APPENDIX A
NOTICE OF PREPARATION AND COMMENTS

NOTICE OF PREPARATION

TOWN OF MAMMOTH LAKES
MAMMOTH YOSEMITE AIRPORT IMPROVEMENTS

Date: October 21, 2019

To: Reviewing Agencies and Other Interested Parties

Subject: Notice of Preparation of a Draft Environmental Impact Report

Project Title: Mammoth Yosemite Airport Improvements

Project Proponent: Town of Mammoth Lakes

Scoping Meeting: October 24, 2019 at 4:00 PM, Town Council Chambers, 437 Old Mammoth Road, Suite Z, Mammoth Lakes, California 93546

The Town of Mammoth Lakes will prepare an Environmental Impact (EIR) for a proposed newe passenger terminal area at the existing Mammoth Yosemite Airport (the project). The purpose of this Notice of Preparation (NOP) is to provide information related to the project and its potential environmental impacts and to solicit agency and public comments and suggestions regarding (1) the scope and content of the EIR and (2) the environmental issues and alternatives to be addressed in the EIR, pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15082.

Pursuant to Public Resources Code Section 21080.4, are requested to submit any comments in response to this NOP no later than 30 days from the receipt of the NOP, or November 19, 2019. The NOP and related materials are available for review at:

1. Town of Mammoth Lakes, Community and Economic Development Department, 437 Old Mammoth Road, Suite R, Mammoth Lakes.

2. Mono County Library, 400 Sierra Park Road, Mammoth Lakes

3. Town of Mammoth Lakes website: https://www.townofmammothlakes.ca.gov/622/Environmental-Review---Airport

All comments or questions related to the NOP should be submitted in writing to:

Kim Cooke, Associate Planner
Town of Mammoth Lakes
Community and Economic Development Department
P.O. Box 1609
437 Old Mammoth Road, Suite R
Mammoth Lakes, California 93546
Telephone: 760-965-3630
Fax: 760-934-8608
Email: kcooke@townofmammothlakes.ca.gov

The Town will conduct a public scoping meeting in conjunction with this NOP in order to present the project, discuss the EIR and the EIR process and receive public comments and suggestions regarding the scope and content of the EIR. The meeting will be held on Thursday, October 24, 2019 at 4:00 PM at the **Mammoth Lakes Town Hall, 437 Old Mammoth Road, Suite Z, Mammoth Lakes, California**.

Project Location

Mammoth Yosemite Airport consists of approximately 246 acres located approximately six miles east of the Town, adjacent to and north of U.S. Highway 395 between Hot Creek Hatchery Road and Benton Crossing Road. The proposed project site is in the vicinity of the existing terminal area. The airport and the terminal area project site are shown on the attached exhibits. The site is shown on the Whitmore Hot Springs U.S. Geological Survey 7.5-minute quadrangle map within Sections 1, 2, and 12 of Township 4 South, Range 28 East, Mt. Diablo Baseline and Meridian. The approximate latitude of the project site is 37° 37′ 41″ North, and the approximate longitude is 118° 50′ 30″ West.

Existing Airport and Environmental Setting

The project site is the existing Mammoth Yosemite Airport (Airport), which is owned and operated by the Town of Mammoth Lakes. The Airport serves general aviation aircraft, commercial aircraft helicopter operations and charter flights. It has a single runway, Runway 9-27, that is 7,000 feet long and 100 feet wide with 12-foot paved shoulders. The runway is paralleled by Taxiway A at a 300-foot centerline-to-centerline distance. Five cross taxiways connect the runway and the parallel taxiway.

The existing interim passenger terminal area is approximately 5,060 square feet in floor area, immediately north of the runway/taxiway. The existing terminal currently handles commercial operations and including electronic check-in kiosks, baggage check, and passenger check-in. The terminal also provides areas for Transportation Security Administration (TSA) screening, secure passenger waiting, rental car operations, TSA baggage screening, lost baggage storage, and

airline and TSA storage lockers. A temporary 2,250-square foot tensile structure has been installed adjacent to the interim terminal to provide additional passenger holding area.

The existing terminal area includes a 58,000-square foot, 12-inch thick Portland cement concrete parking apron with a 417,000-square foot of flexible pavement section. The apron includes 74 tie-down spaces for small aircraft. A series of tee hangars and storage hangars served by hangar taxi lanes extend along the north side of the runway west and east of the terminal area. Other terminal area facilities include the Fixed Base Operator office and pilots' lounge, the Airport Manager's office, an electrical and telephone vault and parking areas.

Undeveloped portions of the airport site are vacant and populated primarily with big sagebrush. Soils consist of medium to coarse sands and gravels that produce little runoff. There are no water bodies located on the airport property. Land surrounding the project site is mostly undeveloped. Lands to the north and west are managed by the Inyo National Forest, part of the U.S. Forest Service. A portion of the Airport is located on National Forest land, subject to a Special Use Permit. Lands to the east are owned by the Los Angeles Department of Water and Power (LADWP), including a portion of the Airport which is under a 50-year lease from the LADWP. Access to the Airport is provided by Hot Creek Hatchery Road, which intersects US 395 just west of the Airport, and Airport Road. The Town of Mammoth Lakes General Plan designates the project site as Airport, and the zoning for the site is Airport.

Project Background

The Airport was originally constructed by the U.S. Army during World War II. Mono County acquired the Airport after the War and operated it until 1992, when it was acquired by the Town. Commercial passenger service began in 1973 and continued intermittently through 1997. After an 11-year hiatus, Alaska Airlines began commercial air service in 2008 followed by United Airlines in 2011. In 2011-2012, the two airlines provided up to seven daily flights. Alaska Airlines ended service at the Airport in November 2018; all current passenger service is now provided by United Airlines.

The existing interim passenger terminal resulted from remodeling of an existing building. However, the terminal facility is overcrowded and too small to accommodate airline and security requirements. In 2011, to relieve passenger overcrowding and to provide a passenger holding area, the temporary fabric structure was installed adjacent to the interim terminal.

In 2015, a Terminal Area Development Plan (TADP) for the airport was completed; the TADP found that expansion of the interim terminal is not economically or operationally feasible and instead recommended development of an entirely new terminal facility, a commercial aircraft apron, maintenance facility building, and related infrastructure. The improvements described in the TADP constitute the proposed project.

The Federal Aviation Administration is responsible for airport facilities regulation, planning and improvement funding. These activities are therefore subject to the requirements of the

National Environmental Policy Act (NEPA). In addition to the CEQA EIR, the Town is also preparing a NEPA Environmental Assessment (EA) for the project for use by the FAA.

Project Description

The proposed project involves construction of the various terminal area improvements recommended in the TADP. The relative location of the proposed facilities is shown on the attached exhibits. Specifically, the project proposes construction of:

- New passenger terminal building
- Aircraft parking apron
- Aircraft de-icing facilities
- Connecting taxilanes
- Automobile parking lots
- Twelve-bay maintenance building
- Supporting infrastructure, including access and service roads, automobile parking, water and sewer improvements

The approximately 38,688 square foot passenger terminal would devote about 40% of its area to commercial airline services, including ticket counters, ticketing kiosks and baggage handling and claim areas. An additional 40% square feet would be dedicated to public seating and waiting areas, circulation corridors, security checkpoints, and ticket lobbies. The remaining area would be used for car rental services, restaurants and retail uses, ground transportation, and airport administration, maintenance, mechanical and other support facilities.

The proposed 130,500 square foot, 16-inch thick concrete aircraft parking apron will accommodate three Q400 aircraft or three CRJ700 aircraft in a taxi-in/taxi-out type operation, or three B 737 aircraft in a taxi-in/pushout type operation. A separate 16-inch thick concrete de-icing apron would be located adjacent to the aircraft parking apron. Storm water and de-icing fluid from the apron would be captured at a central drain inlet; storm water would be routed to an on-site disposal area, while de-icing fluid would be directed to a central holding tank for disposal to a licensed disposal facility. Two asphalt concrete connecting taxilanes will connect the aircraft parking and de-icing aprons to existing Taxiway A.

A new 9,000 square foot, twelve-bay maintenance building would be constructed to the east of the de-icing facility, which would include provide housing for Aircraft Rescue and Fire Fighting (ARFF)/snow removal equipment. The building would include an approximately 32,750 square foot apron area and an 800-foot by 25-foot access road connecting it with Taxiway A.

The project would include a four-lane, median-divided extension of Airport Road from its existing terminus to a cul-de-sac at the new terminal. A 20-foot concrete sidewalk would line the road along the terminal frontage, and parallel parking would be provided for passenger loading and unloading. The project includes two new automobile parking areas; 130 spaces

would be provided west of the new terminal primarily for rental car parking; an additional 60 spaces would be located east of the new terminal for use by commercial passengers and visitors parking.

Project-related infrastructure improvements would include a package sewage treatment plant, associated sanitary sewer lines and a treated effluent disposal field. Potable water would be supplied by existing on-site wells and storage, distributed to proposed facilities by new water lines. Electricity would be provided by Southern California Edison from existing facilities at the Airport as would telecommunication services, which would be provided by Verizon.

Security will be provided in the terminal building as necessary, including alarmed doors and security cameras. In the new terminal area, security fencing will be installed and/or relocated to separate Airport operations area from the non-secure civilian use area. The existing wire fence around the entire airport will be replaced with a new 8-foot high chain link fence with coded gates as required. Security cameras would be installed at all entrance gates and at critical points on the aircraft parking apron.

No date has been set for initiation of project construction. It is anticipated that construction will proceed as funding becomes available.

Potential Environmental Impacts to be Addressed in the EIR

The Town will prepare an Environmental Impact Report (EIR) for the proposed project in accordance with the requirements of CEQA; the Town will proceed with EIR preparation without first preparing an Initial Study. The Draft EIR will consider the following potential environmental issues and concerns together with any other issues and concerns identified during the Notice of Preparation review and project scoping process.

The objectives of the proposed project are to provide passenger terminal facilities needed to serve existing and projected airline traffic.

- *Aesthetics and Visual Resources* – The EIR will identify and describe existing views of the Airport and environs as seen from Airport Road, US 395 and open space lands surrounding the Airport. The proposed project may result in short-term aesthetic impacts related to project construction and long-term effects from the addition of new terminal area buildings, lighting and other improvements. Potential effects of these changes on existing views from the affected public places and on the populations using these facilities will be evaluated in the EIR.

- *Agriculture and Forestry Resources* – The EIR will document the suitability of the project site for agriculture and forestry and the effects of proposed development on these on-site capabilities, if any. The EIR will consider the potential effects of proposed improvements on use of National Forest lands and any nearby areas used or zoned for timber production.

- *Air Quality* – Existing air quality conditions, and existing and projected future air emissions from airport operations will be described from existing available documentation. The EIR will document potential air quality impacts resulting from project construction, such as dust generation, construction vehicle and equipment emissions, and odors. The EIR will document any incremental increases in aircraft or vehicle emissions associated with passenger terminal improvement. The EIR will describe project consistency with regional air quality planning programs applicable to the Great Basin Valleys Air Basin.

- *Biological Resources* – The EIR will identify and describe existing biological conditions on and near the project site including special-status species, migratory birds, wetlands, and sensitive habitat areas. The EIR will consider the potential biological resource effects of project construction and operation, including potential effects on on-site resources as well as off-site impacts on special-status species nesting and foraging activities.

- *Cultural Resources* – The EIR will describe the cultural resource sensitivity of the project site and vicinity as documented in cultural resource technical studies prepared for the project. No cultural resources have yet been recorded on or in the immediate vicinity of the site. However, the EIR will analyze the potential for encountering undiscovered historical and archaeological resources during project construction and prescribe mitigation measures that would reduce potential for significant cultural resources effects to a less than significant level.

- *Energy* – The EIR will examine potential energy consumption associated with project construction and operations and will determine whether such consumption would be wasteful or inefficient.

- *Geology and Soils* – The Town and surrounding area is situated within a seismically active region, capable of producing surface rupture, ground motion, or soil settlement of sufficient magnitude to damage buildings or structures during an earthquake. The EIR will describe the seismicity, geologic hazards and soil conditions of the area from the *Town of Mammoth Lakes 2005 General Plan Update Final Environmental Impact Report* (General Plan EIR) and the potential exposure of proposed improvements and airport users to these conditions.

- *Greenhouse Gas Emissions* – Proposed terminal area improvements would involve increases in greenhouse gas emissions both during construction and operation of the proposed project. The EIR will quantify the greenhouse gas emissions from project construction and long-term operations, including building, and transportation emissions, the applicability of state and local "green" building standards and the consistency of the resulting emissions with applicable greenhouse gas reduction plans and standards.

- *Hazards and Hazardous Materials* – The EIR will document existing hazardous materials and waste records on and in the vicinity of the Airport and consider the potential hazards and hazardous materials concerns related to construction and operation of the project. Concerns to be addressed would include storage and use of hazardous materials such as fuels, cleaning and degreasing solvents, and other materials used in the regular maintenance of buildings and landscaping. The EIR will consider potential hazards associated with the transport, use, or disposal of hazardous materials, and the potential for reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. The EIR will evaluate the potential for project interference with applicable emergency response or evacuation plans.

- *Hydrology and Water Quality* – The EIR will describe the surface and groundwater hydrology of the project site and vicinity. The EIR will analyze construction-related effects on hydrology and water quality; effects on or exposure to flooding; any potential long-term water quality effects, including potential effects of land disposal of treated wastewater effluent; permanent changes to stormwater drainage and/or flooding; project-related impacts to groundwater quantity and quality; and off-site hydrology and water quality impacts.

- *Land Use* – The EIR will identify and describe applicable land use plan designations and zoning. The proposed project will be evaluated for consistency with the existing policies and standards of the Town General Plan, Mammoth Lakes Municipal Code (Municipal Code), the Mono County General Plan, the Inyo National Forest Land and Resource Management Plan and other applicable land use plans and standards. The EIR will consider potential adverse impacts on adjacent land uses.

- *Noise* – The EIR will document existing and projected future noise levels in the project area including aircraft operations and vehicular traffic. The EIR will describe the project's short-term construction noise as well as any long-term changes in noise levels in the area that may result from project operations in comparison to applicable noise thresholds as set forth in the Town of Mammoth Lakes General Plan.

- *Population and Housing* – The project proposes improvements to an existing airport facility and would not construct or demolish housing or extend airport infrastructure in such a way that it could influence new housing development or population growth. As such, the project is not expected to have a substantial impact on population and housing.

- *Public Services* – The EIR will report on contacts with potentially affected public service agencies, such as fire protection and law enforcement, in order to describe relevant existing conditions, potential project impacts, and recommended mitigation measures, if needed. The EIR will document any potential increased demand for services and any potential need for the construction, alteration or expansion of service facilities

associated with the project. The Draft EIR will evaluate the ability of the project to receive adequate service based on applicable Town standards and, if adequate services are not available, recommended mitigation measures if necessary.

- *Transportation* – The EIR will describe existing transportation systems associated with the airport. The EIR will consider the potential impacts of project construction and operations and effects on local and regional transportation facilities, internal circulation, and emergency access to the project site. The EIR will consider traffic issues as well as potential effects on public transit and other alternative modes of transportation.

- *Tribal Cultural Resources* – The Draft EIR will analyze the potential impacts of the project on resources of importance to tribes with a geographical and cultural affiliation to the project site. The analysis will include the results of tribal notification as required by AB 52 and any tribal consultation that may be requested pursuant to AB 52.

- *Utilities and Service Systems* – The EIR will describe the existing utility systems on and near the project site, including existing systems serving the Airport. The EIR will consider increases in utility demand associated with the project as well as the potential for direct project impacts on existing utility facilities.

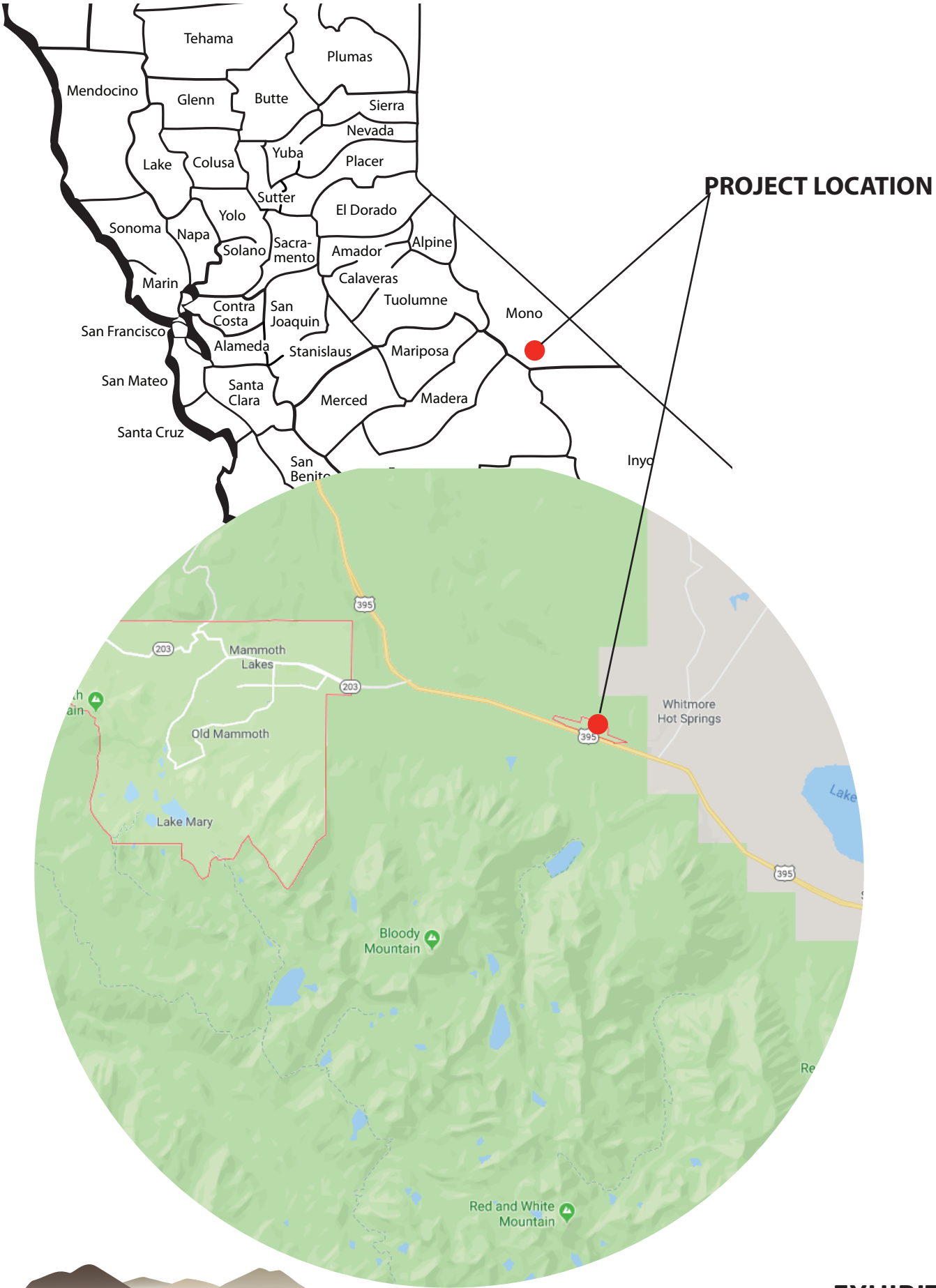
- *Wildfire* – The EIR will document the existing wildfire hazards associated with the airport site and surroundings as well as on-site fire management facilities and services. The EIR will consider the wildfire risk to the project site, along with other potential hazards such as exposure of project occupants to pollutant concentrations from a wildfire, exacerbation of fire risks from project features, and exposure to downslope or downstream flooding or landslides arising from wildfires.

- *Cumulative Impacts* – Consistent with CEQA Guidelines Section 15130, the Draft EIR will discuss the cumulative impacts of the proposed project, addressing each topic covered in the environmental analysis.

- *Project Alternatives* – Under CEQA, environmental documentation must include an analysis of a reasonable range of alternatives to the project, including the "No Project" alternative. The Draft EIR will consider alternatives to the project, potentially including the alternatives considered in the NEPA EA, as applicable, along with other reasonable alternatives to the project. Each alternative will be contrasted with the proposed project in terms of the extent to which project's objectives are met and a reduction in adverse impacts is achieved. The environmentally superior alternative will be identified.

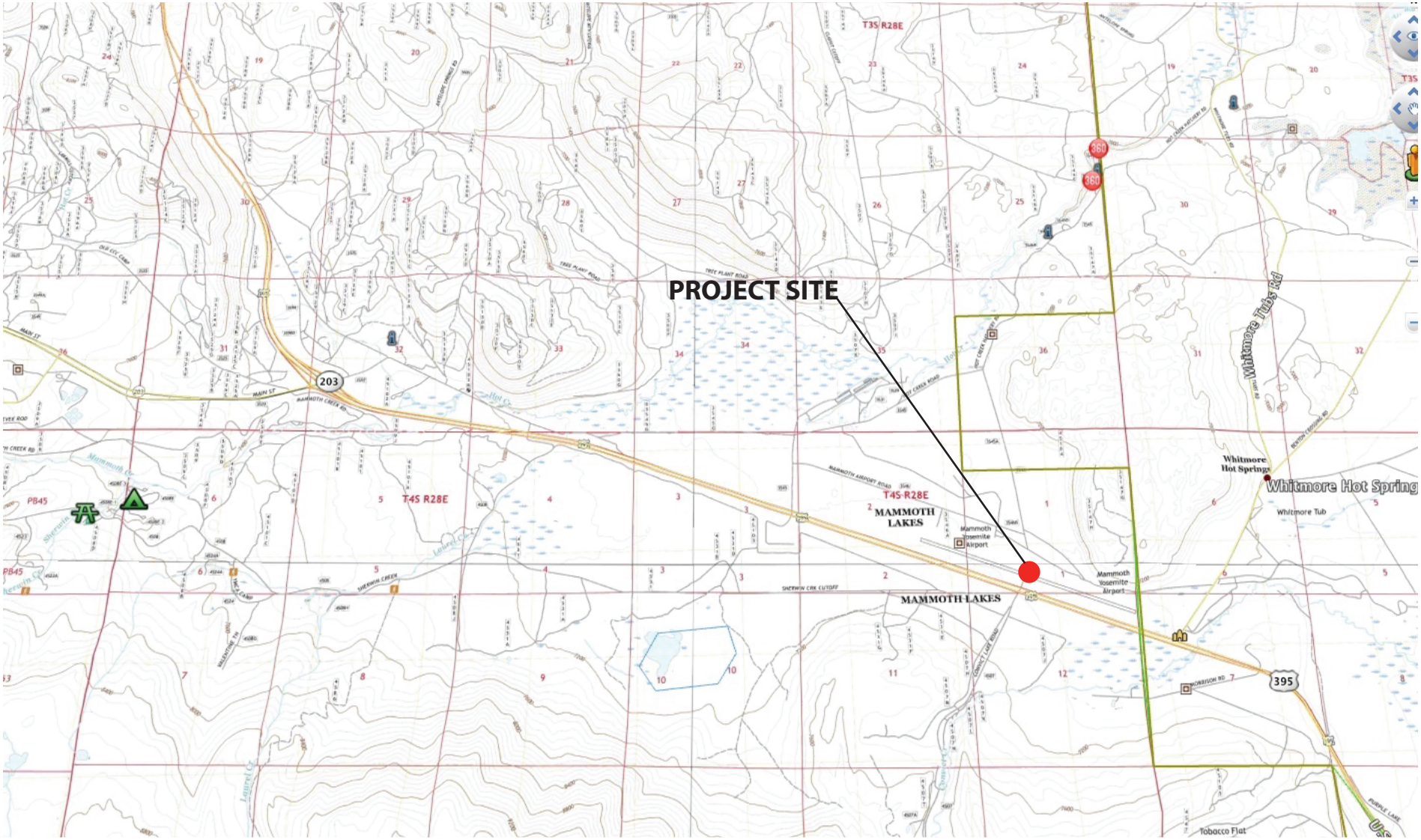
- *Significant and Unavoidable Environmental Effects* – The Draft EIR will describe, if any, environmental impacts that cannot be avoided or reduced to a level that would be less than significant with the application of mitigation measures.
- *Growth-Inducing Impacts* – As required under CEQA Guidelines Section 15126.2(d), the

Draft EIR will include a discussion of growth-inducing effects as well as any secondary impacts that could result from projected growth. The Draft EIR will consider the project's potential to foster economic or population growth and/or its potential to remove obstacles to population growth through extension of infrastructure.



