
FINAL
ENVIRONMENTAL ASSESSMENT

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Bishop Airport
Bishop, Inyo County, California

Prepared for:

Inyo County

and

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

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

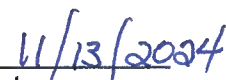
Prepared by:

Environmental Science Associates

November 2024

This environmental assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.


Responsible FAA Official


Date

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT IS IN THIS DOCUMENT? This Final Environmental Assessment (EA) was prepared to evaluate Inyo County's proposed runway safety area (RSA) improvements at Bishop Airport (BIH). This Draft EA provides information on the Proposed Project; discusses the purpose of and need for the Proposed Project; describes alternatives considered; and discloses the analyses and findings of potential environmental resource impacts associated with the Proposed Project and the No Action Alternative.

BACKGROUND: BIH is a public-use airport owned and operated by the County of Inyo. The Airport is located approximately 1.5 miles east of the City of Bishop, and approximately 45 miles southeast of the town of Mammoth Lakes. BIH is classified as a Local General Aviation Airport in the National Plan of Integrated Airport Systems. BIH currently serves general aviation traffic and the air cargo and military traffic in the Eastern Sierra region. Runway 12/30, which accommodates commercial service operations, currently operates with a non-standard RSA. Inyo County proposes to provide a standard RSA for Runway 12/30 by cutting, filling, and grading portions of the RSA which are currently non-standard.

WHAT SHOULD YOU DO? Read this Final EA to understand the potential environmental effects of the proposed runway safety area (RSA) improvements and the actions that Inyo County and the FAA may take relative to the proposal. Copies of the document may be viewed at the Bishop Airport or on the Department of Public Works website.

WHAT HAPPENS AFTER THIS? If the Final EA is determined to be adequate, the FAA will accept the document and decide to either issue a Finding of No Significant Impact (FONSI) or prepare a Federal Environmental Impact Statement (EIS).

TABLE OF CONTENTS

Runway 12/30 Safety Area Improvement Project at Bishop Airport

	<u>Page</u>
Chapter 1 Introduction and Purpose and Need	1-1
1.1 Introduction.....	1-1
1.2 Background	1-2
1.3 Purpose and Need	1-8
1.4 Description of the Proposed Project	1-10
1.5 Requested Federal Actions.....	1-10
1.6 Project Timing	1-11
1.7 Document Organization	1-11
Chapter 2 Alternatives	2-1
2.1 Introduction.....	2-1
2.2 Alternatives Screening	2-2
2.3 Range of Alternatives Considered	2-4
2.4 Alternatives Retained for Further Analysis	2-9
2.5 Federal Laws and Regulations Considered in this EA	2-13
Chapter 3 Affected Environment	3-1
3.1 Introduction.....	3-1
3.2 Air Quality	3-4
3.3 Biological Resources.....	3-9
3.4 Climate	3-15
3.5 Hazardous Materials, Solid Waste, and Pollution Prevention	3-17
3.6 Historic, Architectural, Archaeological, and Cultural Resources	3-20
3.7 Land Use	3-25
3.8 Natural Resources and Energy Supply.....	3-26
3.9 Noise and Noise-Compatible Land Use.....	3-29
3.10 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks.....	3-32
3.11 Visual Effects.....	3-37
3.12 Water Resources (Wetlands, Floodplains, Groundwater, and Surface Waters only).....	3-37
3.13 Past, Present, and Reasonably Foreseeable Future Actions.....	3-47
Chapter 4 Environmental Consequences	4-1
4.1 Introduction.....	4-1
4.2 Air Quality	4-3
4.3 Biological Resources.....	4-7
4.4 Climate	4-9
4.5 Hazardous Materials, Solid Waste, and Pollution Prevention	4-15
4.6 Historical, Architectural, Archaeological, and Cultural Resources	4-17
4.7 Land Use	4-19

	<u>Page</u>
4.8 Natural Resources and Energy Supply	4-21
4.9 Noise and Noise-Compatible Land Use	4-23
4.10 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	4-30
4.11 Visual Effects	4-36
4.12 Water Resources (Wetlands, Floodplains, Groundwater, and Surface Water only)	4-37
4.13 Cumulative Impacts	4-41
Chapter 5 Agency Coordination and Public Involvement	5-1
5.1 Summary of Public Outreach and Coordination	5-1
5.2 Notice of Availability of the Draft EA	5-1
5.3 Public Workshop/Public Hearing	5-1
5.4 Draft EA Comment Period	5-2

Appendices

A. Glossary of Terms and Acronyms	A-1
B. References	B-1
C. List of Preparers	C-1
D. Aviation Activity Forecasts	D-1
E. Agency Coordination	E-1
F. Public Involvement	F-1
G. Air Quality Technical Analysis	G-1
H. Biological Assessment	H-1
I. Cultural Resources Technical Analysis	I-1
J. Noise Technical Report	J-1
K. Wetlands Delineation Technical Report	K-1

List of Figures

Figure 1-1 Airport Location	1-3
Figure 1-2 Bishop Airport and Vicinity	1-4
Figure 1-3 Current RSAs at BIH	1-9
Figure 2-1 Alternatives Screening Process	2-3
Figure 2-2 Alternative A – Proposed Project Runway 12/30	2-10
Figure 2-3 Alternative A – Proposed Project Runway 12 End	2-11
Figure 2-4 Alternative A – Proposed Project Runway 30 End	2-12
Figure 3-1 General Study Area	3-2
Figure 3-2 Biological Evaluation Action Area	3-10
Figure 3-3 Resources Conservation and Recovery Act Sites	3-23
Figure 3-4 Area of Potential Effects	3-24
Figure 3-5 Existing Zoning in the General Study Area	3-27
Figure 3-6 Planned Future Land Uses in the General Study Area	3-28
Figure 3-7 Existing Conditions (2022) CNEL Contours	3-31
Figure 3-8 Environmental Justice Communities	3-36
Figure 3-9 Wetlands – Runway 12 End	3-43
Figure 3-10 Wetlands – Runway 30 End	3-44
Figure 3-11 Floodplains – Runway 12 End	3-45
Figure 3-12 Floodplains – Runway 30 End	3-46
Figure 4-1 No Action Alternative 2024 CNEL Contours	4-26
Figure 4-2 Proposed Project 2024 CNEL Contours	4-27

	<u>Page</u>
Figure 4-3 No Action Alternative 2029 CNEL Contours	4-28
Figure 4-4 Proposed Project 2029 CNEL Contours	4-29

List of Tables

Table 1-1 BIH Aircraft Operations Forecast	1-6
Table 1-2 Current Runway 12/30 Declared Distances	1-7
Table 2-1 Alternative B – Use of Declared Distances on Runway 30	2-5
Table 2-2 No Action Alternative – Declared Distances on Runway 12/30	2-8
Table 2-3 Alternatives Comparison Summary	2-9
Table 2-4 Federal Laws and Statutes Considered	2-14
Table 2-5 Executive Orders Considered	2-15
Table 2-6 FAA Orders, Advisory Circulars, and Federal Regulations Considered	2-16
Table 3-1 Great Basin Valleys Air Basin – Standards and Attainment Status	3-6
Table 3-2 Air Quality Monitoring Data Summary (2019-2021)	3-7
Table 3-3 Existing Conditions Air Pollutant Emissions Inventory (Tons per Year)	3-8
Table 3-4 Federal Listed Species Potentially Occurring in the Action Area	3-12
Table 3-5 State-Listed Species Potentially Occurring in the Action Area	3-14
Table 3-6 Existing Conditions (2022) Greenhouse Gas Emissions (Annual Metric Tons)	3-16
Table 3-7 RCRA Sites	3-19
Table 3-8 Unemployment Trends	3-33
Table 3-9 Income and Housing Data	3-34
Table 3-10 Environmental Justice Communities	3-35
Table 3-11 Past, Present, and Reasonably Foreseeable Projects	3-48
Table 4-1 Impact Summary	4-2
Table 4-2 Maximum Regional Construction Emissions Under the No Action Alternative	4-4
Table 4-3 Maximum Regional Construction Emissions Under the Proposed Project	4-5
Table 4-4 Proposed Project and No Action Alternative Emissions Inventory (Tons Per Year) Summary	4-6
Table 4-5 No Action Alternative - Construction Greenhouse Gas Emissions	4-10
Table 4-6 No Action Alternative - Greenhouse Gas Operational Emissions Inventory	4-11
Table 4-7 Proposed Project - Construction Greenhouse Gas Emissions	4-12
Table 4-8 Proposed Project - Greenhouse Gas Emissions Inventory	4-13
Table 4-9 Aircraft Operations Summary	4-23
Table 4-10 Noise Sensitive Uses and Population within the CNEL 65 dB and Higher Contours Proposed Project and No Action Alternative – 2024 and 2029	4-31

This Page Intentionally Left Blank

CHAPTER 1

Introduction and Purpose and Need

1.1 Introduction

Inyo County (County) proposes to improve the Runway Safety Area (RSA) for Runway 12/30 at Bishop Airport (BIH or the Airport) to meet design standards and safety requirements established by the Federal Aviation Administration (FAA). An RSA is a rectangular area surrounding a runway that is designed to enhance safety for aircraft that undershoot, overrun, or otherwise leave the paved runway surface. Currently, Runway 12/30 provides a non-standard RSA in areas beyond the runway ends and declared distances¹ have been implemented to meet FAA standards. The proposed improvements would bring the RSA into compliance with current FAA standards by cutting, filling, grading, and compacting these areas within the RSA. In addition, an existing unpaved patrol road running through the RSA beyond the Runway 12 end would be relocated to outside the runway Object Free Area (OFA) and existing perimeter fencing would be removed from beyond both the Runway 12 and Runway 30 ends and new fencing would be installed beyond the OFA boundary.

The Proposed Project² requires certain decisions and approvals (actions) by the FAA, and these federal actions are subject to environmental review under the *National Environmental Policy Act of 1969* (NEPA) (42 United States Code [U.S.C.] §§ 4321-4335). Accordingly, this Environmental Assessment (EA) has been prepared pursuant to the requirements of Section 102(2)(C) of the NEPA and Council on Environmental Quality Regulations (CEQ Regulations)(Title 40 Code of Federal Regulations [CFR] parts 1500-1508)³, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, and the guidance provided in the 1050.1F Desk Reference. This EA identifies and considers the potential environmental impacts associated with the Proposed Project. The FAA is the lead federal agency with the primary responsibility to ensure the requested federal actions comply with NEPA.

¹ Declared distances are the lengths an airport declares available on a runway for use by an aircraft during takeoff and landing. Declared distances are frequently used by airports where there is inadequate area beyond a runway end to allow for a 1,000-foot-long RSA. The portion of the RSA beyond the runway end can begin at a displaced threshold instead of the physical end of the runway. Declared distances are further discussed in Chapter 2, *Alternatives*.

² In this EA, “Proposed Project” specifically refers to the sponsor’s proposed improvements to the Runway 12/30 Safety Area at Bishop Airport. The term “Proposed Action” is used to describe those the requested federal actions and decisions that are subject to NEPA review prior to FAA making its decision(s).

³ Council on Environmental Quality, National Environmental Policy Act Implementing Regulations, 40 CFR Parts 1500-1508, May 20, 2022.

1.2 Background

1.2.1 Airport Location

BIH is a public-use airport located in Inyo County in the Eastern Sierra region of California. BIH is located approximately 1.5 miles east of the city of Bishop and 267 miles northeast of Los Angeles. The location of the airport is shown on **Figure 1-1**. The Airport and vicinity are depicted on **Figure 1-2**.

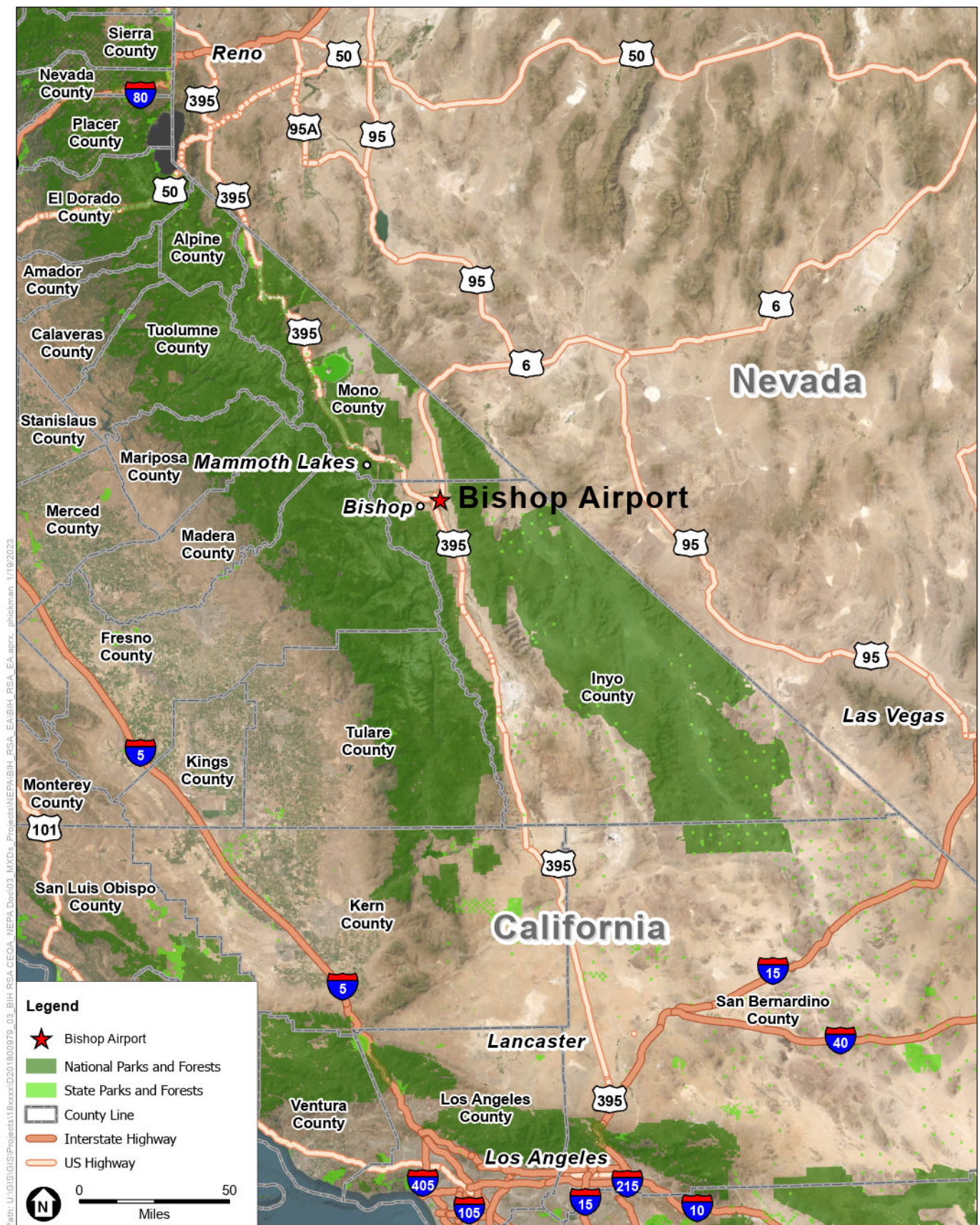
1.2.2 Existing Airport Facilities and Services

Bishop Airport is owned and operated by Inyo County and is situated on land leased from the City of Los Angeles Department of Water and Power (LADWP). Inyo County also holds an easement on and in areas around the leasehold ensuring indefinite use of the property as an airport. BIH is designated in the FAA's 2023-2027 National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport. The Airport serves general aviation activity, limited military activity, as well as charter and air cargo operations. Beginning in December 2021, commercial air passenger service was introduced to BIH and the Airport will continue to serve commercial air passenger service into the foreseeable future.

The Airport has three runways, Runway 12/30, Runway 17/35, and Runway 8/26. Runways are designed to accommodate specific types of aircraft. The current airport layout plan (ALP) shows that the existing Airport Reference Code (ARC) is B-II with a critical/design aircraft of the Lockheed P-3 Orion, and a future ARC C-III with critical/design aircraft of Boeing 737/Airbus 319.⁴

Runway 12/30, the Airport's primary runway, is 7,498 feet long by 100 feet wide. The runway is oriented southeast/northwest and paved with asphalt in excellent condition. The ALP identifies ARC C-II aircraft (e.g., Bombardier CRJ-700) as the critical design aircraft for Runway 12/30 with a future ARC C-III designation with a critical design aircraft of Boeing 737/Airbus 319. Both Runway 12 and Runway 30 provide four light Precision Approach Path Indicators (PAPIs). A PAPI is a system of lights that provides visual descent guidance for aircraft on final approach to a runway. Each PAPI light is angled to reflect the appropriate glide path for the runway end. Runway 12 has a 3.0-degree glide path and Runway 30 has a 3.52-degree glide path.

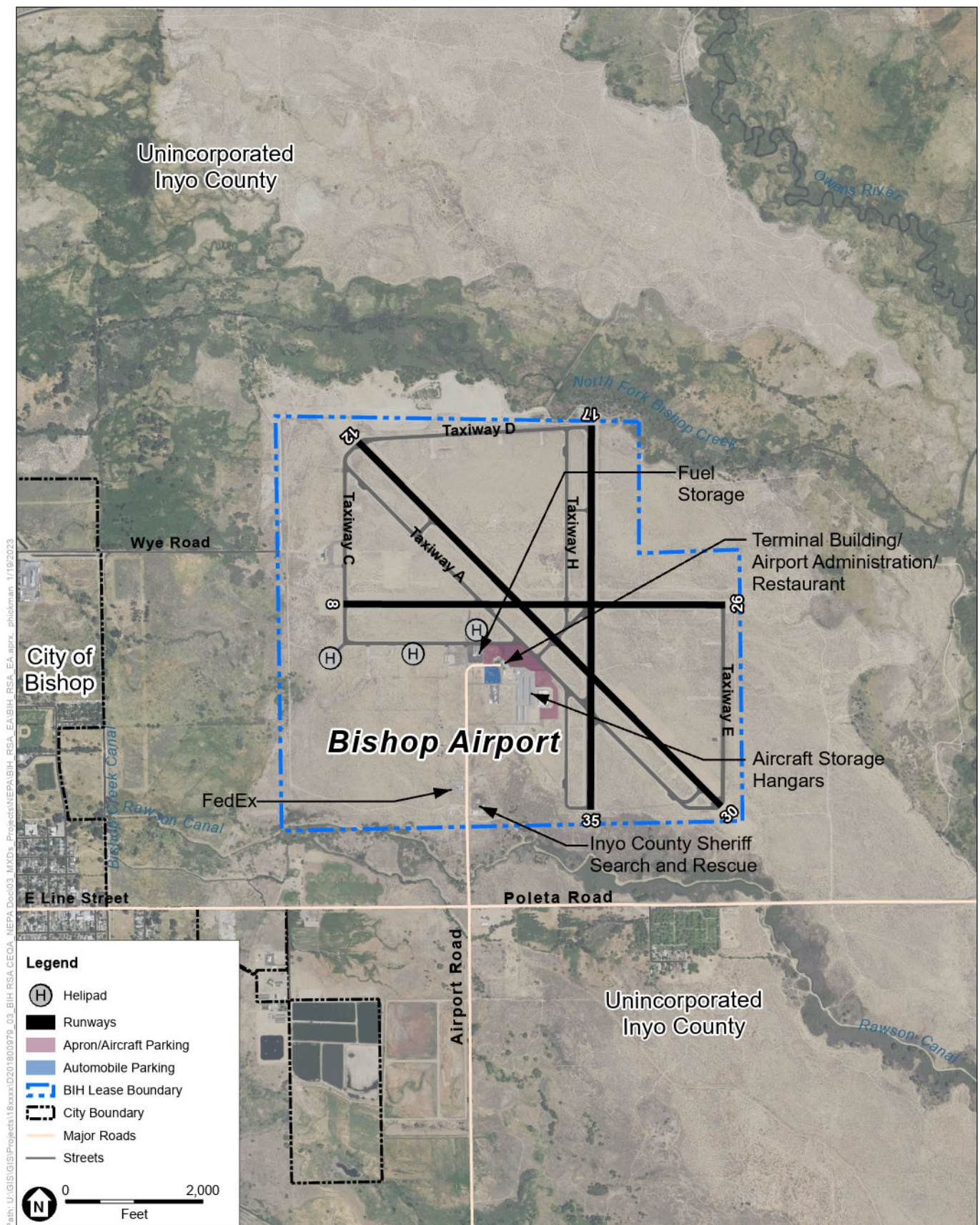
⁴ ARC is an airport designation referenced on the ALP and derived from the airport's highest Runway Design Code (RDC). The RDC signifies the design standards to which the runway is to be built, and is composed of two codes, the Aircraft Approach Category (AAC) and the Aircraft Design Group (ADG), plus the approach visibility minimums. The ARC is comprised of only the AAC and ADG. The AAC is represented by a letter, A, B, C, D, or E, and represents a grouping of aircraft based on landing speed. The ADG is a classification of aircraft based in wingspan and tail height. B-II signifies an approach speed of 91 knots or more but less than 121 knots and a wingspan of 49' to 79' and a tail height of 20' to 30'. C-III signifies an approach speed of 121 knots or more but less than 141 knots and a wingspan of 79' to 118' and a tail height 30' to 45' (FAA AC 150/5300-13B, *Airport Design*, March 2022).



SOURCE: Esri; Inyo County Department of Public Works; ESA, 2020.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 1-1
Bishop Airport Location



SOURCE: Esri; Inyo County Department of Public Works; ESA, 2020.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 1-2
Bishop Airport Vicinity Map

The other two runways are Runway 17/35 and Runway 8/26. Runway 17/35 is north-south oriented, 5,600 feet long by 100 feet wide, and paved with asphalt. Runway 8/26 is east-west oriented, 5,567 feet long by 100 feet wide, and paved with asphalt. Inyo County plans to close Runway 8/26. The Runway 8 end will be converted to a taxiway and the Runway 26 end to helicopter parking.

The airport traffic pattern off all runway ends is a standard left-hand pattern. Runways 12/30 and 17/35 are served by parallel taxiways (Taxiway A and Taxiway H, respectively). The Airport has three dedicated helipads south of the Runway 8 end.

Landside facilities at the Airport include a terminal building, an airport administration building, a tensioned fabric building employed as an annex to the terminal building, an air cargo trailer, an aircraft parking apron and storage hangars, a maintenance building, an air ambulance/aircraft rescue and firefighting (ARFF) hangar, aircraft fuel storage facilities, an airport restaurant, and vehicle parking areas.

FedEx, Suddenlink Communications, the Inyo County Sheriff, and the Eastern Sierra Transit Authority (ESTA) also maintain facilities within the Airport's leasehold.

The most recent aircraft operations forecast for BIH was prepared in March 2020 and approved by the FAA on April 29, 2020. The forecast has been adjusted to represent actual counts for air carrier operations and enplanements for 2021 and 2022. **Table 1-1** presents the adjusted forecast for BIH. The forecast presents operations at BIH through 2033. As shown in Table 1-1, aircraft operations and corresponding passenger enplanements are estimated to increase through 2028, at which point aircraft operations would plateau. The March 2020 BIH forecast report is included in **Appendix D**.

TABLE 1-1
BIH AIRCRAFT OPERATIONS FORECAST

Year	Operation Type				Total Aircraft Operations	Enplanements	Growth (Change in Enplanement)	Percent (Change in Enplanement)
	Air Carrier	Commuter/ Air Taxi	General Aviation	Military				
Historical								
2018 ^a	0	6	23,000	3,000	26,006	-	-	-
2019 ^a	0	6	23,000	3,000	26,006	3	-	-
2020 ^a	0	6	23,000	3,000	26,006	3	-	-
2021 ^a	60	6	23,000	3,000	27,202	1,069	-	-
2022 ^a	632	6	23,000	3,000	27,216	10,875	-	-
2023 ^a	492	6	23,000	3,000	26,498	9,972	(903)	(8.3%)
Future								
2024	1,444	6	23,000	3,000	27,440	28,902	5,160	22%
2029	1,942	6	23,000	3,000	27,948	51,160	1,068	2%

NOTES:

^a Commercial service began at BIH on December 19, 2021. Years 2018 through 2023 are based on actual aviation activity counts from FAA's Terminal Area Forecast (TAF). Future study years (2024 and 2029) were derived from the Aviation Activity Forecast Bishop Airport (January 2021).

To be conservative, forecast air carrier operations are assumed to occur year-round and do not reflect possible winter season cancellations (3% on average).

SOURCE: FAA TAF for Bishop Airport (March 2022). Aviation Activity Forecast Bishop Airport, Inyo County Department of Public Works, March 2020 (Updated January 2021).

1.2.3 Current Runway Safety Area – Runway 12/30

As discussed in Section 1.1, an RSA is a rectangular area surrounding a runway that is designed to enhance safety for aircraft that undershoot, overrun, or otherwise leave the paved runway surface. Per FAA regulations, an airport must keep the RSA cleared, graded, drained, and accessible by firefighting and rescue equipment.⁵ The FAA defines RSA standards and dimensions based on the type of aircraft using the airport. Following these guidelines, the standard RSA for Runway 12/30 would be 500 feet wide, centered on the runway centerline, and extend 600 feet prior to the runway threshold and 1,000 feet beyond the runway end. The RSA surface should have no more than a three-percent slope for 200 feet off the runway end and a maximum slope of five percent thereafter. If an RSA does not provide 600 feet prior to the runway threshold, the FAA requires that either the RSA be improved to meet this criterion or that the runway threshold be permanently displaced.

