050.1E. 40 CFR 1502.16(e) and (f) require FAA to evaluate the energy requirements of a Proposed Action or Proposed Project and each alternative, as well as the use of natural or consumable resources. Executive Order 13123 encourages each Federal agency to expand the use of renewable energy in its facilities and for its actions.

5.13.3 Methodology

Future fuel utilization at MMH for the No-Action and Proposed Action Alternatives was qualitatively assessed based on the projected number of aircraft operations as contained in the forecast of future aviation activity.

Review of USGS Topographic 7.5 Minute Series Quadrangles, the Town of Mammoth Lakes General Plan, the California Department of Conservation, and land use maps were used to determine if the Proposed Action would impact any natural sources of mineral or energy resources.

5.13.4 Baseline Condition

During the baseline year of 2009 there were a total of approximately 7,500 aircraft operations at MMH, including 220 air carrier operations by Horizon Air using Q400 aircraft.

5.13.5 No-Action Alternative

The demand for aviation fuel at MMH would increase under the No-Action Alternative consistent with the 2011 and 2015 forecasts of aviation activity when compared to the baseline 2009 condition. Electricity demand should remain relatively constant throughout the period since no new construction activities would occur. The increased demand for fuel is considered small and would be supplied by existing service providers and infrastructure without an impact to the supply or capacity of these resources. Since the No-Action Alternative would create a small demand for energy that would be accommodated within the existing energy supply, the No-Action Alternative would not result in a significant impact.

No construction would occur with the No-Action Alternative; therefore, this alternative would not result in natural resource impacts.

5.13.6 Proposed Action

The demand for fuel and electrical energy would increase under this alternative due to a projected increase in aviation activity when compared to the No-Action Alternative in 2011, and for the period of 2011 - 2013. The increase in airport operations (i.e., 230 additional yearly operations in 2011 and 690 additional operations in for the period of 2011-2013) would result in increased aircraft fuel needs. After 2013, the Proposed Action would not result in an increase in aviation operations when compared to the No-Action Alternative. The short-term increased demand for fuel is considered small and would be

supplied by existing service providers and infrastructure without an impact to the supply or capacity of these resources. According to the Town of Mammoth Lakes General Plan Update, Southern California Edison is able to supply the region with enough electricity to accommodate the needs of the region. Since the Proposed Action would create a small demand for energy that would be accommodated within the existing energy supply, the Proposed Action would not result in a significant impact.

There are no known sources of mineral or energy resources on MMH that would be adversely affected by the Proposed Action. Implementation of this alternative would not require the use of unusual materials or those that are in short supply in the Town of Mammoth Lakes area. No construction would occur with the Proposed Action; therefore, this alternative would not result in natural resource impacts.

5.13.7 Mitigation

Since the Proposed Action would not have any significant impact on natural resources or energy supplies, no mitigation is required or proposed.

5.14 CUMULATIVE IMPACTS

5.14.1 Overview of Impacts

Since the Proposed Action would not result in any construction activities at MMH, would not change the projected number of aircraft operations or enplanements at MMH after 2013, and would not result in significant changes to noise levels in the vicinity of the airport or at surrounding DOT Section 4(f) resources, the FAA has determined that there would be no significant cumulative impacts resulting from the Proposed Action.

5.14.2 Applicable Regulations

Pursuant to regulations at 40 CFR Sections 1508.7 and 1508.25(a)(2), as well as Council on Environmental Quality (CEQ) guidance documents[3], FAA is required to consider the effects of the Proposed Project in combination with the effects on the same resources due to past, concurrent, and reasonably foreseeable actions. Actions to be included in this analysis include both on-airport and off-airport projects and actions implemented by FAA, the airport sponsor, or other entities. The analysis must address actions that would affect all, some, or one of the resources the proposed airport action would affect, and that would occur within the same timeframes as the time frames analyzed for the proposed airport action.