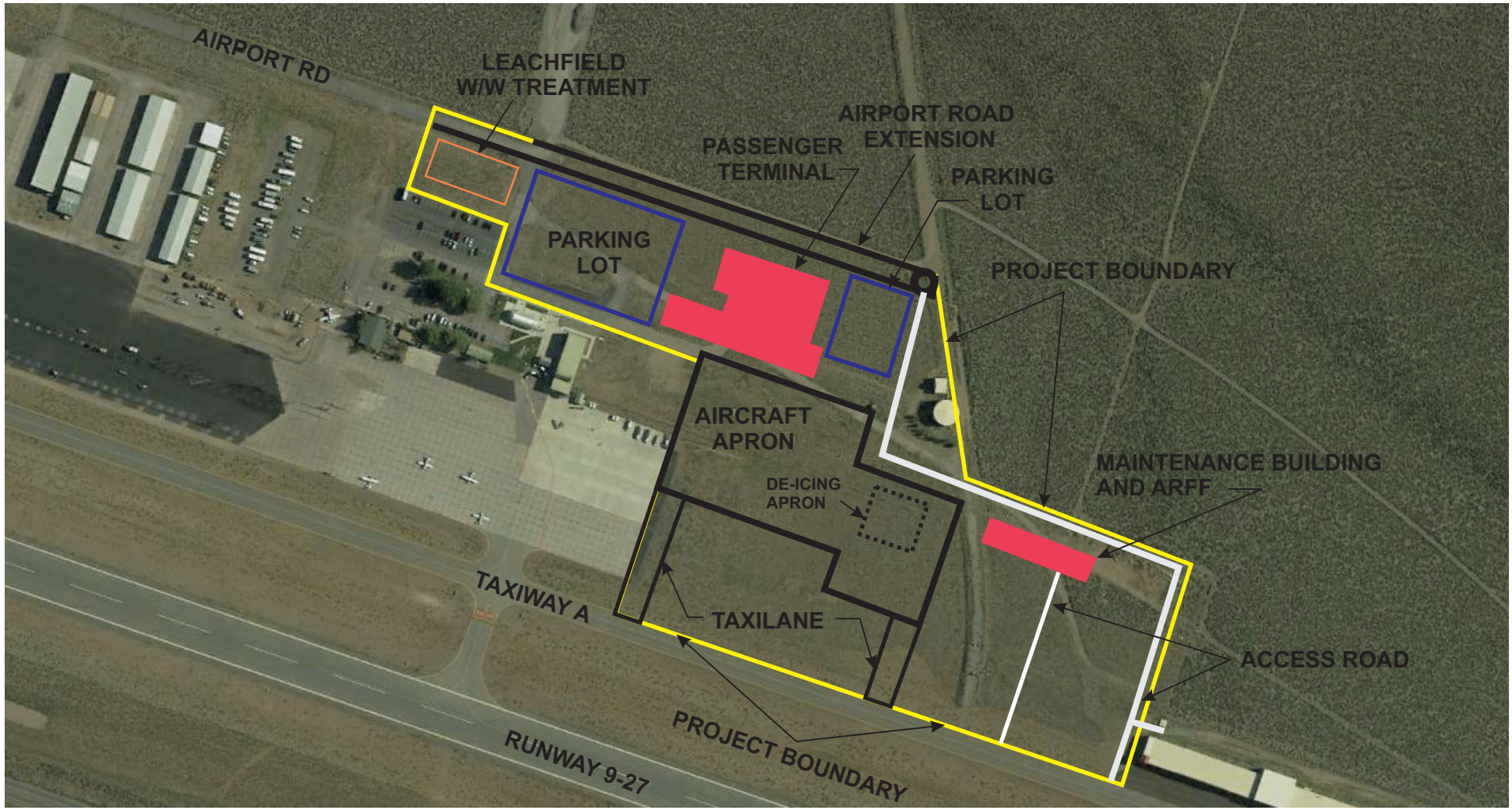
BaseCamp Environmental

EXHIBIT 1



BaseCamp Environmental

EXHIBIT 2



Mammoth Yosemite Airport
Terminal Area Development Plan

EXHIBIT 3

DEPARTMENT OF TRANSPORTATION
DISTRICT 9
500 SOUTH MAIN STREET
BISHOP, CA 93514
PHONE (760) 872-0785
FAX (760) 872-0678
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

November 7, 2019

Ms. Kim Cooke
Town of Mammoth Lakes
P.O. Box 609
Mammoth Lakes, CA 93546

File: Mno-395- 22.74
NOP DEIR
SCH #: 2019100384

Mammoth Airport Terminal Area Development Plan - Notice of Preparation of a draft Environmental Impact Report (NOP DEIR)

Dear Ms. Cooke:

The California Department of Transportation (Caltrans) District 9 appreciates the opportunity to review the proposed development at the airport, which abuts US 395 and accesses it via Hot Creek Road. Please consider the following in environmental analysis:

- Aesthetics and Visual Resources - Consider that US 395 is designated as a Scenic Highway in this corridor.
- Biological Resources - Assess and address any impacts on animal movement patterns. Utilize current information/resources of the Eastern Sierra Wildlife Stewardship Team, which includes Mammoth Lakes staff member Haley Lang.
- Transportation - Assess and address traffic impacts for the US 395/Hot Creek Road intersection.
- Utilities and Service Systems - Assess if any project utility upgrades would be within US 395 right-of-way (thus, necessitating a Caltrans encroachment permit).
- If not already in consultation, the Town should do so with Mono County. The County has a project proposed to rehabilitate Hot Creek Hatchery and Airport Roads.

We value our cooperative working relationship with the Town regarding development affecting the state transportation system. For any questions, feel free to contact me at (760) 872-0785 or at gayle.rosander@dot.ca.gov.

Sincerely,

Gayle J. Rosander

GAYLE J. ROSANDER
External Project Liaison

c: State Clearinghouse
Mark Reistetter, Caltrans D9

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D.
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

November 18, 2019

Ms. Kim Cooke
Town of Mammoth Lakes Community and Economic Development
P.O. Box 609
Mammoth Lakes, California 93546

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR MAMMOTH YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PLAN PROJECT – DATED OCTOBER 21, 2019
(STATE CLEARINGHOUSE NUMBER: 2019100384)

Dear Ms. Cooke:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for Mammoth Yosemite Airport Terminal Area Development Plan Project.

The proposed project would include a new approximately 40,000 square foot, three-gate passenger terminal and an associated aircraft parking apron of approximately 130,500 square feet capable of parking three commercial aircraft. The project would include automobile parking lots, an aircraft de-icing apron, new taxiways, an Airport Road extension, service road realignment, a package wastewater treatment plant and wastewater disposal field, new electrical service, and an Aircraft Rescue and Fire Fighting-Snowplow building with a new vehicle parking apron and access road.

DTSC recommends that the following issues be evaluated in the EIR, Hazards and Hazardous Materials section:

1. The forthcoming EIR should acknowledge the potential for project site activities to have resulted in the release of hazardous wastes/substances. In instances in which releases have occurred, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and

the government agency who will be responsible for providing appropriate regulatory oversight.

2. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf).

3. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).

4. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Ag-Guidance-Rev-3-August-7-2008-2.pdf).

DTSC appreciates the opportunity to review the NOP. Should you need any assistance with an environmental investigation, please submit a request for Lead Agency Oversight Application, which can be found at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/VCP_App-1460.doc. Additional information regarding voluntary agreements with DTSC can be found at: https://dtsc.ca.gov/brownfields/.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.clearinghouse@opr.ca.gov

Ms. Lora Jameson, Chief
Site Evaluation and Remediation Unit
Department of Toxic Substances Control
Lora.Jameson@dtsc.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereasis@dtsc.ca.gov

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 12, 2019
Sent via email

Kim Cooke
Associate Planner
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546
kcooke@townofmammothlakes.ca.gov

Subject: Notice of Preparation of a Draft Environmental Impact Report
Mammoth Yosemite Airport Improvements Project
State Clearinghouse No. 2019100384

Dear Ms. Cooke:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the Town of Mammoth Lakes for the Mammoth Yosemite Airport Improvements Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the state. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

PROJECT DESCRIPTION SUMMARY

Description: The Town of Mammoth Lakes (Town; Lead Agency) proposes improvements and additions to the passenger terminal area at the existing Mammoth Yosemite Airport to provide adequate passenger terminal facilities for existing and projected commercial airline operations. The Project includes construction of a new terminal building, aircraft parking and de-icing aprons and taxiways, maintenance facilities, and associated infrastructure.

Location: The Mammoth Yosemite Airport consists of approximately 246 acres located approximately six miles east of the Town, adjacent to and north of U.S. Highway 395 between Hot Creek Hatchery Road and Benton Crossing Road. The proposed Project site is in the vicinity of the existing terminal area, located at approximately 37° 37' 41" north and 118° 50' 30" west on the Whitmore Hot Springs U.S. Geological Survey 7.5-minute quadrangle map.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the Town in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed Project with respect to impacts on biological resources. CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed Project. CDFW recommends that CNDDB Field Survey Forms be completed and submitted to CNDDB to document survey results. Online forms can be obtained and submitted at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data

   Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the Project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see https://www.wildlife.ca.gov/Conservation/Plants).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. To

ensure that Project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other Project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address Project-related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.

2. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands.

3. An evaluation of impacts to adjacent open space lands from both the construction of the Project and long-term operational and maintenance needs.

4. A cumulative effects analysis developed as described under CEQA Guidelines § 15130. Please include all potential direct and indirect Project related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future Projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Alternatives Analysis

Note that the DEIR must describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the Project. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time. Project activities described in the DEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to

the Project area. CDFW also recommends that the DEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization and mitigation measures will avoid indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.

3. *Mitigation*: CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

4. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in local ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in advance of project activities to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate.

Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

5. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code (FGC) afford protective measures as follows: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by FGC or any regulation made pursuant thereto; Section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by FGC or any regulation adopted pursuant thereto; and Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

   CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but may not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), constructing sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should an active nest be located within the Project site. If pre-construction surveys are proposed in the DEIR, CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

6. *Moving out of Harm's Way:* The proposed Project is anticipated to result in the clearing of natural habitats that support native species. To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from Project-

related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss.

7. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to https://www.wildlife.ca.gov/Conservation/LSA/Forms.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a data base which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected

during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Mammoth Yosemite Airport Improvements Project to assist the Town of Mammoth Lakes in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Rose Banks, Environmental Scientist, at (760) 873-4412 or Rose.Banks@wildlife.ca.gov.

Sincerely,

Scott Wilson
Environmental Program Manager

cc: State Clearinghouse

REFERENCES

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

Lahontan Regional Water Quality Control Board

November 15, 2019

Kim Cooke, Associate Planner
Town of Mammoth Lakes Planning Department
P.O. Box 1609
Mammoth Lakes, CA 93546
kcooke@townofmammothlakes.ca.gov

File: Environmental Doc Review
Mono County

Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Mammoth Yosemite Airport Terminal Area Development Plan Project, Mono County, State Clearinghouse Number 2019100384

Lahontan Region Water Quality Control Board (Water Board) staff received a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the above-referenced project (Project) on October 25, 2019. The NOP was prepared by Town of Mammoth Lakes Planning Department and submitted in compliance with provisions of the California Environmental Quality Act (CEQA). Water Board staff, acting as a responsible agency, is providing these comments to specify the scope and content of the environmental information germane to our statutory responsibilities pursuant to CEQA Guidelines, California Code of Regulations, title 14, section 15096. Based on our review of the NOP, we recommend the following: 1) the most recent and current documents/publications be utilized in to the EIR to establish baseline environmental conditions; 2) cumulative effects of sewage treatment and disposal systems be considered in the environmental analysis; and 3) a mitigation measure be included that requires the preparation and implementation of site-specific Storm Water Pollution Prevention Plan (SWPPP) to effectively treat storm water runoff during the life of the Project. Our comments on the Project are outlined below.

WATER BOARD'S AUTHORITY

All groundwater and surface waters are considered waters of the State. All waters of the State are protected under California law. State law assigns responsibility for protection of water quality in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the United States. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the United States.

The Water Quality Control Plan for the Lahontan Region (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwater of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan can be accessed via the Water Board's web site at Basin Plan - References.

GENERAL COMMENTS AND RECOMMENDATIONS

1. The NOP states, "The EIR will describe the seismicity, geologic hazards and soils conditions of the area from the *Town of Mammoth Lakes 2005 General Plan Update Final Environmental Impact Report* (General Plan EIR) and potential exposure of proposed improvements and airport users to these conditions." The General Plan EIR alone is inadequate. The EIR must consider the most recent and up to date documents/publications from all sources, including federal, state, county, and local agencies, when establishing baseline conditions and in evaluating the Project's potential impacts on environmental resources, particularly on water quality and hydrology.

2. The EIR should identify and consider all existing sewage treatment and disposal systems and associated infrastructure (i.e. sewer lines) in addition to any new or modifications to existing systems and associated infrastructure.

3. The EIR should consider the long-term cumulative effects of all existing and proposed sewage treatment and disposal systems on water quality and hydrology.

4. A Project-specific SWPPP and implementation of site-specific erosion and sediment control best management practices (BMPs) is an effective way to reduce potentially significant water quality impacts to a less than significant level. To that end, we recommend the development and implementation of a Project-specific SWPPP during both the construction and post-construction (industrial) phases of the Project. The SWPPP should be applicable to all areas of the Project site throughout the life of the Project.

5. Equipment staging areas, excavated soil stockpiles, and hazardous materials (i.e. oils and fuels) should be sited in upland areas outside surface waters and adjacent flood plain areas. The EIR should include a mitigation measure for the preparation and implementation of a comprehensive Spill Prevention and Response Plan that outlines the site-specific monitoring requirements and lists the BMPs necessary to prevent hazardous material spills or to contain and cleanup a hazardous material spill, should one occur.

6. All surface waters are waters of the State. The EIR will need to fully delineate the extent of waters of the State and evaluate potential impacts to these resources with respect to hydrology and water quality as a result of Project implementation

7. The Project site is located within the Long Hydrologic Area of the Owens Hydrologic Unit (626.40), and groundwater beneath the Project site is contained within the Long Valley Groundwater Basin (6-11). The beneficial uses of these water resources are listed either by watershed (for surface waters) or by groundwater basin (for groundwater) in Chapter 2 of the Basin Plan. We request that the EIR identify and list the beneficial uses of the water resources within the Project area and include an analysis of the Project's potential impacts to water quality and hydrology with respect to those beneficial uses.

8. The EIR should identify the water quality standards that could potentially be violated by the Project and consider these standards when evaluating thresholds of significance for impacts. Water quality objectives and standards, both numerical and narrative, for all waters of the State within the Lahontan Region, including surface waters and groundwater, are outlined in Chapter 3 of the Basin Plan. Implementation of the proposed Project must comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan.

9. Buffer areas should be identified, and exclusion fencing used to protect water resources and to prevent unauthorized vehicles or equipment from entering or otherwise disturbing the surface waters. Equipment should use existing roadways to the extent feasible.

PERMITTING REQUIREMENTS FOR INDIVIDUAL PROJECTS

10. A number of activities implemented by individual projects in accordance with the General Plan amendment have the potential to impact waters of the State and, therefore, may require permits issued by either the State Water Resources Control Board (State Water Board) or Lahontan Water Board. The required permits may include the following.

11. Streambed alteration and/or discharge of fill material to a surface water may require a CWA, section 401 water quality certification for impacts to federal waters (waters of the U.S.), or dredge and fill waste discharge requirements for impacts to non-federal waters, both issued by the Lahontan Water Board.

12. Land disturbance of more than 1 acre may require a CWA, section 402(p) storm water permit, including a National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit, Water Quality Order (WQO) 2009-0009-DWQ, obtained from the State Water Board, or individual storm water permit obtained from the Lahontan Water Board.

13. Depending on the Standard Industrial Classification (SIC) code for industrial-type activities at a specific site, individual projects may require an NPDES General Industrial Storm Water Permit, WQO-2014-0057-DWQ, obtained from the State Water Board, or individual storm water permit obtained from the Lahontan Water Board.

14. Discharge of waste to land (i.e. evaporation ponds) may require waste discharge requirements (WDRs) issued by the Lahontan Water Board in compliance with the CCR, title 27, section 20005 et seq. If the Project includes wastes that can be characterized as either designated and/or non-hazardous, and a planned discharge to land would occur, the discharger will be required to submit the Report of Waste Discharge application, Form 200, to the Water Board.

We request that the EIR recognize the potential permits that may be required for the Project, as outlined above, and identify the specific activities that may trigger these permitting actions in the appropriate sections of the environmental document. Information regarding these permits, including application forms, can be downloaded from our web site at http://www.waterboards.ca.gov/lahontan/. Early consultation with Water Board staff regarding potential permitting is recommended.

Thank you for the opportunity to comment on the NOP. If you have any questions regarding this letter, please contact me at (760) 241-4942 jeffrey.fitzsimmons@waterboards.ca.gov or Jan Zimmerman, Senior Engineering Geologist, at (760) 241-7404 or jan.zimmerman@waterboards.ca.gov. Please send all future correspondence regarding this Project to the Water Board's email address at Lahontan@waterboards.ca.gov and Project name in the subject line.

Jeff Fitzsimmons
Engineering Geologist

cc: State Clearinghouse (SCH 2019100384) (state.clearinghouse@opr.ca.gov)
Nick Buckmaster, CDFW (nick.buckmaster@wildlife.ca.gov)
Louis Molina, Mono County (lmolina@mono.ca.gov)

R:\RB6\RB6Victorville\Shared\Units\JAN's UNIT\Jeff\CEQA\Mammoth Yosemite Airport\NOP - Mammoth Yosemite Airport Terminal Development Project.docx

APPENDIX B
AIR QUALITY MODELING RESULTS

Mammoth Yosemite Airport

Mono County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	38.69	1000sqft	0.89	38,688.00	0
General Light Industry	8.40	1000sqft	0.19	8,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	54
Climate Zone	1			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage of terminal.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	18.00
tblConstructionPhase	NumDays	200.00	230.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	10.00	18.00
tblConstructionPhase	NumDays	2.00	5.00
tblLandUse	LandUseSquareFeet	38,690.00	38,688.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1539	1.2054	1.1645	2.2200e-003	0.0290	0.0541	0.0831	6.6300e-003	0.0518	0.0584	0.0000	187.4632	187.4632	0.0322	0.0000	188.2674
2023	0.6242	0.6181	0.6956	1.3100e-003	0.0126	0.0262	0.0388	3.3900e-003	0.0252	0.0286	0.0000	110.4641	110.4641	0.0178	0.0000	110.9095
Maximum	**0.6242**	**1.2054**	**1.1645**	**2.2200e-003**	**0.0290**	**0.0541**	**0.0831**	**6.6300e-003**	**0.0518**	**0.0584**	**0.0000**	**187.4632**	**187.4632**	**0.0322**	**0.0000**	**188.2674**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1539	1.2054	1.1645	2.2200e-003	0.0239	0.0541	0.0779	5.9100e-003	0.0518	0.0577	0.0000	187.4630	187.4630	0.0322	0.0000	188.2672
2023	0.6242	0.6181	0.6956	1.3100e-003	0.0126	0.0262	0.0388	3.3900e-003	0.0252	0.0286	0.0000	110.4640	110.4640	0.0178	0.0000	110.9094
Maximum	**0.6242**	**1.2054**	**1.1645**	**2.2200e-003**	**0.0239**	**0.0541**	**0.0779**	**5.9100e-003**	**0.0518**	**0.0577**	**0.0000**	**187.4630**	**187.4630**	**0.0322**	**0.0000**	**188.2672**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**12.31**	**0.00**	**4.20**	**7.19**	**0.00**	**0.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-3-2022	8-2-2022	0.5221	0.5221
2	8-3-2022	11-2-2022	0.4999	0.4999
3	11-3-2022	2-2-2023	0.4875	0.4875
4	2-3-2023	5-2-2023	0.4495	0.4495
5	5-3-2023	8-2-2023	0.5999	0.5999
		Highest	0.5999	0.5999

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2385	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004
Energy	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	140.8671	140.8671	4.9900e-003	1.5700e-003	141.4590
Mobile	0.0547	0.3509	0.6670	2.2500e-003	0.1656	1.7800e-003	0.1673	0.0444	1.6600e-003	0.0461	0.0000	206.5630	206.5630	9.4400e-003	0.0000	206.7991
Waste						0.0000	0.0000		0.0000	0.0000	9.4188	0.0000	9.4188	0.5566	0.0000	23.3346
Water						0.0000	0.0000		0.0000	0.0000	2.7979	19.9046	22.7025	0.2882	6.9600e-003	31.9799
Total	**0.2970**	**0.3851**	**0.6961**	**2.4600e-003**	**0.1656**	**4.3800e-003**	**0.1699**	**0.0444**	**4.2600e-003**	**0.0487**	**12.2167**	**367.3355**	**379.5522**	**0.8593**	**8.5300e-003**	**403.5736**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2385	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004
Energy	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	140.8671	140.8671	4.9900e-003	1.5700e-003	141.4590
Mobile	0.0547	0.3509	0.6670	2.2500e-003	0.1656	1.7800e-003	0.1673	0.0444	1.6600e-003	0.0461	0.0000	206.5630	206.5630	9.4400e-003	0.0000	206.7991
Waste						0.0000	0.0000		0.0000	0.0000	2.3547	0.0000	2.3547	0.1392	0.0000	5.8337
Water						0.0000	0.0000		0.0000	0.0000	2.2383	15.9237	18.1620	0.2306	5.5600e-003	25.5839
Total	**0.2970**	**0.3851**	**0.6961**	**2.4600e-003**	**0.1656**	**4.3800e-003**	**0.1699**	**0.0444**	**4.2600e-003**	**0.0487**	**4.5930**	**363.3546**	**367.9476**	**0.3841**	**7.1300e-003**	**379.6766**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**62.40**	**1.08**	**3.06**	**55.29**	**16.41**	**5.92**