Declared distances are in effect for Runway 12/30 due to the current, non-standard condition of the RSA. Declared distances are the lengths an airport declares available on a runway for use by an aircraft during takeoff and landing. Declared distances associated with Runway 12/30 include:

⁵ Federal Aviation Administration, AC 150/5300-13B, *Airport Design*.

- Takeoff Run Available (TORA)
- Takeoff Distance Available (TODA)
- Accelerate Stop Distance Available (ASDA)
- Landing Distance Available (LDA)

TORA is the runway length made available for the ground run of an aircraft during takeoff. TODA is the length of the TORA plus the length of any additional runway beyond the far end of the takeoff run. ASDA is the TORA plus the length of the stopway declared available for acceleration and deceleration of an aircraft in the event of an aborted takeoff. LDA is the runway length made available and suitable for landing an aircraft.⁶ By employing declared distances, airports can designate a displaced threshold, which is located at a point on the runway other than the physical runway end and marks the beginning of the useable length of runway. Declared distances are frequently used by airports where there is inadequate area beyond a runway end to allow for the full length of an RSA. The portion of the RSA beyond the runway end can begin at the displaced threshold instead of the physical end of the runway. The Runway 12/30 declared distances are presented in Table 1-2.

TABLE 1-2
CURRENT RUNWAY 12/30 DECLARED DISTANCES

Runway	TORA (feet)	TODA (feet)	ASDA (feet)	LDA (feet)
12	7,498	7,498	7,098	7,098
30	7,498	7,498	6,743	6,743

NOTES:

TORA = Takeoff Run Available
 TODA = Takeoff Distance Available
 ASDA = Arrival Stop Distance Available
 LDA = Landing Distance Available

SOURCE: Environmental Science Associates, 2022.

Figure 1-3 depicts the Runway 12/30 RSA at BIH. Currently, the Runway 12 RSA meets FAA's design guidelines for approximately 285 feet prior to the threshold and 640 feet beyond the runway end. Similarly, the Runway 30 RSA meets FAA design guidelines for approximately 640 feet prior to the threshold and 245 feet beyond the runway end. The remaining 715 feet at the north end and 360 feet at the south end feature excessive slopes, noncompliant grading, and/or excessive vegetation. In addition, an LADWP service road currently runs through the RSA off the Runway 12 end and the airport security fence runs through the RSAs off both the Runway 12 and Runway 30 ends.

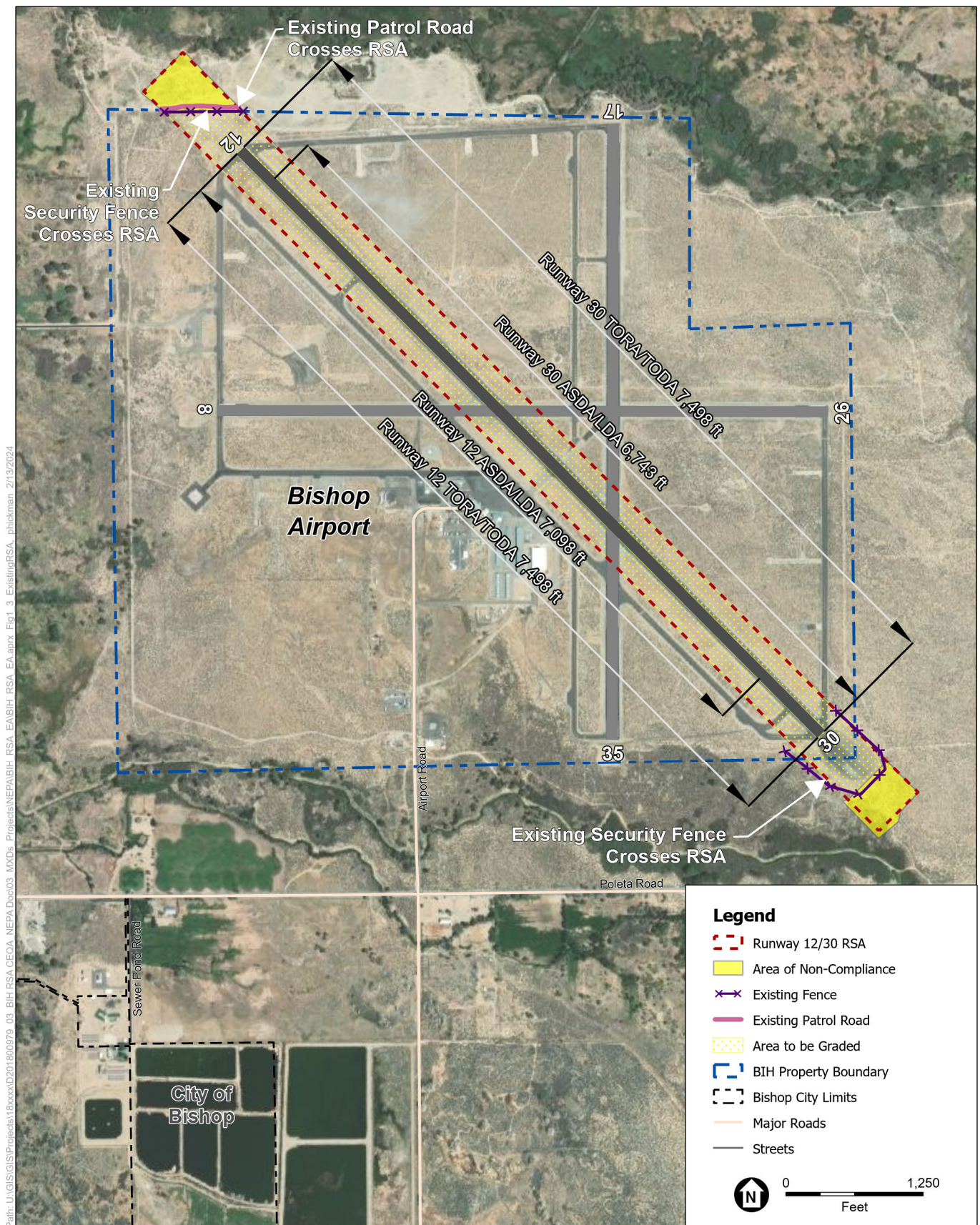
⁶ Federal Aviation Administration, AC 150/5300-13B, *Airport Design*, Appendix H, Section H.4, March 31, 2022.

1.3 Purpose and Need

As stated in Section 1.2.3, Runway 12/30 currently has a nonstandard RSA with portions featuring excessive slopes, noncompliant grading, and/or excessive vegetation. In addition, an LADWP service road currently runs through the RSA off the Runway 12 end and the airport security fence runs through the RSA off both the Runway 12 and Runway 30 ends. As discussed in Section 1.2.2, the current ALP shows the future Runway 12/30 as an ARC C-III runway with a critical/design aircraft of Boeing 737/Airbus 319. The current RSA for this runway does not meet the needs for a runway designed to accommodate C-III aircraft without implementation of declared distances. The permanent implementation of declared distances would limit full use of the runway by C-III aircraft, potentially creating a situation during hotter days in the summer months where aircraft could be required to reduce fuel and/or passengers loads to lower the weight of the aircraft due to the limited takeoff distance available. The Owens Valley frequently experiences extreme heat during the summer months. Between June and September 2022, there were more than 30 days with temperatures surpassing 100 degrees.⁷ This could be problematic for forecasted future commercial aircraft operations at the Airport. Accordingly, the purpose of the Proposed Project is to correct the existing deficiencies in the RSA so it can meet FAA standards for a C-III runway without the use of declared distances.

The FAA regularly re-evaluates standard and non-standard RSAs at airports nationwide and requires airports to make incremental improvements where necessary. In situations where there is insufficient land available in which to develop a standard RSA, or if existing obstacles make a standard RSA impossible, the FAA works with airports to find alternative solutions. Bishop Airport is currently maintaining a non-standard RSA for Runway 12/30. Furthermore, BIH is a Part 139 certificated airport. The Airport is required to comply with the requirements of the Part 139 certification program. Under 14 CFR § 139.309, Part 139 certificated airports must provide and maintain RSAs that are compliant with FAA design standards. Accordingly, the purpose for the Proposed Project is to provide Runway 12/30 with a standard RSA in compliance with FAA regulations.

⁷ National Oceanic and Atmosphere Administration (NOAA), National Weather Service, NOAA NOW Online Weather Data, Climatological Data for Bishop, California, June – August 2022, <<https://www.weather.gov/wrh/Climate?wfo=vef>>, accessed December 2022.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 1-3
Bishop Airport Existing RSAs

1.4 Description of the Proposed Project

To satisfy FAA regulations for runways serving the type of aircraft currently operating on Runway 12/30, the Proposed Project would provide a standard RSA. This would involve the following elements:

Runway 12

- Approximately 7.8 acres of land within the RSA beyond the Runway 12 end would be cut, filled, graded, and compacted. This would provide a standard RSA.
- The existing LADWP unpaved patrol road would be relocated outside the runway's OFA. The portion of relocated road would be approximately 15 feet wide and 1/4 mile long.
- Approximately 1,635 linear feet (LF) of existing perimeter fence would be removed and approximately 2,175 LF of new perimeter fence would be installed beyond the OFA boundary.

Runway 30

- Approximately 6.5 acres of land within the RSA beyond the Runway 30 end would be cleared of vegetation, cut, filled, and graded. This would provide a standard RSA.
- Approximately 2,000 LF of existing perimeter fence would be removed and approximately 3,125 LF of new perimeter fence would be installed outside the OFA.

Runway Sides

- The RSA alongside the runway is generally in compliance with FAA regulations but would be graded to ensure an adequate, flat surface throughout.

The necessary fill material for the RSAs will be taken from the cut material in the RSAs. In the event more material is required, a borrow area has been identified immediately adjacent to the RSA beyond the Runway 12 end.

The portions of the RSA beyond the existing Airport perimeter fence occupy land outside the current leasehold with the LADWP, but within the Airport's easement. The Proposed Project is discussed in further detail in Chapter 2.

1.5 Requested Federal Actions

Approval and implementation of the Proposed Project requires one or more federal actions by the FAA. The federal actions for which the FAA is responsible include:

- Unconditional approval of those portions of the *Bishop Airport Airport Layout Plan* that depict components of the Proposed Project pursuant to 49 U.S.C. §§ 40103(b), 44718, and 47107(a) (16), and 14 CFR Part 77.

- Approval of FAA funding for the Runway 12/30 Safety Area Improvement Project. Approval of funding for the Runway 12/30 Safety Area Improvement Project through determinations under §§ 47016 and 47107 that are associated with the eligibility of the Proposed Project for Federal funding assistance under the Airport Improvement Program (AIP); 49 U.S.C. § 40117, as implemented by 14 CFR § 158.25 to use passenger facility charges (PFCs) collected at the Airport to assist with construction of eligible elements of the Proposed Project as shown of the ALP; and potential funding through the Infrastructure Investment and Jobs Act of 2021, (Public Law 117-58).

1.6 Project Timing

Assuming the Proposed Project is approved, construction activities are anticipated to begin in the fall of 2024. The Proposed Project would be completed in early 2025.

1.7 Document Organization

This document consists of five chapters and supporting appendices:

Chapter 1 – Introduction and Purpose and Need. Chapter 1 provides background information on Bishop Airport, a brief description of the Proposed Project, as well as the purpose and need for the Proposed Project and the requested federal actions.

Chapter 2 – Alternatives. Chapter 2 includes a discussion of the identification and screening of alternatives considered as part of the NEPA process.

Chapter 3 – Affected Environment. Chapter 3 describes the existing environmental conditions within the general study area identified for the Proposed Project.

Chapter 4 – Environmental Consequences. Chapter 4 discloses the potential environmental effects that the Proposed Project and Alternatives, including the No Action Alternative would have on the Airport environs per FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.

Chapter 5 – Agency Coordination and Public Involvement. Chapter 5 summarizes agency coordination and the public involvement process. More detailed information on these topics is provided in **Appendices E and F**.

Appendices:

Appendix A – Acronyms. Appendix A includes a glossary of terms and list of acronyms used in this EA.

Appendix B – References. Appendix B includes references to materials used in the preparation of this EA.

Appendix C – List of Preparers. Appendix C lists the names and the qualifications of individuals that prepared this EA.

Appendix D – Aviation Activity Forecasts. Appendix D includes the aviation activity forecast for Bishop Airport.

Appendix E – Agency Coordination. Appendix E discusses the various agencies and individuals contacted by Inyo County and the FAA as part of the preparation of this EA.

Appendix F – Public Involvement. Appendix F discusses the public involvement activities, including public workshops/hearings held in support of the NEPA process, as well as the comments received during the public review period and the responses to those comments.

Appendix G – Air Quality Technical Analysis. Appendix G discusses air quality analysis for this EA.

Appendix H – Biological Assessment. Appendix H provides the biological assessment prepared for this EA.

Appendix I – Cultural Resources Technical Analysis. Appendix I provides the cultural resources technical analysis prepared for this EA.

Appendix J – Noise Technical Report. Appendix J discusses the noise modeling conducted for this EA.

Appendix K – Wetlands Delineation Technical Report. Appendix K provides the wetlands delineation technical report prepared for this EA.

CHAPTER 2

Alternatives

2.1 Introduction

This chapter provides a summary of the screening process employed to identify, compare, and evaluate alternatives to the Proposed Project. The alternatives analysis presented in this chapter was prepared in accordance with CEQ regulations (40 CFR § 1502.14); FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

2.1.1 Scope of the Alternatives Analysis

The alternatives analysis included the following elements:

- An overview of the alternatives screening process and the analysis used to evaluate each alternative.
- A description of the alternative(s) identified, including the No Action Alternative.
- A discussion of why some alternatives have been eliminated from further evaluation.
- Identification of the alternatives retained for further analysis.

As discussed in Section 2.3, *Range of Alternatives Considered*, five alternatives were initially evaluated for inclusion in this EA. Alternatives that did not meet the purpose and need for the Proposed Action were not carried forward for further analysis. Those alternatives carried forward for further analysis are discussed in Section 2.4, *Alternatives Retained for Further Analysis*. The No Action Alternative was also carried forward for further analysis pursuant to CEQ Regulations at 40 CFR §1502.14(d)).

2.1.2 Requirements of the National Environmental Policy Act

The CEQ regulations (40 CFR § 1502.14) for implementing NEPA (42 U.S.C. 4321 et seq.) require that federal agencies perform the following tasks:

- Evaluate reasonable alternatives to the proposed action, and, for alternatives that the agency eliminated from detailed study, briefly discuss the reasons for their elimination.
- Discuss each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits.

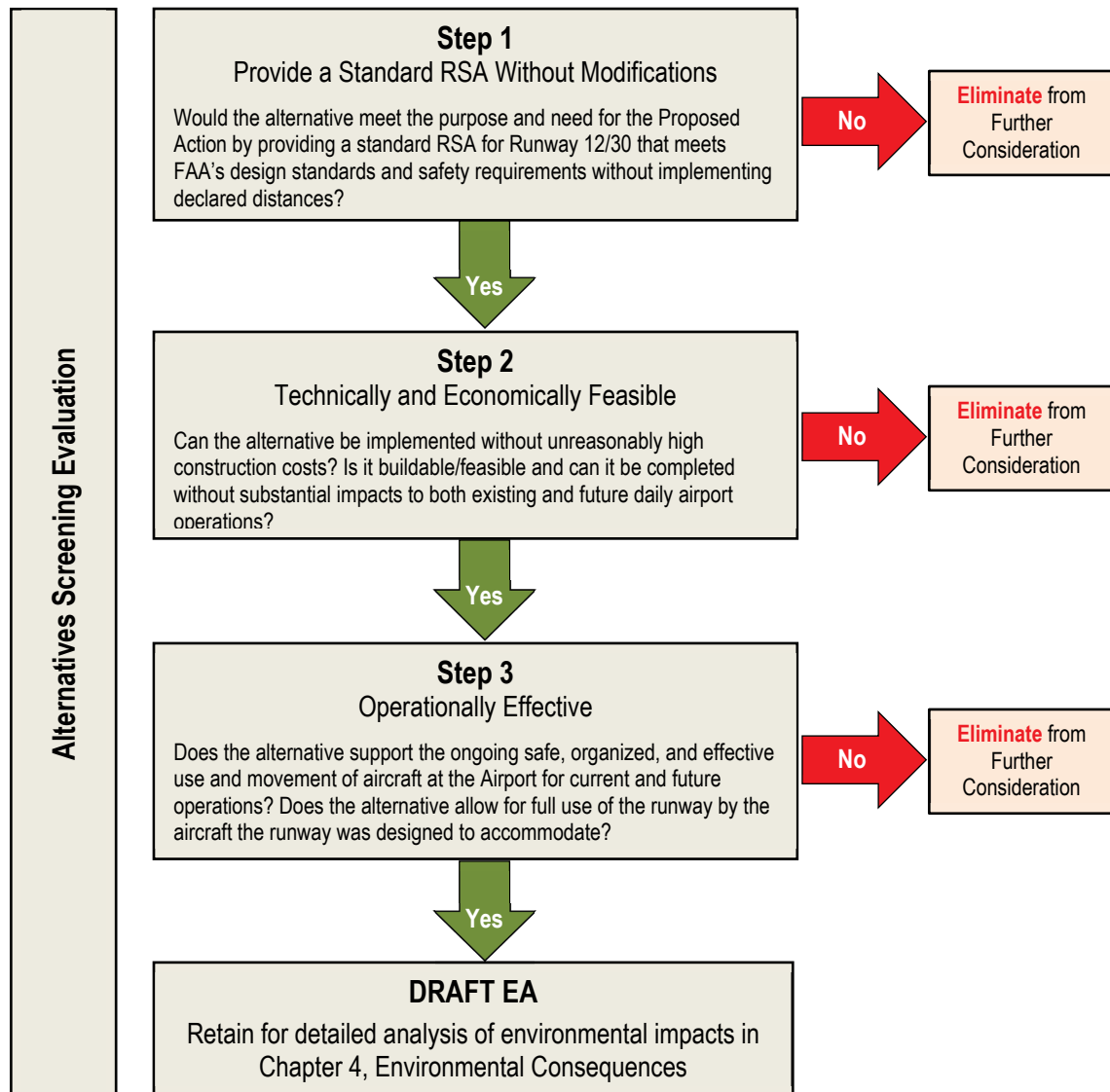
- Include the no action alternative.
- Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
- Include appropriate mitigation measures not already included in the proposed action or alternatives.
- Limit their consideration to a reasonable number of alternatives.

FAA Order 1050.1F states that there is no requirement for a specific number of alternatives or a specific range of alternatives to be included in an EA, and that an EA may limit the range of alternatives to the proposed action and no action when there are no unresolved conflicts concerning alternative uses of available resources (see FAA Order 1050.1F, para. 6-2.1(d)). NEPA mandates that all reasonable alternatives to a proposed action must be examined. Alternatives are “reasonable” if they meet the purpose and need for the proposed action.

2.2 Alternatives Screening

To identify a range of alternatives to carry forward for detailed environmental analysis, it was necessary to determine if they are reasonable. **Figure 2-1** depicts this screening process. The alternatives screening process identifies, compares, and evaluates alternatives for the Proposed Project employing specific criteria. The screening criteria considers whether the potential alternative meets the purpose and need, is constructible and cost effective, and would support the airport’s operational efficiency. Alternatives that were determined not to satisfy the screening criteria were eliminated from further consideration. The detailed screening criteria includes the following:

- Provide a Standard RSA Without Modifications – Does the alternative provide a runway with an acceptable RSA at BIH that meets FAA’s design standards and safety requirements without the use of declared distances?
- Technically and Economically Feasible – Does the alternative have unreasonably high construction costs? Is the alternative buildable/feasible and can it be completed without substantial impacts to both existing and future daily airport operations?
- Operationally Effective – Does the alternative support the ongoing safe, organized, and effective use and movement of aircraft at the Airport for both current and future operations? Does the alternative allow for full use of the runway by the aircraft the runway was designed to accommodate?



SOURCE: Environmental Science Associates, 2023.

Runway 12/30 Safety Area Improvement Project at Bishop Airport
Final Environmental Assessment

Figure 2-1
Alternatives Screening Process

2.3 Range of Alternatives Considered

The following sections discuss the range of alternatives considered. Table 2-1 provides a summary of the alternatives considered and how they compared to the screening criteria discussed in Section 2.2.

2.3.1 Alternative A – Proposed Project

The Proposed Project (Alternative A) is discussed in detail in Section 1.4 and depicted on **Figure 2-2**. The Proposed Project would provide a standard RSA for Runway 12/30 by cutting, filling, and grading the noncompliant portions of the RSA beyond the runway ends, as well as relocating noncompliant structures (patrol road) and objects (airport security fence) from the RSA and placing them beyond the Runway 12/30 OFA. The Proposed Project would entail grading, filling, and clearing vegetation from approximately 7.8 acres at the Runway 12 end of the RSA, and approximately nine acres at the Runway 30 end. At the Runway 12 end, the area of cut, fill, and grading would extend approximately 1,000 feet beyond the runway. Approximately 14,500 cubic yards of material would be excavated during grading and would be used to meet the estimated fill requirement of 19,700 cubic yards at the Runway 12 end. At the Runway 30 end, the area of cut, fill, and grading would extend approximately 1,060 feet beyond the runway. Approximately 16,200 cubic yards of material is anticipated to be excavated at the Runway 30 end and would be used for the approximately 23,200 cubic yards of fill required to construct the necessary embankments. Due to soil shrinkage and compaction anticipated to occur at a rate of 10-20%, as much as 20,780 additional cubic yards of soil may be needed to balance the site cut/fill. The extra fill would be moved from an on-site borrow area. This alternative meets the FAA's RSA requirements for runways like Runway 12/30 and would avoid implementation of declared distances, providing the full usable runway length of 7,498 feet. The Proposed Project would meet the purpose and need for the project by providing RSAs that meet the FAA's design standards and safety requirements, without the use of declared distances. The Proposed Project would be readily constructible and cost effective, using materials from within the RSA or immediately adjacent to the RSA to fill the uneven terrain in the RSA. Completion of this work would have a minimal impact to daily airport operations and would ensure that the RSA would support the ongoing safe and efficient, movement of aircraft for current and future operations at the Airport. Areas of cut, fill, and grading would occur proximate to delineated wetlands and floodplains. However, it is anticipated that this alternative would avoid most, if not all, environmental impacts. Therefore, Alternative A was carried forward for further analysis in the EA.

2.3.2 Alternative B – Use of Declared Distances on Runway 30

As discussed in Section 1.2, declared distances are the lengths an airport declares available on a runway for use by an aircraft during takeoff and landing. Through employment of declared distances, the portion of the RSA beyond the runway end can be measured from the terminus of the LDA/ASDA, instead of the physical end of the runway. Alternative B was proposed to help avoid affecting the floodplain beyond the Runway 12 end. **Table 2-1** provides the declared distances proposed under Alternative B.

TABLE 2-1
ALTERNATIVE B – USE OF DECLARED DISTANCES ON RUNWAY 30

Runway	Threshold Displacement (feet)	TORA (feet)	TODA (feet)	ASDA (feet)	LDA (feet)
30	N/A	7,498	7,498	7,333	7,333

SOURCE: Environmental Science Associates, 2022.

Since Alternative B would include declared distances, it does not meet the purpose and need for the project. Although Alternative B would require a smaller construction effort and cost as the cut, fill, and grading quantities would be reduced on the Runway 12 end, this Alternative would have the potential to limit the ability of aircraft to fully utilize the runway during the hotter summer months. During periods of extreme heat, it can be more difficult for planes to take off due to fluctuations in air density, requiring a longer takeoff run on a runway. To compensate, aircraft may limit fuel and passenger loads to reduce aircraft weight. As discussed in Section 1.3, the Owens Valley frequently experiences extreme heat during the summer months which could be problematic for future commercial aircraft operations at the Airport. Therefore, Alternative B would not meet the purpose and need for the project, and it was eliminated from further consideration.

2.3.3 Alternative C – Modify Runway 12/30 (Relocation, Shifting, or Realignment of the Runway)

Alternative C proposes options for relocating, shifting, or realigning Runway 12/30 for the purpose of achieving an adequate RSA. The following sections discuss runway modification options, including relocating, shifting, or realigning Runway 12/30.

2.3.3.1 Relocating Runway 12/30

Relocation of a runway under Alternative C would require moving the runway centerline to provide adequate space for a standard RSA. While this option has the potential for meeting the purpose and need by providing adequate RSAs, there are numerous constraints that would make relocation of the runway difficult. First, there is insufficient area on the Airport property to accommodate relocation of the runway. Relocating the runway to the southwest would require relocation of the Airport's landside facilities as well as Taxiway A, the taxiway connectors, and one or more of the helipads. Relocating the runway to the northwest would be constrained by the Airport property boundary. Furthermore, the cost of relocating the runway, let alone the other Airport facilities, would be prohibitively expensive, potentially costing tens of millions of dollars. The Airport would be effectively closed to service during construction, negatively affecting operational effectiveness.

2.3.3.2 Shifting Runway 12/30

Shifting the runway under Alternative C would require relocating the Runway 12 end to the northwest or Runway 30 end to the southeast along the existing runway centerline. Demarking a displaced threshold is a type of runway shift; however, under Alternative C this would entail a physical relocation of the runway ends. While the current ALP includes a future expansion of Runway 12/30 on both ends, indicating a runway shift may be feasible, shifting the runway would

face similar constraints to those described for relocating the runway. There is not enough area available on the current Airport property to accommodate a runway shift and an adequate RSA. Like relocating the runway, the cost of shifting the runway would be expensive and the Airport would be effectively closed to commercial air passenger service during construction, negatively affecting operational effectiveness. Finally, there are physical constraints associated with shifting the runway. A northwestern shift would bring the Runway 12 end closer to the floodplain, North Fork Bishop Creek, and associated wetlands and riparian habitat. A southeastern shift would bring the Runway 30 end closer to the Rawson Canal and East Line Road. In each case, a shift would result in greater impacts than establishing a standard RSA around the existing Runway 12/30.