5.14.3 Methodology

Section 4.4 of this EA identifies the past, concurrent, and reasonably foreseeable future actions at and near the Mammoth Yosemite Airport that are included in the assessment of cumulative impacts (hereinafter termed the "Cumulative Projects"). The following sections present an analysis of potential

3 *Considering Cumulative Effects*, January 1997, and *Guidance on the Consideration of Past Actions in cumulative Effects Analysis*, June 24, 2005.

cumulative impacts under the No-Action Alternative, and the combined impacts of the Proposed Project and the Cumulative Projects for each of the environmental categories addressed in **Sections 5.3** through **5.13** above. Under each category the potential impacts of the Proposed Project reflect the specific discussion in the corresponding sections above. The projected impacts of the Cumulative Projects are based on the discussions of the No-Action Alternative in the cited sections, along with more general information regarding projects of the types involved in the environmental setting of the airport, considering standard regulatory constraints and requirements.

5.14.4 Baseline Conditions

The environmental setting within which the Cumulative Projects have, are, or will be developed, and within which the Proposed Project would be developed, is described in **Chapter 4.0** of this EA. The baseline conditions for each environmental category included in the assessment are described in **Sections 5.3** through **5.13** above.

5.14.5 No-Action Alternative

Under the No-Action Alternative the impacts of the past, concurrent, and reasonably foreseeable future projects and actions would continue or otherwise be unaffected by the impacts of the Proposed Action. The projected growth of the previously-approved air service provided by Horizon Air would have in the future impacts on resources such as the levels of air pollutant emissions at the airport, the volumes of surface traffic on local roads on and leading to the airport, changes in local and regional economic activity, increased generation of solid waste, and increased use of fuel for aircraft operations. These impacts have been fully evaluated in the 2008 FEIS. The potential impacts of the previous FAA action would not change under the No-Action Alternative.

5.14.6 Proposed Action

Aircraft Noise and Compatible Land Use

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on future levels of aircraft noise on compatible land in the vicinity of MMH.

Socioeconomic Impacts, Environmental Justice, Children's Environmental Health and Safety Risks

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on socioeconomic impacts, environmental justice, or children's environmental health and safety risks. Therefore, no cumulative impacts on this environmental category are projected from combined projects.

Secondary (Induced) Impacts

Since the future levels of enplanements at MMH resulting from the Proposed Action would not differ significantly from those projected for the existing air service at MMH, there would not be a cumulative effect on secondary and induced economic activity resulting from the Proposed Action in the context of the previous FAA approvals.

Historic, Archaeological and Cultural Resources

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on Historic, Archaeological or Cultural Resources. Therefore, no cumulative impacts on this environmental category are projected from combined projects.

Department of Transportation Section 4(f) and Department of Interior Section 6(f) Resources

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on Section 4(f) or Section 6(f) resources within the 4fSA.

Air Quality

Since the future levels of aircraft operations at MMH resulting from the Proposed Action would not differ significantly from those projected for the existing air service at MMH, there would not be a cumulative effect on the levels of air emissions resulting from the Proposed Action in the context of the previous FAA approvals.

Hazardous Materials, Pollution Prevention, and Solid Waste

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on hazardous materials, pollution prevention, and solid waste. Therefore, no cumulative impacts on this environmental category are projected from combined projects.

Fish, Wildlife, and Plants

The Proposed Action would have no direct impacts on fish, wildlife, or plants. Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on future aircraft-related noise levels at any grouse lek.

Water Resources

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on water quality. Therefore, no cumulative impacts on this environmental category are projected from combined projects.

Natural Resources and Energy Supply

Neither the Proposed Action nor the Cumulative Projects are projected to have any impacts on natural resources and energy supply. Therefore, no cumulative impacts on this environmental category are projected from combined projects.

5.14.7 Mitigation

Since no cumulative impacts are projected to occur from the Proposed Action in the context of the Cumulative Projects, no mitigation is required or proposed.