3.0 Construction Detail

Construction Phase

Mammoth Yosemite Airport - Mono County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/1/2022	5/27/2022	5	20	
2	Site Preparation	Site Preparation	5/28/2022	6/3/2022	5	5	
3	Grading	Grading	6/4/2022	6/15/2022	5	8	
4	Building Construction	Building Construction	6/16/2022	5/3/2023	5	230	
5	Paving	Paving	5/4/2023	5/29/2023	5	18	
6	Architectural Coating	Architectural Coating	5/30/2023	6/22/2023	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 70,220; Non-Residential Outdoor: 23,407; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	16.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.1900e-003	0.0000	7.1900e-003	1.0900e-003	0.0000	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**7.1900e-003**	**8.3800e-003**	**0.0156**	**1.0900e-003**	**7.8300e-003**	**8.9200e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	7.2000e-004	6.0100e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.3158	1.3158	5.0000e-005	0.0000	1.3170
Total	**9.6000e-004**	**7.2000e-004**	**6.0100e-003**	**1.0000e-005**	**1.6100e-003**	**1.0000e-005**	**1.6200e-003**	**4.3000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.3158**	**1.3158**	**5.0000e-005**	**0.0000**	**1.3170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2300e-003	0.0000	3.2300e-003	4.9000e-004	0.0000	4.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**3.2300e-003**	**8.3800e-003**	**0.0116**	**4.9000e-004**	**7.8300e-003**	**8.3200e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	7.2000e-004	6.0100e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.3158	1.3158	5.0000e-005	0.0000	1.3170
Total	**9.6000e-004**	**7.2000e-004**	**6.0100e-003**	**1.0000e-005**	**1.6100e-003**	**1.0000e-005**	**1.6200e-003**	**4.3000e-004**	**1.0000e-005**	**4.4000e-004**	**0.0000**	**1.3158**	**1.3158**	**5.0000e-005**	**0.0000**	**1.3170**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0366	0.0177	4.0000e-005		1.5600e-003	1.5600e-003		1.4300e-003	1.4300e-003	0.0000	3.7788	3.7788	1.2200e-003	0.0000	3.8094
Total	**3.2800e-003**	**0.0366**	**0.0177**	**4.0000e-005**	**0.0000**	**1.5600e-003**	**1.5600e-003**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**3.7788**	**3.7788**	**1.2200e-003**	**0.0000**	**3.8094**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	9.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2024	0.2024	1.0000e-005	0.0000	0.2026
Total	**1.5000e-004**	**1.1000e-004**	**9.2000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2024**	**0.2024**	**1.0000e-005**	**0.0000**	**0.2026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0366	0.0177	4.0000e-005		1.5600e-003	1.5600e-003		1.4300e-003	1.4300e-003	0.0000	3.7788	3.7788	1.2200e-003	0.0000	3.8094
Total	**3.2800e-003**	**0.0366**	**0.0177**	**4.0000e-005**	**0.0000**	**1.5600e-003**	**1.5600e-003**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**3.7788**	**3.7788**	**1.2200e-003**	**0.0000**	**3.8094**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.1000e-004	9.2000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2024	0.2024	1.0000e-005	0.0000	0.2026
Total	**1.5000e-004**	**1.1000e-004**	**9.2000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2024**	**0.2024**	**1.0000e-005**	**0.0000**	**0.2026**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3300e-003	0.0480	0.0237	6.0000e-005		2.0700e-003	2.0700e-003		1.9000e-003	1.9000e-003	0.0000	4.9526	4.9526	1.6000e-003	0.0000	4.9926
Total	**4.3300e-003**	**0.0480**	**0.0237**	**6.0000e-005**	**2.1200e-003**	**2.0700e-003**	**4.1900e-003**	**2.3000e-004**	**1.9000e-003**	**2.1300e-003**	**0.0000**	**4.9526**	**4.9526**	**1.6000e-003**	**0.0000**	**4.9926**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	1.4800e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3239	0.3239	1.0000e-005	0.0000	0.3242
Total	**2.4000e-004**	**1.8000e-004**	**1.4800e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3239**	**0.3239**	**1.0000e-005**	**0.0000**	**0.3242**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.5000e-004	0.0000	9.5000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3300e-003	0.0480	0.0237	6.0000e-005		2.0700e-003	2.0700e-003		1.9000e-003	1.9000e-003	0.0000	4.9526	4.9526	1.6000e-003	0.0000	4.9926
Total	**4.3300e-003**	**0.0480**	**0.0237**	**6.0000e-005**	**9.5000e-004**	**2.0700e-003**	**3.0200e-003**	**1.0000e-004**	**1.9000e-003**	**2.0000e-003**	**0.0000**	**4.9526**	**4.9526**	**1.6000e-003**	**0.0000**	**4.9926**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	1.4800e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3239	0.3239	1.0000e-005	0.0000	0.3242
Total	**2.4000e-004**	**1.8000e-004**	**1.4800e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3239**	**0.3239**	**1.0000e-005**	**0.0000**	**0.3242**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1171	0.8877	0.9036	1.5700e-003		0.0418	0.0418		0.0404	0.0404	0.0000	128.9196	128.9196	0.0225	0.0000	129.4810
Total	**0.1171**	**0.8877**	**0.9036**	**1.5700e-003**		**0.0418**	**0.0418**		**0.0404**	**0.0404**	**0.0000**	**128.9196**	**128.9196**	**0.0225**	**0.0000**	**129.4810**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6500e-003	0.0596	0.0189	1.6000e-004	3.3900e-003	1.4000e-004	3.5300e-003	9.8000e-004	1.3000e-004	1.1200e-003	0.0000	15.3943	15.3943	1.0400e-003	0.0000	15.4203
Worker	8.3800e-003	6.2900e-003	0.0525	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7300e-003	9.0000e-005	3.8200e-003	0.0000	11.4981	11.4981	4.1000e-004	0.0000	11.5084
Total	**0.0110**	**0.0659**	**0.0714**	**2.9000e-004**	**0.0174**	**2.4000e-004**	**0.0177**	**4.7100e-003**	**2.2000e-004**	**4.9400e-003**	**0.0000**	**26.8924**	**26.8924**	**1.4500e-003**	**0.0000**	**26.9287**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1171	0.8877	0.9036	1.5700e-003		0.0418	0.0418		0.0404	0.0404	0.0000	128.9195	128.9195	0.0225	0.0000	129.4808
Total	**0.1171**	**0.8877**	**0.9036**	**1.5700e-003**		**0.0418**	**0.0418**		**0.0404**	**0.0404**	**0.0000**	**128.9195**	**128.9195**	**0.0225**	**0.0000**	**129.4808**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6500e-003	0.0596	0.0189	1.6000e-004	3.3900e-003	1.4000e-004	3.5300e-003	9.8000e-004	1.3000e-004	1.1200e-003	0.0000	15.3943	15.3943	1.0400e-003	0.0000	15.4203
Worker	8.3800e-003	6.2900e-003	0.0525	1.3000e-004	0.0140	1.0000e-004	0.0141	3.7300e-003	9.0000e-005	3.8200e-003	0.0000	11.4981	11.4981	4.1000e-004	0.0000	11.5084
Total	**0.0110**	**0.0659**	**0.0714**	**2.9000e-004**	**0.0174**	**2.4000e-004**	**0.0177**	**4.7100e-003**	**2.2000e-004**	**4.9400e-003**	**0.0000**	**26.8924**	**26.8924**	**1.4500e-003**	**0.0000**	**26.9287**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0670	0.5153	0.5549	9.7000e-004		0.0226	0.0226		0.0219	0.0219	0.0000	79.9036	79.9036	0.0136	0.0000	80.2428
Total	**0.0670**	**0.5153**	**0.5549**	**9.7000e-004**		**0.0226**	**0.0226**		**0.0219**	**0.0219**	**0.0000**	**79.9036**	**79.9036**	**0.0136**	**0.0000**	**80.2428**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3500e-003	0.0308	0.0102	1.0000e-004	2.1000e-003	4.0000e-005	2.1500e-003	6.1000e-004	4.0000e-005	6.5000e-004	0.0000	9.4031	9.4031	4.8000e-004	0.0000	9.4151
Worker	4.8600e-003	3.4800e-003	0.0291	8.0000e-005	8.7000e-003	6.0000e-005	8.7600e-003	2.3100e-003	5.0000e-005	2.3700e-003	0.0000	6.8609	6.8609	2.3000e-004	0.0000	6.8666
Total	**6.2100e-003**	**0.0343**	**0.0393**	**1.8000e-004**	**0.0108**	**1.0000e-004**	**0.0109**	**2.9200e-003**	**9.0000e-005**	**3.0200e-003**	**0.0000**	**16.2640**	**16.2640**	**7.1000e-004**	**0.0000**	**16.2816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0670	0.5153	0.5549	9.7000e-004		0.0226	0.0226		0.0219	0.0219	0.0000	79.9035	79.9035	0.0136	0.0000	80.2427
Total	**0.0670**	**0.5153**	**0.5549**	**9.7000e-004**		**0.0226**	**0.0226**		**0.0219**	**0.0219**	**0.0000**	**79.9035**	**79.9035**	**0.0136**	**0.0000**	**80.2427**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3500e-003	0.0308	0.0102	1.0000e-004	2.1000e-003	4.0000e-005	2.1500e-003	6.1000e-004	4.0000e-005	6.5000e-004	0.0000	9.4031	9.4031	4.8000e-004	0.0000	9.4151
Worker	4.8600e-003	3.4800e-003	0.0291	8.0000e-005	8.7000e-003	6.0000e-005	8.7600e-003	2.3100e-003	5.0000e-005	2.3700e-003	0.0000	6.8609	6.8609	2.3000e-004	0.0000	6.8666
Total	**6.2100e-003**	**0.0343**	**0.0393**	**1.8000e-004**	**0.0108**	**1.0000e-004**	**0.0109**	**2.9200e-003**	**9.0000e-005**	**3.0200e-003**	**0.0000**	**16.2640**	**16.2640**	**7.1000e-004**	**0.0000**	**16.2816**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-003	0.0561	0.0792	1.2000e-004		2.7800e-003	2.7800e-003		2.5600e-003	2.5600e-003	0.0000	10.5952	10.5952	3.3600e-003	0.0000	10.6792
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-003**	**0.0561**	**0.0792**	**1.2000e-004**		**2.7800e-003**	**2.7800e-003**		**2.5600e-003**	**2.5600e-003**	**0.0000**	**10.5952**	**10.5952**	**3.3600e-003**	**0.0000**	**10.6792**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.8000e-004	4.8300e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1402	1.1402	4.0000e-005	0.0000	1.1412
Total	**8.1000e-004**	**5.8000e-004**	**4.8300e-003**	**1.0000e-005**	**1.4500e-003**	**1.0000e-005**	**1.4600e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1402**	**1.1402**	**4.0000e-005**	**0.0000**	**1.1412**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.8000e-003	0.0561	0.0792	1.2000e-004		2.7800e-003	2.7800e-003		2.5600e-003	2.5600e-003	0.0000	10.5952	10.5952	3.3600e-003	0.0000	10.6791
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.8000e-003**	**0.0561**	**0.0792**	**1.2000e-004**		**2.7800e-003**	**2.7800e-003**		**2.5600e-003**	**2.5600e-003**	**0.0000**	**10.5952**	**10.5952**	**3.3600e-003**	**0.0000**	**10.6791**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.8000e-004	4.8300e-003	1.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1402	1.1402	4.0000e-005	0.0000	1.1412
Total	**8.1000e-004**	**5.8000e-004**	**4.8300e-003**	**1.0000e-005**	**1.4500e-003**	**1.0000e-005**	**1.4600e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1402**	**1.1402**	**4.0000e-005**	**0.0000**	**1.1412**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.5442**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.1200e-003	0.0000	3.3000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2631	0.2631	1.0000e-005	0.0000	0.2634
Total	**1.9000e-004**	**1.3000e-004**	**1.1200e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.4000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2631**	**0.2631**	**1.0000e-005**	**0.0000**	**0.2634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5425					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.5442**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.3000e-004	1.1200e-003	0.0000	3.3000e-004	0.0000	3.4000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2631	0.2631	1.0000e-005	0.0000	0.2634
Total	**1.9000e-004**	**1.3000e-004**	**1.1200e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.4000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2631**	**0.2631**	**1.0000e-005**	**0.0000**	**0.2634**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0547	0.3509	0.6670	2.2500e-003	0.1656	1.7800e-003	0.1673	0.0444	1.6600e-003	0.0461	0.0000	206.5630	206.5630	9.4400e-003	0.0000	206.7991
Unmitigated	0.0547	0.3509	0.6670	2.2500e-003	0.1656	1.7800e-003	0.1673	0.0444	1.6600e-003	0.0461	0.0000	206.5630	206.5630	9.4400e-003	0.0000	206.7991

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	30.16	11.09	5.71	92,491	92,491
Office Park	149.73	63.45	29.40	348,080	348,080
Total	179.89	74.54	35.12	440,572	440,572

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.530267	0.037148	0.196347	0.120186	0.025624	0.006375	0.008580	0.059610	0.006951	0.001307	0.005436	0.000965	0.001204
Office Park	0.530267	0.037148	0.196347	0.120186	0.025624	0.006375	0.008580	0.059610	0.006951	0.001307	0.005436	0.000965	0.001204

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	103.6597	103.6597	4.2800e-003	8.9000e-004	104.0306
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	103.6597	103.6597	4.2800e-003	8.9000e-004	104.0306
NaturalGas Mitigated	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2073	37.2073	7.1000e-004	6.8000e-004	37.4284
NaturalGas Unmitigated	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2073	37.2073	7.1000e-004	6.8000e-004	37.4284

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	29484	1.6000e-004	1.4500e-003	1.2100e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5734	1.5734	3.0000e-005	3.0000e-005	1.5827
Office Park	667755	3.6000e-003	0.0327	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	35.6339	35.6339	6.8000e-004	6.5000e-004	35.8457
Total		**3.7600e-003**	**0.0342**	**0.0287**	**2.1000e-004**		**2.6000e-003**	**2.6000e-003**		**2.6000e-003**	**2.6000e-003**	**0.0000**	**37.2073**	**37.2073**	**7.1000e-004**	**6.8000e-004**	**37.4284**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	29484	1.6000e-004	1.4500e-003	1.2100e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5734	1.5734	3.0000e-005	3.0000e-005	1.5827
Office Park	667755	3.6000e-003	0.0327	0.0275	2.0000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	35.6339	35.6339	6.8000e-004	6.5000e-004	35.8457
Total		**3.7600e-003**	**0.0342**	**0.0287**	**2.1000e-004**		**2.6000e-003**	**2.6000e-003**		**2.6000e-003**	**2.6000e-003**	**0.0000**	**37.2073**	**37.2073**	**7.1000e-004**	**6.8000e-004**	**37.4284**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	35952	11.4551	4.7000e-004	1.0000e-004	11.4961
Office Park	289386	92.2047	3.8100e-003	7.9000e-004	92.5345
Total		**103.6597**	**4.2800e-003**	**8.9000e-004**	**104.0306**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	35952	11.4551	4.7000e-004	1.0000e-004	11.4961
Office Park	289386	92.2047	3.8100e-003	7.9000e-004	92.5345
Total		**103.6597**	**4.2800e-003**	**8.9000e-004**	**104.0306**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2385	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004
Unmitigated	0.2385	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1839					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004
Total	**0.2385**	**0.0000**	**4.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.4000e-004**	**8.4000e-004**	**0.0000**	**0.0000**	**9.0000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0546					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1839					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.4000e-004	8.4000e-004	0.0000	0.0000	9.0000e-004
Total	**0.2385**	**0.0000**	**4.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.4000e-004**	**8.4000e-004**	**0.0000**	**0.0000**	**9.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.1620	0.2306	5.5600e-003	25.5839
Unmitigated	22.7025	0.2882	6.9600e-003	31.9799

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	1.9425 / 0	3.9653	0.0634	1.5200e-003	6.0050
Office Park	6.87652 / 4.21464	18.7372	0.2248	5.4300e-003	25.9749
Total		**22.7025**	**0.2882**	**6.9500e-003**	**31.9799**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	1.554 / 0	3.1722	0.0508	1.2200e-003	4.8040
Office Park	5.50121 / 3.37171	14.9898	0.1798	4.3500e-003	20.7799
Total		**18.1620**	**0.2306**	**5.5700e-003**	**25.5839**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.3547	0.1392	0.0000	5.8337
Unmitigated	9.4188	0.5566	0.0000	23.3346

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	10.42	2.1152	0.1250	0.0000	5.2402
Office Park	35.98	7.3036	0.4316	0.0000	18.0944
Total		**9.4188**	**0.5566**	**0.0000**	**23.3346**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2.605	0.5288	0.0313	0.0000	1.3101
Office Park	8.995	1.8259	0.1079	0.0000	4.5236
Total		**2.3547**	**0.1392**	**0.0000**	**5.8337**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C
BIOLOGICAL RESOURCE ASSESSMENTS

BIOLOGICAL RESOURCES ASSESSMENT
FOR THE

±24-ACRE MAMMOTH YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PLAN STUDY AREA

MONO COUNTY, CALIFORNIA

Prepared for:
Wallace Environmental Consulting
P.O. Box 266
Courtland, CA 95615

Prepared by:

Salix consulting, inc.
11601 Blocker Drive, Ste. 100
Auburn, California 95603
(530) 888-0130

JANUARY 2020

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

Biological Resources Assessment for the

±24-ACRE MAMMOTH YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PLAN STUDY AREA

INTRODUCTION

Project Location

Salix Consulting, Inc. (Salix) has prepared a Biological Resources Assessment for the ±24 -acre Mammoth Yosemite Airport Terminal Area Development Plan study area located seven miles east of Mammoth Lakes in Mono County, California. The airport is owned by the Town of Mammoth Lakes and is located within the city limits. It is bounded on the south and southwest U.S. Highway 395, on the west by Hot Creek Hatchery Road, on the north by Airport Road, and on the east by Benton Crossing Road. The approximate coordinates for the center of the study area are: 37° 37′ 35.13″ N and 118° 50′ 23.59″ W. The study area is situated within Section 1 Township 4S Range 28E of the Whitmore Hot Springs, California 7.5-minute USGS topographic quadrangle (Figure 1).

Project Setting

Mammoth Yosemite Airport consists of approximately 246 acres located in the Long Valley caldera along the eastern edge of the central Sierra Nevada mountain range. The airport —which is surrounded by the Inyo National forest to the west, north and south— is situated approximately 3.5 miles west of Crowley Lake and approximately two miles north of convict lake near the Whitmore Hot Springs. U.S. Highway 395 is located along the entire south side of the airport and Doe Ridge is located on the northeast side of the airport (Figure 2). The site is relatively flat, with elevations ranging from approximately 7119 feet along the northwestern edge to approximately 7093 along the southeastern edge.

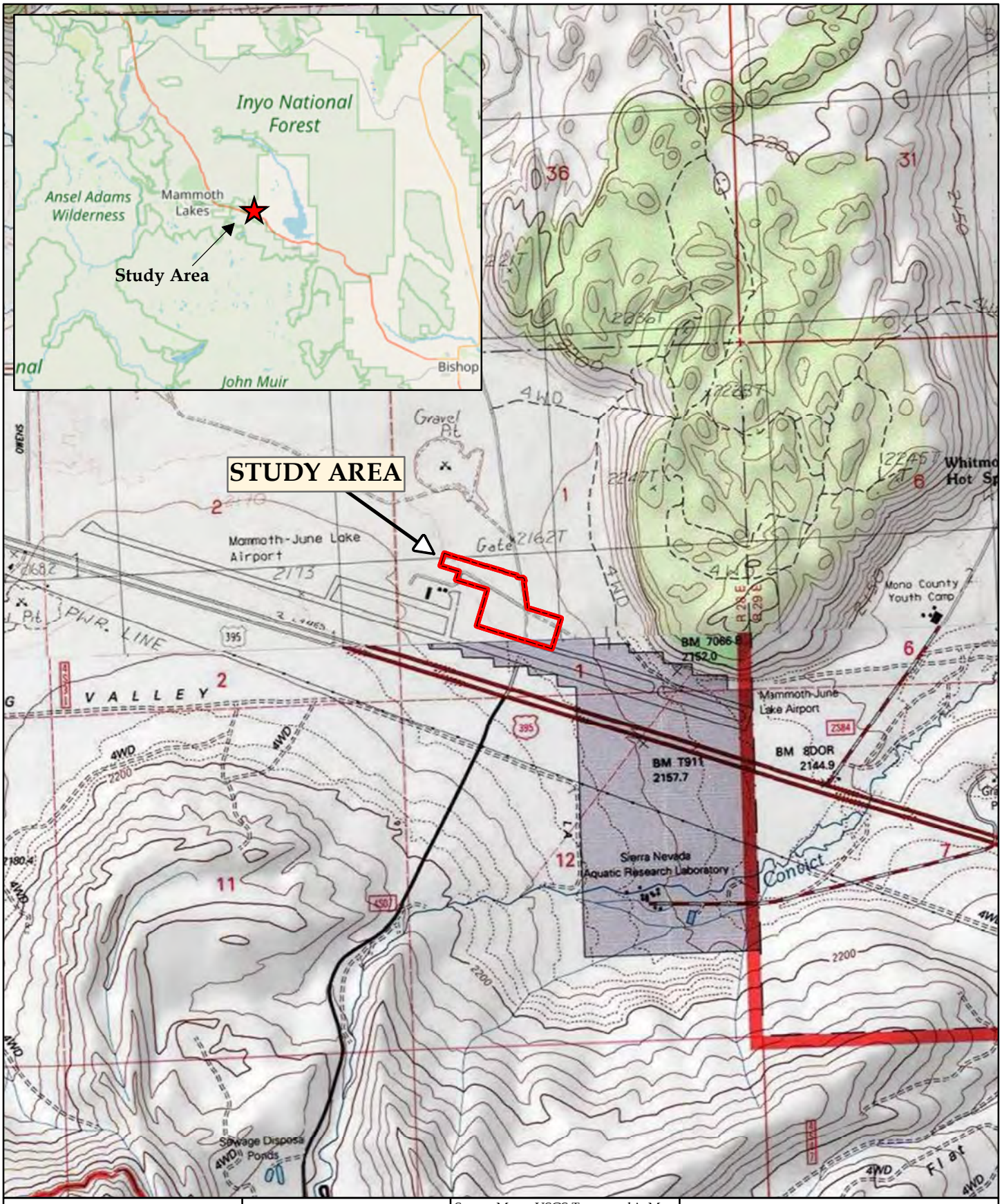
Objectives of Biological Resources Assessment

- Identify and describe the biological communities present in the study area;
- Evaluate and identify if any sensitive habitats or special-status plant and animal species exist or could exist on the site;
- Conduct an analysis to determine if waters of the U.S. are present, and
- Provide conclusions and recommendations.

METHODS

Literature Review

For this analysis, Salix biologists reviewed aerial photographs, USGS maps, engineering and architectural drawings of the proposed Development Plan along with previous biological studies conducted for the area surrounding the airport. Standard publications on life history, habitat requirements, and distribution of regionally occurring plant and



Salix consulting, inc.

N

0 1,000 2,000

Feet

Source Maps: USGS Topographic Map
Whitmore Hot Springs Quad 1:24,000
S1 T4S R28E

Figure 1

SITE AND VICINITY MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Salix consulting, inc.

N

0 125 250

Feet

Study Area
(±24 acres)

Imagery: 9-17-19 Salix Consulting
Overlaid on DigitalGlobe 6/19/2015 Basemap

Figure 2

AERIAL MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

animal species were reviewed as needed for identification and to determine the likelihood of occurrence for special status species.

Special-Status Species Reports

To assist with the determination of which special-status species could occur within or near the study area Salix biologists queried the California Natural Diversity Data Base (CDFW 2019) and the California Native Plant Society Inventory (CNPS 2019) and the USFWS Information for Planning and Consultation (USFWS IPaC 2019) database for reported occurrences of special-status fish, wildlife, and plant species in the region surrounding the study area. The five-quadrangle search area included the Whitmore Hot Springs, Old Mammoth, Convict Lake, Watterson Canyon, and Toms Place USGS quadrangles. In addition, Salix biologists reviewed the California Department of Fish and Wildlife list of Species of Special Concern for the project vicinity.

For the purposes of this report, special-status species are those that fall into one or more of the following categories:

- Listed as endangered or threatened under the federal Endangered Species Act (or candidate species, or formally proposed for listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- Designated a Species of Special Concern by the California Department of Fish and Wildlife, or
- Designated as Ranks 1, 2, or 3 on lists maintained by the California Native Plant Society.

Field Assessments

Field assessments of the study area were conducted by Salix biologists Jeff Glazner and Hunter Gallant on September 16 and 17, 2019 to characterize existing conditions, to assess the potential for sensitive plant and wildlife resources to occur, and to determine if waters of the U.S. were present onsite. During the field assessments, biological communities were mapped and assessed for the potential to support special status species, plants and animals observed were documented, and ground photos were taken. The UAV was utilized to obtain an orthomosaic and oblique aerial photos of the study area.

Plants observed are listed in Appendix A; animals observed are listed in the *Wildlife Occurrence and Use* section below. Plant names are according to The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et. al. 2012) and updated literature that supersedes the Jepson Manual. Standard manuals were used as needed to identify wildlife species observed.

Soils

One soil unit has been mapped within the study area: Watterson family-Torriorthentic Haploxerolls complex, 5 to 15 percent slopes. The components of the complex are described below.

Torriorthentic Haploxerolls (40%)

The Torriorthentic Haploxerolls component makes up 40 percent of the map unit. Slopes are 15 to 30 percent. This component is on alluvial fans, alluvial plains. The parent material consists of alluvium and/or colluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Watterson family (40%)

The Watterson family component makes up 40 percent of the map unit. Slopes are 15 to 30 percent. This component is on alluvial fans, alluvial plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Hydrology

The site is in the Convict Creek HUC12 watershed (180901020207), which is part of the greater Crowley Lake HUC8 watershed (18090102). Surface water, which is minimal to non-discernable, trends toward the northeast corner of the study area before exiting the site. Although there is no significant surface drainage apparent, water appears to continue in a southeasterly direction along the base of Doe Ridge for approximately 1 mile before joining a drainage southeast of the runway. From there, water continues to flow southeast in the drainage for approximately 0.5 miles before draining into Convict Creek. Convict Creek flows southeasterly for approximately 4.5 miles before draining into Crowley Lake.

Biological Communities

One primary biological community is present within the study area– sagebrush scrub, and the site also contains three other distinct areas: pavement, disturbed areas, and structures, as illustrated in Figure 3 and summarized in Table 1. Four aerial site photos are presented in Figures 4a and 4b, and four representative ground photos are presented in Figures 4c and 4d.

Table 1.
Biological Communities Present within the
Mammoth Yosemite Airport Terminal Area Development Plan Study Area

Biological Community	Approximate Acreage
Sagebrush scrub	19
Paved	2.5
Disturbed	2.5
Structures	<0.1
Total	**24**

Sagebrush Scrub

The unpaved areas of the study area are composed of sagebrush scrub, characterized by low, generally sparse shrubs and native and weedy herbaceous species. Common species include sagebrush (*Artemisia tridentata*), antelope bush (*Purshia tridentata*), rubber rabbitbrush (*Ericameria nauseosa*), Parry's rabbitbrush (*E. parryi*), desert peach (*Prunus andersonii*), tumbleweed (*Salsola tragus*), and cheatgrass (*Bromus techtorum*). Vegetative cover over most of this habitat type is less than 50%.

Paved

Approximately 2.5 acres of the study area is paved and lacks vegetation.

Disturbed

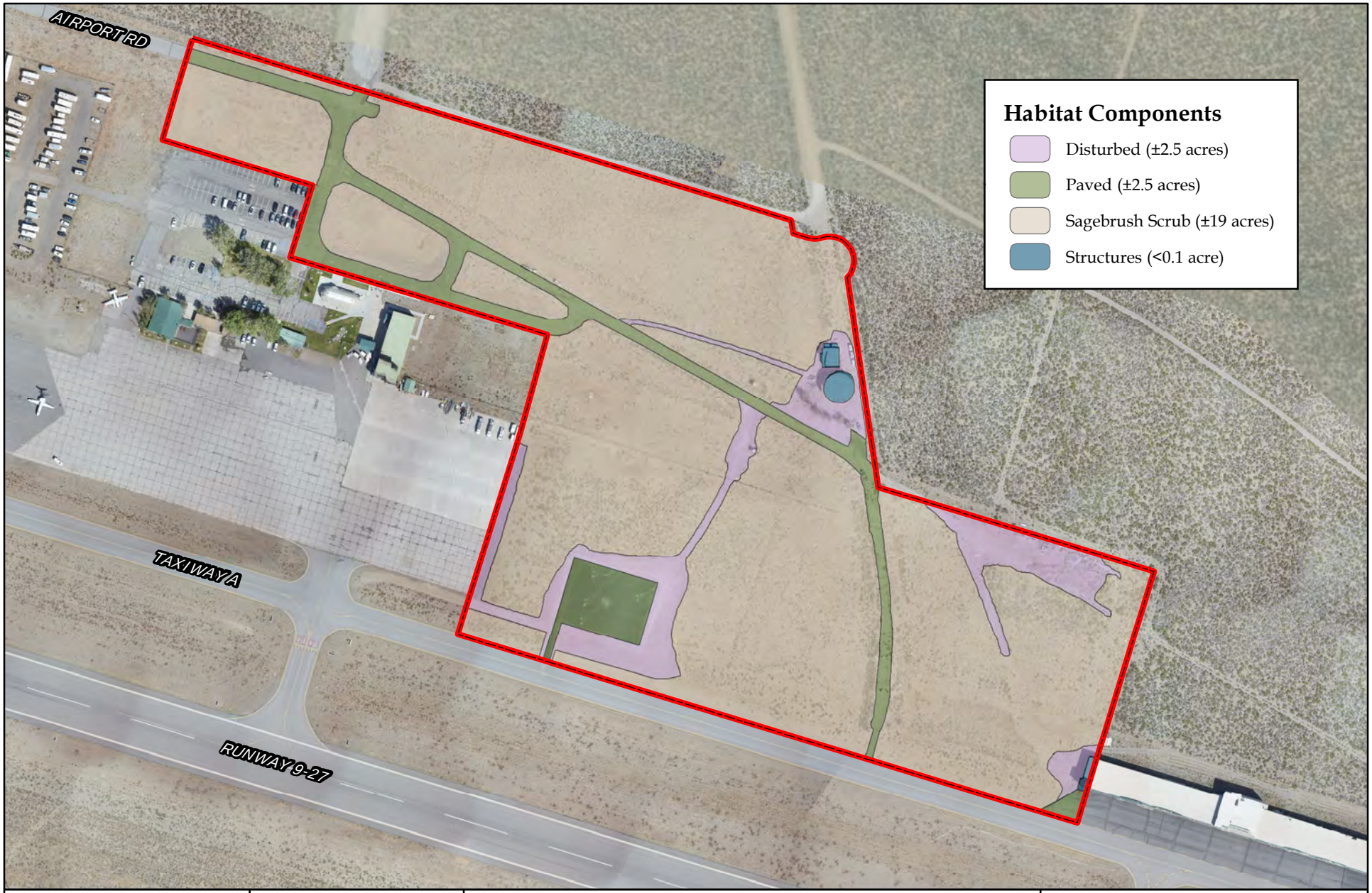
Approximately 2.5 acres of the study area is dirt roads and ruderal surfaces with little or no vegetation.