2.3.3.1 Realigning Runway 12/30

Runway alignment refers to the magnetic azimuth along which a runway is situated. Realigning the runway under Alternative C would entail changing the runway alignment to allow for more area for standard RSAs. This would also necessitate changes to established procedures and flight paths. This option would face similar constraints as those that would be encountered in relocating or shifting the runway, namely in the availability of land for realignment. For example, assuming there was enough area within the Airport property boundary, relocating the runway to a northeast-southwest alignment would require relocation of the Airport's existing and future landside facilities and navigational aids. Assuming enough space on Airport property, relocating the runway to an east-west alignment would also raise the prospect of introducing an increase in aircraft overflight of the city of Bishop, including areas of residential development near the Airport. In addition, relocation of a runway would be prohibitively expensive, and the Airport would be effectively closed to commercial air passenger service during construction, negatively affecting operational effectiveness. This option would likely result in increased noise exposure to local residents and other environmental impacts.

Although the options available under Alternative C would potentially meet the purpose and need for the project, they would have significantly higher construction costs than the Proposed Project and would be operationally inefficient. Furthermore, none of the Alternative C options would avoid or minimize environmental impacts. Therefore, Alternative C was eliminated from further consideration.

2.3.4 Alternative D – Engineered Materials Arresting System

An Engineered Materials Arresting System (EMAS) consists of a bed of “high energy absorbing materials of selected strength, which will reliably and predictably crush under the weight of an aircraft.”¹ Installing an EMAS bed at the end of a runway would quickly slow down an aircraft that overran the runway. Accordingly, the RSA would not require as much length to meet the FAA's design guidelines and standards and placement of an EMAS bed beyond the Runway 12 end would reduce the likelihood of infringing on the floodplain or encroaching on wetlands. However, while the FAA considers a properly sized and placed EMAS bed as an acceptable method for bringing an

¹ Federal Aviation Administration, AC 150/5200-22B, *Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns*, April 2012.

RSA into compliance, it is generally not recommended as a reasonable alternative when sufficient area is available for development of a standard RSA.²

EMAS provides safety benefits in cases where land is not available or it's not possible to have the standard 1,000-foot runway overrun.³ Although proximate to potentially sensitive environmental resources, there is sufficient area available for development of a standard RSA beyond the runway ends. Installation of EMAS beds would meet the purpose and need while likely not impacting the operational efficiency of the Airport as well as avoiding or minimizing environmental impacts. However, the cost of construction and ongoing maintenance would be substantially higher than development of a standard RSA. EMAS beds have demonstrated a limited lifespan with major rehabilitation required and full replacement after approximately 20 years. Extreme cold, flooding, and earthquakes could also impact inspection, maintenance, and replacement schedules. Limited competition in the manufacture of EMAS panels has contributed to limited supply availability and high costs associated with installation, maintenance, and replacement. Furthermore, EMAS panels would require replacement in the event of any incident resulting in EMAS collapse. In view of these costs and limited supply coupled with the availability of land to adequately accommodate a standard RSA, Alternative D was eliminated from further consideration.

2.3.5 Alternative E – Improve Other Runways at the Airport

The Airport has two other runways, Runway 08/26 and Runway 17/35. Alternative E would improve the RSA for either of these runways and shift commercial service from Runway 12/30. Runway 8/26 is east-west oriented and 5,567 feet long by 100 feet wide. This runway would provide substantially less length than Runway 12/30. Furthermore, Runway 08/26 is a crosswind runway that experiences infrequent headwinds, providing a challenge to aircraft takeoffs and landings. There is adequate room to develop a standard RSA without implementing declared distances, thus meeting the purpose and need for the Proposed Project and the development would not be excessively expensive; however, the use of this runway would provide operational and environmental challenges that would affect the efficiency of the Airport. In addition, as discussed in Section 1.2.2, *Existing Airport Facilities and Services*, Inyo County plans to close Runway 8/26. The Runway 8 end will be converted to a taxiway and the Runway 26 end to helicopter parking.

Runway 17/35 is north-south oriented and 5,600 feet long by 100 feet wide. Similar to Runway 08/26, this runway would provide substantially less length than Runway 12/30. In addition, there is inadequate room beyond the runway to develop a standard RSA. The North Fork Bishop Creek runs approximately 450 feet beyond the Runway 17 end and the Rawson Canal is located approximately 650 feet beyond the Runway 35 end. To develop a standard RSA would require realigning or culverting both water bodies, which would carry unreasonably high construction costs and would not avoid or minimize environmental impacts.

The options available under Alternative E would potentially meet the purpose and need for the project; however, improving the RSA for Runway 08/26 would be operationally inefficient and for Runway 17/35 would have significantly higher construction costs and more potential

² Federal Aviation Administration, Order 5200.8, *Runway Safety Area Program*, Appendix 2, Section 4(f), October 1, 1999.

³ <https://www.faa.gov/newsroom/runway-safety-fact-sheet>

environmental impacts than the Proposed Project. Therefore, Alternative E was eliminated from further consideration.

2.3.6 Alternative F – No Action Alternative

Under the No Action Alternative, no construction would occur to expand the Runway 12/30 RSA. Because the current declared distances would remain in effect permanently under this alternative, the threshold on the Runway 12 end would need to be physically displaced to the southeast by 355 feet. The threshold displacement would involve the removal of the existing threshold striping and re-application in the new location, as well as amending existing or developing new Runway 12 approach procedures. The Runway 12 PAPI would also need to be relocated. It is important to note that new flight procedures are not ripe for development at the time of this analysis. New or amended flight procedures would not be developed until the physical improvements have been completed, and new runway survey information is available. If amendments to flight procedures are required, a separate NEPA analysis will be conducted. This alternative would leave the Airport with a permanently shortened runway, which could affect the type of aircraft able to serve the Airport in the future. The declared distances which would become permanent under the No Action Alternative are presented in **Table 2-2**.

TABLE 2-2
NO ACTION ALTERNATIVE – DECLARED DISTANCES ON RUNWAY 12/30

Runway	Threshold Displacement (feet)	TORA (feet)	TODA (feet)	ASDA (feet)	LDA (feet)
12	355	7,498	7,498	7,098	7,098
30	0	7,498	7,498	6,743	6,743

SOURCE: Environmental Science Associates, 2023.

Table 2-3 presents an evaluation matrix summarizing the comparison of the alternatives considered.

**TABLE 2-3
ALTERNATIVES COMPARISON SUMMARY**

Screening Criteria	Alternative A - Proposed Project	Alternative B - Use of Declared Distances	Alternative C - Modify Runway 12/30	Alternative D - Engineered Materials Arresting Systems (EMAS)	Alternative E - Improve Other Runways at the Airport	Alternative F - No Action Alternative
Provide a Standard RSA Without Modifications	Yes	No	Yes	No	Yes	No
Technically and Economically Feasible	Yes	Yes	No	No	No	Yes
Operationally Effective	Yes	No	No	Yes	No	Yes
Retain for Detailed Analysis in EA?	Yes	No	No	No	No	Yes

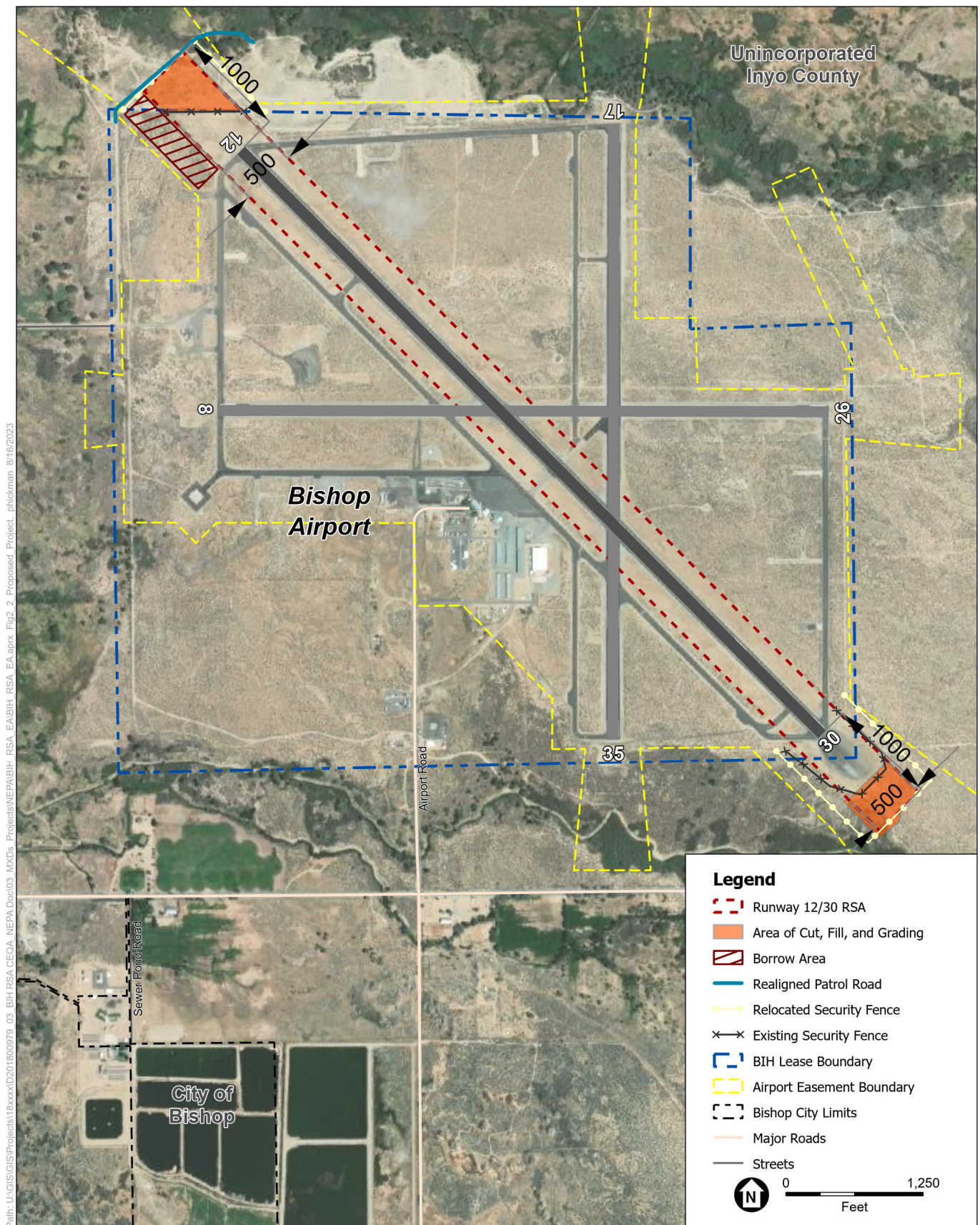
SOURCE: Environmental Science Associates, 2023.

2.4 Alternatives Retained for Further Analysis

Upon careful consideration of the range of alternatives discussed in Section 2.3, the following alternatives have been identified for further evaluation in this EA.

2.4.1 Alternative A - Proposed Project

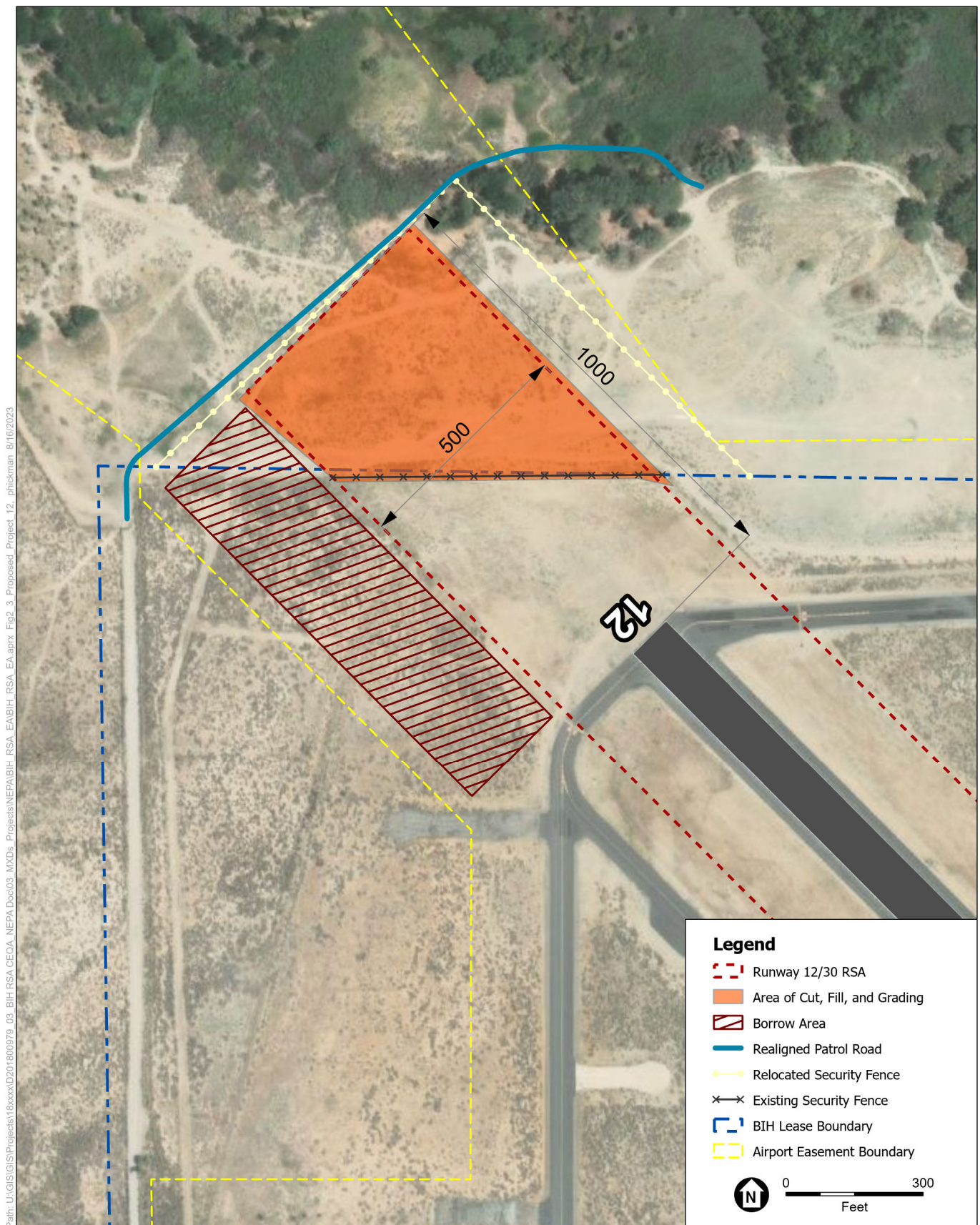
As discussed in Section 2.3.1, Alternative A would provide a fully compliant RSA for Runway 12/30 through cutting, filling, and grading the noncompliant portions of the RSA beyond the runway ends, as well as removing noncompliant structures (patrol road) and objects (airport security fence) from the RSA and placing them beyond the Runway 12/30 OFA. Figure 2-2 presents an overview of Alternative A. **Figure 2-3** provides a closeup of the proposed RSA beyond the Runway 12 end and **Figure 2-4** provides a similar view of the proposed RSA beyond the Runway 30 end. Alternative A would meet the purpose and need for the project by providing RSAs that meet the FAA's design standards and safety requirements. Alternative A would also be easily constructible and cost effective and would have a minimal impact to daily airport operations.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

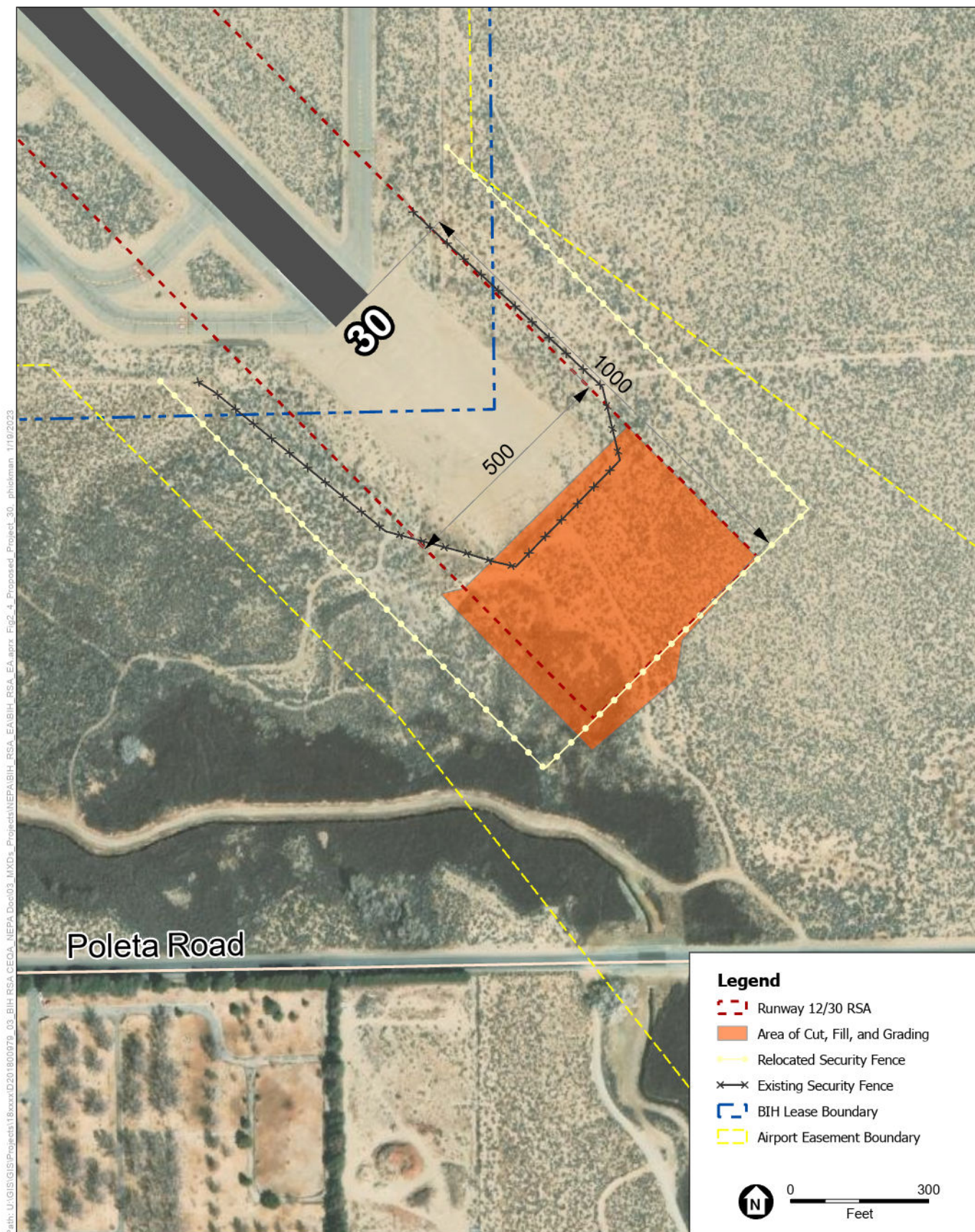
Figure 2-2
Alternative A - Proposed Project
Runway 12/30



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 2-3
Alternative A - Proposed Project
Runway 12 End



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 2-4
Alternative A - Proposed Project
Runway 30 End

2.4.3 Alternative F- No Action Alternative

Under the No Action Alternative, the Proposed Project would not be built. The RSA would remain noncompliant and there would be no clearing, cutting, filling, or grading in the RSA. The LADWP patrol road would remain within the Runway 12 RSA and the Airport security fences would continue to transect the RSA off both runway ends. The Runway 12/30 RSA would remain non-standard and non-compliant with FAA design standards and regulations. The current declared distances would remain in effect permanently under this alternative, the threshold on the Runway 12 end would need to be physically displaced to the southeast by 355 feet and NAVAIDs would need to be relocated. Furthermore, approach procedures would need to be amended or new approach procedures developed to account for the shift in the runway threshold. Flight procedures are not ripe for development at the time of this analysis. New or amended flight procedures would not be developed until the physical improvements have been completed, and new runway survey information is available. If amendments to flight procedures are required, a separate NEPA analysis would be conducted.

In accordance with CEQ regulations at 40 CFR § 1502.14, an EA must include a No Action Alternative. The purpose of the No Action Alternative is to provide a point of comparison against other alternatives to allow for the identification of potential environmental impacts.

2.5 Federal Laws and Regulations Considered in this EA

Relevant federal laws and statutes, executive orders, and other federal regulations considered during preparation of this EA are listed in **Table 2-4**, **Table 2-5**, and **Table 2-6**.

TABLE 2-4
FEDERAL LAWS AND STATUTES CONSIDERED

<i>Airport and Airway Improvement Act of 1982, as amended</i>	42 U.S.C. 7401 <i>et seq.</i>
<i>Aviation Safety and Capacity Expansion Act of 1990</i>	P.L. 101-508
<i>Aviation Investment and Reform Act for the 21st Century, 2000</i>	P.L. 106-181
<i>Vision 100--Century of Aviation Reauthorization Act of 2003</i>	P.L. 108-176
<i>FAA Reauthorization Act</i>	P.L. 112-95
<i>National Environmental Policy Act of 1969</i>	42 U.S.C. 4321 <i>et seq.</i>
<i>Noise Control Act of 1972</i>	P.L. 92-574; 42 U.S.C. Section 4901
<i>Aviation Safety and Noise Abatement Act of 1979</i>	49 U.S.C. 47501 <i>et seq.</i>
<i>Airport Noise and Capacity Act of 1990</i>	49 U.S.C. 4752 <i>et seq.</i>
<i>Clean Air Act of 1970, as amended</i>	42 U.S.C. 4321 <i>et seq.</i>
<i>Endangered Species Act of 1973, as amended</i>	16 U.S.C. 1531 <i>et seq.</i>
<i>Fish and Wildlife Coordination Act of 1958</i>	16 U.S.C. 1531 <i>et seq.</i>
<i>Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended</i>	16 U.S.C. 1801 <i>et seq.</i>
<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Community Environmental Response Facilitation Act of 1992</i>	42 U.S.C. 9601 <i>et seq.</i>
<i>Resource Conservation and Recovery Act of 1976, as amended by the Solid Waste Disposal Act of 1980</i>	42 U.S.C. 6901 <i>et seq.</i>
<i>Policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites</i> [recodified from and formerly known as Section 4(f) of the <i>Department of Transportation Act of 1966</i>]	49 U.S.C. Section 303
<i>National Historic Preservation Act of 1966, as amended</i>	16 U.S.C. 470 <i>et seq.</i>
<i>Archaeological and Historic Preservation Act of 1974, as amended</i>	16 U.S.C. 469 <i>et seq.</i>
<i>Land and Water Conservation Fund Act of 1965</i>	16 U.S.C. 4601 <i>et seq.</i>
<i>Clean Water Act, as amended</i>	33 U.S.C. 1251 <i>et seq.</i>
<i>Rivers and Harbors Act of 1899</i>	33 U.S.C. 403 <i>et seq.</i>
<i>Farmland Protection Policy Act</i>	7 U.S.C. 4201 <i>et seq.</i>
<i>Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs</i>	42 U.S.C. 61
<i>Wild and Scenic Rivers Act of 1968</i>	16 U.S.C. 1271 <i>et seq.</i>
<i>Toxic Substances Control Act</i>	15 U.S.C. 2601 <i>et seq.</i>
<i>Coastal Zone Management Act of 1972</i>	16 U.S.C. 1452 <i>et seq.</i>
<i>Migratory Bird Treaty Act of 1918</i>	16 U.S.C. 703-711
U.S.C. = United States Code, P.L. = Public Law	

TABLE 2-5
EXECUTIVE ORDERS CONSIDERED

<i>Executive Order 11593, "Protection and Enhancement of the Cultural Environment"</i>	36 Federal Register 8921
<i>Executive Order 11988, "Floodplain Management"</i>	43 Federal Register 6030
<i>Executive Order 11296, "Flood Hazard Evaluation Guidelines"</i>	31 Federal Register 6030
<i>Executive Order 11514, "Protection and Enhancement of Environmental Quality"</i>	35 Federal Register 4247
<i>Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency"</i>	65 Federal Register 50121
<i>Executive Order 11990, "Protection of Wetlands"</i>	42 Federal Register 26961
<i>Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"</i>	59 Federal Register 7629
<i>Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks"</i>	62 Federal Register 19883
<i>Executive Order 13690, "Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input"</i>	80 Federal Register 6325
<i>Executive Order 13783, "Promoting Energy Independence and Economic Growth"</i>	82 Federal Register 16093
<i>Executive Order 14096, "Revitalizing Our Nation's Commitment to Environmental Justice for All"</i>	88 Federal Register 25251

TABLE 2-6
FAA ORDERS, ADVISORY CIRCULARS, AND FEDERAL REGULATIONS CONSIDERED

U.S. Department of Transportation and FAA Orders
U.S. Department of Transportation (DOT), FAA Order 1050.1F, <i>Environmental Impacts: Policies and Procedures</i>
U.S. DOT, FAA Order 5050.4B, <i>NEPA Implementing Instructions of Airport Actions</i>
U.S. DOT, Order 5280.5D, <i>Airport Certification Program Handbook</i>
U.S. DOT, Order 5650.2, <i>Floodplain Management and Protection</i>
U.S. DOT Order 5610.1D, <i>Procedures for Considering Environmental Impacts</i>
U.S. DOT Order 5200.8, <i>Runway Safety Area Program</i>
U.S. DOT Order 5200.9, <i>Financial Feasibility and Equivalency of Runway Safety Area Improvements and Engineered Material Arresting Systems</i>
U.S. DOT, Order 5660.1A, <i>Preservation of the Nation's Wetlands</i>
U.S. DOT, Order 5680.1, <i>Final Order to Address Environmental Justice in Low-Income and Minority Populations</i>
U.S. DOT, FAA Joint Order 7110.65Y, <i>Air Traffic Organization Policy</i>
U.S. DOT, FAA Order 8900.1, Change 489, <i>Flight Standards Information Management System</i>
FAA Advisory Circulars
U.S. DOT, FAA AC 150/5070-6B, <i>Airport Master Plans</i>
U.S. DOT, FAA AC 150/5200-33C, <i>Hazardous Wildlife Attractants on or Near Airports</i>
U.S. DOT, FAA Draft AC 150/5220-22B, <i>Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns</i>
U.S. DOT, FAA AC 36-3H, <i>Estimated Airplane Noise Levels in A-Weighted Decibels</i>
U.S. DOT, FAA AC 150/5300-13B, <i>Airport Design</i>
U.S. DOT, FAA AC 150/5320-6F, <i>Airport Pavement Design and Evaluation</i>
U.S. DOT, FAA AC 150/5370-10H, <i>Standards for Specifying Construction of Airports</i>
Code of Federal Regulations
Title 14 CFR Part 77, <i>Safe, Efficient Use and Preservation of the Navigable Airspace</i>
Title 14 CFR Part 119, <i>Certification: Air Carriers and Commercial Operators</i>
Title 14 CFR Part 139, <i>Airport Operations Specifications</i>
Title 14 CFR Part 150, <i>Airport Noise Compatibility Planning</i>
Title 14 CFR Part 151, <i>Federal Aid to Airports</i>
Title 14 CFR Part 152, <i>Airport Aid Program</i>
Title 14 CFR Part 157, <i>Notice of Construction, Alteration, Activation, and Deactivation of Airports</i>
Title 14 CFR Part 169, <i>Expenditures of Federal Funds for Non-Military Airports or Air Navigational Facilities Thereon</i>
Title 36 CFR Part 800 (39 Federal Register [FR] 3365, January 25, 1974, and 51 FR 31115, September 2, 1986), <i>Protection of Historic Properties</i>
Title 40 CFR Part 93, <i>Determining Conformity of Federal Actions to State or Federal Implementation Plans</i> , Subpart B
Title 40 CFR Part 122, <i>EPA Administered Permit Programs: The National Pollutant Discharge Elimination System</i>
Title 40 CFR Part 124, <i>Procedures for Decision Making</i>
Title 40 CFR Part 172, <i>Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements</i>
Title 40 CFR Parts 1500-1508 (1978, as amended in 1986 and 2005), <i>President's Council on Environmental Quality</i>
Title 50 CFR Part 402, <i>Interagency Cooperation – Endangered Species Act of 1973, as amended</i>

CHAPTER 3

Affected Environment

3.1 Introduction

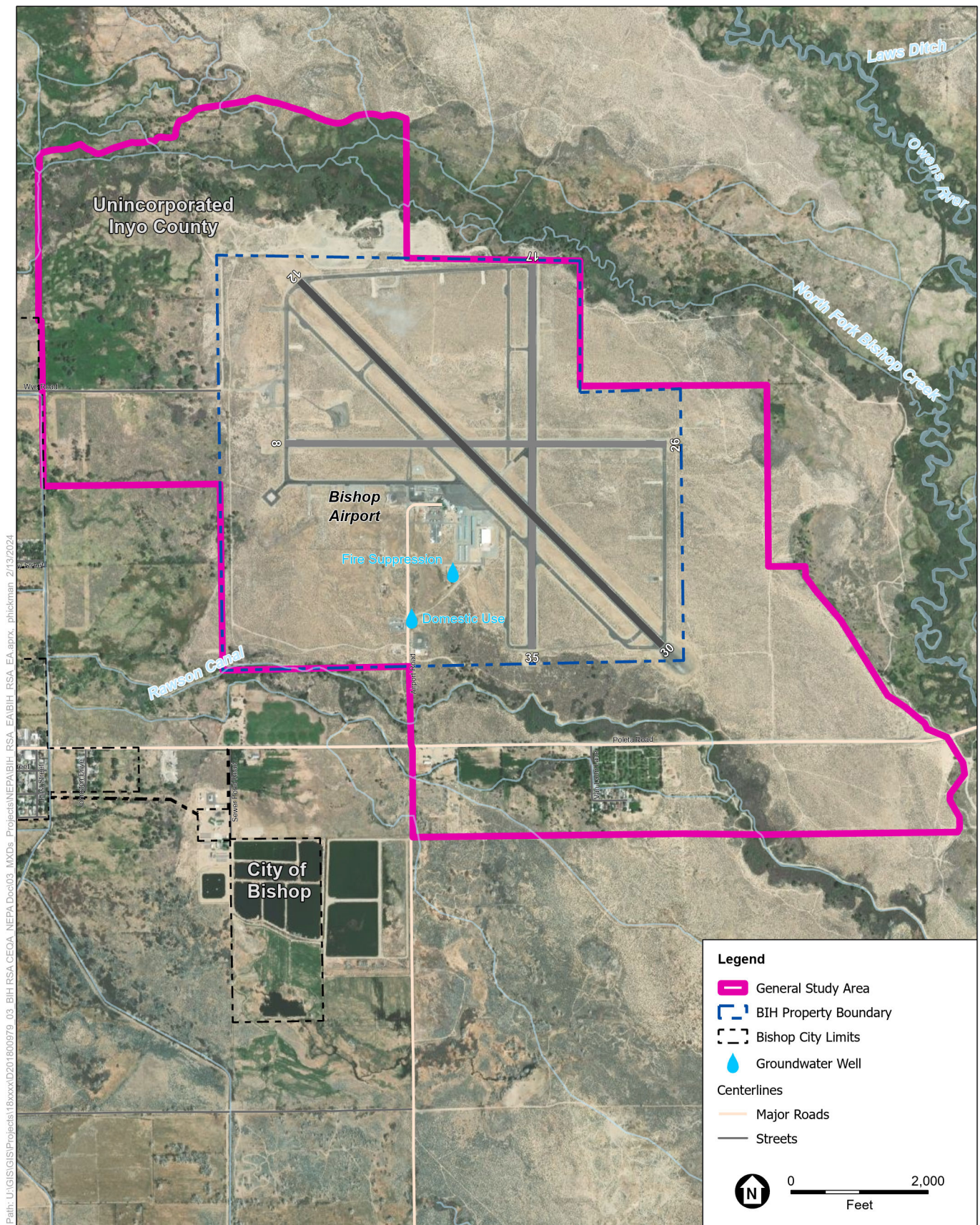
The Affected Environment chapter describes the existing physical, natural, and human environmental conditions that could be directly, or indirectly, affected by the Proposed Project. This information sets the stage on which potential environmental impacts associated with the Proposed Project are assessed and compared to the No Action Alternative in Chapter 4, *Environmental Consequences*. The environmental impact categories discussed in this chapter are presented in the same order as shown in FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures*, FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, and the 1050.1F Desk Reference.

FAA Order 5050.4B states the affected environment chapter of an EA should succinctly describe only those environmental resources the Proposed Project and its reasonable alternatives are likely to affect. Per FAA Order 1050.1F and the guidance provided in the 1050.1F Desk Reference, the amount of information provided on potentially affected environmental resources is based on the expected impact and is commensurate with the impact's importance.

3.1.1 Study Areas

Study areas were identified to describe existing conditions in the vicinity of Bishop Airport and to assess the potential environmental impacts of the Proposed Project and the No Action Alternative. For the purposes of this EA, a General Study Area (GSA) of approximately 1,872 acres has been defined, as well as specialized study areas where necessary to address individual environmental impact categories not effectively assessed within the GSA. The GSA is shown in **Figure 3-1**. Environmental impact categories with specialized study areas include, but are not limited to, Biological Resources and Historic, Architectural, Archaeological, and Cultural Resources. As discussed in the 1050.1F Desk Reference, study areas may vary based on the impact category being analyzed. Information regarding specialized study areas is described, where applicable, within each environmental impact section below.

The GSA encompasses the area around the Airport property and areas along the extended centerline of Runway 12/30 in both directions. The GSA boundary was defined using a combination of U.S. Census geometry, Inyo County tax assessor parcel boundaries, and the Airport property line. The GSA represents the area where both direct and indirect impacts may result from the implementation of the Proposed Project and establishes the study area for the quantification of impacts to categories that involve issues that are regional in scope and scale, including noise, land use, and socioeconomic impacts.



SOURCE: ESA (2022); Maxar (2020); US Census Bureau (2020); Inyo County (2022).

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-1
General Study Area

3.1.2 Impact Categories Not Affected

The environmental impact categories that would not be affected by the Proposed Project are discussed below. In accordance with guidance provided in FAA Order 1050.1F, FAA Order 5050.4B, and the 1050.1F Desk Reference, no further analysis of these resources is included in this EA.

Coastal Resources

Inyo County is located approximately 200 miles from the Pacific Ocean and is outside of the California Coastal Zone (defined as 1,000 yards from the mean high tide line). Accordingly, the Proposed Project would not affect Coastal Resources.

Farmlands

Farmlands are defined as those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include pasturelands, croplands, and forests (even if zoned for development) that are considered “prime,” “unique,” or “of statewide or local importance.” Farmland does not include land already in or committed to urban development or water storage as of August 4, 1984 (7 CFR § 658.2(a)(2)).

The Proposed Project would involve clearing, grading, and fencing of land which is designated for agriculture and is within an area permitted for, but not currently used for, livestock grading. However, this land is not identified as being of “prime” or “unique” importance by the California Department of Conservation. Furthermore, this land is within an existing airport easement reserving it for airport use.

Department of Transportation Act, Section 4(f)

To qualify as a resource subject to the protective provisions included in Section 4(f) of the Department of Transportation Act of 1966 (DOT Act) (re-codified and renumbered as 49 U.S.C § 303(c)), land must be a publicly owned park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance as determined by the officials having jurisdiction over the land (Section 4(f) properties). Some areas around the Airport and within the GSA have been occasionally used for recreational purposes, and the question of whether these lands were considered recreational areas of national, state, or local significance by their managing agency was previously investigated as part of the EA for the Proposed Commercial Airline Service at the Airport completed in 2021. In October 2020, Inyo County contacted the LADWP, both owner of the land and the agency with jurisdiction over the property in question, to determine whether the LADWP considers the property to qualify as a Section 4(f) property. LADWP indicated that their lands in the GSA for the Part 139 Certification Project EA function primarily as watershed protection for its operations providing municipal drinking water to the city of Los Angeles. While the LADWP permits public recreation on these lands as a secondary use at the agency’s discretion, these areas do not function as parks or recreational areas and are not designated as such. As the recreational aspects of the LADWP-owned properties around the Airport are secondary to their primary purpose, they do not constitute publicly owned lands of a public park or recreation area or a wildlife and waterfowl refuge of national, state, or local significance. Therefore, LADWP-owned properties around the Airport are not considered Section 4(f) properties. There are no other properties within the GSA that would qualify as Section 4(f) properties. In consideration of these actualities, there is no further evaluation of Section 4(f) properties in this EA.

Water Resources (Wild and Scenic Rivers Subcategory)

Wild and Scenic Rivers is a subcategory of the Water Resources environmental impact category. The nearest designated Wild and Scenic River is Cottonwood Creek, approximately 20 miles northeast of the Airport in the Inyo National Forest (NPS 2020). Accordingly, the Proposed Project would not affect Wild and Scenic Rivers.

3.1.3 Existing Conditions Study Year

The year used to identify existing conditions in this EA is 2022. This represents the latest year for which full sets of data were available or anticipated to be available at the time preparation of this EA commenced.

3.1.4 Potentially Affected Impact Categories

This chapter provides information on existing conditions for the environmental impact categories potentially affected by the Proposed Project. These environmental impact categories include:

- Air Quality
- Biological Resources
- Climate
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Noise-Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects
- Water Resources (Wetlands, Floodplains, Groundwater, and Surface Waters)

This chapter also provides a list of past, present, and reasonably foreseeable projects that in combination with the Proposed Project may result in cumulative environmental impacts.

The following sections discuss each of the above-listed environmental impact categories in detail.

3.2 Air Quality

3.2.1 Introduction

The U.S. Environmental Protection Agency (USEPA) is required by the federal Clean Air Act of 1970 (CAA) (42 U.S.C. § 7401 *et seq.* [1970]), as amended, to set National Ambient Air Quality Standards (NAAQS) for common air pollutants considered harmful to public health and the environment. Accordingly, the U.S. EPA, established NAAQS for seven air pollutants, described as “criteria air pollutants.”

These pollutants include:

- ozone (O₃)
- carbon monoxide (CO)
- nitrogen dioxide (NO₂)
- sulfur dioxide (SO₂)
- particulate matter less than or equal to 10 microns in diameter (coarse particulates, or PM₁₀)

- particulate matter less than or equal to 2.5 microns in diameter (fine particulates, or PM_{2.5})
- lead (Pb).

In establishing the NAAQS, the U.S. EPA identified two sets of standards, primary and secondary. The primary standards are focused on protecting public health, including the health of populations with increased sensitivity to air pollution. The secondary standards are focused on protecting public welfare from other adverse effects of air pollution, such as damage to property and reduced visibility.

Each state is required to analyze air quality in areas within its jurisdiction and make recommendations to the EPA on whether they meet the NAAQS. Those areas where air quality meets or surpasses the NAAQS are designated as being in “attainment” and those areas where the NAAQS are not being met are designated as being in “nonattainment.” States that identify nonattainment areas must prepare a State Implementation Plan (SIP) that details the efforts that will be undertaken to meet the NAAQS by deadlines specified in the 1990 amendments to the CAA. Areas formally designated as being in “nonattainment” that have met the NAAQS are designated as being in “maintenance.” In nonattainment areas, the General Conformity rule established under the CAA requires federal agencies work with state, tribal, and local governments to ensure that their actions conform to the relevant SIP and not interfere with plans to attain and maintain the NAAQS.

In California, air quality is managed by the California Air Resources Board (CARB). The CARB regulates mobile emissions sources and oversees county and regional air district activities associated with managing air quality. The State of California has also established its own air quality standards, the California Ambient Air Quality Standards (CAAQS). The CARB regulates local air quality indirectly through the CAAQS, as well as setting vehicle emissions standards, conducting air quality research, air quality planning, and overseeing state and local coordination activities. The CAAQS are generally more stringent than the federal standards.

The Proposed Project is located in the Great Basin Valleys - Air Basin (Air Basin). The Air Basin is monitored by the Great Basin Unified Air Pollution Control District (GBUAPCD), a regulatory entity created through a joint powers agreement between Inyo, Mono, and Alpine Counties. The GBUAPCD enforces federal laws delegated to it and state laws concerning stationary emissions sources. The GBUAPCD also establishes and enforces its own legal requirements. Enforcement of federal, state, and local air quality regulations in the Air Basin is handled by the GBUAPCD. Mobile emissions sources in California are typically regulated by the CARB.

3.2.2 Regulatory Context

Air quality management in the Air Basin is the responsibility of the GBUAPCD. The GBUAPCD has prepared air quality plans for four separate areas in the Air Basin. However, the GSA is not located in any of these planning areas and is thus not located in an area designated as being in nonattainment or maintenance for any of the NAAQS. Because the Air Basin is in attainment for the NAAQS, there is no SIP applicable to the GSA.

This EA is focused on potential impacts to air quality associated with federal standards. However, for purposes of disclosure it is important to note that Inyo County is designated as being in nonattainment for the CAAQS for O₃ and PM₁₀. The current NAAQS and CAAQS are discussed in greater detail in the Air

Quality Technical Memorandum provided in **Appendix G. Table 3-1** describes the NAAQS and CAAQS and attainment status within the Air Basin for each.

TABLE 3-1
GREAT BASIN VALLEYS AIR BASIN – STANDARDS AND ATTAINMENT STATUS

Pollutant	Primary/Secondary	Averaging Time	Federal Standard	State Standard	Federal Attainment Status - Basin	State Attainment Status - Basin
Ozone (O ₃)	Primary and secondary	1 Hour	0.12 ppm	0.09 ppm	Unclassified/Attainment	Nonattainment
	Primary and secondary	8 Hour	0.070 ppm	0.070 ppm	Unclassified/Attainment	Nonattainment
Respirable Particulate Matter (PM ₁₀)	Primary and secondary	24 Hour	150 µg/m ³	50 µg/m ³	Unclassified/Nonattainment (Owens Valley) ^a	Nonattainment
	--	1 Year	--	20 µg/m ³	Unclassified/Attainment	Attainment
Fine Particulate Matter (PM _{2.5})	Primary	1 Year	12 µg/m ³	12 µg/m ³	Unclassified/Attainment	Attainment
	Secondary	1 Year	15 µg/m ³	--	Unclassified/Attainment	Attainment
	Primary and secondary	24 Hours	35 µg/m ³	--	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Primary	1 Hour	35 ppm	20 ppm	Unclassified/Attainment	Attainment
		8 Hour	9 ppm	9 ppm	Unclassified/Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Primary	1 Hour	0.100 ppm	0.18 ppm	Unclassified/Attainment	Attainment
	Primary and secondary	1 Year	0.053 ppm	0.030 ppm	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO ₂)	Primary	1 Hour	0.075 ppm	0.25 ppm	Unclassified/Attainment	Attainment
	Secondary	3 Hour	0.5 ppm	--	Unclassified/Attainment	Attainment
	--	24 Hour	--	0.04 ppm	Unclassified/Attainment	Attainment
Lead (Pb)	Primary and secondary	Rolling 3-month Average	0.15 µg/m ³	--	Unclassified/Attainment	Attainment
	--	30 Days	--	1.5 µg/m ³	Unclassified/Attainment	Attainment

Note:

^a The portion of the Owens Valley in which the GSA is located is in attainment of the NAAQS for PM₁₀.

SOURCE: California Air Resources Board, 2022; U.S. Environmental Protection Agency Green Book, 2022.

3.2.3 Existing Conditions

The GBUAPCD monitors air quality at 14 locations throughout Inyo County. The closest air quality monitoring station to BIH is located at the White Mountain Research Center on East Line Street, about 1.2

miles southeast of the Airport. The White Mountain Research Center monitors concentrations of ozone, CO, SO₂, PM_{2.5}, and PM₁₀. There are no monitoring stations that measure concentrations of NO₂ near the Airport. **Table 3-2** summarizes air quality data from the White Mountain Research Station for the four most recent years for which complete data was available.¹

TABLE 3-2
AIR QUALITY MONITORING DATA SUMMARY (2019-2022)

Pollutant	Monitoring Data by Year			
	2019	2020	2021	2022
Ozone (O₃)				
Highest 1 Hour Average (ppm)	0.069	0.079	0.081	0.075
Days over National Standard	0	0	0	0
Highest 8 Hour Average (ppm)	0.064	0.073	0.075	0.068
Days over National Standard (0.070 ppm)	0	1	4	0
Sulfur Dioxide (SO₂)				
Highest 1 Hour Average (ppb)	0.9	0.9	0.6	0.6
Days over National Standard (75 ppb)	0	0	0	0
Highest 24-Hour Average (ppb)	0.2	0.3	0.3	0.4
Days over National Standard (140 ppb)	0	0	0	0
Carbon Monoxide (CO)				
Highest 1 Hour Average (ppm)	1.6	2.2	0.9	0.3
Days over Federal Standard (35 ppm)	0	0	0	0
Highest 8 Hour Average (ppm)	1.2	1.7	0.8	0.3
Days over National Standard (9.0 ppm)	0	0	0	0
Particulate Matter ≤ 10 Microns (PM₁₀)				
Highest 24-Hour Average (µg/m ³) ^a	742	788	151	478
Estimated Days over National Standard (150 µg/m ³)	3	10	0	3
Particulate Matter ≤ 2.5 Microns (PM_{2.5})				
Highest 24-Hour Average (µg/m ³) ^a	98.9	196.9	89.7	42.2
Estimated Days over National Standard (35 µg/m ³)	--	--	--	-

NOTES:

ppm = parts per million

ppb = parts per billion

µg/m³ = micrograms per cubic meter

-- There was insufficient data available to determine the value

^a exceptional events excluded

SOURCE: U.S. Environmental Protection Agency. Outdoor Air Quality Data; Monitor Values Report, 2023.

The climate in the Air Basin, which includes the GSA, is determined by its terrain and geographical location. The Air Basin is situated in a valley between the Sierra Nevada Mountains to the west and the White-Inyo Mountains to the east. The Sierra Nevada Mountains to the west act as a barrier to precipitation creating a 'rain shadow' in the Air Basin. For this reason, the region has an arid climate with an average annual rainfall of about five inches. The temperature typically varies between 22°F to 97°F throughout the

¹ While available, annual statistics for 2022 are not finalized until May 1, 2023. Accordingly, data is reported through 2021 only.

year with the hottest months in June through August. It is not uncommon for temperatures to exceed 100°F during the summer months. The average wind speed ranges from around five miles per hour (mph) in the fall to seven mph in the spring.

Air emissions sources associated with the Airport are typical of a small commercial service facility used mainly by general aviation aircraft. These sources include aircraft during the landing/take-off cycle and airport-related motor vehicles (e.g., passenger vehicles, heavy trucks, shuttles, etc.). Although the Airport owns and maintains a small back-up generator, it does not rely on stationary sources such as diesel-powered generators for regular sources of power. Emissions from aircraft auxiliary power unit (APU) and ground support equipment (GSE) were modeled for commercial service jet aircraft using FAA's Aviation Environmental Design Tool (AEDT Version 3e) employing the default GSE assignments.

Table 3-3 presents the existing conditions (2022) air pollutant emissions inventory calculated for the Airport. The emissions inventory was developed using AEDT Version 3e and the EMFAC2021 web database for motor vehicles. More information on the emissions inventory can be found in the Air Quality Technical Memorandum provided in Appendix G.

TABLE 3- 3
EXISTING CONDITIONS AIR POLLUTANT EMISSIONS INVENTORY (TONS PER YEAR)

Emissions Source	CO	VOC	NO_x	SO_x	PM₁₀	PM_{2.5}
Aircraft	92.13	5.17	5.52	0.96	0.17	0.17
GSE	5.36	0.19	0.45	0.00	0.02	0.02
Off-Airport Vehicular Travel	1.34	0.19	2.12	0.01	0.56	0.17
Total	98.83	5.55	8.09	0.97	0.75	0.36

NOTES:

CO = carbon monoxide

NO_x = oxides of nitrogen

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

SO_x = oxides of sulfur

VOC = volatile organic compound

SOURCE: Environmental Science Associates, 2023.

3.3 Biological Resources

3.3.1 Introduction

This section describes existing biotic communities in the Airport environs, including vegetation communities, wildlife, and protected species with potential to exist therein.

3.3.2 Regulatory Context

The provisions set forth in the federal *Endangered Species Act* (16 U.S.C. § 1531 et seq) require the FAA to determine whether a proposed project under its purview would affect a federally listed species or designated critical habitat for that species. Identification of candidate species [any species that either the USFWS or National Marine Fisheries Service (NMFS) is considering for listing as “endangered” or “threatened,” but has not yet issued a proposed rule] is also required.