Structures

A small portion of the study area has existing structures, including a water tank, a maintenance shed and the edge of a hanger. There are planted trees on the runway side of the water tank (mostly aspen- the only trees in the study area).

Potential Waters of the U.S

The study area was assessed for waters of the U.S. This was done by reviewing aerial photography and through a thorough ground assessment. The study area contains no



Salix consulting, inc.

N

0 125 250

Feet

Study Area
(±24 acres)

Imagery: 9-17-19 Salix Consulting
Overlaid on DigitalGlobe 6/19/2015 Basemap

Figure 3

HABITAT MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Looking west over study area. *Photo Date 9-16-19.*

Looking east over study area. *Photo Date 9-16-19.*

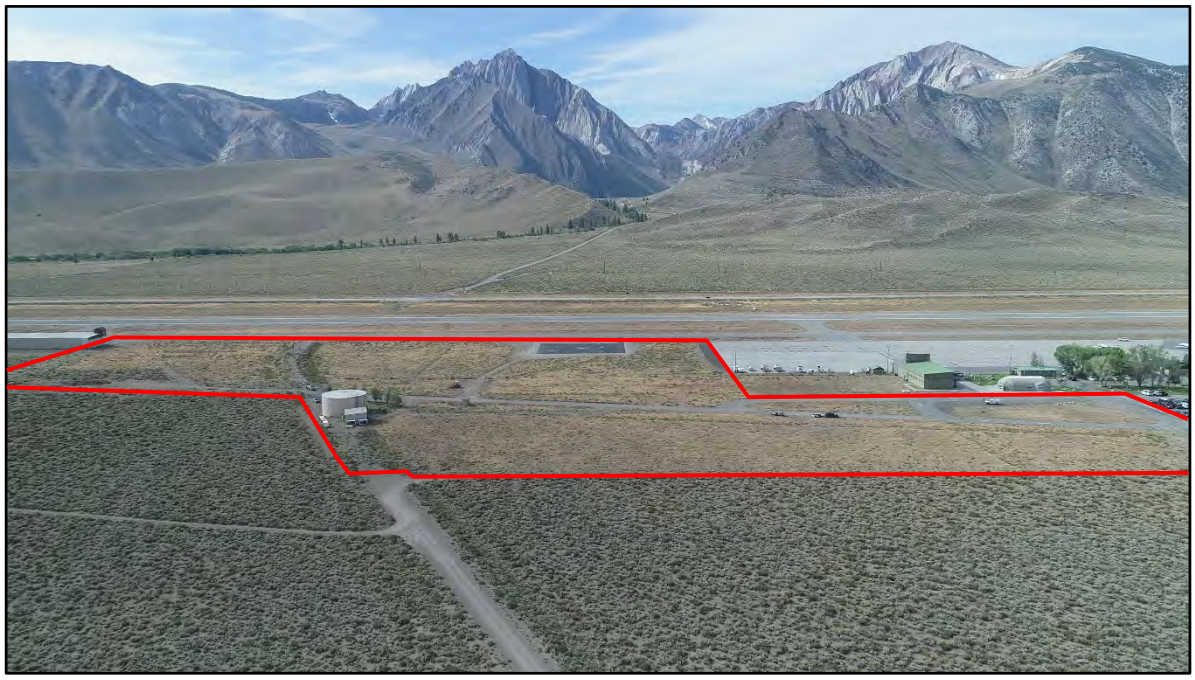
Salix consulting, inc.

Figure 4a

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA



Looking south over study area. *Photo Date 9-16-19.*

Looking north over study area. *Photo Date 9-16-19.*

Salix consulting, inc.

Figure 4b

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Looking east over study area. *Photo Date 9-17-19.*

Looking southeast over eastern portion of study area and proposed AARF building. *Photo Date 9-17-19.*

Salix consulting, inc.

Figure 4c

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Looking west over study area toward existing terminal.
Photo Date 9-17-19.

Looking southeast over southern half of study area.
Photo Date 9-17-19.

Salix consulting, inc.

Figure 4d

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

depressions that hold water for an extended period, groundwater discharge areas, or surface drainages. There are no waters of the U.S. in the study area.

Wildlife Occurrence and Use

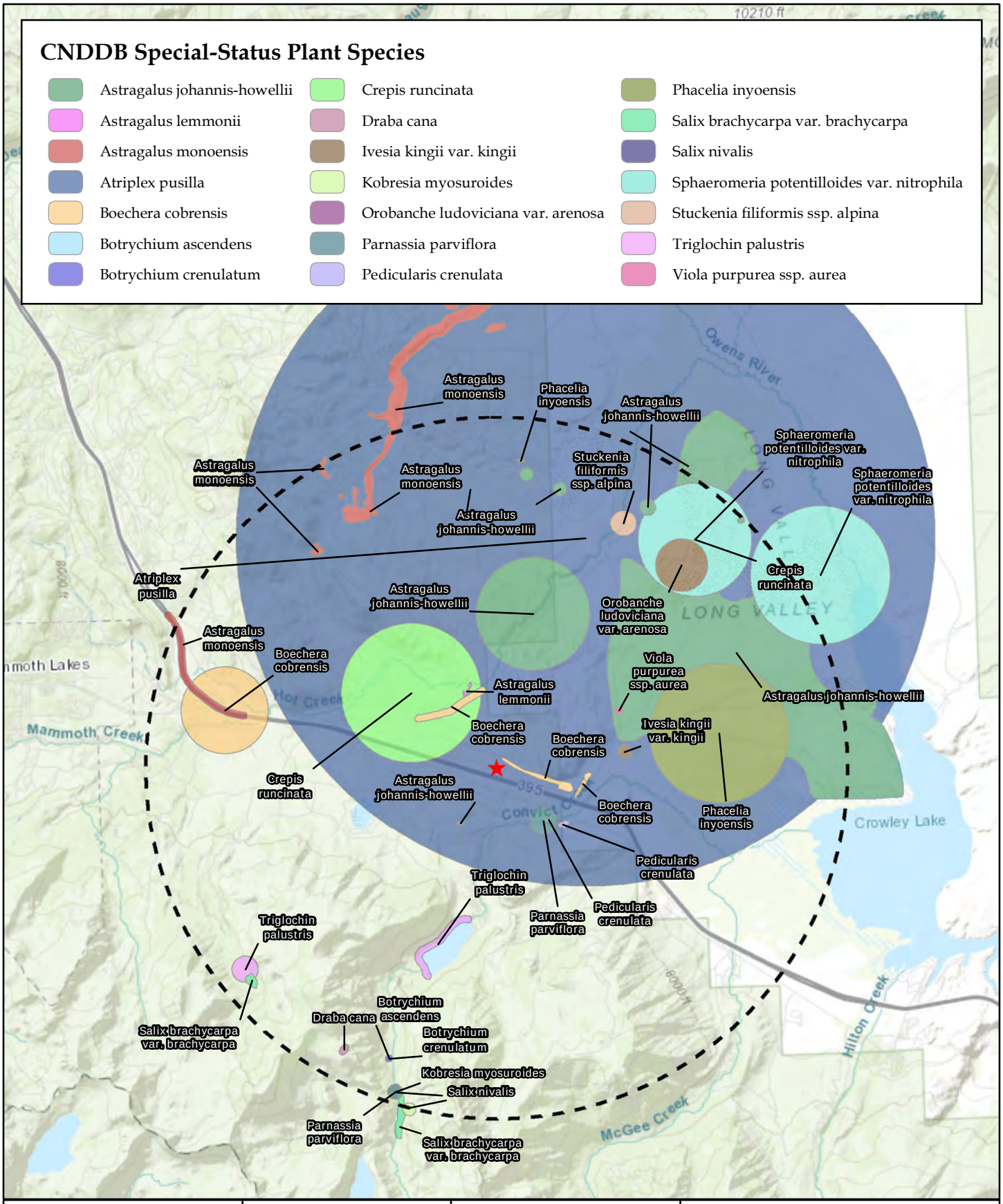
The study area occurs adjacent to the existing airport facility and most of the ground is influenced by airport operations, including infrastructure and vegetation management. Wildlife species occur throughout the area but are generally transient foragers that do not linger. Sign of mule deer (tracks) was present although none were observed during the site visits. Other mammal tracks were observed but not identified. Bird utilization was low during the two-day site visit. Species observed included Brewer's blackbird, northern flicker, spotted towhee, California scrub-Jay, common raven, dark-eyed Junco and house sparrow, red-tailed hawk, turkey vulture, house finch, green-tailed towhee, northern mockingbird and mourning dove. Rodent burrows were observed but other than golden mantled ground squirrel (*Spermophilus lateralis*) few live animals were observed.

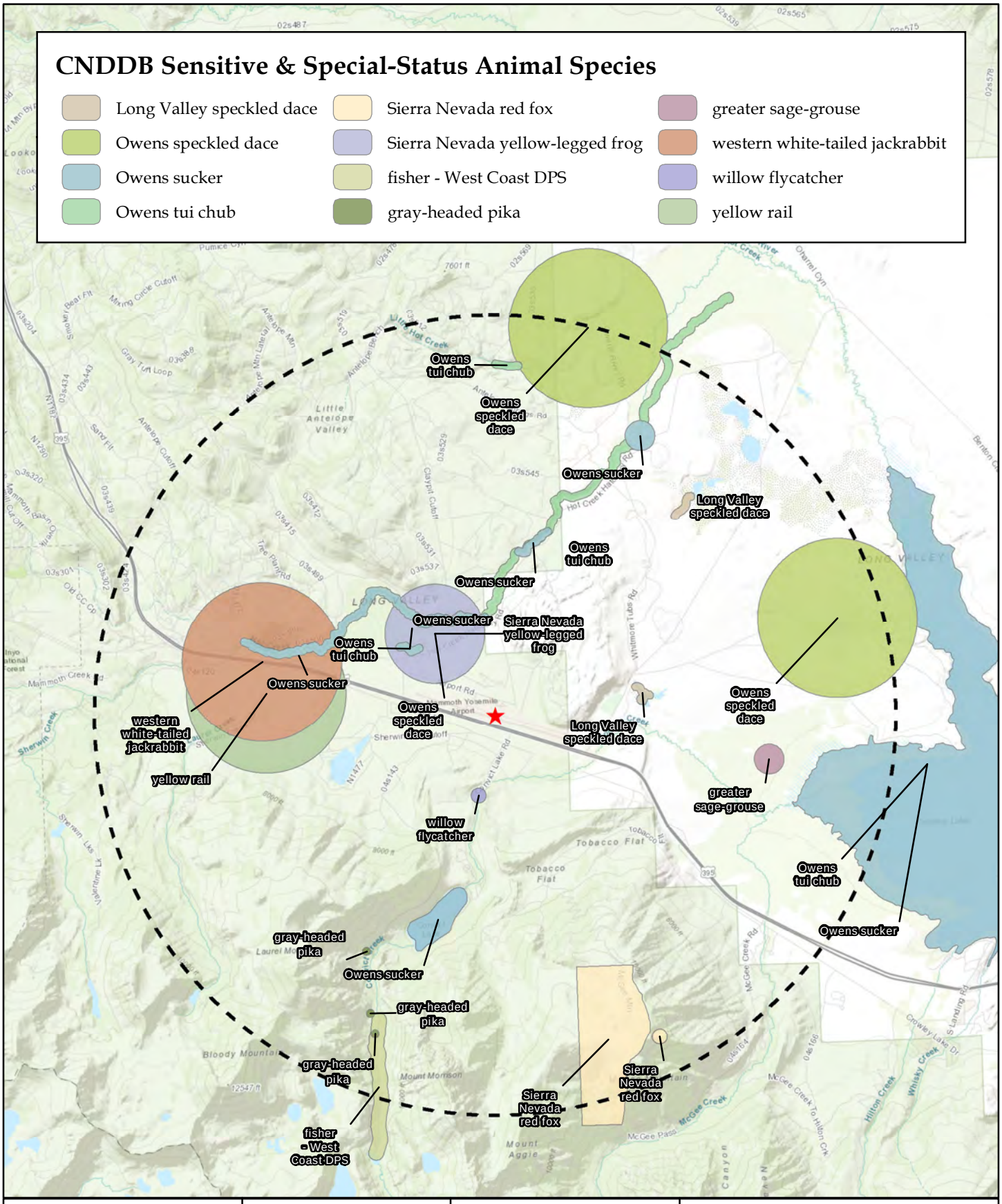
Great Basin mixed scrub and big sagebrush scrub habitat in the area surrounding the airport provide important forage for populations of mule deer (*Odocoileus hemionus*) belonging to the Round Valley herd. The migration route of the Round Mountain Herd passes through an area south of the airport and U.S. Route 395 (US 395) and the airport is part of a "holding area" where deer may linger for up to 6-10 weeks (Caltrans 2016). The mule deer is considered a species of least concern by the International Union for Conservation of Nature (IUCN). However, the Round Valley herd has experienced decline and fluctuation in population numbers (Town of Mammoth Lakes 2002) and the biggest "hot-spot" for deer vehicle collisions along US 395 is located between Benton Crossing Road and Mt. Morrison Rd, just east of the airport (Caltrans 2016).

A Wildlife Hazard Assessment (WHA) prepared for Town of Mammoth Lakes (TOML) in December 2015 recommended that an 8-foot chain link fence be constructed along the Airport boundary to prevent deer and other wildlife from entering the airfield (Advantage Consulting, LLC 2015). The fence has not yet been constructed.

Special-Status Species

To determine potentially-occurring special-status species, the standard databases from the USFWS, CDFW (the CNDDB), and CNPS were queried and reviewed. These searches provided a list of regionally occurring species and were used to determine which species have some potential to occur within or near the study area. Appendix B lists potentially-occurring special-status plants, and Appendix C lists special-status animals compiled from our queries as described above. The field survey and the best professional judgment of Salix biologists were used to further refine the tables in Appendices B and C. Additionally, plant species found on the CNPS List 4 are not considered further in the document. Figure 5a shows the approximate locations of reported occurrences of CNDDB special-status plants within a five-mile radius of the study area, and Figure 5b shows the same for reported occurrences of sensitive and special-status animals


CNDDB Special-Status Plant Species
Astragalus johannis-howellii
Astragalus lemmonii
Astragalus monoensis
Atriplex pusilla
Boechera cobrensis
Botrychium ascendens
Botrychium crenulatum
Crepis runcinata
Draba cana
Ivesia kingii var. kingii
Kobresia myosuroides
Orobanche ludoviciana var. arenosa
Parnassia parviflora
Pedicularis crenulata
Phacelia inyoensis
Salix brachycarpa var. brachycarpa
Salix nivalis
Sphaeromeria potentilloides var. nitrophila
Stuckenia filiformis ssp. alpina
Triglochin palustris
Viola purpurea ssp. aurea
Owens River
LONG VALLEY
Mammoth Creek
Hot Creek
Crowley Lake
Hilton Creek
McGee Creek
Convict
395
10210 ft
8000 ft
6000 ft
Astragalus monoensis
Phacelia inyoensis
Astragalus johannis-howellii
Sphaeromeria potentilloides var. nitrophila
Stuckenia filiformis ssp. alpina
Sphaeromeria potentilloides var. nitrophila
Crepis runcinata
Orobanche ludoviciana var. arenosa
Viola purpurea ssp. aurea
Ivesia kingii var. kingii
Phacelia inyoensis
Pedicularis crenulata
Triglochin palustris
Parnassia parviflora
Pedicularis crenulata
Triglochin palustris
Botrychium ascendens
Draba cana
Botrychium crenulatum
Salix brachycarpa var. brachycarpa
Kobresia myosuroides
Salix nivalis
Parnassia parviflora
Salix brachycarpa var. brachycarpa
Atriplex pusilla
Astragalus monoensis
Boechera cobrensis
Astragalus lemmonii
Boechera cobrensis
Boechera cobrensis
Crepis runcinata
Astragalus johannis-howellii
Astragalus johannis-howellii
Astragalus monoensis
Astragalus johannis-howellii
Astragalus monoensis
Astragalus johannis-howellii
Astragalus johannis-howellii
Salix
consulting, inc.
N
0
5,000
10,000
Feet
5-Mile Radius
Project Site
Figure 5a
CNDDB OCCURRENCES MAP
Mammoth Yosemite Airport
Town of Mammoth Lakes, Mono County, CA



Salix consulting, inc.

N

0 4,400 8,800

Feet

5-Mile Radius

Project Site

Figure 5b

CNDDB OCCURRENCES MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Plants

Of the 42 potentially-occurring plant species identified in the CNDDB query (Appendix B), 21 were identified as occurring within or near a five-mile radius of the study area (Figure 5a).

Thirty-six (36) species were determined to have no potential to occur due to the absence of suitable habitats or substrates. The following 18 species have no potential to occur due to the lack of wet conditions within the study area. Those that are reported to occur within a 5-mile radius of the study area are marked with an asterisk (*).

- Alkali tansy-sage (*Sphaeromeria potentilloides var. nitrophila)**
- Canescent draba (*Draba cana)**
- Tall draba (*Draba praealta)*
- Foxtail thelepody (*Thelypodium integrifolium ssp. complanatum)*
- Bog sandwort (*Minuartia [Sabulina] stricta)*
- Western single-spiked sedge (*Carex scirpoidea ssp. pseudoscirpoidea)*
- Little bulrush (*Trichophorum pumilum*)
- Lemmon's milkvetch (*Astragalus lemmonii)**
- Marsh arrow-grass (*Triglochin palustris)**
- Upswept moonwort (*Botrychium ascendens)**
- Scalloped moonwort (*Botrychium crenulatum)**
- Mingan moonwort (*Botrychium minganense*)
- Scallop-leaved lousewort (*Pedicularis crenulata)**
- Small-flowered grass-of-parnassus (*Parnassia parviflora)**
- Slender-leaved pondweed (*Stuckenia filiformis ssp. alpina*)*
- Alkali ivesia (*Ivesia kingie var. kingii)**
- Short-fruited willow (*Salix brachycarpa var. brachycarpa)**
- Snow willow (*Salix nivalis)**

Eighteen (18) species were determined to have no potential for occurring onsite due to the absence of suitable habitat (pinon/juniper forest, rock outcrops or slopes, pumice flats, or talus slopes) or alkaline substrates. These include the following. Those that are reported to occur within a 5-mile radius of the study area are marked with an asterisk (*).

- Fiddleleaf hawksbeard (*Crepis runcinata)**
- Inyo hulsea (*Hulsea vestita inyoensis)*
- Inyo phacelia (*Phacelia inyoensis)*
- Bodie Hills rock cress (*Boechera bodiensis)*

- Pinyon rockcress (*Boechera dispar)*
- Sweetwater Mountains draba (*Draba incrassata)*
- Spear-fruited draba (*Draba lonchocarpa)*
- Smooth saltbush (*Atriplex pusilla*)*
- Dwarf monolepis (*Micromonolepis pusilla)*
- Seep kobresia (*Kobresia myosuroides)**
- Mono milkvetch (*Astragalus monoensis)**
- Mono Lake lupine (*Lupinus duranii)*
- Hockett Meadows lupine (*Lupinus lepidus var. culbertsonii)*
- Inyo County star-tulip (*Calochortus excavatus)*
- Torrey's blazing star (*Mentzelia torreyi)*
- Fell-fields claytonia (*Claytonia megarhiza)*
- Booth's evening-primrose (*Eremothera boothii ssp. boothii)*
- Scribner's wheatgrass (*Elymus scribneri)*

In summary, 36 special-status plants known from the region surrounding the study area (Appendix C), including 17 species that are known from within a five-mile radius (Figure 5a), require habitats or substrates that do not occur within the study area, were determined to have no potential for occurring onsite, and were eliminated from further consideration.

Six (6) plant species from Appendix B, listed in Table 2 below, were determined to have some potential to occur within the study area and are described below. Four of these species are reported to occur within a 5-mile radius of the study area (Figure 5a) and are marked with an asterisk (*) in Table 2.

Table 2.

Special-Status Plant Species Determined to Have Some Potential to Occur within the Mammoth Yosemite Airport Terminal Area Development Plan Study Area

Species	Status* Federal	State	CNPS	Habitat	Potential for Occurrence Within Study Area**
Naked-stemmed phacelia *Phacelia gymnoclada*	-	-	2B.3	Chenopod scrub, Great Basin scrub, Pinyon and juniper woodland; gravelly or clay.	Unlikely. Marginal habitat present within study area.
Masonic rock cress *Boechera cobrensis**	-	-	2B.3	Great Basin scrub; pinyon/ juniper woodland [sandy].	Possible. Marginal habitat present within study area. Observed within study area in 2003 and 2010.

Species	Status* Federal	State	CNPS	Habitat	Potential for Occurrence Within Study Area**
Long Valley milkvetch *Astragalus johannis-howellii**	-	CR	1B.2	Great Basin scrub (sandy loam).	Unlikely. Marginal habitat present within study area.
Booth's hairy evening-primrose *Eremothera boothii intermedia*	-	-	2B.3	Great Basin scrub (sandy), Pinyon and juniper woodland	Unlikely. Marginal habitat present within study area.
Suksdorf's broom-rape *Orobanche ludoviciana arenosa**	-	-	2B.3	Great Basin scrub	Unlikely. Marginal habitat present within study area.
Golden violet *Viola purpurea aurea**	-	-	2B.2	Great Basin scrub; pinyon/juniper woodland; [sandy].	Unlikely. Marginal habitat present within study area.

*Status Codes:
State
CR California Rare
CNPS
Rank 1 Rare, Threatened, or Endangered in California
Rank 2 R, T, or E in California, more common elsewhere

**Definitions for the Potential to Occur:
Unlikely. Some habitat may occur, but disturbance may restrict/eliminate the possibility of occurrence. Habitat may be very marginal, or study area is outside range of species.

Naked-stemmed phacelia (*Phacelia gymnoclada),* an annual herb of the Hydrophyllaceae family, has no federal or state status, but is ranked 2B.3 by CNPS. It is native to the western Great Basin of the United States, where it can be found in the scrublands of Nevada, Oregon, and the eastern edge of California. Its habitats include chenopod scrub, Great Basin scrub and pinon and juniper woodland. *Phacelia gymnoclada* has a branching, spreading or upright stem up to about 20 centimeters long. Each flower is up to a centimeter long and has a yellow tubular throat and five corolla lobes which are usually lavender in color. *Phacelia gymnoclada* blooms from April thru June, sometimes August.

According to the CNDDB, the nearest recorded occurrence of the species is approximately 7.6 miles north of the study area, near the Owens River in 1979, location a "best guess." Habitat within the study area is marginal, and it was not observed during the September field assessment, although the survey was conducted after the bloom period. It is unlikely that it occurs on the site.

Masonic rock cress (*Boechera cobrensis)* is a perennial herb of the Brassicaceae (mustard) family, and has no federal or state status, but is ranked 2B.3 by CNPS. It is native to the western United States from eastern California to Wyoming, where it is found in sandy habitat, especially sagebrush in Great Basin scrub and pinon and juniper woodland. This is a perennial herb growing several erect, slender stems to heights near half a meter from a branching caudex. The plant forms a narrow clump with a base of narrow, linear, densely hairy leaves up to 5 centimeters long. The top of each stem is occupied by an

inflorescence of small, nodding flowers with dull yellowish sepals and white petals. Masonic rock cress blooms in June and July.

While habitat within the study area is marginal, masonic rock cress has been observed within the study area, on the north side of the airport and the west side of Benton Crossing Road, in 2003 and 2010, according to the CNDDB. It was not observed during the September field assessment, but the survey was conducted after the bloom period, and it is possible that it may occur.

Long Valley milkvetch *Astragalus johannis-howellii** is a perennial herb of the Fabaceae family, native to California. It has no federal status but is listed as Rare by the State; it is ranked 1B.2 by CNPS. It is native to eastern California, including Long Valley in Mono County, and its distribution extends over the border into Nevada. Its habitat is Great Basin scrub. Long valley milkvetch forms loose clumps of very thin, branching stems up to 20 centimeters long. The leaves are a few centimeters long and are made up of many tiny folded oval-shaped leaflets. The inflorescence holds 6 to 12 off-white pale-striped flowers, each a few millimeters long. It blooms from May or June through August.

According to the CNDDB, the nearest reported occurrence of Long Valley milkvetch I approximately one mile southwest of the study area, west of the Sierra Nevada Aquatic Research Laboratory, May 2011. Habitat within the study area is marginal, and it was not observed during the September field assessment, although the survey was conducted after the bloom period. It is unlikely that it occurs on the site.

Booth's hairy evening-primrose *Eremothera boothii intermedia* is an annual herb of the Onagraceae family, native to California. It has no federal or state status but is ranked 2B.3 by CNPS. It is most abundant in arid areas. It has hairy reddish-green stems and mottled foliage. The stem ends in a nodding inflorescence of many small flowers which may be white to red or yellowish, often with darker shades on the external surfaces of the four spoon-shaped petals. It blooms from April to September.

According to the CNDDB, the nearest recorded occurrence of Booth's hairy evening-primrose is approximately 11.3 miles northeast of the study area in the Glass Mountains in 1982. Habitat within the study area is marginal, and it was not observed during the September field assessment, toward the end of the bloom period. It is unlikely that it occurs on the site.

Suksdorf's broom-rape *Orobanche ludoviciana arenosa** is a perennial herb of the Orobanchaceae family, native to California. It is "achlorophyllous," meaning it is partly or entirely non-photosynthetic. It has no federal or state status but is ranked 2B.3 by CNPS. According to CNPS, the species is parasitic on *Ericameria* and *Iva* spp. and occurs in Great Basin scrub habitat. It blooms from June through September or October.

According to the CNDDB, the nearest recorded occurrence of Suksdorf's broom-rape is approximately 3.6 miles northeast of the study area in Long Valley, Little Alkali Lake, Benton Crossing Road north of Highway 395, specific location unknown, in 2002. Habitat within the study area is marginal, and it was not observed during the September field assessment, toward the end of the bloom period. It is unlikely that it occurs on the site.

Golden violet *Viola purpurea aurea**is perennial herb of the Violaceae family, native to California. It has no federal or state status but is ranked 2B.2 by CNPS. Its habitats are Great Basin scrub and pinon/juniper woodland, sandy soils. It is known from scattered occurrences in various types of dry habitat such as the slopes of desert mountains. It grows from a tough taproot and produces a woolly-haired stem up to about 13 centimeters tall. A solitary flower has five yellow petals, the lowest one marked with brown veining and the upper pair tinged with brown or purple on the outer surface. It blooms from April through June.

According to the CNDDB, the nearest recorded occurrence of golden violet is approximately 1.6 miles northeast of the study area along Whitmore Tubs Road, north of Whitmore Hot Springs, "best guess location" in 2011. Habitat within the study area is marginal, and it was not observed during the September field assessment, although the survey was conducted after the bloom period. It is unlikely that it occurs on the site.

Animals

Of the 22 sensitive and special-status animal species identified in the CNDDB and USFWS queries (Appendix C), 12 were identified as occurring within or near the five-mile radius of the study area (Figure 5b).

None of the fish or amphibian species occurring within a 5-mile radius (* below) or identified in the CNDDB and USFWS queries were determined to have any potential for occurring onsite due to the total absence of suitable aquatic habitat. These include:

- Owens speckled dace (*Rhinichthys osculus ssp.2)**
- Long Valley speckled dace (*Rhinichthys osculus ssp. 5)**
- Owens pupfish (*Cyprinodon radiosus)*
- Lahontan cutthroat trout (*Oncorhynchus clarki henshawi)*
- Owens tui chub (*Siphateles bicolor snyderi)**
- Owens sucker (*Catostomus fumeiventris)**
- Yosemite toad (*Anaxyrus canorus)*
- Sierra Nevada yellow-legged frog (*Rana sierrae)**

None of the bird species occurring within a 5-mile radius (* below) or identified in the CNDDB and USFWS queries were determined to have any potential for occurring onsite due to the total absence of suitable nesting habitat. These include:

- Northern goshawk (*Accipiter gentilis)*
- Swainson's hawk (*Buteo swainsoni)*
- Greater sage-grouse (C*entrocercus urophasianus)**
- Yellow rail (*Coturnicops noveboracensis)**
- Great gray owl (*Strix nebulosa)*
- Willow flycatcher (*Empidonax traillii)**

- Bank swallow (*Riparia riparia)*

Six (6) of the seven (7) mammalian species occurring within a 5-mile radius (* below) or identified in the CNDDB and USFWS queries were determined to have no potential for occurring onsite due to the absence of suitable habitats (streams, riparian, forests, rocky terrain). In one case, the study area's proximity to human activity also precluded occurrence (California wolverine). These mammals include:

- Mt. Lyell shrew (*Sorex lyelli)*
- Sierra Nevada mountain beaver (*Aplodontia rufa californica)*
- Sierra Nevada red fox (*Vulpes vulpes necator)**
- Fisher - West Coast DPS (*Pekania pennanti)**
- California wolverine (*Gulo gulo)*
- Sierra Nevada bighorn sheep (*Ovis canadensis sierrae)*

In summary, 21 special-status animals known from the region surrounding the study area (Appendix C), including 12 species that are known from within a five-mile radius (Figure 5b) require habitats that do not occur within the study area, were determined to have no potential for occurring onsite, and were eliminated from further consideration.

One animal species from Appendix C, white-tailed jackrabbit (*Lepus townsendii),* is reported to occur within five miles of the study area and was determined to have some potential (unlikely) to occur within the study area and is discussed below.

In addition, the CNDDB query indicated that the gray-headed pika, which has no federal or state status but is considered a sensitive species, is also reported to occur within five miles of the study area and is discussed below.

Western white-tailed jackrabbit *(Lepus townsendii)* is an uncommon to rare year-round resident of the crest and upper eastern slope of the Sierra Nevada and Cascade Range from the Oregon border south to Tulare and Inyo counties. Populations of the western white-tailed jackrabbit have become significantly fragmented. This primarily nocturnal species prefers open areas with scattered shrubs, such as in sagebrush, subalpine conifer, juniper, and perennial grassland habitats. Seasonal movement from higher to lower elevations during winter months is common. Like other hares, white-tailed jackrabbit takes cover in a shallow depression in dense underbrush. Breeding takes places from February to July, with gestation occurring for 30 to 42 days. Soon after birth, the young forage for themselves, becoming independent at about 3 to 4 weeks. During the spring through fall, the diet consists of grasses and other herbaceous plants. In winter, the diet includes buds, bark, and young twigs (Zeiner et al., 1990).

The CNDDB documents the nearest occurrence of the western white-tailed jackrabbit as a 1955 observation, three miles west of the study area, in Long Valley about 1.2 miles southeast of Casa Diablo Hot Springs. It is unlikely that white-tailed jackrabbit would occur within the Mammoth Airport study area because there is no nearby water and

cover on the site is minimal. The species was not observed during the September survey.

The **greater sage grouse** (*Centrocercus urophasianus*) is an uncommon permanent resident in northeastern California that ranges from the Oregon border to northern Inyo county along the east side of the Cascade and Sierra Nevada mountain ranges. The species prefers a habitat of sagebrush, perennial grassland, or wet meadow interspersed with open areas among shrubs to perform mating courtship displays. Breeding occurs in late winter and early spring, when males from several square miles congregate at established courtship ritual areas (leks) to perform a strutting display for observing females. After breeding, female greater sage grouse nest underneath sagebrush in areas surrounding the lek (Zeiner et al., 1990).

The Bi-State distinct population segment (DPS) of greater sage grouse (which occupies the Mono Basin in Mono, Alpine and Inyo counties) currently has a federal status of proposed threatened and is considered a species of special concern by the California Department of Fish and Wildlife (CDFW). On October 1, 2019, the USFWS announced a 6-month extension of the final determination of whether to list the Bi-State DPS as a threatened species under the Endangered Species Act.

Greater sage-grouse are known to occur in the region surrounding the airport and signs of sage grouse (fecal droppings) were observed north of the airport near Hot Creek Hatchery Road in June 2000 (Town of Mammoth Lakes 2002). The nearest CNDDB documented occurrence of the greater sage-grouse is from 1987, when a large lek was observed approximately 3.5 miles east of the study area in sage desert habitat near Crowley Lake in 1987. Because of the study area's proximity to human and airport activity, there is no suitable habitat for the greater sage-grouse on the site, and the species was not observed during the September survey.

The **gray-headed pika** does not have federal or state status, but it is given a rank of S2S4 by the State, which indicates a range of uncertainty about the status of the species (S2=imperiled to S4=apparently secure). Pika inhabits talus or piles of broken rock fringed by suitable vegetation within generally cool, mesic, and usually montane habitat.

The CNDDB documents several occurrences of pika within a five-mile radius of the site, the nearest being approximately 3.4 miles southwest of the study area, 0.9 mile east northeast of Laurel Mountain, along Convict Creek in light limestone-based debris flow, in 2009. No suitable habitat for pika occurs within the study area, and the species was not observed during the September survey.

RECOMMENDATIONS

Waters of the United States

The study area contains no potential waters of the U.S. and therefore, there are no Clean Water Act permitting requirements.

Streams, Pond, and Riparian Habitat

No streams or riparian areas are present within the study area. Thus, no impacts to the bed, bank, or channel of streams or ponds are anticipated, and no Lake & Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW) would be required.

Special-Status Plants

The study area contains marginal habitats for six special-status plant species that may occur in the region, as listed in Table 2. One of these, Long Valley milkvetch, has no federal status but is listed as Rare by the State. All six plants are ranked 1B or 2B by CNPS. While none were detected during the September survey, the survey was conducted outside the bloom period for most of these species. The Town of Mammoth Lakes may require that special-status plant surveys be conducted during the appropriate time (late spring-early summer) to determine if any of these species are present onsite. Should any special-status plant species be detected within the study area, appropriate mitigation measures shall be developed in coordination with the Town Planning Department.

Special-Status Wildlife

Western white-tailed jackrabbit

The study area provides marginal habitat for the western white-tailed jackrabbit and therefore, additional springtime observation is warranted to determine if it is present in the study area. If this species is detected within the study area, appropriate mitigation measures shall be developed in coordination with the Town Planning Department. The Town may defer to CDFW for consultation.

Nesting Raptors and Migratory Birds

The site does not provide suitable nesting habitat for any common raptors known from the region, nor for other birds protected by the Migratory Bird Treaty Act. Thus, a pre-construction survey would not be necessary.

REFERENCES AND OTHER RESOURCES

Advantage Consulting, LLC. 2015. Mammoth Yosemite Airport Wildlife Hazard Assessment. Hodgson, Ann B. and Exner, Gary, preparers. January 12, 2015

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Department of Fish and Wildlife, California Wildlife Habitat Relationships Program. 2008. Complete List of Amphibians, Reptiles, Birds, and Mammals in California. Sacramento, California.

California Department of Fish and Wildlife, Wildlife and Habitat Data Analysis Branch. 2019. Natural Diversity Data Base Report (CNDDB). Sacramento, California.

California Department of Transportation, District 9 (Caltrans). 2016. Feasibility Study Report for Wildlife Vehicle Collision Reduction in Caltrans District 9. October 2016.

CaliforniaHerps.com. A Guide to the Amphibians and Reptiles of California. Updated 2019. Found online: http://www.california.herps.com

California Native Plant Society. 2019. Inventory of Rare and Endangered Plants. An online database maintained by the Native Plant Society.

Fix, David and Andy Bezener. 2000. Birds of Northern California. Lone Pine Publishing. Renton, Washington.

Jameson, E.W., Jr. and H.J. Peeters. 2004. Mammals of California. University of California Press. Berkeley, California.

Jennings, Mark R. and Marc P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California.

Sibley, D.A. 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf. New York.

Stebbins, R.C. 1985. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Company. Boston, Massachusetts.

Town of Mammoth Lakes. 2002. Final Supplement to Subsequent Environmental Impact Report. Mammoth Yosemite Airport Expansion Project. Mammoth Yosemite Airport. March 2002. Section III. 3.3.

U.S. Fish and Wildlife Service. 2019. IPaC Trust Resources Report generated for the Mammoth Airport study area, Sacramento County.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988. California's Wildlife, Volume I. Amphibians and Reptiles. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a. California's Wildlife, Volume II: Birds. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b. California's Wildlife, Volume III: Mammals. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Appendix A.
Plant Species Observed Within the Mammoth Airport Study Area

Appendix A

Mammoth Yosemite Airport - Plants Observed - September 2019

Angiosperms - Dicots

Asteraceae (Compositae) - Sunflower Family

Achillea millefolium	Common yarrow
Artemisia tridentata subsp. vaseyana	Mountain sagebrush
Ericameria nauseosa	Rubber rabbitbrush
Ericameria parryi var. aspera	Rough rabbitbrush
Erigeron sp.	Fleabane

Boraginaceae - Borage Family

Lappula redowskii var. redowskii	Western stickseed

Brassicaceae (Cruciferae) - Mustard Family

**Descurainia sophia*	Tansy mustard

Chenopodiaceae - Goosefoot Family

**Chenopodium album*	White pigweed
**Salsola tragus*	Russian-thistle

Fabaceae (Leguminosae) - Legume Family

Astragalus sp.	Loco weed
Lupinus sp.	Lupine

Linaceae - Flax Family

Linum lewisii	Prairie flax

Loasaceae - Loasa Family

Mentzelia dispersa	Nevada stickleaf

Montiaceae - Miner's Lettuce Family

Calyptridium monospermum	One-seeded pussypaws

Polemoniaceae - Phlox Family

Eriastrum wilcoxii	Wilcox's woolly-star

Polygonaceae - Buckwheat Family

Chorizanthe sp.	Spineflower
Eriogonum baileyi var. baileyi	Bailey's wild buckwheat
Eriogonum sp.	Wild buckwheat
**Polygonum aviculare*	Common knotweed

Rosaceae - Rose Family

Prunus andersonii	Desert peach
Purshia tridentata	Antelope bitterbrush

Scrophulariaceae - Figwort Family

**Verbascum thapsus*	Woolly mullein

Angiosperms -Monocots

Poaceae (Gramineae) - Grass Family

**Agropyron cristatum subsp. pectinatum*	Crested wheatgrass
**Bromus madritensis*	Foxtail brome

* Indicates a non-native species

**Bromus tectorum*	Cheat grass
Elymus elymoides	Squirreltail
**Elymus repens*	Quackgrass
**Poa pratensis*	Kentucky bluegrass

Appendix B.
Potentially-Occurring Special-Status Plants in the Region of the Mammoth Airport Study Area

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Asteraceae (Compositae)				
Crepis runcinata Fiddleleaf hawksbeard	Fed: - State: - CNPS: Rank 2B.2	May-August	Mojavean desert scrub, Pinyon and juniper woodland; Mesic, alkaline.	None. No suitable habitat present. Study area lacks alkaline soils.
Hulsea vestita inyoensis Inyo hulsea	Fed: - State: - CNPS: Rank 2B.2	April-June	Chenopod scrub, Great Basin scrub, Pinyon and juniper woodland; rocky	None. No suitable habitat present. Study area lacks open gravelly talus slopes in pinyon ununiper woodland.
Sphaeromeria potentilloides nitrophila Alkali tansy-sage	Fed: - State: - CNPS: Rank 2B.2	June-July	Meadows and seeps, Playas; usually alkaline	None. No suitable habitat present. Study area lacks wet conditions. Generally occurs at lower elevations.
Boraginaceae				
Phacelia gymnoclada Naked-stemmed phacelia	Fed: - State: - CNPS: Rank 2B.3	April-June	Chenopod scrub, Great Basin scrub, Pinyon and juniper woodland; gravelly or clay.	Unlikely. Marginal habitat present within study area.
Phacelia inyoensis Inyo phacelia	Fed: - State: - CNPS: Rank 1B.2	April-August	Meadows and seeps (alkaline)	None. No suitable habitat present. Study area lacks alkaline meadows..
Brassicaceae (Cruciferae)				
Boechera bodiensis Bodie Hills rock cress	Fed: - State: - CNPS: Rank 1B.3	June-August	Alpine boulder and rock field, Great Basin scrub, pinyon and juniper woodland.	None. No suitable habitat present. Study area lacks igneous rock outcrops. Study area below range of species.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Boechera cobrensis Masonic rock cress	Fed: - State: - CNPS: Rank 2B.	June-July	Great Basin scrub; pinyon/juniper woodland [sandy].	Possible. Marginal habitat present within study area, but species observed within study area in 2003 and 2010.
Boechera dispar Pinyon rockcress	Fed: - State: - CNPS: Rank 2B.3	March-June	Joshua Tree woodland; Mojavean desert scrub; pinyon/juniper woodland [granitic, gravelly].	None. No suitable habitat present. Study area lacks rocky outcrops.
Draba cana Canescent draba	Fed: - State: - CNPS: Rank 2B.3	July-July	Alpine boulder and rock field, Meadows and seeps, Subalpine coniferous forest; carbonate	None. No suitable habitat present. Study area lacks wet areas and boulder fields.
Draba incrassata Sweetwater Mountains draba	Fed: - State: - CNPS: Rank 1B.3	July-August	Alpine boulder and rock field (rhyolitic talus)	None. No suitable habitat present. Study area lacks alpine barrens and rocky slopes.
Draba lonchocarpa Spear-fruited draba	Fed: - State: - CNPS: Rank 2B.3	June-July	Alpine boulder and rock field (carbonate, scree)	None. No suitable habitat present. Study area lacks calcareous scree.
Draba praealta Tall draba	Fed: - State: - CNPS: Rank 2B.3	July-August	Meadows and seeps (mesic)	None. No suitable habitat present. Study area lacks wet areas or talus.
Thelypodium integrifolium complanatum Foxtail thelepody	Fed: - State: - CNPS: Rank 2B.2	June-October	Great Basin scrub, Meadows and seeps; alkaline or subalkaline, mesic.	None. No suitable habitat present. Study area lacks alkaline soils and wet areas.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Caryophyllaceae				
Minuartia stricta Bog sandwort	Fed: - State: - CNPS: Rank 2B.3	July-September	Alpine boulder and rock field, Alpine dwarf scrub, Meadows and seeps	(Also called Sabulina stricta). None. No suitable habitat present. Study area lacks wet areas.
Chenopodiaceae				
Atriplex pusilla Smooth saltbush	Fed: - State: - CNPS: Rank 2B.1	June-September	Great Basin scrub, Meadows and seeps (hot springs); alkali.	None. No suitable habitat present. Study area lacks alkaline soils and hot springs.
Micromonolepis pusilla Dwarf monolepis	Fed: - State: - CNPS: Rank 2B.3	May-August	Great Basin scrub; alkaline, openings.	None. No suitable habitat present. Study area lacks alkali flats.
Cyperaceae				
Carex scirpoidea pseudoscirpoidea Western single-spiked sedge	Fed: - State: - CNPS: Rank 2B.2	July-September	Alpine boulder and rock field, Meadows and seeps, Subalpine coniferous forest (rocky); mesic, often carbonate	None. No suitable habitat present. Study area lacks wet areas.
Kobresia myosuroides Seep kobresia	Fed: - State: - CNPS: Rank 2B.2	June-August	Alpine boulder and rock field (mesic); meadows and seeps (carbonate); subalpine coniferous forest.	None. No suitable habitat present. Study area lacks rocky seeps.
Trichophorum pumilum Little bulrush	Fed: State: CNPS: Rank 2B.2	August-August	Bogs and fens, Marshes and swamps, Riparian scrub; riverbanks, carbonate.	None. No suitable habitat present. Study area lacks wet areas.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Fabaceae (Leguminosae)				
Astragalus johannis-howellii Long Valley milkvetch	Fed: - State: CR CNPS: Rank 1B.2	June-August	Great Basin scrub (sandy loam).	Unlikely. Marginal habitat present withiin study area.
Astragalus lemmonii Lemmon's milkvetch	Fed: FSS State: - CNPS: Rank 1B.2	May-August	Great Basin scrub (meadows, seeps, marshes, and swamps). 1280 to 2200 meters.	None. No suitable habitat present. Study area lacks wet areas.
Astragalus monoensis Mono milkvetch	Fed: - State: CR CNPS: Rank 1B.2	June-August	Great Basin scrub; upper montane coniferous forest; [pumice flats].	None. No suitable habitat present. Study area lacks open pumice flats.
Lupinus duranii Mono Lake lupine	Fed: - State: - CNPS: Rank 1B.2	May-August	Great Basin scrub, Subalpine coniferous forest, Upper montane coniferous forest; volcanic pumice, gravelly.	None. No suitable habitat present. Study area lacks dry volcanic pumice areas.
Lupinus lepidus culbertsonii Hockett Meadows lupine	Fed: - State: - CNPS: Rank 1B.3	July-August	Meadows and seeps, Upper montane coniferous forest (mesic, rocky)	None. No suitable habitat present. Study area lacks rocky slopes.
Juncaginaceae				
Triglochin palustris Marsh arrow-grass	Fed: - State: - CNPS: Rank 2B.3	July-August	Meadows and seeps, Marshes and swamps (freshwater), Subalpine coniferous forest; mesic.	None. No suitable habitat present. Study area lacks wet areas.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Liliaceae				
Calochortus excavatus Inyo County star-tulip	Fed: - State: - CNPS: Rank 1B.1	April-July	Chenopod scrub; meadows (alkaline).	None. No suitable habitat present. Study area lacks meadows or alkali scrub habitat.
Loasaceae				
Mentzelia torreyi Torrey's blazing star	Fed: - State: - CNPS: Rank 2B.2	June-August	Great Basin scrub, Mojavean desert scrub, Pinyon and juniper woodland; sandy or rocky, alkaline, usually volcanic.	None. No suitable habitat present. Study area lacks alkaline, volcanic substrate.
Montiaceae				
Claytonia megarhiza Fell-fields claytonia	Fed: FSW State: - CNPS: Rank 2B.3	July-August	Alpine boulder or rock; subalpine coniferous forest (rocky).	None. No suitable habitat present. Study area lacks rocky habitat. Site below elevational range of species.
Onagraceae				
Eremothera boothii boothii Booth's evening-primrose	Fed: - State: - CNPS: Rank 2B.3	April-May	Joshua Tree woodland; pinyon/juniper woodland.	None. Study area does not support Joshua tree or pinyon juniper woodland.
Eremothera boothii intermedia Booth's hairy evening-primrose	Fed: - State: - CNPS: Rank 2B.3	May-June	Great Basin scrub (sandy), Pinyon and juniper woodland	Unlikely. Marginal habitat present within study area.
Ophioglossaceae				
Botrychium ascendens Upswept moonwort	Fed: FSS State: - CNPS: Rank 2B.3	July-August	Lower montane coniferous forest [mesic]; meadows and seeps.	None. No suitable habitat present. Study area lacks moist, shaded areas.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Botrychium crenulatum Scalloped moonwort	Fed: FSS State: - CNPS: Rank 2B.2	June-July	Lower montane coniferous forest; bogs and fens; meadows; marshes and swamps (freshwater).	None. No suitable habitat present. Study area lacks wet areas.
Botrychium minganense Mingan moonwort	Fed: FSS State: - CNPS: Rank 2B.2	July-September	Upper and lower montane coniferous forest (mesic); bogs and fens.	None. No suitable habitat present. Study area lacks wet areas.
Orobanchaceae				
Orobanche ludoviciana arenosa Suksdorf's broom-rape	Fed: - State: - CNPS: Rank 2B.3	June-October	Great Basin scrub	Unlikely. Marginal habitat present within study area.
Pedicularis crenulata Scallop-leaved lousewort	Fed: - State: - CNPS: Rank 2B.2	June-July	Meadows and seeps (mesic)	None. No suitable habitat present. Study area lacks wet areas.
Parnassiaceae				
Parnassia parviflora Small-flowered grass-of-parnassus	Fed: - State: - CNPS: Rank 2B.2	August-September	Meadows and seeps; mesic.	None. No suitable habitat present. Study area lacks rocky seeps.
Poaceae (Gramineae)				
Elymus scribneri Scribner's wheatgrass	Fed: - State: - CNPS: Rank 2B.3	July-August	Alpine boulder and rock field	None. No suitable habitat present. Study area lacks rocky areas and is located below elevational range of species.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
Potamogetonaceae				
Stuckenia filiformis alpina Slender-leaved pondweed	Fed: FSW State: - CNPS: Rank 2B.2	May-July	Marshes and swamps (assorted shallow freshwter).	None. No suitable habitat present. Study area lacks wet areas.
Rosaceae				
Ivesia kingii kingii Alkali ivesia	Fed: - State: - CNPS: Rank 2B.2	May-August	Great Basin scrub, Meadows and seeps, Playas; mesic, alkaline, clay.	None. No suitable habitat present. Study area lacks moist alkaline clay.
Salicaceae				
Salix brachycarpa brachycarpa Short-fruited willow	Fed: - State: - CNPS: Rank 2B.3	June-July	Alpine dwarf scrub, Meadows and seeps, Subalpine coniferous forest; carbonate.	None. No suitable habitat present. Study area lacks wet areas.
Salix nivalis Snow willow	Fed: - State: - CNPS: Rank 2B.3	July-August	Alpine dwarf scrub	None. No suitable habitat present. Study area lacks wet areas and is located below the elevational range of species.
Violaceae				
Viola purpurea aurea Golden violet	Fed: - State: - CNPS: Rank 2B.2	April-June	Great Basin scrub; pinyon/juniper woodland; [sandy].	Unlikely. Marginal habitat present within study area.