3.3.3 Biological Assessment Action Area

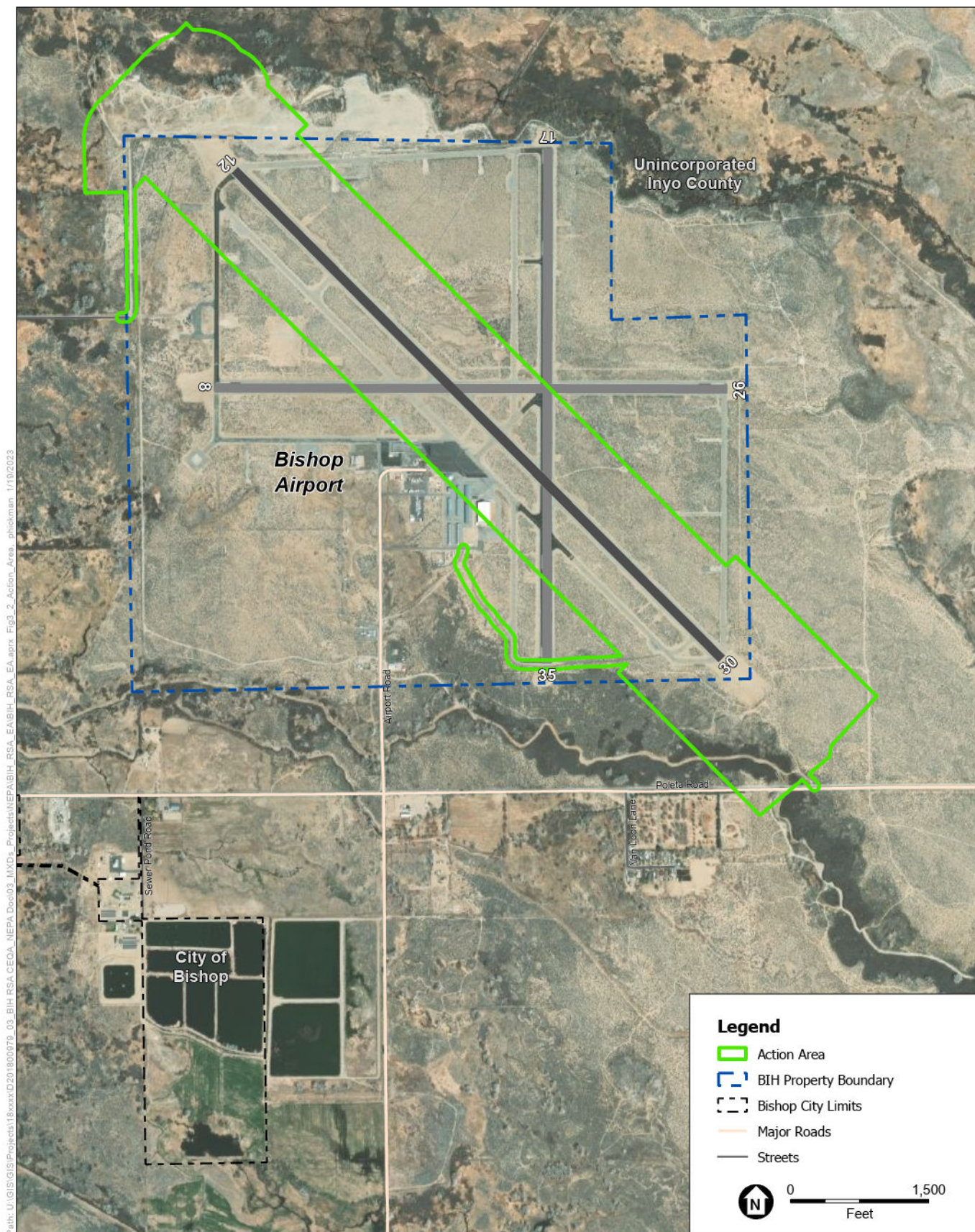
For purposes of meeting the requirements of Section 7 of the *Endangered Species Act*, a Biological Assessment (BA) was prepared for the FAA. The results of the BA are used herein to describe existing conditions at the Airport. An Action Area (AA) was delineated for use in preparing the BA. The AA is a distinct study area used to analyze potential impacts to biological resources. Per the 1050.1F Desk Reference, the AA encompasses all areas that may be affected directly or indirectly by the Proposed Project, as well as immediately adjacent areas. The AA includes approximately 403 acres surrounding Runway 12/30, the runway safety area (RSA), and the surrounding area within a 500-foot buffer, as well as the access roads that will be used to bring equipment and workers into the RSA beyond each runway end. The AA is shown in **Figure 3-2**. The BA is provided in **Appendix H**.

3.3.4 Existing Conditions

3.3.4.1 Vegetation Communities

A biological reconnaissance survey of the AA was conducted by verified biologists on November 1, 2022. The survey was conducted to observe and characterize vegetation communities in the survey area and to assess habitat quality and potential for common and special-status wildlife species to occur within the AA or the vicinity. Surveys were also conducted by ESA biologists on June 7, 2019 and May 1, 2020 to assess biological resources and potential for use by the southwestern willow flycatcher (*Empidonax traillii extimus* (SWFL)).

The AA includes upland and wetland vegetation communities. The AA primarily consists of upland habitat. This includes areas with a mixture of low-intensity development, open space, and shrub/scrub habitat. Airport operations staff routinely grade and maintain the open areas surrounding the runway. The area to the northeast of the AA was previously used for gravel mining but has not been used for that purpose since 2010. This area is open to the public and is occasionally used for recreational purposes, including off-highway vehicle use. The LADWP regularly patrols this area to ensure that there are no illegal dumping activities that could compromise the integrity of local water resources. The shrub/scrub habitat consists of primarily low-growing ruderal grassland and common shrub species. Airport infrastructure (buildings, runways, taxiways, etc.), gravel and paved roads, and actively managed areas



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-2
Biological Resources - Action Area

are bare or have sparse vegetation. Within the maintained runway safety and object-free areas (OFAs) surrounding the runways, low-growing angle-stemmed buckwheat (*Eriogonum maculatum*), cryptantha (*Cryptanthum micrantha*), and short-podded mustard (*Hirschfeldia incana*) are present. Airport property and surrounding areas outside of the actively maintained RSAs and OFAs consist of rubber rabbitbrush (*Ericameria nauseosa*) as the primary shrub species, with interspersed greasewood (*Sarcobatus vermiculatus*), and saltbush (*Atriplex spp.*).

Wetland habitats at the far north and south ends of the AA were identified through research using the USFWS NWI database and field surveys conducted on November 1, 2022. Rawson Canal is a perennial stream located on the southeastern end of Runway 30 and is potential habitat for wetland and stream species. Rawson Canal is located within the Crowley Lake Watershed and empties into the Owen River.

The USFWS NWI identifies the presence of freshwater forested/shrub riparian habitat slightly within and immediately surrounding the AA. Field surveys confirm that these areas consist of perennial herbaceous vegetation, shrubby willow trees (*salix sp.*), and rose (*Rosa sp.*) bushes beyond the Runway 12 end. In addition, small areas of willow shrubs and rose thicket are located to the south, beyond the Runway 30 end, along Rawson Canal. Field surveys confirm that these areas consist of the following community vegetation types: Sandbar willow thicket (*Salix exigua* Alliance), Fremont cottonwood-willow riparian forest (*Populus fremontii*-*Salix gooddingii*-*S. lasiolepis* *S. laevigata* Alliance); Willow riparian woodland (*Salix gooddingii*-*S. lasiolepis* *Salix laevigata* Alliance); and Saltgrass meadow (*Distichlis spicata* Alliance). More detailed descriptions of upland and wetland habitats within the AA can be found in Appendix H.

3.3.3.2 Wildlife

Federally Listed Species and Critical Habitat

The federally listed species with potential to occur in the AA are identified in **Table 3-4**. The species described in this section are based on the official list of threatened and endangered species provided by USFWS on December 8, 2022. A biological reconnaissance survey of the AA was conducted by verified biologists on November 1, 2022. Surveys were also conducted by ESA biologists in June 2019 and May 2020 to assess biological resources and potential for use by the SWFL, including habitat that might be impacted by potential future commercial aircraft operations.

The SWFL (*Empidonax traillii extimus*) is a subspecies of Willow Flycatcher found in the Southwestern United States, and the only subspecies of Willow Flycatcher known to breed in the Owens River Valley (Paxton 2000). Several other subspecies of Willow Flycatcher that breed further north pass through the area during spring and fall migration (*E. t. brewsteri*, *E. t. adastus*). Multiple databases were queried for records of Willow Flycatchers observed in the project vicinity, with a focus on records between the days of June 15 and July 20 of each year, the “nonmigrant period,” where individuals observed are presumed to be *E. t. extimus* (Willow Flycatchers are not reliably separated in the field to subspecies by other means). Records of Willow Flycatchers in the Bishop area were found during 2022 on eBird (eBird 2022b); however, these observations were not during the non-migrant period. The most recent observation during the non-migrant period was in 2003 (CNDDDB 2022), approximately six miles northwest of BIH along Horton Creek. A separate search on USFWS ECOS database indicates that there is no SWFL critical habitat within, or in close proximity to, the survey area. The nearest designated Critical Habitat is located approximately 115 miles south of the Airport.

TABLE 3-4
FEDERAL LISTED SPECIES POTENTIALLY OCCURRING IN THE ACTION AREA

Common Name	Scientific Name	Species Type	USFWS Listing
Western Yellow-Billed Cuckoo ^a	<i>Coccyzus americanus occidentalis</i>	Birds	T
Southwestern Willow Flycatcher ^a	<i>Empidonax traillii extimus</i>	Birds	E
Owens Pupfish	<i>Cyprinodon radiosus</i>	Fish	E
Owens Tui Chub ^a	<i>Gila bicolor ssp. snyder</i>	Fish	E
Monarch Butterfly	<i>Danaus plexippus</i>	Insect	C
Fish Slough Milk-vetch ^a	<i>Astragalus lentiginosus var. piscinensis</i>	Plant	T

NOTES:

The species list was based on USFWS official species list in addition to research of historical information. Potential to occur within the AA may also be influenced by occurrences in adjacent similar habitat.

^a The USFWS has only designated Critical Habitat for Southwestern Willow Flycatcher, Yellow-billed Cuckoo, Owens Tui Chub and Fish Slough Milk-vetch. The AA does not overlap Critical Habitat for these species.

Status Codes:

E = Listed as Endangered

T = Listed as Threatened

C = Candidate for Listing

SOURCES: U.S. Fish and Wildlife Service, Information, Planning, and Consultation (IPaC) System, December 8, 2022..

The SWFL occurs in riparian woodlands in Southern California. It prefers riparian areas dominated by willow trees along streams or the margins of a pond or lake, and at wet mountain meadows. Based on the recent field survey, there is potential suitable habitat to support the SWFL at riparian locations along the North Fork Bishop Creek and Rawson Canal by providing opportunities to forage within or near the survey area on occasion. However, on-site species-specific surveys, conducted by ESA in 2019 and 2020, did not confirm the presence of SWFL within or near the survey area and described the habitat as low-quality. Habitat quality has not changed since these surveys were conducted, and the potential suitable habitat is trimmed for maintenance, therefore potential for occurrence is low.

The USFWS lists the Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) as a threatened avian species potentially occurring within the AA. The Yellow-billed Cuckoo is a primarily riparian avian species that primarily inhabits canopies of deciduous trees and is seen in woodland patches with gaps and clearings. They require large, contiguous tracts of riparian habitat for nesting and prefer Cottonwood-willow forests (*Populus spp* and *Salix spp.*) for breeding. The closest Critical Habitat designated for this species is approximately 115 miles south of the Airport. Review of CNDDDB records indicate that the closest recent sighting of the Yellow-billed Cuckoo occurred 15 miles south of BIH in 2009. The species was not detected in the AA during site visits conducted at the Airport and it is unlikely the species would be found in the AA.

The USFWS lists the Owens Tui Chub (*Cyprinodon radiosus*) and Owens Pupfish (*Gila bicolor ssp. Snyder*) as endangered or threatened fish species potentially occurring within the AA; however, it is unlikely either of these fish species would be present. Habitat for the Owens Pupfish consists of spring pools, sloughs,

irrigation ditches, swamps, and flooded pastures in the Owens Valley, including Inyo County. However, this fish is confined to five relatively isolated populations, which includes the Fish Slough Area of Critical Environmental Concern (ACEC). The Fish Slough ACEC is located approximately six miles north of the AA. Although the Fish Slough ACEC is hydrologically connected to the Owens River, its unique biome and distance make it a relatively unlikely path of migration to the North Fork Bishop Creek or Rawson Canal.

Critical Habitat for Owens Tui Chub does not exist on or adjacent to the AA or within the GSA. The distribution of the Owens Tui Chub extends throughout the Owens River and its larger tributaries extending from its source springs to Owens Lake. The three existing natural populations are located at the Owens River Gorge, source springs of the Hot Creek Hatchery, and at Cabin Bar Ranch near Owens Dry Lake. The Owens River Gorge is located about seven miles northwest of the survey area and represents the closest population of this fish species. Given the distance of North Fork Bishop Creek and Rawson Canal to the Owens River Gorge, combined with its populations' isolation, it is unlikely that the Owens Tui Chub would be found in the AA.

The USFWS listed the Fish Slough Milk-vetch (*Astragalus lentiginosus* var. *piscinensis*) as potentially occurring in the AA. The Fish Slough Milk-vetch is largely dependent on desert spring-fed wetland ecosystems that consist of highly alkali soils. The California Native Plant Society (CNPS) Calflora database indicates that the Fish Slough Milk-vetch has been positively identified in Inyo County.² Designated Critical Habitat is located approximately five miles north of the AA; however, there are no historical records of its presence within the AA.

The monarch butterfly is a federal candidate species and not yet listed or proposed for listing under the ESA. In the western U.S., monarch butterflies migrate in the fall and overwinter at sites along the Pacific coast and Central Valley. Monarch's host plant, milkweed (*Asclepias* spp.), and other flowering plants are necessary for monarch butterfly habitat-adult monarchs feed on the nectar of many flowering plants during breeding and migration, but they can only lay eggs on milkweed plants. The AA lies in the migration route of monarch butterflies, and if nectar sources and milkweed are present, individuals may occur. No milkweed plants were observed during the field survey in November 2022; however, one adult monarch butterfly was observed.

State-Listed Species

Nine state-listed special-status species were identified with the potential to occur in the AA or in its immediate surroundings through research using the following sites: California Department of Fish and Wildlife (CDFW) CNDDDB, and the USFWS ECOS. The state listed species of concern are presented in **Table 3-5**.

Excluding the Northern Harrier (*Circus hudsonius*), Yellow Warbler (*Setophaga petechia*), and Yellow-breasted Chat (*Icteria virens*), none of the state-listed species identified in Table 3-5 have been observed within the AA and their potential to occur is low or not expected. The Northern Harrier (*Circus hudsonius*), Yellow Warbler (*Setophaga petechia*), and Yellow-breasted Chat (*Icteria virens*) were identified in the AA

² California Native Plant Society, Calflora.
<<https://www.calflora.org/entry/observ.html?track=m#srch=t&cols=0,3,61,35,37,13,54,32,41&lpci=t&taxon=Astragalus+lentiginosus+var.+piscinensis&chk=t&cch=t&inat=r&cc=INY.>> (accessed February 22, 2023).

during the field surveys conducted in 2019 and 2020. However, the available habitat in the AA is of limited quality and they are unlikely to nest in the area. In addition, the 2023 CDFW Special Animals List identifies these species as being secure from global extinction.³ More information on state listed species can be found in Appendix H.

TABLE 3-5
STATE-LISTED SPECIES POTENTIALLY OCCURRING IN THE ACTION AREA

Common Name	Scientific Name	Species Type	CDFW Listing
Owens Valley vole	<i>Microtus californicus vallicola</i>	Mammal	SSC
Yellow-breasted chat	<i>Icteria virens</i>	Birds	SSC
Burrowing owl	<i>Athene cunicularia</i>	Birds	SSC
Yellow warbler	<i>Setophaga petechia</i>	Birds	SSC
Northern harrier	<i>Circus hudsonius</i>	Birds	SSC
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Birds	T
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Birds	E
Owens pupfish	<i>Cyprinodon radiosus</i>	Fish	E
Owens Tui chub	<i>Gila bicolor ssp. snyder</i>	Fish	E

NOTES:

Species list was based on research of historical information and site visits in 2019 and 2020. Potential to occur within the AA may also be influenced by occurrences in adjacent similar habitat.

It is important to note that the Species of Special Concern is an administrative designation and carries no formal legal status. The intent of the designation is to focus attention on animals at possible conservation risk.

Status Codes:

E = Listed as Endangered

T = Listed as Threatened

SSC = Species of Special Concern

SOURCES: California Department of Fish and Wildlife, State and Federally Listed Endangered and Threatened Animals of California, 2022; California Department of Fish and Wildlife, Special Animals List, 2022; California Department of Fish and Wildlife, Inland Deserts Region, <<https://wildlife.ca.gov/Regions/6>> (accessed 2022).

3.3.3.4 Migratory Birds

The *Migratory Bird Treaty Act of 1918* (16 U.S.C. §§ 703-711) makes it illegal for anyone to take any migratory bird, nest, or eggs except under the terms of a valid permit. The migratory bird species in the area include hawks and other raptors, among many others. The complete list of migratory bird species with potential to occur in the AA and identified by the USFWS is included in Appendix H.

³ California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB), Special Animals List, March 2023.

3.4 Climate

3.4.1 Introduction

This section defines greenhouse gases (GHGs), describes the sources of GHG emissions at the Airport, and provides the context for analysis of project-related effects on climate.

3.4.2 Regulatory Context

In January 2023, the CEQ published interim guidance on analyzing greenhouse gas emissions and effects on climate change for NEPA actions.⁴ This guidance directs agencies to consider both a proposed action's effect on climate change as well as the effects of climate change on a proposed action. In analyzing a proposed action's effect on climate change, an agency should follow three steps:

Quantifying the GHG emissions of the proposed action and its alternatives – This involves quantifying direct and indirect emissions of individual GHGs as well as the aggregate carbon dioxide equivalent (CO₂e) emissions.

Contextualizing the GHG emissions and climate impacts associated with a proposed action and alternatives – This involves quantifying the effects of climate impacts in terms of monetized damages using metrics such as the Social Cost of Carbon (SC-GHG). Agencies should also contextualize the emissions in terms of their effects on existing climate action commitments and goals.

Analyzing the reasonable alternatives to identify mitigation measures to avoid, minimize, or compensate for the effects of climate change – Agencies should disclose and compare the GHG emissions across all reasonable alternatives, including the no action alternative, to inform the public and decision makers.

Projected GHG emissions were estimated, consistent with the guidance provided in the FAA's 1050.1F Desk Reference. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Increasing concentrations of GHGs in the atmosphere affect global climate. Anthropogenic (i.e., man-made) sources of GHG emissions are primarily associated with the combustion of fossil fuels, including aircraft fuel.

Mass emissions of GHGs are accounted for by converting emissions of specific pollutants to CO₂e emissions by applying the proper global warming potential (GWP) value for each pollutant. GWP represents the amount of heat captured by a mass of a specific GHG compared to a similar mass of CO₂. Some GHGs have greater warming potential than others; accordingly, they would represent a greater amount of equivalent CO₂. Specific GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report (AR4) (IPCC 2007). By applying the GWP ratios, project related CO₂e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline.

⁴ Council on Environmental Quality, 88 FR 1196, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, January 9, 2023.

Although Inyo County does not currently have any adopted climate action or adaptation plans, a *Climate Change and Health Profile Report* for Inyo County was published in 2017 which discusses climate projections, associated health impacts, and potentially vulnerable populations.⁵ The report makes recommendations for addressing the public health implications of climate change. However, it does not set emissions reduction targets. Applicable climate action plans include the *2022 Scoping Plan for Achieving Carbon Neutrality* published by the California Air Resources Board.⁶ This plan presents a strategy to reduce GHG emissions 85%, to levels below 1990 emissions, by 2045. The *United States' Nationally Determined Contribution (NDC)*, as presented in Article 4 of the Paris Agreement, sets national GHG emissions reductions to achieve 2005 levels or lower by 2030.⁷

3.4.3 Existing Conditions

Similar to the existing conditions calculations conducted for the criteria air pollutants discussed in Section 3.2, *Air Quality*, existing GHG emissions were calculated for aircraft operations, off-airport vehicular travel, and project construction, the sources for the bulk of air pollutants emissions generated from the Airport. Estimated GHG emissions at the Airport for 2022 are shown in **Table 3-6**. The amount of CO₂ was calculated for aircraft operations using AEDT 3e. CH₄ and N₂O for aircraft were calculated using the methods found in the FAA's *Aviation Emissions and Air Quality Handbook* (Version 3, Update 1). Emissions of GHGs from mobile sources, such as light-duty vehicles associated with passenger traffic and larger trucks, were calculated using the EMFAC2021 web database based on estimated vehicular traffic levels provided by Inyo County.

**TABLE 3-6
EXISTING CONDITIONS (2022) GREENHOUSE GAS EMISSIONS
(ANNUAL METRIC TONS)**

Source		
Aircraft*		
	CO ₂	1,956.49
	CH ₄	10.12
	N ₂ O	38.19
	Total Aircraft Carbon Dioxide Equivalent (CO_{2e})	2,004.80
Off-Airport Vehicular Travel		
	CO ₂	1,086.86
	CH ₄	0.02
	N ₂ O	0.16
	Total Off-Airport Vehicle Travel Carbon Dioxide Equivalent (CO_{2e})	1,411.92
	2022 Total CO_{2e}	3,416.72
NOTE:		
*Includes emissions from GSE		
SOURCE: Environmental Science Associates, 2023.		

⁵ California Department of Public Health – Office of Health Equity, *Climate Change and Health Profile Report – Inyo County*, February 2017.

⁶ California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*, December 2022.

⁷ United Nations Framework Convention on Climate Change, *United States' Nationally Determined Contribution: Reducing Greenhouse Gases in the United States: A 2030 Emissions Target*, April 2021.

3.5 Hazardous Materials, Solid Waste, and Pollution Prevention

3.5.1 Introduction

This section characterizes known areas of environmental concern, areas with known contamination, and areas subject to past or present remediation efforts within the GSA that may be affected by the Proposed Project.

3.5.2 Regulatory Context

Materials are typically defined as being hazardous if they have specific characteristics defined as such or if they appear on a list of hazardous materials produced by a federal, state, or local regulatory agency.

As part of the *Resources Conservation and Recovery Act* (RCRA)(42 U.S.C. § 6901 *et seq*) implementing regulations, the USEPA has defined the term “solid waste”⁸ as including the following: any gaseous, liquid, semi-liquid, or solid material that is discarded or has served its intended purpose, unless the material is excluded from regulation. These materials are considered solid waste whether they are discarded, reused, recycled, or reclaimed.

The USEPA classifies a waste as hazardous if it is listed on the USEPA’s list of hazardous waste and exhibits one or more of the following properties: ignitability (including oxidizers, compressed gases, and extremely flammable liquids and solids); corrosivity (including strong acids and bases); reactivity (including materials that are explosive or generate toxic fumes when exposed to air or water); or toxicity (including materials listed by the USEPA as capable of inducing systemic damage in humans or animals).⁹

3.5.2.1 Hazardous Materials

Federal, state, and local laws regulate the use, storage, transport, and disposal of hazardous materials. Federal laws and regulations pertaining to hazardous materials include:

- *Resources Conservation and Recovery Act* (RCRA)(42 U.S.C. § 6901 *et seq*)
- *Hazardous and Solid Waste Amendments Act of 1984* (HSWA)(Public Law 98-616)
- *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA or Superfund)(42 U.S.C. § 9601 *et seq*)
- *Superfund Amendments and Reauthorization Act of 1986* (SARA)(Public Law 99-499)
- *Emergency Planning and Community Right-to-Know Act of 1986* (SARA Title III)(Public Law 99-499)

Federal regulations promulgated to implement these statutes are codified in Title 40 of the CFR, *Protection of the Environment*. Additional regulations that apply to workplace safety and transportation of hazardous materials are contained in Titles 29 and 49 of the CFR, respectively.

Hazardous materials management laws in California include:

⁸ 40 CFR § 261.2

⁹ See *Id* at § 261.3.

- *Hazardous Waste Control Law* (California Health and Safety Code §§ 25100, *et seq*)
- *Safe Drinking Water and Toxic Enforcement Act* (Proposition 65)
- *Carpenter-Presley-Tanner Hazardous Substance Account Act* (California Health and Safety Code §§ 25300)

3.5.2.2 Solid Waste and Recycling

State and local jurisdictions have primary responsibility for regulating locally generated solid waste. The *California Integrated Waste Management Act of 1989* required that by the year 2000, each jurisdiction in the state must divert at least 50 percent of its solid waste from landfills or transformation facilities to recycling or composting facilities, or to implement policies to generally reduce waste. Similarly, Assembly Bill 341 (Solid Waste: diversion)(AB 431), implemented in 2011, increased this amount to 75 percent by the year 2020. The City of Bishop participates in the Mandatory Commercial Recycling program that has been in effect since 2012. Under this program, businesses that generate four cubic yards or more of trash per week are required to recycle. The City of Bishop also requires all projects to have a construction waste management plan in compliance with Section 4.408.2 of the *2022 California Green Building Standards Code*. Construction waste management plans are designed to encourage recycling, reuse, and diversion of construction waste.

3.5.2.3 Pollution Prevention

The *Pollution Prevention Act of 1990* (42 U.S.C. §§ 13101-13109) requires prevention and reduction of pollution at the source, when possible, so that waste has a reduced impact on the environment. Pollution reduction at the source includes practices to keep hazardous substances from being released into the environment prior to recycling, treatment, or disposal.

3.5.3 Existing Conditions

There are currently no sites located on Airport property that are permitted as either large or small quantity generators of hazardous wastes. The USEPA's NEPAAssist database was reviewed to identify regulated facilities with locations on or adjacent to the GSA. **Table 3-7** lists the RCRA sites within and immediately surrounding the GSA. One active site regulated by the USEPA under the RCRA was identified within the GSA, with an additional 29 sites located within one mile of the GSA boundary. The review of USEPA data did not reveal any National Priorities List (NPL) sites (also referred to as "Superfund" sites) on, or within one mile of, the GSA.

Current activities at the Airport that involve the use of hazardous materials include fueling, maintenance, and repair of aircraft and motor vehicles. Inyo County operations staff currently operate airport fuel trucks that primarily conduct fueling on the apron, but also serve helipads on the west side of the airfield and air hangars south of the terminal. There are also self-serve fueling options available at the fuel farm. Other operations involving hazardous materials include the use of oils and antifreeze for equipment maintenance, and paints, sealants, and oils for other activities. Operations that entail use of hazardous materials are carried out in accordance with applicable laws and regulations.