Appendix B

Mammoth Airport - Potentially-occurring Special-status Plants

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site

***Status**

Federal:
FE - Federal Endangered
FT - Federal Threatened
FPE - Federal Proposed Endangered
FPT - Federal Proposed Threatened
FC - Federal Candidate
FSS - Forest Service Sensitive
FSW - Forest Service Watchlist

State:
CE - California Endangered
CT - California Threatened
CR - California Rare
CSC - California Species of Special Concern

CNPS (California Native Plant Society - List.RED Code):
Rank 1A - Extinct
Rank 1B - Plants rare, threatened, or endangered in California and elsewhere
Rank 2A- Plants extinct in California, but more common elsewhere
Rank 2B - Plants rare, threatened, or endangered in California, more common elsewhere
Rank 3 - Plants about which more information is needed, a review list
Rank 4 - Plants of limited distribution, a watch list
RED Code
1 - Seriously endangered (>80% of occurrences threatened)
2 - Fairly endangered (20 to 80% of occurrences threatened)
3 - Not very endangered (<20% of occurrences threatened)

Appendix C.
Potentially-Occurring Special-Status Animals in the Region of the Mammoth Airport Study Area

Appendix C

Mammoth Airport - Potentially-occurring Special-status Animals

	Status*	Habitat	Probability on Project Site
Fish			
Owens speckled dace *Rhinichthys osculus ssp.2*	Fed: - State: - Other: CSC	Known to occupy a variety of habitats ranging from small coldwater streams and hot-spring systems, although they are rarely found in water exceeding 29° C. They also have been found in irrigation ditches near Bishop	None. No suitable aquatic habiat present within study area.
Long Valley speckled dace *Rhinichthys osculus ssp 5*	Fed: - State: - Other: CSC	The entire native range of this dace lies within the 700,000 year-old Long Valley volcanic caldera, just east of Mammoth Lakes. The sole remaining population within the native range is in Whitmore Hot Springs.	None. No suitable aquatic habiat present within study area.
Owens pupfish *Cyprinodon radiosus*	Fed: FE State: CE Other: CFP	Spring pools, sloughs, irrigation ditches, swamps, and flooded pastures in the Owens Valley from Fish Slough in Mono County to Lone Pine in Inyo County. Currently confined to five populations in the Owens Valley.	None. No suitable aquatic habiat present within study area.
Lahontan cutthroat trout *Oncorhynchus clarki henshawi*	Fed: FT State: - Other: -	Historically found in all cold waters of the Lahontan Basin, including Independence Lake.	None. No suitable aquatic habiat present within study area.
Owens tui chub *Siphateles bicolor snyderi*	Fed: FE State: CE Other:	Three existing natural populations: at the Owens River Gorge, at source springs of CDFW Hot Creek Hatchery, and a pond and ditches at Cabin Bar Ranch near Owens Dry Lake. Other populations have been established with landowners in the region.	None. No suitable aquatic habiat present within study area.
Owens sucker *Catostomus fumeiventris*	Fed: - State: - Other: CSC	Lower Owens River, lower Rock Creek and lower Hot Creek, in sections with long runs and few riffles. Adults can thrive in lakes, reservoirs, but presumably need gravelly riffles in tributary streams for spawning.	None. No suitable aquatic habiat present within study area.
Amphibians			
Yosemite toad *Anaxyrus canorus*	Fed: FC State: CSC Other: *	Endemic to California. Alpine County south to Fresno County at high elevations in the Sierra Nevada mountains. Inhabits wet mountain meadows and the borders of forests. 4,800 - 12,000 ft.	None. No suitable aquatic habiat present within study area.

Appendix C

Mammoth Airport - Potentially-occurring Special-status Animals

	Status*	Habitat	Probability on Project Site
Sierra Nevada yellow-legged frog *Rana sierrae*	Fed: FE State: CT Other: SSC	Associated with streams, lakes, and ponds in montane riparian, lodgepole pine, subalpine conifer and wet meadow habitats. Occurs in the northern and central portions of the Sierra Nevada at elevations above 4,500 feet. Always near water.	None. No suitable aquatic habiat present within study area.
Birds			
Northern goshawk *Accipiter gentilis*	Fed: - State: SSC Other: *	Dense, mature coniferous forests, most typically dense fir stands in the Sierra Nevada mountains.	None. No suitable habitat (trees/nest sites) present within study area.
Swainson's hawk *Buteo swainsoni*	Fed: - State: CT Other: *	Breeds in open areas with scattered trees; prefers riparian and sparse oak woodland habitats. Requires nearby grasslands, grain fields, or alfalfa for foraging. Rare breeding species in Central Valley.	None. No suitable habitat (trees) present within study area.
Greater sage-grouse *Centrocercus urophasianus*	Fed: - State: SSC Other:	Sagebrush plains; foothills and mountain slopes where sagebrush grows. Open plains, high valleys, rocky mesas, mountainsides, but only in vicinity of sagebrush. Nesting habitat includes some low, wet areas for insect foraging by young.	None. Sagebrush habitat within study area periodically disturbed (by mowing), and airport generates regular human disturbance. Suitable, preferred habitat present beyond airport boundary.
Yellow rail *Coturnicops noveboracensis*	Fed: - State: CSC Other: *	Highly secretive marsh bird. Grassy marshes, meadows. In summer, favors large wet meadows or shallow marshes dominated by sedges and grasses. Typically in fresh or brackish marsh. Winters mostly in coastal salt marsh.	None. No suitable (wet) habitat present within study area.
Great gray owl *Strix nebulosa*	Fed: - State: CE Other: *	Sierra Nevada in mature mixed conifer and red fir forests, adjacent to montane meadows within forested habitat. No regular seasonal migration; however, elevational migration with food availability may occur. Nests in broken top snag or mature fir.	None. No suitable habitat (trees/nest sites) present within study area.
Willow flycatcher *Empidonax traillii*	Fed: - State: CE Other: *	Uncommon summer resident in upper elevation montane riparian and wet meadow areas, usually with a thick growth of shrubby willow.	None. No suitable (riparian) habitat present within study area.
Bank swallow *Riparia riparia*	Fed: - State: CT Other: *	Colonial nester near riparian and oher lowland habitats. Requires vertical banks or cliffs with fine-textured, sandy soils near streams, rivers, and lakes.	None. No suitable (cut banks, cliffs) habitat present within study area.

Appendix C

Mammoth Airport - Potentially-occurring Special-status Animals

	Status*	Habitat	Probability on Project Site
Mammals			
Mt. Lyell shrew *Sorex lyelli*	Fed: State: CSC Other:	Endemic to a small area of the Sierra Nevada in California in Fresno, Mariposa, Mono, and Tuolumne counties between 6,890 to 11,910 ft. Typically found in sub-alpine riparian areas near fast-running streams.	None. Study area lacks streams and riparian habitat. Study area occurs at lower elevational range of species.
White-tailed jackrabbit *Lepus townsendii*	Fed: - State: SSC Other: -	Sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland habitats. Also found in low sagebrush, wet meadow, and early successional stages of conifer habitats. Prefers open areas with scattered shrubs.	Unlikely. Study area lacks nearby water, and cover is minimal.
Sierra Nevada mountain beaver *Aplodontia rufa californica*	Fed: - State: SSC Other: -	Dense decidious trees and shrubs in riparian habitat with an abundant source of water.	None. No suitable riparian habitat or waters
Sierra Nevada red fox *Vulpes vulpes necator*	Fed: - State: CT Other: *	Occurs in conifer forests and rugged alpine landscape of the Sierra Nevada and Cascade ranges between 4,000 feet and 12,000 feet, most often above 7,000 feet.	None. No suitable forested habitat present within study area.
Fisher - West Coast DPS *Pekania pennanti*	Fed: - State: CT Other: SSC	Occurs in intermediate to large-tree stage coniferous forests and riparian woodlands with a high percent level of canopy closure. .	None. No suitable forested habitat present within study area.
California wolverine *Gulo gulo*	Fed: FPT State: CT Other: CFP	Habitat generally consists of open terrain above the timberline, but has been observed at 1500 feet. Prefer areas with low human disturbance. Use caves, hollows in cliffs, logs, rock outcrops, and burrows for cover, generally in denser forest stages.	None. No suitable habitat. Study area lacks cover and is adjacent to human activity.
Sierra Nevada bighorn sheep *Ovis canadensis sierrae*	Fed: FE State: CE Other:	Typical terrain is rough, rocky and steep; also encompasses alpine meadows, summit plateaus, and hanging meadows fed by springs within escape terrain. Summer range is 10,000-14,000 ft. Winter range typically 5,000-9,000 ft.	None. No rocky terrain present within study area.

Appendix C

Mammoth Airport - Potentially-occurring Special-status Animals

	Status*	Habitat	Probability on Project Site

***Status**

Federal:	State:	Other:
FE - Federal Endangered	CE - California Endangered	Some species have protection under the other designations, such as the California Department of Forestry Sensitive Species, Bureau of Land Management Sensitive Species, U.S.D.A. Forest Service Sensitive Species, and the Migratory Bird Treaty Act. Raptors and their nests are protected by provisions of the California Fish and Game Code. Certain areas, such as wintering areas of the monarch butterfly, may be protected by policies of the California Department of Fish and Game.
FT - Federal Threatened	CT - California Threatened	
FPE - Federal Proposed Endangered	CR - California Rare	
FPT - Federal Proposed Threatened	CC - California Candidate	
FC - Federal Candidate	CFP - California Fully Protected	
FPD - Federal Proposed for Delisting	CSC - California Species of Special Concern	WL - CDFG Watch List

BIOLOGICAL ASSESSMENT FOR THE MAMMOTH YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PROJECT
TOWN OF MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

Prepared for:

Wallace Environmental Consulting
P.O. Box 266
Courtland, CA 95615

Prepared by:

Salix consulting, inc.

11601 Blocker Drive, Ste. 100
Auburn, California 95603

Revised April 2021

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICIES

BIOLOGICAL ASSESSMENT FOR THE MAMMOTH YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PROJECT TOWN OF MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

1.0 INTRODUCTION

The Proposed Action subject to the Endangered Species Act (ESA) consultation consists of the implementation of the Terminal Area Development Project (TADP) within Mammoth Yosemite Airport property (airport property), located seven miles east of the Town of Mammoth Lakes in Mono County, California (Figure 1). The purpose of the action is to construct the various terminal area improvements recommended in the TADP.

The Action Area for the purposes of this BA consists of areas to be affected directly or indirectly by the proposed Terminal Area Development Project at Mammoth Yosemite Airport (Figure 2).

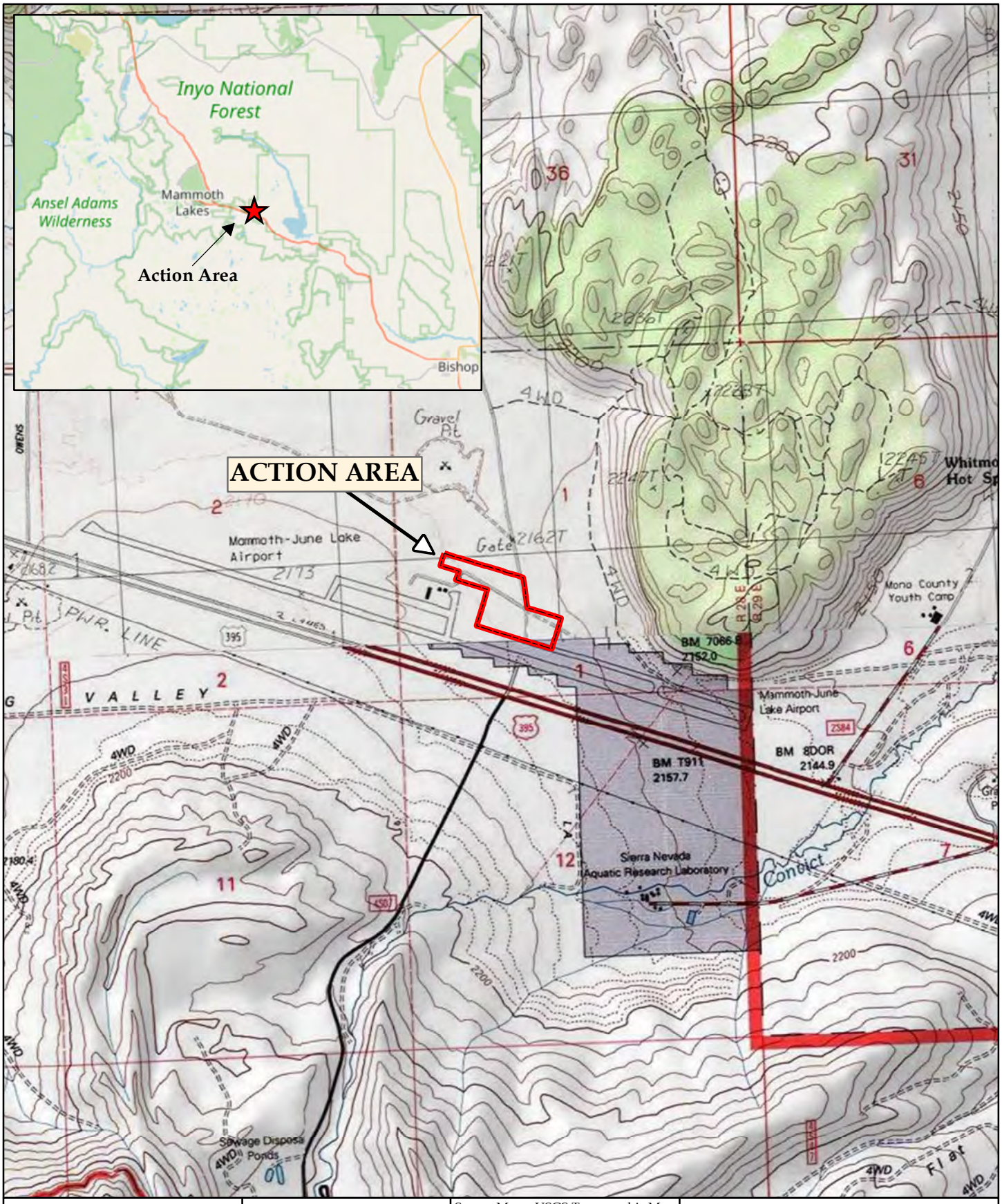
The purpose of this Biological Assessment (BA) is to review the proposed Terminal Area Development project at the Mammoth Yosemite Airport in sufficient detail to determine whether and, if so, to what extent, the Proposed Action (refer to Section 3.0) may affect federally listed threatened or endangered species, or species proposed for federal listing. This document is prepared in accordance with legal requirements set forth under Section 7 of the federal Endangered Species Act (ESA; 16 U.S.C. 1536(c)) and follows standards established by the National Environmental Policy Act (NEPA) and ESA guidance.

2.0 DESCRIPTION OF THE PROPOSED PROJECT

2.1 Description of Proposed Project

The proposed project involves construction of the various terminal area improvements recommended in the TADP. The relative location of the proposed facilities is shown on Figure 3. Specifically, the project proposes construction of:

- New passenger terminal building,
- Aircraft parking apron,
- Aircraft de-icing facilities,
- Connecting taxi lanes,
- Automobile parking lots,
- Eight-bay maintenance building, and
- Supporting infrastructure, including access and service roads, and utilities including wastewater treatment facility and disposal field, potable water system, electrical service, and telecommunications.



Salix consulting, inc.

N

0 1,000 2,000

Feet

Source Maps: USGS Topographic Map
Whitmore Hot Springs Quad 1:24,000
S1 T4S R28E

Figure 1

SITE AND VICINITY MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Salix consulting, inc.

N

0 125 250

Feet

Action Area
(±23.6 acres)

Imagery: 9-17-19 Salix Consulting
Overlaid on DigitalGlobe 6/19/2015 Basemap

Figure 2

AERIAL MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

The approximately 38,688 square foot passenger terminal would devote most of its area to commercial airline services. Other services to be provided include car rental services, restaurants and retail uses, ground transportation, and airport administration, maintenance, mechanical and other support facilities. Three passenger arrival/ departure gates will meet planning criteria in Federal Aviation Administration (FAA) Advisory Circular 150-5360-13A, *Airport Terminal Planning*. The building is designed to be less than 35 feet in height and will include telecommunication, electrical, fire suppression, heating and cooling, and water and wastewater systems.

The proposed 130,500 square foot, 16-inch-thick concrete aircraft parking apron will accommodate three Q400 aircraft or three CRJ700 aircraft in a taxi-in/taxi-out type operation, or three B 737 aircraft in a taxi-in/pushout type operation.

A new, separate 16-inch-thick concrete de-icing apron would be located adjacent to the aircraft parking apron. Storm water and deicing fluid from the apron would be captured at a central drain inlet; storm water would be routed to an on-site disposal area, while de-icing fluid would be directed to a central holding tank for disposal to a licensed disposal facility.

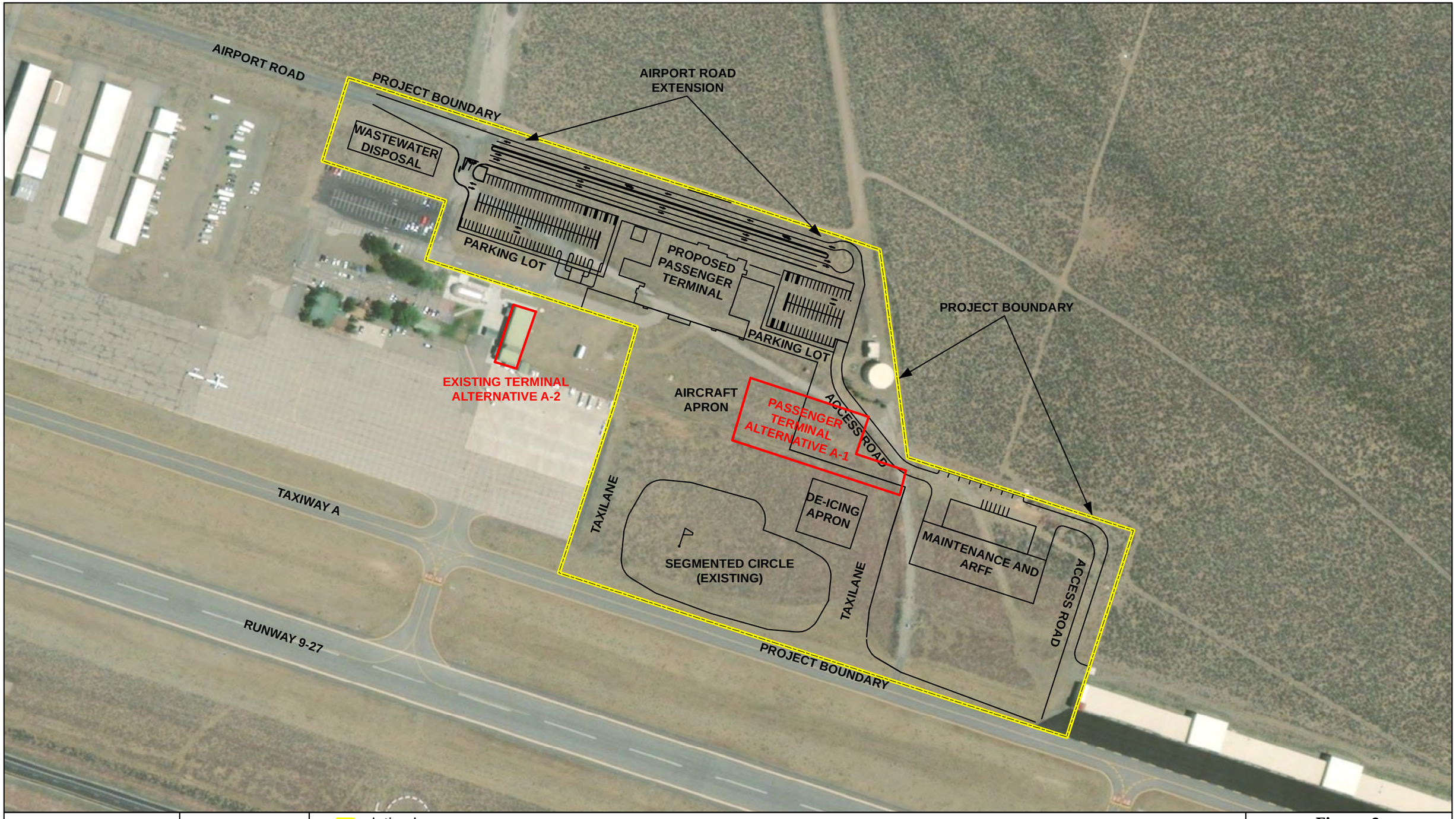
Two new asphalt concrete connecting taxi lanes will connect the terminal aircraft apron and de-icing aprons to existing Taxiway A.

The project includes two new automobile parking areas with a combined capacity of 130 spaces, located south of the new terminal.

The project will include a four-lane, median-divided extension of Airport Road from its existing terminus to a cul-de-sac at the new terminal. A 20-foot concrete sidewalk would line the road along the terminal frontage, and parallel parking would be provided for passenger loading and unloading. A new service road will be constructed to the new maintenance facility.

A new 8,600 square foot, 8-bay maintenance building would be constructed to the east of the de-icing facility, which would include provide housing for Aircraft Rescue and Fire Fighting (ARFF)/snow removal equipment. The building would include a new access road connecting it with Taxiway A.

Project-related infrastructure improvements would include a package sewage treatment plant, associated sanitary sewer lines and a treated effluent disposal field. Potable water would be supplied by existing on-site wells and storage, distributed to proposed facilities by new water lines. Electricity would be provided by Southern California Edison from existing facilities at the Airport as would telecommunication services, which would be provided by Verizon. Security will be provided in the terminal building as necessary, including alarmed doors and security cameras. In the new terminal area, security fencing will be installed and/or relocated to separate the airport operations area from the non-secure civilian use area.



Salix consulting, inc.

N

0 100 200

Feet

Action Area
(±23.6 acres)

Imagery: 6/19/2015 DigitalGlobe

Figure 3

PROPOSED PROJECT COMPONENTS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

2.2 Location of Project

The ±24 -acre Mammoth Yosemite Airport Terminal Area Development Project Action Area is located within Airport property, which located seven miles east of the Town of Mammoth Lakes in Mono County, California. The airport is owned by the Town of Mammoth Lakes and is located within the city limits. It is bounded on the south and southwest by U.S. Highway 395, on the west by Hot Creek Hatchery Road, on the north by Airport Road, and on the east by Benton Crossing Road. The approximate coordinates for the center of the study area are: 37° 37′ 35.13″ N and 118° 50′ 23.59″ W. The Action Area is situated within Section 1 Township 4S Range 28E of the Whitmore Hot Springs, California 7.5-minute USGS topographic quadrangle (Figure 1).

Mammoth Yosemite Airport consists of approximately 246 acres located in the Long Valley caldera along the eastern edge of the central Sierra Nevada mountain range. The airport, which is surrounded by the Inyo National forest to the west, north and south, is situated approximately 3.5 miles west of Crowley Lake and approximately two miles north of Convict Lake near the Whitmore Hot Springs. U.S. Highway 395 is located along the entire south side of the airport, and Doe Ridge is located on the northeast side of the airport (Figure 2). The site is relatively flat, with elevations ranging from approximately 7119 feet along the northwestern edge to approximately 7093 along the southeastern edge.

The Proposed Action will occur entirely within an Action Area of approximately 24 acres, located in the eastern portion of the airport property (Figure 2).

2.3 Activities and methods that comprise the whole project

It is anticipated that the project will involve several stages, including demolition, grading, drainage, utility relocation, and eventual construction of new facilities.

Demolition of about 600 linear feet of asphaltic pavement will occur in the terminal area and may involve the use of an excavator and grinder equipment to pulverize the existing pavement material.

Earthwork in the entirety of the Action Area will involve the use of excavators, dozers, scrapers, graders, rollers, water trucks, haul trucks, and other similar equipment to grade the site, slope aprons for proper drainage, install underground utilities, install pavement, and construct new facilities.

The proposed project will increase the overall impervious drainage area, driven by new buildings and aprons, parking, and access roads. Surface drainage will occur away from the hangar/terminal area to the northeast, exit the site, and continue in a southeasterly direction.

Figure 3 shows the locations of the various components of the Proposed Action. It is estimated that approximately 23.8 acres will be disturbed in association with the project.

2.4 Timeframe and Duration of Proposed project

No date has been set for initiation of project construction. It is anticipated that construction will proceed as funding becomes available.

2.5 Conservation Measures

The following general conservation measures will be implemented as part of the Proposed Action:

- Prior to implementation of the proposed project, the Town of Mammoth Lakes will prepare and implement a detailed erosion control plan that incorporates Best Management Practices (BMPs) including dust-control measures, erosion reduction and sediment control, and restricted equipment fueling and maintenance practices. The plan will also require revegetation of any disturbed areas, as necessary, and provisions for erosion control in the event of non-seasonal or early seasonal rainfall during construction.
- Construction activities shall comply with state National Pollutant Discharge Elimination System permit requirements. Erosion will be avoided by use of best management practices during construction and by directing surface water runoff from paved surfaces into the Airport drainage system.
- All grading activities will occur during the non-rainy season (May to October).
- Rainy season erosion control measures shall be in place before October 1 of each year.
- To prevent erosion and sedimentation in drainage areas, silt fence, fiber rolls, or a combination of both, will be placed along the edge of the grading limits immediately adjacent to those areas to contain sediment runoff.
- Bright orange construction fencing will be installed along the perimeter (outer edge) of the construction area, to clearly delineate the limits of contractor access.
- During construction associated with the proposed action, the contractor will ensure that construction equipment and vehicles operated in the action area are checked and maintained daily to prevent leaks of fuels, lubricants or other fluids. The biological monitor will make periodic checks to ensure that adequate vehicle and equipment maintenance is being implemented as required.
- Contractors will access the site from the existing Airport Road.
- All spoils will be removed to the nearest landfill accepting construction waste. When not in use, contractor equipment will be staged within the work limits, or in the established staging area.
- Following completion of construction, all disturbed areas will be smooth-graded and reseeded. Standard erosion control measures will remain in place until reseeded areas are successfully revegetated. An appropriate seed mixture using only native species will be used for all reseeding activities onsite.