**TABLE 3-7
RCRA SITES**

FRS ID	Name	Status	Compliance/ Enforcement Issues	Within GSA?
110055669904	7/11 Materials	Active	None	No
110070480315	Barnett Gatrell Equipment Rentals	Active	None	No
110002821466	Bishop Dry Cleaners	Active	None	No
110070426261	Bishop Mobile Auto Repair	Inactive	None	No
110070476338	Bob's Auto & Son's Towing & Storage	Active	None	No
110002805297	Caltrans Bishop Maintenance Station	Active	None	No
110070454639	City of Bishop - Pw	Active	None	No
110055812526	City of Bishop Public Works Yard	Inactive	None	No
110008278292	Clair Trucking	Active	None	No
110070592468	Family Dollar 32264	Active	None	No
110055431938	FedEx Ground Package System Inc	Active	None	Yes
110002779690	Inyo Mono Shop	Active	None	No
110070476322	JC Penney #1385	Active	None	No
110070401664	Jennifer Schlaich	Active	None	No
110070425117	Kay Vee Jay Sales Inc dba Bishop Gas & Mini Mart	Active	None	No
110065932307	Kmart #7756	Active	None	No
110002779707	Migo Inc Bishop Auto Body	Active	None	No
110070445071	Mr K Automotive	Active	None	No
110055670910	Our Water Works Car Wash	Inactive	None	No
110002895127	Phillips Camera House	Active	None	No
110070487950	Preferred Septic and Disposal	Active	None	No
110002779734	Sierra Auto Body Works	Active	None	No
110070481590	Smart & Final #380	Active	None	No
110070482142	T J's Firing Line	Active	None	No
110070476883	Thomas Petroleum dba Eastern Sierra Oil Co	Active	None	No
110070483805	Tiger Tote Inc dba Giggle Springs	Active	None	No
110070413269	V and V Motors Inc dba Bishop Ford	Active	None	No
110070476883	Vons Fuel Station 1753	Active	None	No
110070448725	Warren's Auto	Active	None	No
110015672137	White Mountain Ranger Station	Active	None	No

NOTE:

Compliance and enforcement information available in the USEPA ECHO report is only available for the previous 5-year period.

SOURCE: USEPA, Enforcement and Compliance History Online (ECHO), <<https://echo.epa.gov/>> (accessed November 29, 2022).

Solid waste and recycling services in the City of Bishop and surrounding areas are provided by two waste management providers: Preferred Septic & Disposal and Bishop Waste. Both providers offer local solid waste collection and recycling services to residents and commercial businesses. Solid waste at the Airport is handled via two on-site dumpsters, emptied once a week by Preferred Septic & Disposal with which the Airport has a three-year contract that commenced on March 1, 2020. One additional on-site dumpster, emptied by Bishop Waste, serves the restaurant located in the terminal building. Solid waste produced by Airport activities is transported to the closest disposal site at Bishop-Sunland Landfill located approximately four miles southwest of the Airport on Sunland Reservation Road. The local landfill is operated by Inyo County on land leased from LADWP. According to the CalRecycle Solid Waste Information System (SWIS), the Bishop-Sunland Landfill has a maximum permitted capacity of 160 tons of solid waste per day and a cease operation date of 2064. The landfill has a capacity of 6 million cubic yards with a remaining capacity of 3.3 million cubic yards.¹⁰ The landfill also accepts recyclable materials such as wood, metal, cardboard, paper, electronic waste, universal waste, glass, plastic, aluminum, mattresses, carpet, and various electronics. RCRA sites proximate to the GSA are depicted on **Figure 3-3**.

3.6 Historic, Architectural, Archaeological, and Cultural Resources

3.6.1 Introduction

This section discusses historic, architectural, archaeological, and cultural resources located in areas around the Airport. These resources reflect human culture and history in the physical environment, and may include structures, objects, and other features that were important in past human events. Historic, architectural, archaeological, and cultural resources also include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups.

3.6.2 Regulatory Context

The primary laws that pertain to the treatment of historic, architectural, archaeological, and cultural resources during environmental analyses are the *National Historic Preservation Act of 1966* (NHPA) (54 U.S.C. §§ 300101 *et seq.*), the *Archaeological Resources Protection Act* (16 U.S.C. §§ 470aa-470mm), and the *Native Graves Protection and Repatriation Act* (25 U.S.C. §§ 3001-3013).

3.6.2.1 Section 106 of the National Historic Preservation Act

Section 106 of the NHPA requires federal agencies with jurisdiction over a proposed federal action (referred to as an “undertaking” under the NHPA) to take into account the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). The term “historic properties” describes “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register” (36 CFR § 800.16(1)(1)).

¹⁰ CalRecycle, SWIS Facility/Site Activity Details, Bishop Sunland Solid Waste Site (14-AA-0005), <<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4236?siteID=648>> (accessed November 29, 2022).

Under the NHPA, a property is considered significant if it meets the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

- a) Are associated with events that have made a significant contribution to the broad patterns of our history, or
- b) Are associated with the lives of persons significant in our past, or
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- d) Have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR § 60.4).

For a resource to be eligible for the National Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. Resources that are less than 50 years old are generally not considered eligible for the National Register.

As documented in the 1050.1F Desk Reference, the regulations implementing Section 106 require the FAA to consult with certain parties, such as the State Historic Preservation Office (SHPO) and the Tribal Historic Preservation Officer (THPO) of a Federally Recognized Indian Tribe pursuant to Section 1010(d)(2) of the NHPA. Consultation with THPO(s) occur if an undertaking is occurring on tribal lands or if an undertaking's Area of Potential Effects (APE) is located outside tribal lands but include historic resources of religious and cultural significance to a tribe. The purpose of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR § 800.1(a)). Consultation with Federally Recognized Native American tribes regarding issues related to Section 106 must recognize the government-to-government relationship between the Federal Government and Native American tribes as set forth in Executive Order (EO) 13175, "*Consultation and Coordination with Indian Tribal Governments*" and the Presidential Memorandum on Tribal Consultation, dated November 5, 2009.

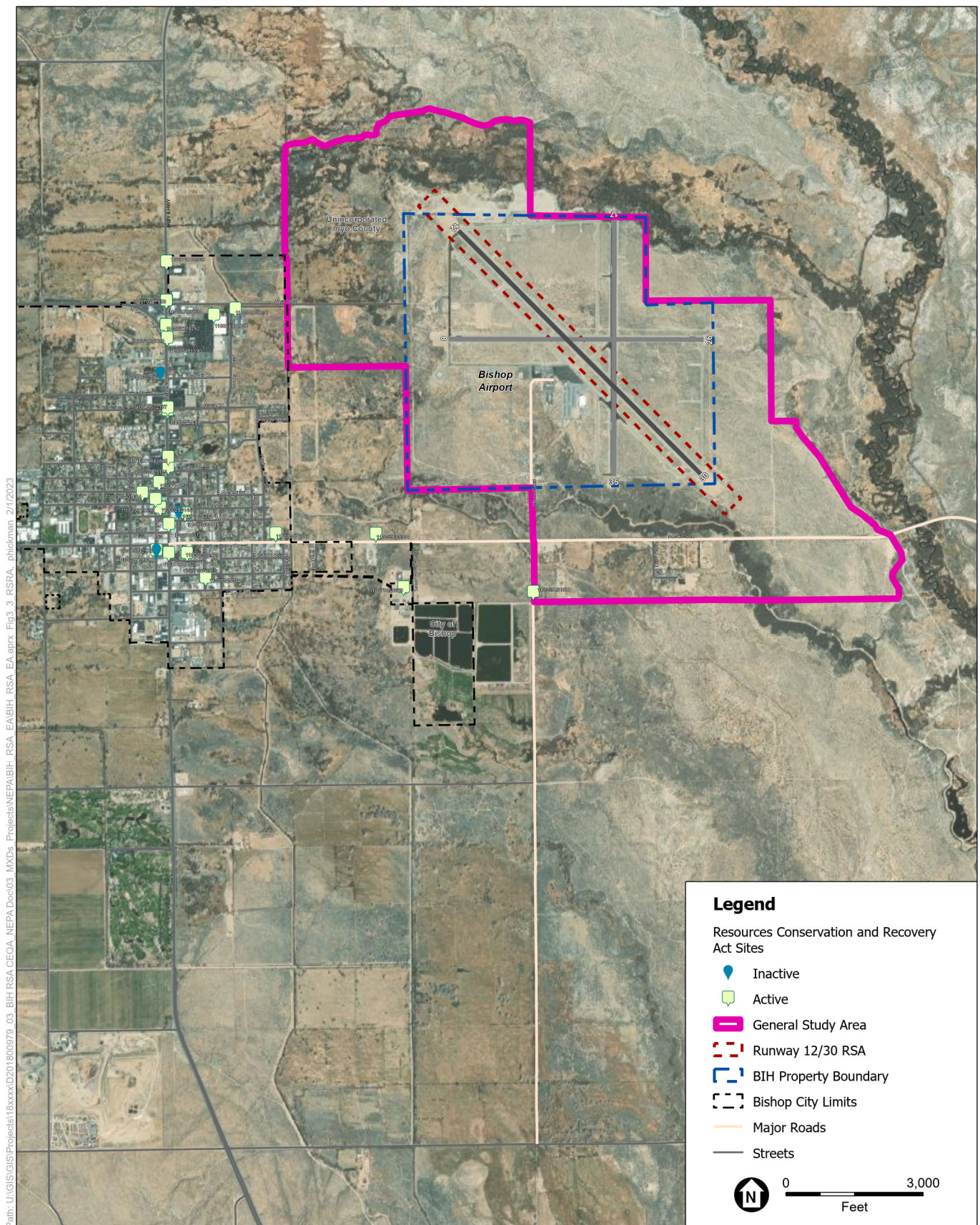
Consultation under Section 106 is not required if the undertaking has no potential to affect historic properties. The regulations implementing Section 106 state: "If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106 of this part." (36 CFR § 800.3(a)(1)).

Documentation of the FAA's compliance with Section 106 for the Proposed Project is provided in **Appendix I**.

3.6.3 Existing Conditions

An APE was established pursuant to 36 CFR § 800.4(a). The APE for the Proposed Project includes Runway 12/30 with a 500-foot buffer that incorporates all project elements as well as a patrol road realignment as depicted in **Figure 3-4**. The APE represents the geographic area in which the undertaking may directly or indirectly cause alterations in the character or use of historic properties. For the purposes of this assessment, the horizontal APE is defined as the extent of all proposed project construction work and staging areas, encompassing an area of approximately nine acres within the RSA beyond the Runway 12 end and 6.5 acres within the RSA beyond the Runway 30 end. The vertical APE varies depending on elevation within each work area but would not exceed 20 feet below the existing ground surface. Areas along the sides of Runway 12/30 would be graded to a depth not exceeding 24 inches. There would be no improvements to the access roads as part of the Proposed Project; the roads would only be used as-is to haul equipment and transport workers to the Proposed Project work locations.

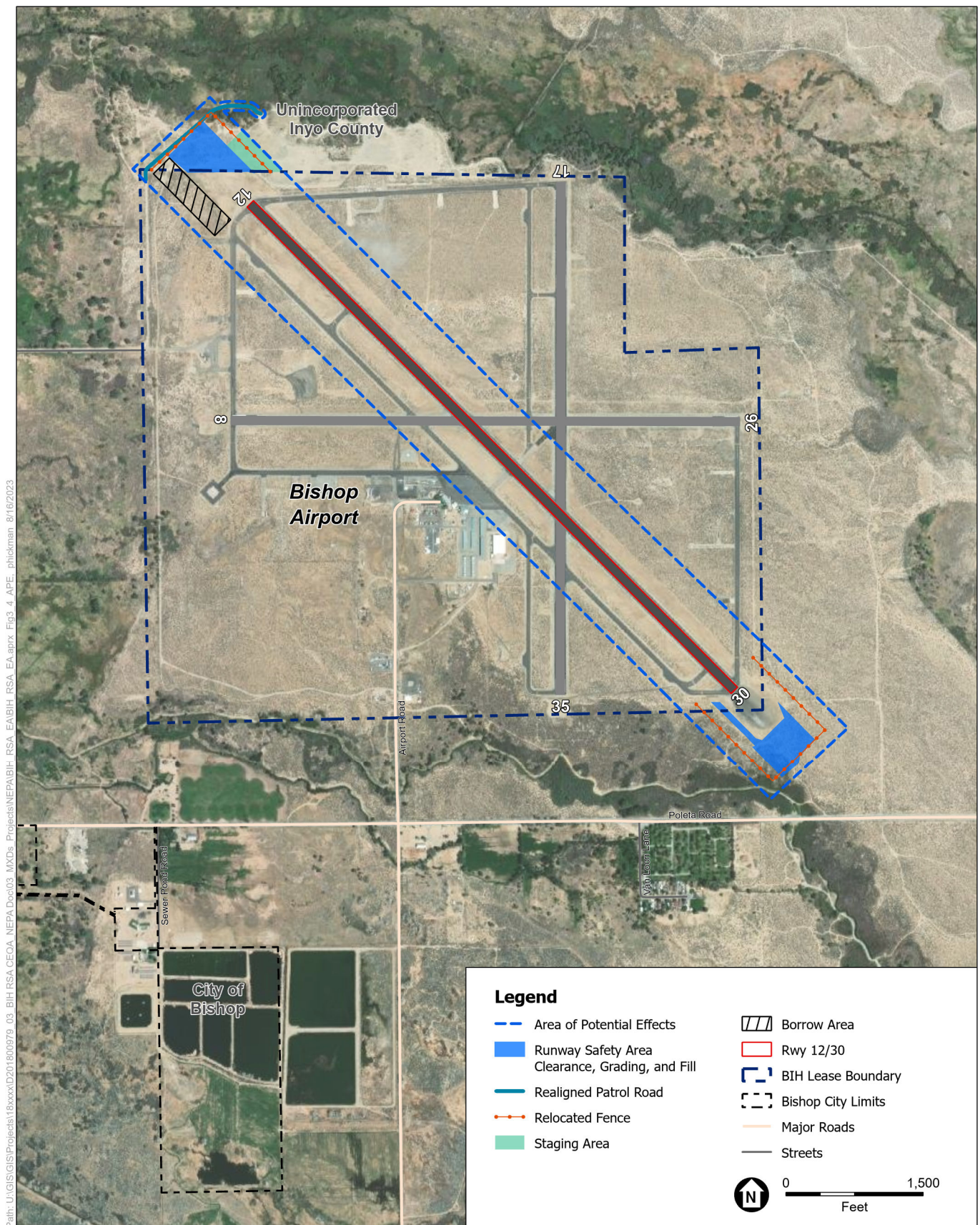
A records search of the Eastern Information Center of the California Historic Resources Information System was completed in September 2020 and has indicated the presence of four significant cultural resources inside of or within 200 feet of the APE. Due to the sensitivity of these sites, their precise locations will not be disclosed in this document. However, any potential impacts will be assessed and documented in Chapter 4.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022; USEPA, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-3
Resources Conservation
and Recovery Act Sites



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-4
Area of Potential Effects
for the Proposed Project (Undertaking)

3.7 Land Use

3.7.1 Introduction

This section addresses local land use in the GSA. Land use development is guided by local government planning and is influenced by a variety of factors including transportation patterns, physical geography, and market forces. The County of Inyo has land use regulatory authority within the GSA.

3.7.2 Regulatory Context

Per Section 1502.16(c) of the CEQ Regulations, NEPA documents are required to consider “conflicts between the proposed action and the objectives of federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.” If there is inconsistency with local land use plans, NEPA documentation must describe the degree to which an agency’s proposed action would have to change to be consistent with the applicable plan(s) (40 CFR § 1506.2(d)). Certain grant assurances must be met to utilize Airport Improvement Program (AIP) funds for Airport projects. Per *the Airport and Airway Improvement Act of 1982* (49 U.S.C. § 47107(a)(10)), Grant Assurance 6, *Consistency with Local Plans*, requires proposed projects to be reasonably consistent with local plans of public agencies responsible for planning development of the area surrounding the airport. Other federal laws and regulations pertaining to the effects of airport actions on land use include the *Airport Improvement Program* 49 U.S.C § 47106(a)(1), and the *Airport Safety, Protection of Environment, Criteria for Municipal Solid Waste Landfills* (40 CFR § 258.10).

California law requires each city and county in the state to prepare and adopt a general plan to guide future development within their respective jurisdictions.¹¹ The California State Aeronautics Act (Pub. Util. Code § 21001 *et seq.*) requires preparation of Airport Land Use Compatibility Plans (ALUCPs) for all public use and military airports in the state. ALUCPs address development of compatible land uses in areas around airports and are developed by Airport Land Use Commissions (ALUCs).

The Order 1050.1F Desk Reference states that the compatibility of existing and planned land uses with an aerospace proposal is usually associated with noise impacts. However, in addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may also affect land use compatibility. Any impacts on land use should be analyzed and described.

3.7.2.1 Inyo County

Land use decision-making authority for the lands in the GSA is the responsibility of the Inyo County Planning Department. The entire area covered by the GSA is in unincorporated Inyo County. Inyo County establishes the planning policies and objectives applicable to the unincorporated areas of the county in the Inyo County General Plan. The legal standards implementing the policies of the general plan are established in the Inyo County Code Title 18, Zoning.

The *Inyo County Policy Plan and Airport Comprehensive Land Use Plan* (CLUP) was adopted in December 1991. The Inyo County Board of Supervisors serves as the ALUC for Inyo County.

¹¹ Government Code § 65030.1.

3.7.2.2 City of Los Angeles - Department of Water and Power

Approximately 99 percent of the land within the GSA is owned and administered by the LADWP with much of the surface area leased to the County of Inyo for operation of Bishop Airport and to ranchers for cattle grazing. The LADWP has established guidance regarding the management of commercial use, cultural resources, habitat conservation, livestock grazing, recreation, and rivers in the *Owens Valley Land Management Plan* (OVLMP).¹²

3.7.3 Existing Conditions

The existing land uses in the portions of the GSA located immediately off-airport include open access agricultural pasture lands and transportation infrastructure providing access to the Airport. Land uses south of the Airport and south of Poleta Road in unincorporated Inyo County, include a cemetery zoned as Public (P), a residential area zoned as Single Residence Mobile Home Combined – 7,200 sq ft minimum (RMH-7200), and an area of agricultural use zoned as Open Space – 40 acre minimum (OS-40). The current zoning in the GSA and adjacent areas is depicted in **Figure 3-5**.

Planned land uses in the GSA are depicted on **Figure 3-6**. The Airport is located on land designated for public facilities and light industrial uses. Although the Airport is situated on land owned by the LADWP, Inyo County leases the land and was granted easements in 1929 and 2010 protecting the land for airport use. Off-airport lands abutting the BIH property boundary include agriculture and natural resource uses. An approximately 34-acre open pit aggregate mine was located immediately north of the airfield and was in operation between 1978 and 2010. Under the terms of the reclamation plan for this facility, a portion of the area was redesignated to Public Facilities and rezoned to Public (P) in December 2021. The reclamation plan has now been satisfied, the lease associated with the property has been terminated with closure of the Surface Mining and Reclamation Act of 1975 permit.

3.8 Natural Resources and Energy Supply

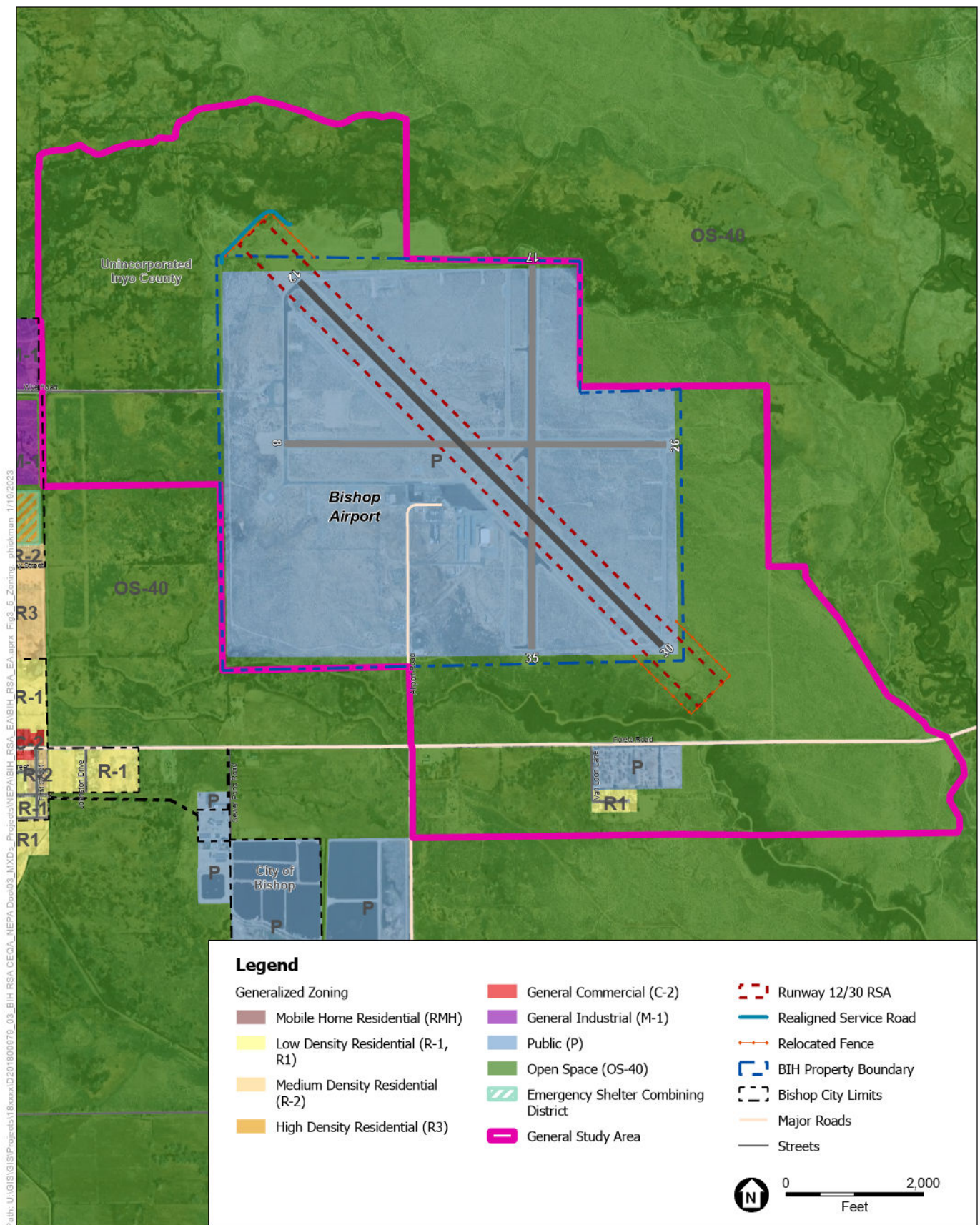
3.8.1 Introduction

This section discusses natural resources present in the GSA as well as the types and sources of energy supplied to the Airport.

3.8.2 Regulatory Context

In keeping with the spirit of NEPA, the FAA encourages the development of facilities designed and constructed with sustainability and energy efficiency best practices incorporated (FAA Order 1053.1, *Energy and Water Management Program for FAA Buildings and Facilities*). Specific federal statutes and regulations regarding natural resources and energy supply include the *Energy Independence and Security Act* (42 U.S.C. § 17001 *et seq*) and the *Energy Policy Act* (42 U.S.C. § 15801 *et seq*). Both of these laws require federal agencies to take actions to move their operations and infrastructure toward energy reliability and independence.

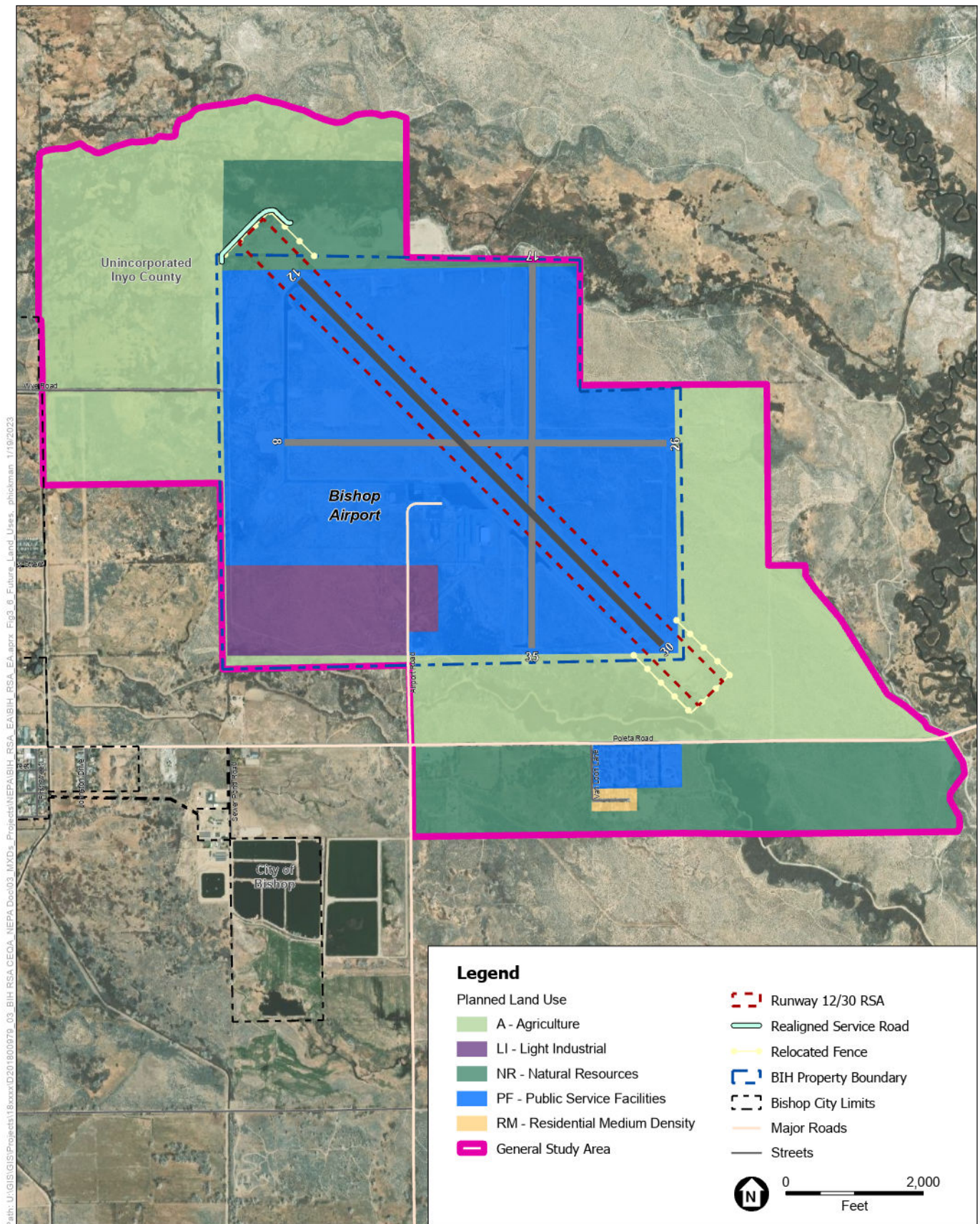
¹² Los Angeles Department of Water and Power and Ecosystem Sciences, Owens Valley Land Management Plan, April 28, 2010.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022; City of Bishop, 2011.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-5
Existing Zoning in the General Study Area



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-6
Planned Future Land Uses
in the General Study Area

3.8.3 Existing Conditions

3.8.3.1 Natural Resources

There is currently no municipal water service provided to the Airport as water needs are met by two on-Airport wells: a domestic well and a fire suppression well. The domestic well is currently planned for decommission, but the fire suppression well is expected to continue meeting anticipated future water needs at the Airport. Two wells maintained by LADWP are located immediately north of BIH.