3.0 ACTION AREA

The Action Area for the purposes of this BA consists of areas to be affected directly by the proposed Terminal Area Development Project at Mammoth Yosemite Airport (Figure 2). Areas to be directly affected by the proposed project are shown in Figure 3.

3.1 Environmental Baseline

This section discusses the environmental setting of the Action Area and is based on the findings of a biological survey conducted by Jeff Glazner, Principal Biologist of Salix Consulting, in September 2019, the *Mammoth Yosemite Airport United Air Service Final EA* (URS 2010), the *Biological Assessment: Unincorporated Communities of Mono County DRAFT* (Paulus 2014), the *Mono County Master Biological Assessment* (Mono County CDD Planning Department Staff 2010), the *Biological Assessment for the Mammoth Yosemite Airport Wildlife Hazard Management Plan* (Wallace Environmental Consulting, 2015), and *the Feasibility Study Report for Wildlife Vehicle Collision Reduction in Caltrans District 9* (CalTrans 2016). Also incorporated into the following discussions, where appropriate, are observations from site assessments and general wildlife surveys conducted in association with a Wildlife Hazard Assessment (WHA) prepared for Town of Mammoth Lakes in December 2015 (Advantage Consulting, LLC 2015).

The field evaluation in September 2019 was conducted to assess existing conditions and determine if the site could support any special status species.

3.1.1 Soils

One soil unit has been mapped within the study area: Watterson family-Torriorthentic Haploxerolls complex, 5 to 15 percent slopes. The components of the complex are described below.

Torriorthentic Haploxerolls (40%)

The Torriorthentic Haploxerolls component makes up 40 percent of the map unit. Slopes are 15 to 30 percent. This component is on alluvial fans, alluvial plains. The parent material consists of alluvium and/or colluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Watterson family (40%)

The Watterson family component makes up 40 percent of the map unit. Slopes are 15 to 30 percent. This component is on alluvial fans, alluvial plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent.

3.1.2 Hydrology

The Action Area is in the Convict Creek HUC12 watershed (180901020207), which is part of the greater Crowley Lake HUC8 watershed (18090102). Surface water, which is minimal to non-discernable, trends toward the northeast corner of the study area before exiting the site. Although there is no significant surface drainage apparent, water appears to continue in a southeasterly direction along the base of Doe Ridge for approximately 1 mile before joining a drainage southeast of the runway. From there, water continues to flow southeast in the drainage for approximately 0.5 miles before draining into Convict Creek. Convict Creek flows southeasterly for approximately 4.5 miles before draining into Crowley Lake.

3.1.3 Waters of the U.S.

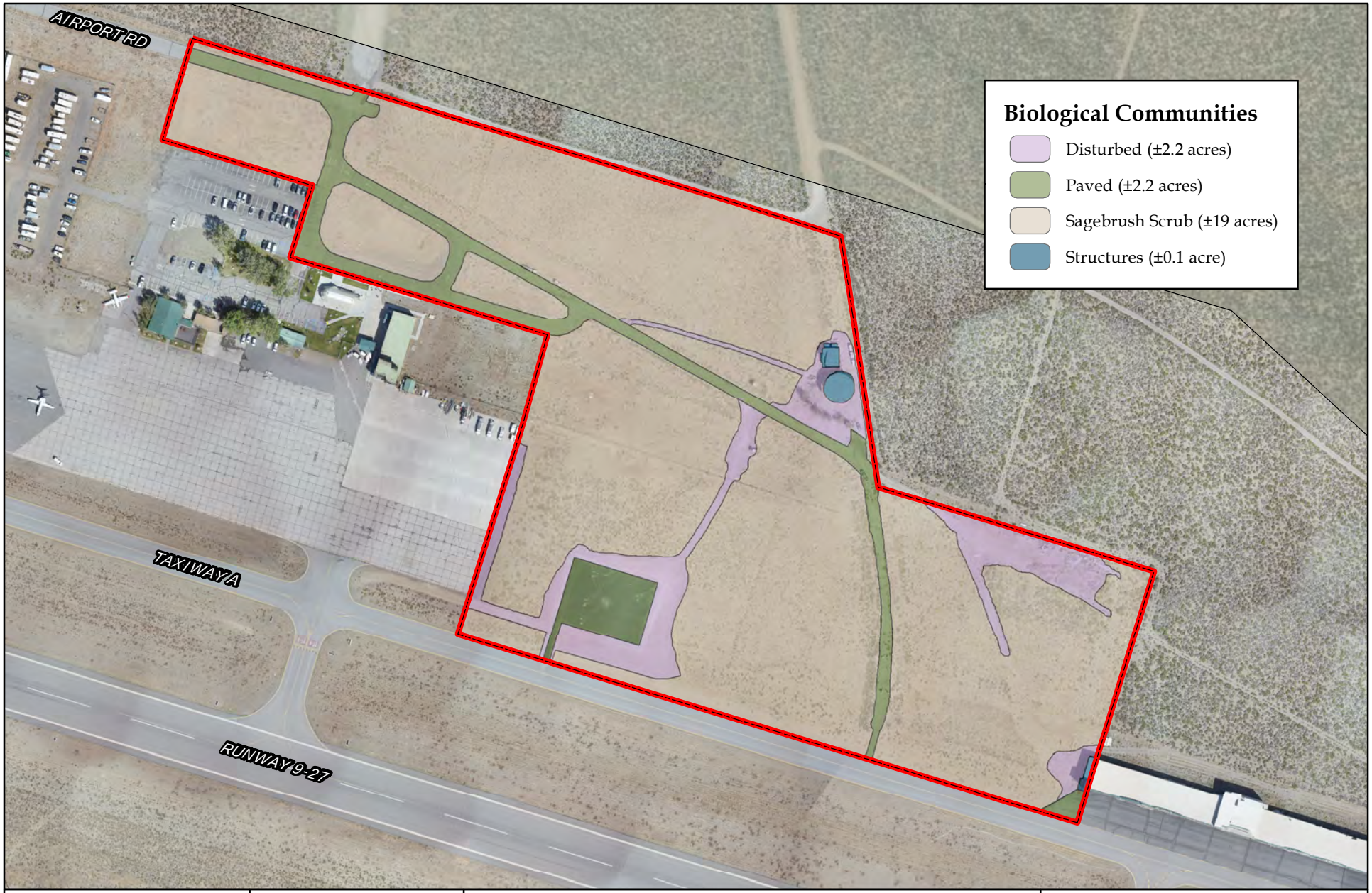
The study area was assessed for waters of the U.S. by reviewing aerial photography and through a thorough ground assessment. The study area contains no depressions that hold water for an extended period, groundwater discharge areas, or surface drainages. There are no waters of the U.S. in the study area.

3.1.4 Biological Communities

One primary biological community is present within the study area– sagebrush scrub, and the site also contains three other distinct areas: pavement, disturbed areas, and structures, as illustrated in Figure 4 and summarized in Table 1. Four aerial site photos are presented in Figures 5a and 5b, and four representative ground photos are presented in Figures 5c and 5d.

Table 1.
Biological Communities Present within the
Mammoth Yosemite Airport Terminal Area Development Project Action Area

Biological Community	Approximate Acreage
Sagebrush scrub	19
Paved	2.5
Disturbed	2.5
Structures	<0.1
Total	**24**



Salix consulting, inc.

N

0 125 250

Feet

Action Area
(±23.6 acres)

Imagery: 9-17-19 Salix Consulting
Overlaid on DigitalGlobe 6/19/2015 Basemap

Figure 4

BIOLOGICAL COMMUNITIES MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Sagebrush Scrub

The unpaved areas of the study area are composed of sagebrush scrub, characterized by low, generally sparse shrubs and native and weedy herbaceous species. Common species include sagebrush (*Artemisia tridentata*), antelope bush (*Purshia tridentata*), rubber rabbitbrush(*Ericameria nauseosa*), Parry's rabbitbrush (*E. parryi*), desert peach (*Prunus andersonii*), tumbleweed (*Salsola tragus*), and cheatgrass (*Bromus techtorum*). Vegetative cover over most of this habitat type is less than 50%.

Paved

Approximately 2.5 acres of the study area is paved and lacks vegetation.

Disturbed

Approximately 2.5 acres of the study area is dirt roads and ruderal surfaces with little or no vegetation.

Structures

A small portion of the study area has existing structures, including a water tank, a maintenance shed and the edge of a hanger. There are planted trees on the runway side of the water tank (mostly aspen- the only trees in the study area).

3.1.5 Wildlife Associations

The Action Area occurs adjacent to the existing airport facility, and most of the ground is influenced by airport operations, including infrastructure and vegetation management. Wildlife species occur throughout the area but are generally transient foragers that do not linger. Sign of mule deer (*Odocoileus hemionus*) (tracks) was present, although none were observed during the site visits. Other mammal tracks were observed but not identified. Bird utilization was low during the two-day site visit. Species observed included Brewer's blackbird (*Euphagus cyanocephalus)*, northern flicker (*Colaptes auratus)*, spotted towhee (*Pipilo maculatus)*, western scrub-jay (*Aphelocoma californica)*, common raven (*Corvus corax)*, dark-eyed Junco (*Junco hyemalis)*, house sparrow (*Passer domesticus)*, red-tailed hawk (*Buteo jamaicensis)*, turkey vulture (*Cathartes aura)*, house finch (*Haemorhous mexicanus)*, green-tailed towhee (*Pipilo chlorurus)*, northern mockingbird (*Mimus polyglottos*, and mourning dove (*Zenaida macroura)*. Rodent burrows were observed, but other than golden-mantled ground squirrel (*Spermophilus lateralis*), few live animals were observed.

Great Basin mixed scrub and big sagebrush scrub habitat in the area surrounding the airport provide forage for populations of mule deer belonging to the Round Valley herd. The airport is located within an area where deer may linger for up to 6-10 weeks before moving on to winter and/or summer ranges (Caltrans 2016). The biggest "hot-spot" for deer-vehicle collisions along US 395 is located between Benton Crossing Road and Mt. Morrison Rd, just east of the airport (Caltrans 2016).

Looking west over action area. *Photo Date 9-16-19.*

Looking east over action area. *Photo Date 9-16-19.*

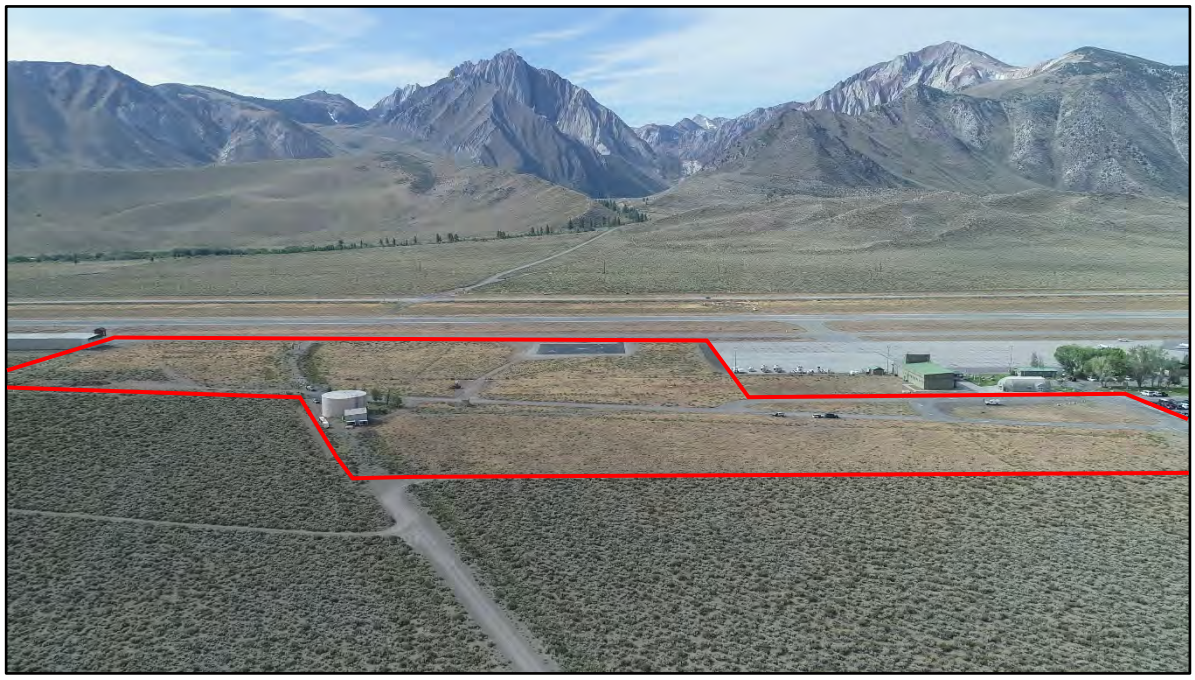
Salix consulting, inc.

Figure 5a

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA



Looking south over action area. *Photo Date 9-16-19.*

Looking north over action area. *Photo Date 9-16-19.*

Salix consulting, inc.

Figure 5b

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Looking east over action area. *Photo Date 9-17-19.*

Looking southeast over eastern portion of action area and proposed AARF building. *Photo Date 9-17-19.*

Salix consulting, inc.

Figure 5c

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

Looking west over action area toward existing terminal.
Photo Date 9-17-19.

Looking southeast over southern half of action area.
Photo Date 9-17-19.

Salix consulting, inc.

Figure 5d

SITE PHOTOS

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

A Wildlife Hazard Assessment (WHA) prepared for Town of Mammoth Lakes in December 2015 recommended that an 8-foot chain link fence be constructed along the airport boundary to prevent deer and other wildlife from entering the airfield (Advantage Consulting, LLC 2015). The fence has not yet been constructed. According to CalTrans, in a March 2016 meeting with CalTrans and Town of Mammoth Lakes (TOML) regarding a proposal to construct a deer fence around the airport,

> "airport personnel described the general pattern of the deer, as generally avoiding the areas of the airport with buildings and hangers creating a pattern of use where the deer track around the airport to the north and south. At the south end of the air field the deer cross through Caltrans' standard barb wire fence and continue on to the opposite side of airport property and on to foraging areas to the east of the airport. The TOML acknowledged that there may be increased DVCs resulting from construction of the airport fence. As it is now, deer are unimpeded by the Caltrans right of way fence (standard 42" tall barb wire fence) separating the airport from Caltrans right of way; deer cross the highway from the west to gain access to foraging areas east of the airport."

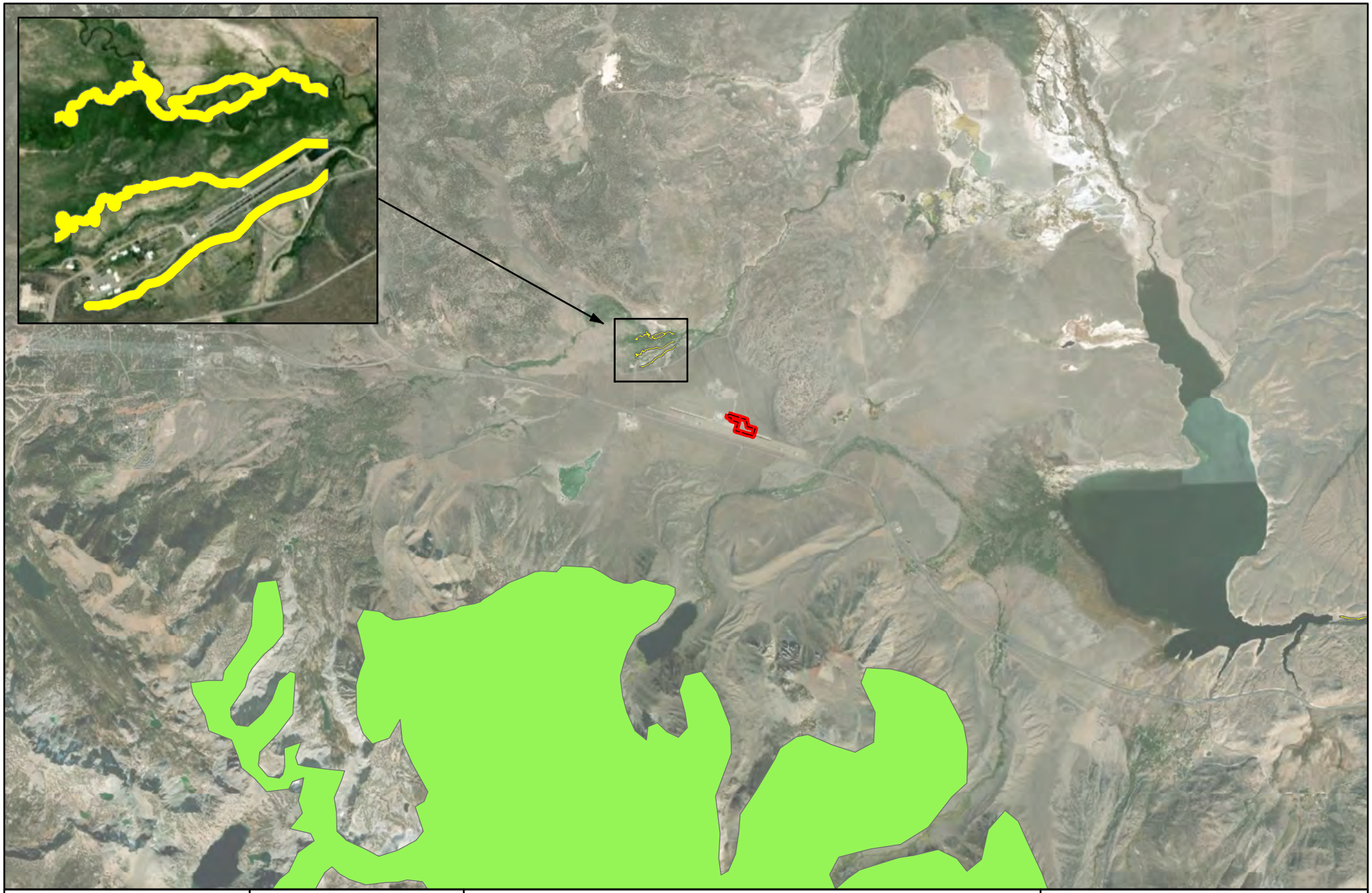
4.0 FEDERAL ENDANGERED, THREATENED, CANDIDATE, AND PROPOSED THREATENED OR PROPOSED ENDANGERED SPECIES

Lists of federally endangered (E), threatened (T), candidate (C), and proposed endangered or threatened (PE/PT) species known to occur (and their critical habitat) in the broader region surrounding the Action Area were obtained from the U.S. Fish and Wildlife Service (USFWS or Service) Information for Planning & Consultation (IPaC) query (USFWS 2021) (Appendix A). The California Natural Diversity Data Base (CNDDB 2020) was also queried for occurrence information on federally listed species within five US Geographic Survey (USGS) quadrangles surrounding the Action Area including the Whitmore Hot Springs, Old Mammoth, Convict Lake, Watterson Canyon, and Toms Place USGS quadrangles (Appendices B1 and B2). The following 12 federally listed species that may be present were included on these lists:

- Fisher (*Pekania pennanti*) (E)
- Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*) (E)
- Sierra Nevada red fox (*Vulpes vulpes necator*) (PE)
- Yosemite toad (*Anaxyrus canorus*) (T)
- Sierra Nevada yellow-legged frog (*Rana sierrae*) (E)
- Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*) (T)
- Owens tui chub (*Siphateles bicolor snyderi*) (E)
- Owens pupfish (*Cyprinodon radiosus*) (E)
- Monarch butterfly (*Danaus plexippus*)
- Southwestern willow flycatcher (*Empidonax traillii extimus*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- Whitebark pine *(Pinus albicaulis*) (C)

4.1 Critical Habitat

Critical habitat is defined by the USFWS as "a specific geographic area (s) that contains features essential for the conservation of a threatened or endangered species and that may require specific management and protection." The Action Area occurs approximately one (1) mile southeast of Critical Habitat in Hot Creek for the federally listed Owens tui chub, and approximately 2.5 miles northeast of the northeastern boundary of Critical Habitat for the federally listed Sierra Nevada bighorn sheep. The Action Area does not occur within the boundaries of either of these Critical Habitats (Figure 6), and the Action Area does not occur within the boundaries of Critical Habitat for the federally listed Sierra Nevada yellow-legged frog, the Yosemite toad, southwestern willow flycatcher, or yellow-billed cuckoo.



Salix consulting, inc.

Figure 6

CRITICAL HABITATS MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

5.0 EVALUATION OF SPECIES AND CRITICAL HABITAT

5.1 Status of Species in Action Area

Records from the USFWS along with previous field surveys were used to inform whether endangered, threatened, or candidate species are present on the site or have suitable habitat that could be utilized by the species within the Action Area.

Field assessments of the study area were conducted by Jeff Glazner of Salix Consulting, Inc., on September 16 and 17, 2019, that focused on the proposed terminal development area. The purpose of the survey was to review the findings of previous surveys, to ascertain if conditions had changed since the last field surveys in the area, to determine if habitat was present that could support any of the special-status species, and to determine if any of the species listed above were present.

It was determined that none of the identified 12 federally listed sensitive plant or animal species were present in the areas examined. In addition, As illustrated in Table 2 below, it was also determined that no federally listed species have potential to occur within or adjacent to the Action Area due to the absence of suitable habitat needed for their survival. Species were eliminated from further consideration based on review of appropriate species life history and occurrence literature, state and federal databases, prior studies, and recent site conditions.

Figure 7 following the table shows all the recorded occurrences of federally listed and candidate species (wildlife and plants respectively) within a five (5)- mile radius of the Action Area.

Table 2
Federally Listed Species Known from the Region of the
Mammoth Yosemite Airport Terminal Area Development Project Action Area

Species	Federal Status*	Preferred Habitat	Critical Habitat Present?	Potential for Occurrence
Plants				
Whitebark pine (*Pinus albicaulis*)	C	Upper coniferous forest; subalpine forest	None	None. No forest occurs within the Action Area, or immediately adjacent to the airport property. Action Area occurs below the local elevational range of the species.

Table 2
Federally Listed Species Known from the Region of the
Mammoth Yosemite Airport Terminal Area Development Project Action Area

Species	Federal Status*	Preferred Habitat	Critical Habitat Present?	Potential for Occurrence
Fish				
Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*)	T	Historically found in all cold waters of the Lahontan Basin, including Independence Lake.	None	None. No suitable aquatic habitat occurs within the Action Area.
Owens tui chub (*Siphateles bicolor snyderi*)	E	Three existing natural populations: at the Owens River Gorge, at source springs of CDFW Hot Creek Hatchery, and a pond and ditches at Cabin Bar Ranch near Owens Dry Lake. Other populations have been established with landowners in the region.	±1-mile NW of Action Area (Hot Creek).	None. No suitable aquatic habitat occurs within the Action Area. Critical Habitat in Hot Creek more than one mile northwest of the Action Area.
Owens pupfish (*Cyprinodon radiosus*)	E	Spring pools, sloughs, irrigation ditches, swamps, and flooded pastures in the Owens Valley from Fish Slough in Mono County to Lone Pine in Inyo County. Currently confined to five populations in the Owens Valley.	None	None. No suitable aquatic habitat occurs within the Action Area.
Amphibians and Reptiles				
Sierra Nevada yellow-legged frog (*Rana sierrae*)	E	Associated with streams, lakes, and ponds in montane riparian, lodgepole pine, subalpine conifer and wet meadow habitats. Occurs in the northern and central portions of the Sierra Nevada at elevations above 4,500 feet. Always near water.	None	None. No suitable habitat occurs within the Action Area.

Table 2
Federally Listed Species Known from the Region of the
Mammoth Yosemite Airport Terminal Area Development Project Action Area

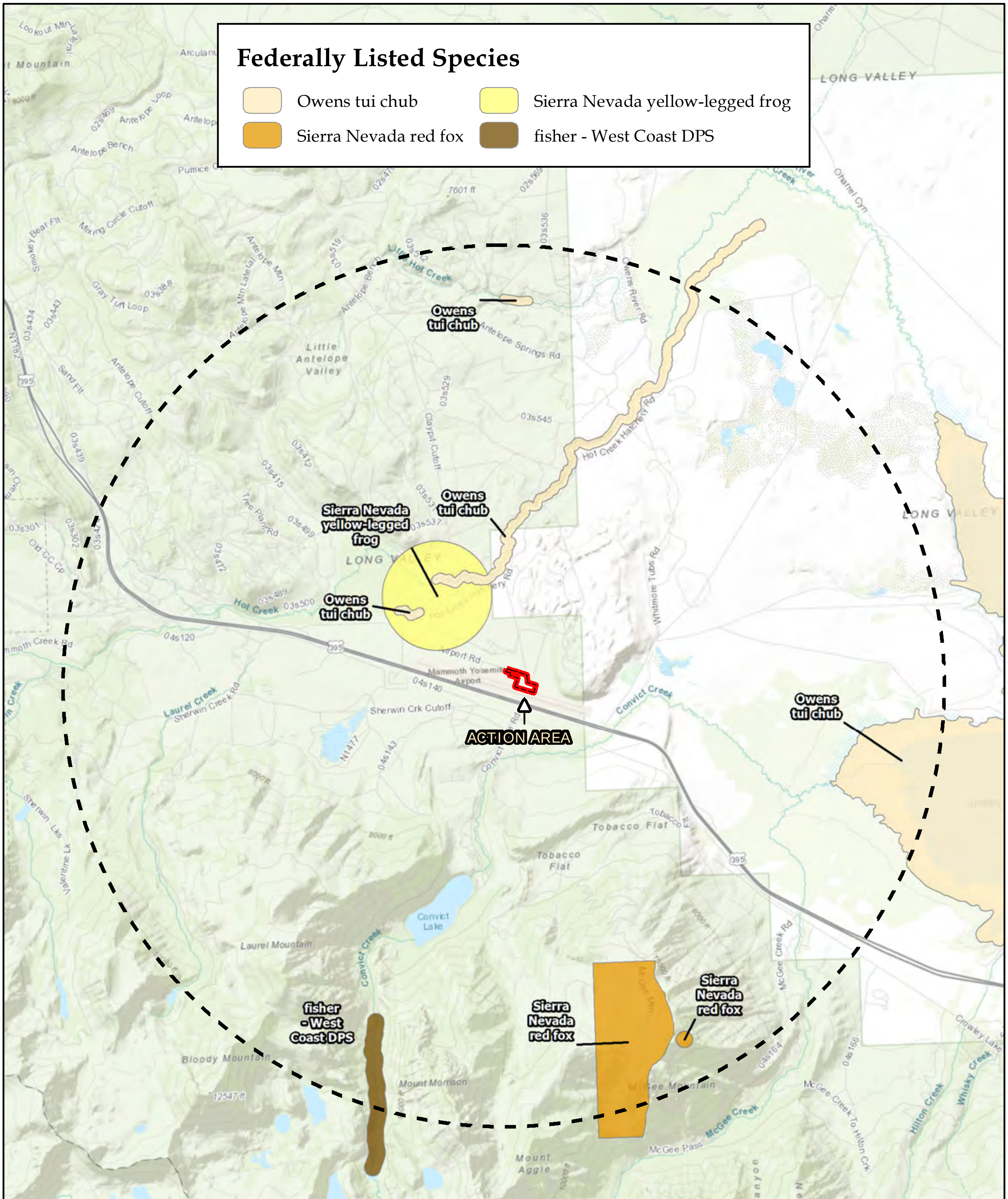
Species	Federal Status*	Preferred Habitat	Critical Habitat Present?	Potential for Occurrence
Yosemite toad (*Anaxyrus canorus*)	T	Endemic to California. Alpine County south to Fresno County at high elevations in the Sierra Nevada mountains. Inhabits wet mountain meadows and the borders of forests. 4,800 - 12,000 ft.	None	None. No suitable habitat occurs within the Action Area.
Insects				
Monarch butterfly *Danaus plexippus*	C	Ranges from southern Canada through northern South America. Eggs are laid singly on underside of a young leaf of milkweed during the spring and summer. Wintering habitat typically provides access to streams, plenty of sunlight, and appropriate roosting vegetation, relatively free of predators	None	None. No suitable habitat for egg-laying or overwintering present within Action Area.
Birds				
Southwestern willow flycatcher *Empidonax traillii extimus*	FE	Uncommon summer resident in upper elevation montane riparian and wet meadow areas, usually with a thick growth of shrubby willow.	None	None. No suitable habitat present within Action Area.
Yellow-billed cuckoo *Coccyzus americanus*	FT	Inhabits riparian forests along the broad, lower floodplains of larger rivers. Nests in thickets of willows and cottonwoods with an understory of blackberry, nettle, or wild grape.	None	None. No suitable habitat present within Action Area.
Mammals				
Sierra Nevada red fox (*Vulpes vulpes necator*)	PE	Occurs in conifer forests and rugged alpine landscape of the Sierra Nevada and Cascade ranges between 4,000 feet and 12,000 feet, most often above 7,000 feet.	None	None. No suitable habitat within or near Action Area.

Table 2
Federally Listed Species Known from the Region of the
Mammoth Yosemite Airport Terminal Area Development Project Action Area

Species	Federal Status*	Preferred Habitat	Critical Habitat Present?	Potential for Occurrence
Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)	E	Typical terrain is rough, rocky and steep; also encompasses alpine meadows, summit plateaus, and hanging meadows fed by springs within escape terrain. Summer range is 10,000-14,000 ft. Winter range typically 5,000-9,000 ft	NE boundary of Critical Habitat is ±2.5 miles south of Action Area	None. No suitable habitat within or near Action Area.
Fisher (*Pekania pennanti*)	E	Occurs in intermediate to large-tree stage coniferous forests and riparian woodlands with a high percent level of canopy closure. .	None	None. No suitable habitat present within or near Action Area.

*Status Codes:

E Federal Endangered
T Federal Threatened
C Federal Candidate Species
PE Federal Proposed Endangered
PT Federal Proposed Threatened
C Federal Candidate Species



Salix consulting, inc.

N

0 4,000 8,000

Feet

Action Area

5-Mile Radius

Figure 7

CNDDB OCCURRENCES MAP

Mammoth Yosemite Airport

Town of Mammoth Lakes, Mono County, CA

5.1.1 Species Discussion

Plants

Whitebark pine *(Pinus albicaulis)* is an important tree species in high-elevation ecosystems of western North America but has suffered widespread mortality throughout its range from the combined effects of mountain pine beetle outbreaks and white pine blister rust infection. Whitebark pine is a small to large evergreen conifer. Tree height typically ranges from 40 to 60 feet at maturity. Whitebark pine is most common on rocky, well-drained sites. Best development occurs on sheltered, north-facing slopes and basins. In the southern Sierra Nevada, whitebark pine is confined to moist north slopes at elevations of 10,000 to 12,100 feet. It is a Candidate species. The Action Area is located below the range of the species in the southern Sierra Nevada, and no suitable habitat is present within the Action Area to support the species.

Fish and Amphibians

Two of the fish or amphibian species in Table 2 above are reported to occur within a 5-mile radius (* below) of the Action Area. Neither of these nor any other of the identified species were determined to have any potential for occurring onsite due to the total absence of suitable aquatic habitat within the Action Area. These species include:

- Owens pupfish (*Cyprinodon radiosus)*
- Lahontan cutthroat trout (*Oncorhynchus clarki henshawi)*
- Owens tui chub (*Siphateles bicolor snyderi)**
- Yosemite toad (*Anaxyrus canorus)*
- Sierra Nevada yellow-legged frog (*Rana sierrae)**

Mammals

Two of the four identified mammalian species in Table 2 above are reported to occur within a 5-mile radius (* below), and all were determined to have no potential for occurring within the Action Area due to the absence of suitable habitats (streams, riparian, forests, rocky terrain). In one case (California wolverine), the Action Area's proximity to human activity also precluded occurrence. These mammals include:

- Sierra Nevada red fox (*Vulpes vulpes necator)**
- Fisher - West Coast DPS (*Pekania pennanti)**
- California wolverine (*Gulo gulo)*
- Sierra Nevada bighorn sheep (*Ovis canadensis sierrae)*

5.1.2 Species That May Be Affected

No identified species were determined to have potential to be present within the Action Area. No species may be affected by the Proposed Action.

6.0 EFFECTS OF THE PROPOSED ACTION

This section describes the effects of the Proposed Action on federally listed species within the Action Area. Activities associated with the Proposed Action could directly or indirectly affect federally listed species and their habitat. These effects are described below.

6.1 Direct Effects

As defined under the federal ESA, direct effects are caused by the Proposed Action and occur at the time of the action. Based on previous studies and review of pertinent literature, all other species identified in the research and listed in Table 2 were determined to have no potential to occur within the Action Area. The Action Area does not include any aquatic habitat or forests to sustain any of the identified species. Thus, no direct effects are anticipated to any of the species listed above within the Action Area.

In addition, no direct disturbance of neighboring critical habitat for either Owens tui chub (to the northeast) or Sierra Nevada big horn sheep (to the south) will occur as a result of the Proposed Action.

6.2 Indirect Effects

As defined under the federal ESA, indirect effects are caused by the Proposed Action and occur later in time and are reasonably certain to occur. Indirect effects may occur outside the area directly affected by the action.

No indirect disturbance of neighboring critical habitat for either Owens tui chub (to the northeast) or Sierra Nevada big horn sheep (to the south) will occur as a result of the Proposed Action, and it is unlikely that critical habitat for either species which is located well beyond the boundaries of the Action Area will be indirectly affected by proposed construction and grading activities that occur within the Action Area

The Proposed Action has been designed to avoid inadvertent alteration of the hydrology of the airport property.

6.3 Critical Habitat

The Action Area occurs approximately one (1) mile southeast of Critical Habitat in Hot Creek for the federally listed Owens tui chub, and approximately 2.5 miles northeast of the northeastern boundary of Critical Habitat for the federally listed Sierra Nevada bighorn sheep. The Action Area does not occur within the boundaries of either of these Critical Habitats (Figure 6), and the Action Area does not occur within the boundaries of Critical Habitat for the federally listed Sierra Nevada yellow-legged frog or the Yosemite toad.

No direct or indirect effects on critical habitat are anticipated as a result of the Proposed Action.

6.4 Cumulative Effects

Cumulative effects are those effects resulting from future state, Tribal, local, or private activities not involving federal activities, that are reasonably certain to occur within the Action Area of a Proposed Action (USFWS and NMFS 1998). Future federal actions that are unrelated to the

Proposed Action are not considered cumulative impacts because they require a separate consultation pursuant to Section 7 of the federal ESA.

No other state, Tribal, local, or private activities are anticipated to occur within the Action Area. Further airport improvements may be proposed in the future.

7.0 CONCLUSION AND DETERMINATION

Based on the Effects of the Proposed Action identified in Section 2.0, along with the implementation of conservation measures identified in Section 2.5, this document concludes that the expected outcome of the Proposed Action includes the following:

- Because habitat is not present to support any of the 10 identified species within the Action Area, the Proposed Action will result in no direct or indirect effects to those species, and the Action will result in *no effect* to the following federally species.
    - Fisher (*Pekania pennanti*) (E)
    - North American Wolverine (*Gulo gulo luscus*) (PT)
    - Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*) (E)
    - Sierra Nevada red fox (*Vulpes vulpes necator*) (PE)
    - Yosemite toad (*Anaxyrus canorus*) (T)
    - Sierra Nevada yellow-legged frog (*Rana sierrae*) (E)
    - Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*) (T)
    - Owens tui chub (*Siphateles bicolor snyderi*) (E)
    - Owens pupfish (*Cyprinodon radiosus*) (E)
    - Whitebark pine *(Pinus albicaulis*) (C)
- The Proposed Action will result in no disturbance to either neighboring Critical Habitats for federally listed Owens tui chub and for the federally listed Sierra Nevada bighorn sheep (as discussed in Section 6.3). Additionally, Conservation Measures specified in Section 2.5 will be implemented to further ensure no direct or indirect impacts. Therefore, the Proposed Action will result in *no effect* to the Critical Habitat for either species.

8.0 REFERENCES AND LITERATURE CITED

Advantage Consulting, LLC. 2015. Mammoth Yosemite Airport Wildlife Hazard Assessment. Hodgson, Ann B. and Exner, Gary, preparers. January 12, 2015.

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Department of Fish and Wildlife, California Wildlife Habitat Relationships Program. 2008. Complete List of Amphibians, Reptiles, Birds, and Mammals in California. Sacramento, California.

California Department of Fish and Wildlife, Wildlife and Habitat Data Analysis Branch. 2021. Natural Diversity Data Base Report (CNDDB). Sacramento, California.

California Department of Transportation, District 9 (Caltrans). 2016. Feasibility Study Report for Wildlife Vehicle Collision Reduction in Caltrans District 9. October 2016.

CaliforniaHerps.com. A Guide to the Amphibians and Reptiles of California. Updated 2019. Found online: http://www.california.herps.com

Federal Register. 2020. Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule for the North American Wolverine. https://www.federalregister.gov/documents/2020/10/13/2020-19538/endangered-and-threatened-wildlife-and-plants-withdrawal-of-the-proposed-rule-for-the-north-american.

Fix, David and Andy Bezener. 2000. Birds of Northern California. Lone Pine Publishing. Renton, Washington.

Jameson, E.W., Jr. and H.J. Peeters. 2004. Mammals of California. University of California Press. Berkeley, California.

Jennings, Mark R. and Marc P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California.

Mono County. 2010. Mono County Master Environmental Assessment. Prepared by Mono County CDD Planning Department Staff.

National Wildlife Federation. 2021. Monarch butterfly. https://www.nwf.org/Educational-Resources/Wildlife-Guide/Invertebrates/Monarch-Butterfly.

Paulus, Jim. 2014. Biological Assessment: Unincorporated Communities of Mono County DRAFT.

Salix Consulting, Inc. 2020. Biological Resources Assessment for the ±24-acre Mammoth Yosemite Airport Terminal Area Development Plan Study Area.

Sibley, D.A. 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf. New York.

Stebbins, R.C. 1985. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Company. Boston, Massachusetts.

Town of Mammoth Lakes. 2002. Final Supplement to Subsequent Environmental Impact Report. Mammoth Yosemite Airport Expansion Project. Mammoth Yosemite Airport. March 2002. Section III. 3.3.

_____. 2011. Addendum to the Final Supplement to the Subsequent Environmental Impact Report for the Mammoth Yosemite Airport Expansion Project. July 21, 2011.

URS. 2010. Mammoth Yosemite Airport United Air Service Final EA.

U.S. Department of Agriculture. U.S. Forest Service. 2002. Fire Effects Information System (FEIS), Species Account for White Bark Pine. https://www.fs.fed.us/database/feis/plants/tree/pinalb/all.html#Introductory. Accessed 08-10-20

U.S. Fish and Wildlife Service. 2021. IPaC Trust Resources Report generated for the Mammoth Airport study area, Mono County.

Wallace Environmental Consulting. 2015. Biological Assessment for the Mammoth Yosemite Airport Wildlife Hazard Management Plan, Town of Mammoth Lakes and Mono County, California. September 2015

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988. California's Wildlife, Volume I. Amphibians and Reptiles. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a. California's Wildlife, Volume II: Birds. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b. California's Wildlife, Volume III: Mammals. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Appendix A
Potentially Occurring Special-Status Species
Results of USFWS IPaC Query Request

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/reno/

In Reply Refer To:
Consultation Code: 08ENVD00-2021-SLI-0217
Event Code: 08ENVD00-2021-E-00634
Project Name: Mammoth Airport

March 24, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq*.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq*.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada’s Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to

take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq*.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade "feathering" success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq*.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible,

we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO

Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO
Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
	All ownerships but tidal/estuarine	All	SFWO
Napa			
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)

Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO

Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO
Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)

Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO
Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

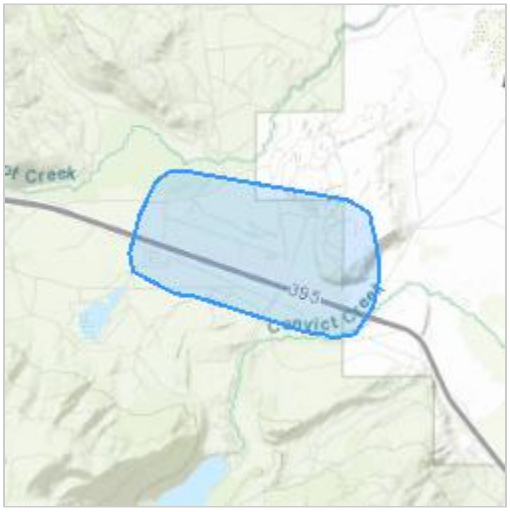
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2021-SLI-0217
Event Code: 08ENVD00-2021-E-00634
Project Name: Mammoth Airport
Project Type: TRANSPORTATION
Project Description: Proposed Airport Terminal Area development project, approx. 24 acres. No estimated time of implementation.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.627826850000005,-118.84543299485003,14z



Counties: Mono County, California

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Fisher *Pekania pennanti* Population: SSN DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3651	Endangered
Sierra Nevada Bighorn Sheep *Ovis canadensis sierrae* Population: Sierra Nevada There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3646	Endangered

Birds

NAME	STATUS
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered
Yosemite Toad *Anaxyrus canorus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7255	Threatened

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened
Owens Pupfish *Cyprinodon radiosus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4982	Endangered
Owens Tui Chub *Gila bicolor ssp. snyderi* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7289	Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Conifers and Cycads

NAME	STATUS
Whitebark Pine *Pinus albicaulis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Proposed Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Owens Tui Chub *Gila bicolor ssp. snyderi* https://ecos.fws.gov/ecp/species/7289#crithab	Final

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Brewer's Sparrow *Spizella breweri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10

NAME	BREEDING SEASON
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
White Headed Woodpecker *Picoides albolarvatus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9411	Breeds May 1 to Aug 15
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

▪ probability of presence ▪ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in

the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1B
- PEM1C
- PEM1F
- PEM1Cx

FRESHWATER POND

- PABKx
- PUBHh
- PUBKx
- PUSKx

FRESHWATER FORESTED/SHRUB WETLAND

- PSSA
- PSSC
- PSSCx

RIVERINE

- R5UBF
- R2UBH

Appendices B1 and B2
Potentially Occurring Special-Status Species
CNDDB Query Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Old Mammoth (3711868) OR Whitmore Hot Springs (3711867) OR Convict Lake (3711857) OR Watterson Canyon (3711866) OR Toms Place (3711856))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Mammoth Airport animals - 5-quad

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter gentilis northern goshawk	ABNKC12060	None	None	G5	S3	SSC
Anaxyrus canorus Yosemite toad	AAABB01040	Threatened	None	G2G3	S2S3	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Bombus morrisoni Morrison bumble bee	IIHYM24460	None	None	G4G5	S1S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Catostomus fumeiventris Owens sucker	AFCJC02090	None	None	G3G4	S3	SSC
Centrocercus urophasianus greater sage-grouse	ABNLC12010	None	None	G3G4	S2S3	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Empidonax traillii willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Gulo gulo California wolverine	AMAJF03010	None	Threatened	G4	S1	FP
Hygrotus fontinalis travertine band-thigh diving beetle	IICOL38050	None	None	G1	S1	
Lepus townsendii townsendii western white-tailed jackrabbit	AMAEB03041	None	None	G5T5	S3?	SSC
Martes caurina sierrae Sierra marten	AMAJF01014	None	None	G4G5T3	S3	
Ochotona princeps schisticeps gray-headed pika	AMAEA0102L	None	None	G5T4	S2S4	
Oncorhynchus clarkii henshawi Lahontan cutthroat trout	AFCHA02081	Threatened	None	G5T3	S1	
Pekania pennanti pop. 2 Fisher - Southern Sierra Nevada ESU	AMAJF01022	Endangered	Threatened	G5T1	S1	SSC

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Picoides arcticus black-backed woodpecker	ABNYF07090	None	None	G5	S2	
Pyrgulopsis wongi Wong's springsnail	IMGASJ0360	None	None	G2	S2	
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
Rhinichthys osculus ssp. 2 Owens speckled dace	AFCJB3705F	None	None	G5T1T2Q	S1S2	SSC
Rhinichthys osculus ssp. 5 Long Valley speckled dace	AFCJB3705E	None	None	G5T1	S1	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Siphateles bicolor snyderi Owens tui chub	AFCJB1303J	Endangered	Endangered	G4T1	S1	
Sorex lyelli Mount Lyell shrew	AMABA01020	None	None	G3G4	S3S4	SSC
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Vulpes vulpes necator Sierra Nevada red fox	AMAJA03012	Proposed Endangered	Threatened	G5T1T2	S1	

Record Count: 28

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Old Mammoth (3711868) OR Whitmore Hot Springs (3711867) OR Convict Lake (3711857) OR Watterson Canyon (3711866) OR Toms Place (3711856))
 AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Mammoth Airport Plants - 5-quad

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Astragalus johannis-howellii Long Valley milk-vetch	PDFAB0F4H0	None	Rare	G2	S1	1B.2
Astragalus lemmonii Lemmon's milk-vetch	PDFAB0F4N0	None	None	G2	S2	1B.2
Astragalus monoensis Mono milk-vetch	PDFAB0F5N0	None	Rare	G2	S2	1B.2
Atriplex pusilla smooth saltbush	PDCHE041P0	None	None	G4	SH	2B.1
Boechera bodiensis Bodie Hills rockcress	PDBRA06240	None	None	G3	S3	1B.3
Boechera cobrensis Masonic rockcress	PDBRA06080	None	None	G5	S3	2B.3
Boechera dispar pinyon rockcress	PDBRA060F0	None	None	G3	S3	2B.3
Botrychium ascendens upswept moonwort	PPOPH010S0	None	None	G3G4	S2	2B.3
Botrychium crenulatum scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
Botrychium minganense Mingan moonwort	PPOPH010R0	None	None	G4G5	S3	2B.2
Calochortus excavatus Inyo County star-tulip	PMLIL0D0F0	None	None	G2	S2	1B.1
Carex scirpoidea ssp. pseudoscirpoidea western single-spiked sedge	PMCYP03C85	None	None	G5T4	S2	2B.2
Claytonia megarhiza fell-fields claytonia	PDPOR030A0	None	None	G5	S2	2B.3
Crepis runcinata fiddleleaf hawksbeard	PDAST2R0K0	None	None	G5	S3	2B.2
Draba cana canescent draba	PDBRA110M0	None	None	G5	S2	2B.3
Draba lonchocarpa spear-fruited draba	PDBRA111F0	None	None	G5	S2S3	2B.3
Draba praealta tall draba	PDBRA11210	None	None	G5	S3	2B.3
Elymus scribneri Scribner's wheat grass	PMPOA2H170	None	None	G5	S3	2B.3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eremothera boothii ssp. boothii Booth's evening-primrose	PDONA03052	None	None	G5T4	S3	2B.3
Eremothera boothii ssp. intermedia Booth's hairy evening-primrose	PDONA03056	None	None	G5T3T4	S3	2B.3
Helodium blandowii Blandow's bog moss	NBMUS3C010	None	None	G4	S2	2B.3
Hulsea vestita ssp. inyoensis Inyo hulsea	PDAST4Z073	None	None	G5T2T3	S1S2	2B.2
Ivesia kingii var. kingii alkali ivesia	PDROS0X092	None	None	G4T3Q	S2	2B.2
Kobresia myosuroides seep kobresia	PMCYP0F010	None	None	G5	S2	2B.2
Lupinus duranii Mono Lake lupine	PDFAB2B1E0	None	None	G2	S2	1B.2
Mentzelia torreyi Torrey's blazing star	PDLOA031S0	None	None	G4	S2	2B.2
Micromonolepis pusilla dwarf monolepis	PDCHE0F020	None	None	G5	S3?	2B.3
Orobanche ludoviciana var. arenosa Suksdorf's broom-rape	PDORO04073	None	None	G5T5	S2	2B.3
Parnassia parviflora small-flowered grass-of-Parnassus	PDSAX0P0A0	None	None	G5?	S2	2B.2
Pedicularis crenulata scalloped-leaved lousewort	PDSCR1K0A0	None	None	G4	S1	2B.2
Phacelia gymnoclada naked-stemmed phacelia	PDHYD0C1X0	None	None	G4	S2	2B.3
Phacelia inyoensis Inyo phacelia	PDHYD0C2F0	None	None	G2	S2	1B.2
Sabulina stricta bog sandwort	PDCAR0G0U0	None	None	G5	S3	2B.3
Salix brachycarpa var. brachycarpa short-fruited willow	PDSAL02531	None	None	G5T5	S2	2B.3
Salix nivalis snow willow	PDSAL024K0	None	None	G5	S2	2B.3
Sphaeromeria potentilloides var. nitrophila alkali tansy-sage	PDAST8S061	None	None	G5T4?	S2	2B.2
Stuckenia filiformis ssp. alpina slender-leaved pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Thelypodium integrifolium ssp. complanatum foxtail thelypodium	PDBRA2N062	None	None	G5T4T5	S2	2B.2
Trichophorum pumilum little bulrush	PMCYP0Q250	None	None	G5	S3	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Triglochin palustris marsh arrow-grass	PMJCG02040	None	None	G5	S2	2B.3
Viola purpurea ssp. aurea golden violet	PDVIO04420	None	None	G5T2	S2	2B.2

Record Count: 41

APPENDIX D
CULTURAL RESOURCE REPORT AND AB 52 LETTERS

CULTURAL RESOURCES INVENTORY AND EFFECTS ASSESSMENT FOR THE MAMMOTH-YOSEMITE AIRPORT TERMINAL AREA DEVELOPMENT PLAN, TOWN OF MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

Prepared For:

Wallace Environmental Consulting, Inc.
P.O. Box 266
Courtland, CA 95615

Prepared By:

Nancy E. Sikes, Ph.D., RPA
Dylan Stapleton, M.A.
Cindy J. Arrington, M.S., RPA

NATURAL INVESTIGATIONS COMPANY

3104 O Street, #221
Sacramento, CA 95816

USGS 7.5-Minute Quadrangle: Whitmore Hot Springs 1994

Positive Cultural Resources Survey; P-26-007973 (CA-MNO-5763);
Town of Mammoth Lakes, Mono County

September 20, 2019
Revised October 28, 2019