3.8.3.2 Energy Supply

Electrical power is supplied to the Airport by Southern California Edison (SCE). SCE generates, transmits, and distributes electric power to 15 million people over a 50,000-square-mile service area that covers 15 counties and 180 cities in Central and Southern California. In 2019, Bishop Airport consumed approximately 100,000 kilowatt hours (kWh) of electric power.

3.9 Noise and Noise-Compatible Land Use

3.9.1 Introduction

This section addresses the existing aircraft noise environment in the GSA and the methodology used to determine existing aircraft noise exposure.

3.9.2 Regulatory Context

The FAA requires an analysis of noise exposure when development actions may change the cumulative noise exposure of individuals to aircraft noise in areas surrounding an airport. Common development actions that may change the cumulative noise environment include changes in aircraft operations and/or movements, introduction of new aircraft types to an airport, or changes in aircraft tracks and profiles.

FAA Order 1050.1F requires that detailed noise analyses must be performed through noise modeling using an FAA-approved model. FAA's AEDT 3e, the latest version of the model available, was used for the aircraft noise exposure analysis. AEDT incorporates the number of annual average daily daytime, evening, and nighttime aircraft operations, flight paths, and flight profiles of aircraft, along with its extensive internal database of aircraft noise and performance information, to calculate Community Noise Equivalent Level (CNEL) at many points on the ground around an airport. Using a grid of noise receptor points, the AEDT contouring program draws contours of equal CNEL that can be superimposed onto land use maps. Three standard ranges of CNEL contours are presented in this EA, CNEL 65, 70, and 75 dB¹³ and above.

The decibel (dB) is a unit used to describe sound pressure level. When expressed as weighted decibels (dBA), the sound has been filtered to reduce the effect of very low and very high frequency sounds, much as the human ear filters sound frequencies. Although referred to as dB in this document, the modeled noise levels are a-weighted to reflect how humans hear sound.

The FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly Day/Night Average Sound Level (DNL). However,

¹³ All references to decibels in this EA refer to A-weighted decibels.

the FAA recognizes CNEL as an acceptable alternative metric for airport projects in California. Both DNL and CNEL account for the noise levels of all individual aircraft events, the number of times those events occur, and the period of day/night in which they occur over a complete 24-hour period.¹⁴ However, DNL adds a 10-dB weighting to noise events occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). The addition of 10-dB reflects people's increased sensitivity to noise at night when ambient sound levels are lower. CNEL includes a 4.77-dB weighting to noise events occurring during the evening hours (7:00 p.m. to 10:00 p.m.), in addition to the 10-dB weighting during nighttime hours. Table 1 in Appendix A to 14 CFR Part 150, Airport Noise Compatibility Planning, provides compatible land use guidelines that determine that all land uses are considered compatible when compared to noise levels less than DNL 65 dB.

3.9.3 Existing Conditions (2022)

The existing noise environment surrounding BIH was evaluated based on the number of aircraft operations at the Airport in 2022 as derived from the Airport's FAA Terminal Area Forecast as well as associated Airport operational characteristics (e.g., runway use, flight track locations, etc.). Additional information on the noise modeling completed for this EA is included in the *Noise Technical Report* in **Appendix J**.

As discussed in Section 3.7, *Land Use*, the existing land uses located immediately off-airport in the GSA include agricultural pasture lands, areas designated for light industrial use, and transportation infrastructure. Land uses south of the Airport and south of Poleta Road include a cemetery, residential uses, and agricultural use.

Noise exposure resulting from existing aircraft operations at the Airport is depicted on **Figure 3-7**. Approximately 33.2 acres are exposed to CNEL of 65 dB or higher, all of which is located on Airport property and is primarily limited to Runways 12/30 and 17/35. No areas of residential or other noise sensitive land uses are exposed to noise exceeding CNEL 65 dB.

¹⁴ FAA Order 1050.1F, Appendix B-1 and FAA Order 5050.4B, Chapter 1, paragraph 9.n.

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

3.10.1 Introduction

This section describes existing economic and demographic conditions and transportation characteristics in the GSA. Socioeconomic issues relevant to the evaluation of environmental impacts include population, race, poverty status, employment, income and housing distribution, children's environmental health and safety, and public services.

3.10.2 Regulatory Context

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was enacted in 1994. The purpose of the EO is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities. The EO directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities' access to public information and public participation.

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 1997), applies to health or safety risks that may disproportionately affect children. Environmental health risks or safety risks refer to risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest such as air, food, water (potable or recreation), soil, and products children use or are exposed to.

EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All* (April 21, 2023), made changes to federal policy regarding environmental justice including an update of the definition of environmental justice, an expansion of what constitutes an environmental justice impact, and a broadening of what constitutes a community with environmental justice concerns.

FAA Order 1050.1F describes socioeconomic as "an umbrella term used to describe aspects of a project that are either social or economic in nature." A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by the Proposed Action and alternatives (FAA, 2015). The following sections describe population, employment, income, and housing in the GSA.

3.10.3 Existing Conditions

3.10.3.1 Socioeconomics

The following sections discuss socioeconomic factors within and abutting the GSA, including population, employment, income and housing, and surface transportation.

Population

The population of Inyo County was 19,016 at the 2020 decennial Census. Per the Census Bureau's American Community Survey 5-year population estimates, the population had decreased to 18,804 by 2021. This represents an approximately one percent decrease in population.

Employment

Unemployment rate trends for Inyo County and the State of California are shown in **Table 3-8**. Between 2012 and 2021, there was a 3.3 percent decrease in unemployment in Inyo County and 3.1 percent decrease in the State of California. Both Inyo County and the State of California saw an overall decrease in unemployment between 2010 and 2019.

TABLE 3-8
UNEMPLOYMENT TRENDS

Year	Inyo County	State of California
2012	9.2%	10.5%
2013	7.9%	9.0%
2014	6.9%	7.6%
2015	5.8%	6.2%
2016	5.3%	5.5%
2017	4.4%	4.8%
2018	3.9%	4.3%
2019	3.6%	4.1%
2020	8.1%	10.3%
2021	5.9%	7.4%

NOTES:

^a Rates presented as average annual percentage.

SOURCES: Bureau of Labor Statistics, Local Area Unemployment Statistics, State of California; Inyo County 2012-2021. Accessed January 2023.

Income and Housing

Table 3-9 presents mean household incomes for 2021, the latest year for which data was available. Geographies listed in Table 3-9 include the state of California, Inyo County, Census Tract 1 which contains the entire GSA, and Census Tract 4 which lies adjacent to a portion of the GSA boundary. The two census tracts encompass all the census tracts touching the GSA boundary. In 2021, Census Tract 1 had a mean household income of \$62,952 and Census Tract 4 had a mean household income of \$70,675. Inyo County had a mean household income of \$78,816. In 2021, all census tracts around the Airport had mean household incomes above the U.S. Department of Housing and Urban Development, *Health and Human Services Poverty Guidelines* for a family of four, which was \$26,500 in 2021.

**TABLE 3-9
INCOME AND HOUSING DATA**

Area	Mean Household Income (2021)	Total Housing Units	Vacancy Rate
California	\$119,149	14,328,539	7.8%
Inyo County	\$78,816	9,457	17.2%
Census Tract 1, Inyo County, California	\$62,952	1,240	9.1%
Census Tract 4, Inyo County, California	\$70,675	2,947	8.8%

SOURCE: U.S. Census. 2023. Selected Economic Characteristics: 2021: American Community Survey 5-Year Estimates – California; Inyo County, California; Census Tracts 1 and 4.

In 2021, Census Tract 1 had 1,240 total housing units with a 9.1% vacancy rate. Census Tract 4 had 2,947 total housing units and an 8.8% vacancy rate. In comparison, Inyo County as a whole had 9,457 housing units and a vacancy rate of 17.2%.

Surface Transportation

Per FAA Order 1050.1F and its Desk Reference, an EA must evaluate if the Proposed Action has the “potential to disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities.” The Airport is connected to the local surface transportation network via Airport Road, a paved, two-lane road that begins on Airport property near the terminal building. Airport Road is aligned north-south and intersects with Poleta Road, south of the Airport property. Poleta Road runs east-west and becomes East Line Street approximately a mile west of the intersection with Airport Road, within the city of Bishop. East Line Street continues west for approximately 0.5 mile before intersecting with U.S. Highway 395/Main Street in the city of Bishop. U.S. Highway 395 is the major highway that runs the length of the Eastern Sierra region.

“Level of Service” (LOS) is a metric used in the realm of transportation planning to describe operating conditions at intersections and along roadway segments. LOS typically includes six levels of service: A through F. LOS A indicates free flowing traffic with no congestion, whereas LOS F represents overcapacity. The Federal Highway Administration (FHWA) has not promulgated regulations establishing specific minimum LOS values for federal highways. The portion of U.S. Highway 395/Main Street that runs through the GSA is under the jurisdiction of the California Department of Transportation (Caltrans). According to the Inyo County Regional Transportation Plan (RTP) adopted in 2019, Caltrans has designated LOS C as the minimal acceptable LOS for Inyo County state highway segments. The RTP indicates that U.S. Highway 395 through Bishop and from Bishop north to the Mono County line is expected to operate at LOS A through at least 2033.

3.10.3.2 Environmental Justice

The socioeconomic and minority characteristics of the population within the GSA are based on the U.S. Census Bureau’s 2017-2021 American Community Survey 5-Year Data Release. Minority and low-income populations were identified using U.S. Census Bureau geospatial and demographic data.

Census block groups immediately surrounding the GSA with minority and/or low-income populations greater than or equal to the proportion of the same populations in the entirety of Inyo County were identified as environmental justice communities. The average percentage minority population for all of Inyo County is 40.2 percent, and the average percentage low-income population is 10.8 percent. The GSA is surrounded by two census block groups (census block groups 60270004003 and 60270001001), both of which are identified as environmental justice communities. Environmental justice communities in the GSA are depicted on **Figure 3-8**. Summarized statistics for the GSA environmental justice communities are listed in **Table 3-10**.

TABLE 3-10
ENVIRONMENTAL JUSTICE COMMUNITIES

Place/ Census Block Group	Population (2021)	Minority Population (2021)	Percentage Minority (2021) ¹	Population Living Below Poverty Level (2021)	Percentage Living Below Poverty Level (2021) ²
California	39,455,353	25,346,056	64.2%	4,741,175	12.3%
Inyo County	18,804	7,551	40.2%	1,989	10.8%
60270004003	920	50	5.4%	153	16.6%
60270001001	1,733	897	51.8%	335	19.4%

NOTES:

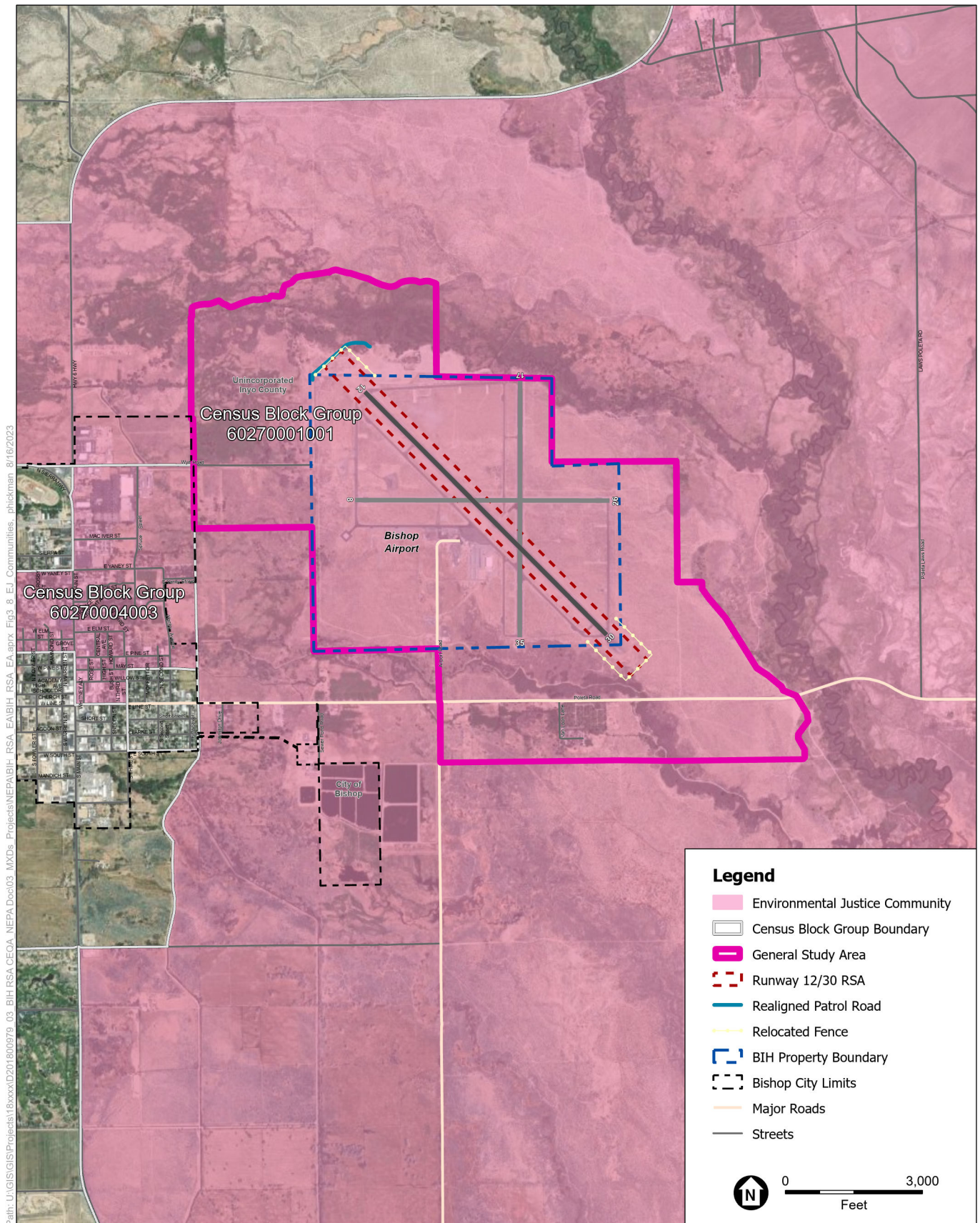
1 Based on total population verified minority status.

2 Based on total population verified income status.

SOURCES: U.S. Census Bureau, American Community Survey 5-Year Estimates – California, Inyo County, California, Census Block Groups; January 2023.

3.10.3.3 Children’s Environmental Health and Safety Risks

The GSA is located within the Bishop Unified School District, which administers two elementary schools, a junior high/middle school, and a high school in the city of Bishop. All four schools are located west of Highway 395, outside the GSA. No child daycare facilities were identified in the GSA.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022; US Census Bureau, 2020.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-8
Environmental Justice Communities

3.11 Visual Effects

3.11.1 Introduction

This section addresses the visual characteristics of the GSA.

3.11.2 Regulatory Context

Per the 1050.1F Desk Reference, an assessment of potential impacts to visual resources is required to consider the extent to which a proposed action could produce light emissions with potential to interfere with activity or cause annoyance or otherwise degrade the visual character of an existing environment. There is no other specified regulatory context for visual effects.

3.11.3 Existing Conditions

BIH is approximately two miles east of the city of Bishop in unincorporated Inyo County. The Airport is located in the Owens Valley, surrounded by the White Mountains to the east and the Sierra Nevada range to the west. The Airport is primarily surrounded by open space with sparse, low-growing vegetation due to the arid desert climate. Mountain vistas are observable from Bishop Airport to the northeast and southwest year-round. The North Fork Bishop Creek lies to the north of the airport in the GSA. Views to the airport from surrounding areas are typical in visual character to other airports and similar industrial or transportation-oriented facilities and are not of exceptional aesthetic quality.

Existing light sources at the Airport primarily include runway and taxiway lights and lighted airfield directional signage. The lights on the runway and taxiway surfaces are Pilot Activated, with minimal nighttime activity. The Airport also has a rotating beacon that emits alternating white and green flashes of light from sunset to sunrise that identifies the location of the Airport from a distance at night. The FedEx Ground facility is equipped with security lighting along Airport Road. Other light sources may include lighting on the terminal area buildings, parking area streetlights, and urban light from the city of Bishop. There are no streetlights on the roads leading to the Airport.

3.12 Water Resources (Wetlands, Floodplains, Groundwater, and Surface Waters only)

3.12.1 Introduction

This section describes the existing environment regarding wetlands, floodplains, surface waters, groundwater, water supply, and wastewater treatment.

3.12.2 Regulatory Context

3.12.2.1 Wetlands

Executive Order 11990, Protection of Wetlands (Federal)

In May 1977, Executive Order 11990 was enacted to “minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.” According to the executive order, federal agencies are required to “avoid to the extent possible the long- and short-term

adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.” Specific to transportation facilities, the guidelines promulgated in Executive Order 11990 were implemented through Department of Transportation (DOT) Order 5660.1A which establishes that transportation facilities be designed, built, and operated to assure the protection and enhancement of wetlands as much as would be feasible.

Fish and Wildlife Coordination Act (Federal)

The Fish and Wildlife Coordination Act establishes the requirement for federal agencies to coordinate with the US Fish and Wildlife Service as well as any relevant state and local agencies whenever proposed projects may result in control or alteration of the water of any stream or other water body including wetlands.

Porter-Cologne Water Quality Control Act (State)

The Porter-Cologne Water Quality Control Act was enacted in 1969 and established a system delegating water quality control through the State Water Resources Control Board and nine Regional Water Quality Control Boards. The Regional Water Quality Control Boards are charged with setting and enforcing water quality standards within their administrative boundaries. These boards regulate any activities with potential to impact the beneficial use of water bodies.

Executive Order W-59-93, State Wetland Conservation Policy (State)

Executive Order W-59-93 established California’s “No Net Loss” policy for wetlands. Signed in 1993, Executive Order W-59-93 began the State Wetland Conservation Policy coordinating state-wide protection of wetland habitats. Implementation of the State Wetland Conservation Policy is jointly led by the Natural Resources Agency and the California Environmental Protection Agency.

3.12.2.2 Floodplains

Executive Order 11988, Floodplain Management (Federal)

Executive Order 11988 was enacted in May 1977 and requires Federal agencies to avoid, to the extent possible, adversely impacting 100-year floodplains through either occupation or modification. The order also directs Federal agencies to avoid, either directly or indirectly, supporting any action that would result in development within a floodplain provided there is a practicable alternative. Executive Order 11988 was implemented through DOT Order 5650.2, *Floodplain Management and Protection*. In 2021, Executive Order 11988 was amended by Executive Order 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*.

Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input

Executive Order 13690 was enacted on May 20, 2021, and amends Executive Order 11988 and establishes the Federal Flood Risk Management Standard (FFRMS or Standard) by replacing the 100-year floodplain standard with the FFRMS. Among other amendments, Executive Order 13690 amends Executive Order 11988 to allow for establishment of the floodplain using different approaches, including identification of the area subject to the 0.2 percent annual chance flood (500-year floodplain).

National Flood Insurance Act (Federal)

The National Flood Insurance Act is a voluntary program for local jurisdictions in which any proposed action within a floodplain as mapped by the Federal Emergency Management Agency (FEMA) must comply with the jurisdiction's FEMA-approved floodplain management regulations.

Inyo County, California County Code, Section 16.32.280 Land Subject to Flood Hazard, Inundation or Geological Hazard (Local)

Section 16.32.280 of the Inyo County Code grants the applicable advisory agency the authority to disapprove project proposals in which “any portion of the land within the boundaries shown on a tentative map is subject to flood hazard, inundation or geological hazard and the probable use of the property will require structures thereon”. As an alternative, the advisory agency may also require protective improvements to be constructed as a condition of approval. Furthermore, the ordinance requires any portion of a parcel depicted on a final or parcel map occurring within a flood hazard, inundation hazard, or geological hazard area to be clearly labeled with a prominently visible note.

3.12.2.3 Groundwater, Surface Waters, and Water Quality

Clean Water Act (Federal)

The *Clean Water Act* (CWA)(33 U.S.C. §§ 1251–1387), as amended, establishes the basic structure for regulating discharges of pollutants into the Waters of the U.S. and regulating quality standards for surface waters. The basis of water quality regulations was enacted in 1948 under the original statute, the *Federal Water Pollution Control Act*, which, in 1972, was reorganized and expanded into the CWA, and subsequent amendments. The CWA establishes a regulatory framework to reduce pollutant discharges into waterways and manage polluted runoff.

Safe Drinking Water Act (Federal)

The *Safe Drinking Water Act* (SDWA) (42 U.S.C. § 300f), enacted in 1974, is the principal federal law ensuring safe drinking water in the United States. The SDWA authorizes the USEPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. Amendments to the Act in 1996 allowed for recognition of source water protection, operator training, funding for water system improvements, and the provision of public information regarding safe drinking water.

National Pollutant Discharge Elimination System Program (State)

The National Pollutant Discharge Elimination System (NPDES) permit program is administered in the State of California by the California State Water Resources Control Board (SWRCB) and regional water quality control boards. Authority to manage the NPDES permit program is granted by the USEPA to control water pollution by regulating point sources that discharge pollutants into Waters of the U.S. If discharges from industrial, municipal, and other facilities go directly to surface waters, project applicants must obtain permits prior to project implementation.

Municipal Stormwater Permit (Local)

California's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s).

Sustainable Groundwater Management Act (State)

In 2014, the California State Legislature approved a combination of bills that together formed the *Sustainable Groundwater Management Act (SGMA)*. The law requires the formation of local Groundwater Sustainability Agencies that must develop Groundwater Sustainability Plans (GSPs) for medium or high-priority groundwater basins in California by 2022. The goal of the GSPs is to make groundwater basins sustainable by the year 2042. The Proposed Project is situated in the Owens Valley groundwater basin, which is managed by the Owens Valley Groundwater Authority (OVGA), which was formed in August 2017 under a joint powers agreement. The OVGA approved its GSP on December 9, 2021.¹⁵

State Executive Order N-3-23 and Prohibited Wasteful Water Uses Emergency Regulation (State)

On April 21, May 10, and July 8, 2021, Governor Gavin Newsom proclaimed a State of Emergency for 50 counties in California due to severe drought conditions. In the same year, Governor Newsom encouraged the SWRCB to prohibit certain wasteful water uses which led to the SWRCB adopting the Prohibited Wasteful Water Uses Emergency Regulation, effective for one year from January 18, 2022. As of December 2022, the SWRCB is proposing the readoption of the regulations.¹⁶ Further, Governor Newsom signed EO N-7-22 on March 28, 2022, which extended the State of Emergency issued in 2021 to all counties across California. EO N-7-22 went into effect on June 10, 2022, and its provisions were amended and extended on February 13, 2023 as part of EO N-3-23. EO N-7-22 and now EO N-3-23 requires the SWRCB to issue emergency regulations for Urban Water Suppliers. EO N-3-23 also prohibits counties, cities, and other public agencies from approving or issuing a permit for a new or altered groundwater well in a basin subject to SGMA with few exceptions.¹⁷

3.12.3 Water Resources Study Area

The General Study Area for the Proposed Project is the area in which the various water resources are inventoried and evaluated. A survey was conducted for the precise delineation of wetlands in areas which could potentially experience direct impacts due to cut, fill, and grading and is shown in Appendix K, *Wetlands Delineation Technical Report*, Figure 2.

3.12.4 Existing Conditions

Wetlands

The USFWS maintains the National Wetlands Inventory (NWI) which can be accessed through an online tool called the Wetlands Mapper. A search using this tool indicates the presence of freshwater emergent wetlands and emergent freshwater shrub wetland located within the GSA along North Fork Bishop Creek and Rawson Canal.¹⁸ This preliminary survey using NWI data was followed by a formal on-site survey and

¹⁵ Owens Valley Groundwater Authority, *Owens Valley Groundwater Basin Final Groundwater Sustainability Plan*, <https://ovga.us/wp-content/uploads/2021/12/OVGA_groundwater_sustainability_plan_Final-120921.pdf> (accessed December 12, 2022)

¹⁶ California State Water Resources Control Board, *Water Conservation Emergency Regulations*, <https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/regs/emergency_regulation.html> (accessed December 12, 2022).

¹⁷ State of California Executive Order N-3-23 (February 13, 2023)

¹⁸ U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, <<https://www.fws.gov/wetlands/data/mapper.html>> (accessed December 15, 2022).

delineation. In November of 2022, a wetland delineation was performed as part of a comprehensive aquatic resources delineation effort. A survey of all wetlands and other habitats was conducted within the survey area as part of the delineation. The survey identified 1.27 acres of freshwater emergent wetlands and 7.56 acres of freshwater forest/scrub wetlands within the survey area. The freshwater emergent wetland is predominantly composed of perennial plants which are present throughout most of the year. The freshwater forest/scrub wetlands include shrubs and small trees. Surface water is present seasonally in both wetland types. Delineated wetlands near the Runway 12 and 30 ends are depicted on **Figure 3-9** and **Figure 3-10** respectively.

Floodplains

In conformance with the directives of EO 13960, flood hazard areas have been delineated according to the presence of the 500-year floodplain (0.2-percent-annual-chance). Flood hazards can be viewed using FEMA's National Flood Hazard Layer Viewer mapping tool. The flood hazard data obtained from the mapping tool indicates there are approximately 223 acres of floodplains in the GSA, including 162.5 acres of Zone A flood hazard areas which are subject to 1-percent-annual-chance flood event inundation and for which no base flood elevation (BFE) has been established. There are also 43.3 acres of Zone AE flood hazard area in the GSA which is also subject to 1-percent-annual-chance flood event inundation but have a BFE determined to be less than 1 foot in depth.¹⁹ Zone X areas with a 0.2-percent-annual-flood event are also present in the GSA in the amount of 14.2 acres. There is also a Zone X area with a 1-percent-annual-chance flood event inundation but with a BFE determined to be less than 1 foot in depth comprising 0.1 acres of the GSA. The only flood hazard area present on the Runway 12 end has a 1 percent annual flood hazard; there is no 500-year flood hazard on this end. Floodplains near the Runway 12 and 30 ends are depicted on **Figure 3-11** and **Figure 3-12** respectively.

Surface Waters

North Fork Bishop Creek, Rawson Canal, Bishop Creek Canal, and an unnamed ditch/canal are surface waters present in the GSA. North Fork Bishop Creek runs from west to east through the GSA, north of the airfield. Rawson Canal runs from west to east, between the airfield and Poleta Road, before diverting south across Poleta Road in the southeastern corner of the GSA. Bishop Creek Canal runs north to south concurrent with the western edge of the GSA from Wye Road to Willow Street before crossing the GSA to Clarke Street. An unnamed ditch/canal runs north to south along the western boundary of the GSA before emptying into Rawson Canal south of Poleta Road. GSA surface waters are depicted on Figure 3-1.

Groundwater

The Airport has two groundwater wells, one for domestic water use and one for fire suppression. The domestic well may eventually be decommissioned, but the fire suppression well will meet current and anticipated future demand. Recharge to the groundwater system in the GSA is primarily from precipitation in the Owens River valley and from runoff from the Sierra Nevada Mountains. In December 2019, the California Department of Water Resources identified the water basin as low priority for purposes of developing a Groundwater Sustainability Plan (GSP) under the State's Sustainable Groundwater Management Act (Div. 6 Water Code Part 2.74). Regardless, the Owens Valley Groundwater Authority

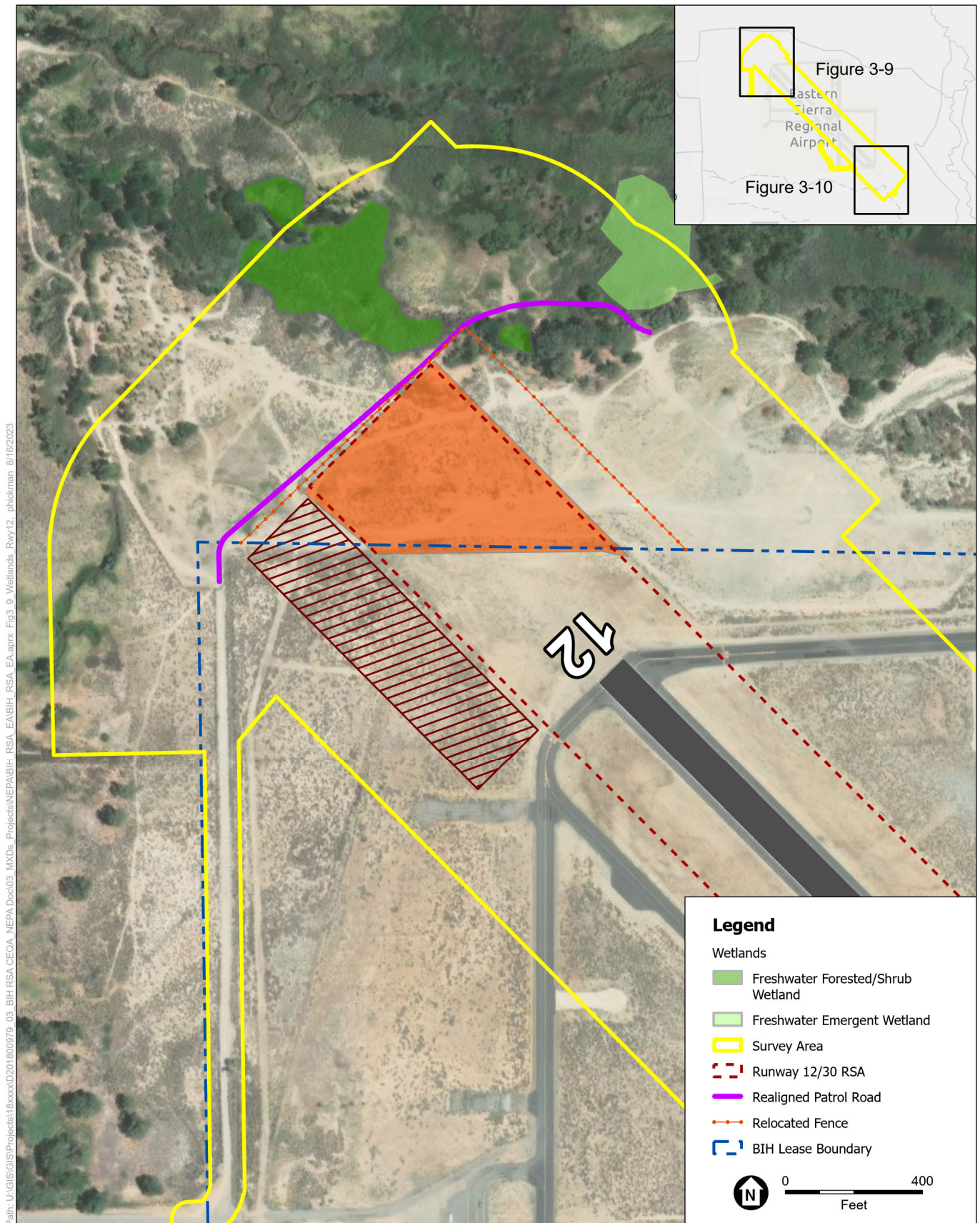
¹⁹ Federal Emergency Management Agency, National Flood Hazard Layer (NFHL) Viewer, < <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd> > (accessed December 16, 2022).

(OVGA) completed a GSP for the Owens River Valley in December 2021. According to the GSP, the groundwater levels and trends in the Owens Valley vary depending on time and location. Groundwater levels are in a dynamic steady state that tracks hydrologic conditions (e.g., water levels increase during wet years and decrease during dry years). The rate at which groundwater levels increase or decrease are influenced by multiple local factors such as nearby pumping, managed surface water spreading, well screen interval, and geologic conditions. According to LADWP's 2021 Annual Owens Valley Report, the groundwater levels in the Owens Valley dropped by an average of 1.1 feet due to below normal runoff and summer precipitation in 2019 and 2020. The primary sources of discharge are pumping wells, evapotranspiration, and underflow to the Owens Lake dry lakebed. Groundwater well locations are depicted on Figure 3-1.

Water Quality

The USEPA requires water quality assessments of each state's waterbodies. The current water quality assessment for California was approved by the SWRCB in February 2022. According to the water quality assessments for the 2020 to 2022 California Integrated Report, two of the waterbodies in the vicinity of the GSA appear on the CWA Section 303d list of impaired waters. North Fork Bishop Creek and Bishop Creek Canal are designated as a "Category 5 stream—at least one beneficial use is not supported and TMDL is needed." These two streams were listed as impaired due to elevated levels of indicator bacteria. Rawson Canal and the unnamed ditch/canal were not listed in the 2020 to 2022 California Integrated Report.²⁰

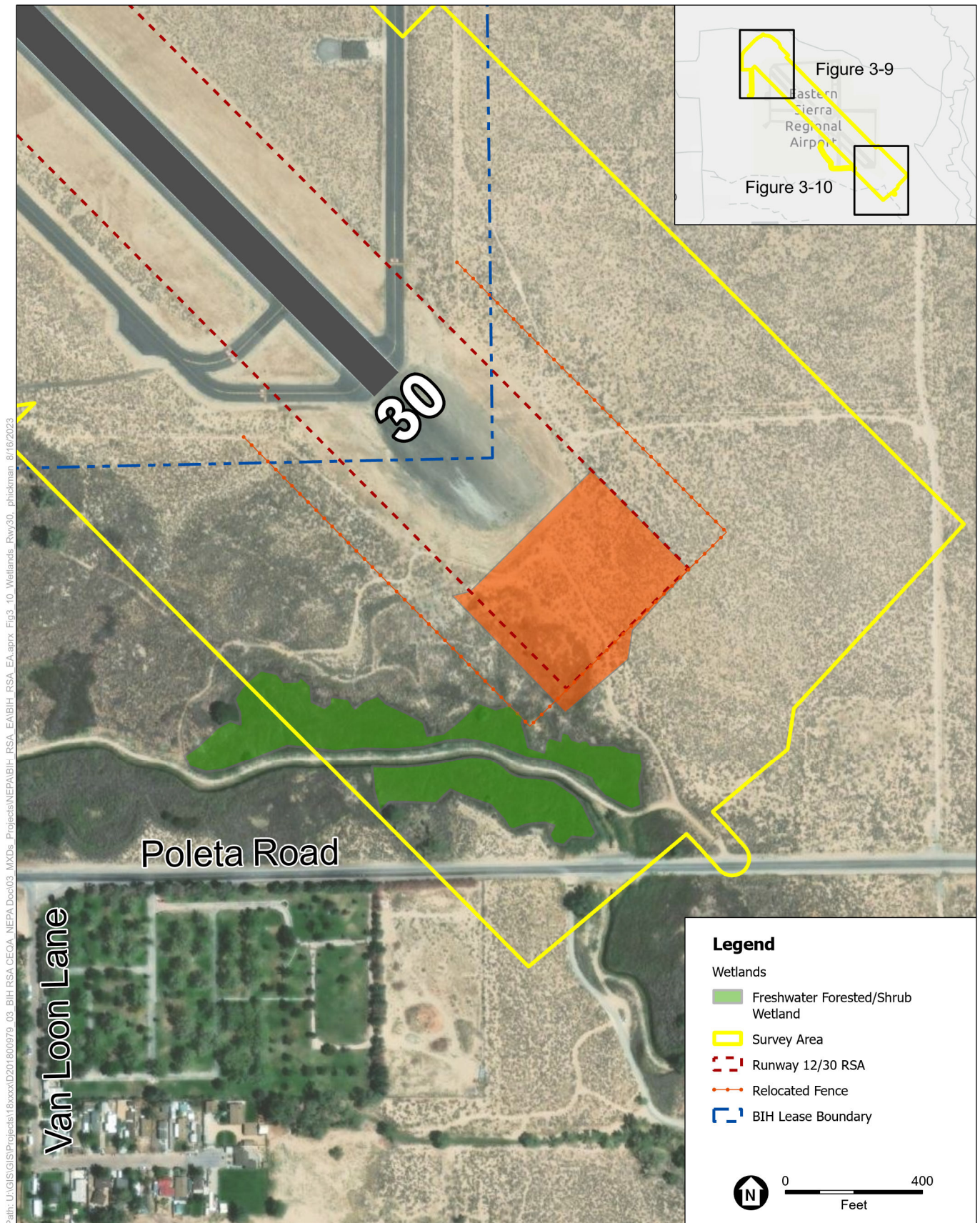
²⁰ California Environmental Protection Agency, State Water Resources Control Board, *2020-2022 Integrated Report for Clean Water Act Sections 303(d) and 305(b)*
<https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_revised_final/2020-2022-integrated-report-final-staff-report.pdf> (accessed December 13, 2022)



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

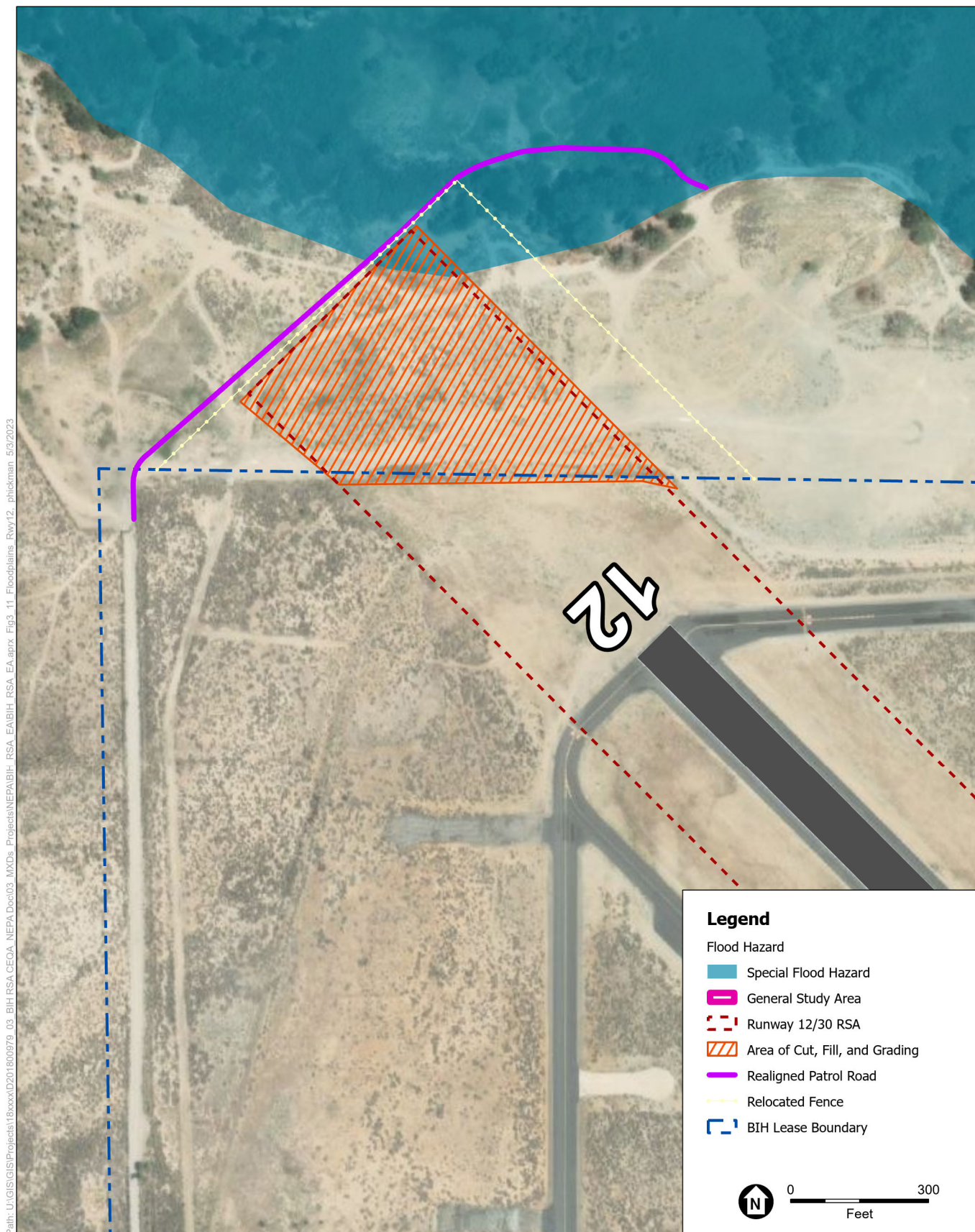
Figure 3-9
Wetlands
Runway 12 End



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

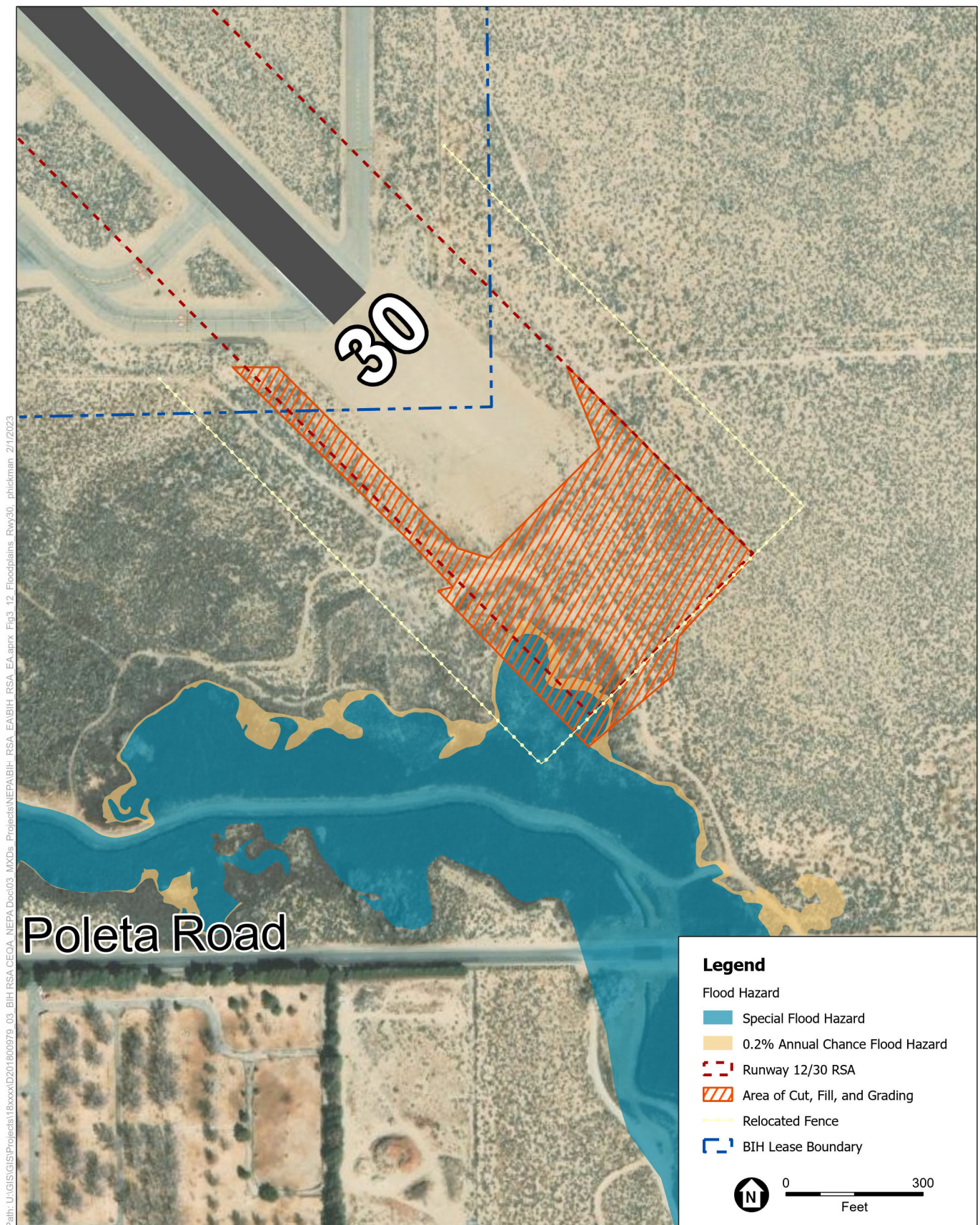
Figure 3-10
Wetlands
Runway 30 End



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022; Federal Emergency Management Agency, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-11
Floodplains
Runway 12 End



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022; Federal Emergency Management Agency, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 3-12
Floodplains
Runway 30 End

3.13 Past, Present, and Reasonably Foreseeable Future Actions

3.13.1 Introduction

This section describes past, present, and reasonably foreseeable future projects at Bishop Airport and in the vicinity of the Airport that when combined with the Proposed Project could result in cumulatively considerable impacts. Cumulative impacts are discussed in Chapter 4, *Environmental Consequences*.

3.13.2 Regulatory Context

NEPA requires analysis of cumulative impacts. Cumulative impacts are those impacts that may result from an action “when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7 [1978, as amended in 1986 and 2005]).

3.13.3 Existing Conditions

The GSA encompasses the area in which the Proposed Project would have potential for direct and indirect impacts to the environment. However, in assessing any potential for cumulative impacts, projects throughout Inyo County were identified and considered for inclusion in the analysis. The temporal limit for identifying past projects was five years before the existing conditions study year (i.e., 2017) and for reasonably foreseeable future projects was five years beyond the 2024 planning horizon (i.e., 2029). Major transportation and development projects in the vicinity of BIH that could have some effect within the GSA were identified and will be considered in the assessment of cumulative impacts. **Table 3-11** lists the past, present, and reasonably foreseeable projects identified within the GSA.

TABLE 3-11
PAST, PRESENT, AND REASONABLY FORESEEABLE PROJECTS

Plan/Project Name	Relevant Dates	Description	Source
Past Projects			
Taxiway Rehabilitation Project at the Bishop Airport	May 2020	Pavement rehabilitation of all airfield taxiways.	Airfield Pavement Rehabilitation and Markings – Taxiways and Runway Shoulders Documented CATEX, November 28, 2017
Runway 12/30 Pavement Rehabilitation and Markings at Bishop Airport	December 2020	Pavement rehabilitation and new markings on Runway 12/30.	Runway 12/30 Pavement Rehabilitation and Markings Documented CATEX; May 22, 2019
General Aviation Terminal Expansion at Bishop Airport	December 2021	Construction of an expansion to the existing general aviation terminal at Bishop Airport.	General Aviation Terminal Expansion Documented CATEX; January 22, 2019
General Plan Amendment 2021-02; Zone Reclassification 2021-02	August 2021	A general plan amendment and zoning change for a portion of Parcel 010-270-13 immediately north of BIH from Open Space, 40-acre minimum, (OS-40) zoning to Public (P) zoning and Natural Resources (NR) general plan land use to Public Facilities (PF) general plan land use.	General Plan Amendment 2021-02; Zone Reclassification 2021-02, 7/11 Materials, Inc. Planning Commission Staff Report, August 21, 2021; https://www.inyocounty.us/sites/default/files/2021-10/Staff%20report%20finalw-attachments_0.pdf
Proposed Commercial Airline Service at Bishop Airport	August 2021	The introduction of limited commercial service operations at Bishop Airport.	Proposed Commercial Airline Service at Bishop Airport Final Environmental Assessment, August 2021: https://www.inyocounty.us/sites/default/files/2023-12/BIH_Part_139_Final_EA_210810.pdf
Zone Text Amendment 2022-02/Inyo County Code Updates	December 2022	Amended the Inyo County Zoning Ordinance including dropping the One-Family Residential Mobile Home Combined (RMH) zoning designation and changing areas with this designation to One-Family (R1) zoning with no overlay.	Zone Text Amendment 2022-02/Inyo County Code Updates, Planning Commission Staff Report, December 7, 2022; https://www.inyocounty.us/sites/default/files/2022-11/ZTA%202022-02%20PC%20Staff%20Report%2012.7.2022.pdf
Present Projects			
Bishop Raised Median	October 2023	Construction of a raised median within State Highway 395 in Bishop, CA.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).
Future Projects			
Runway 12/30 Pavement Grooving	August 2024	The cutting of grooves into the Runway 12/30 pavement to enhance skid resistance and safety during wet weather events; includes fog seal and new markings.	Runway 12-30 Grooving, Documented CATEX, October 19, 2023.
Bishop Pavement Project	March 2024	Rehabilitation of pavement on U.S. Highway 395 and State Route 168 West in Bishop including pedestrian infrastructure upgrades.	Caltrans, District 9; Current Projects, https://dot.ca.gov/caltrans-near-me/district-9/district-9-current-projects/bishop-pavement-project (accessed January 20, 2023).

TABLE 3-11
PAST, PRESENT, AND REASONABLY FORESEEABLE PROJECTS

Plan/Project Name	Relevant Dates	Description	Source
SR 168 Bike & Pedestrian Improvements	May 2024	Construction of a bicycle through-lane and pedestrian crosswalk.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).
Golf Course Two-Way Left Turn Lane II	May 2024	Construction of a two-way left turn lane near Bishop Country Club.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).
D9 Lab	May 2024	Construction of a new laboratory building.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).
Meadow Farms ADA Project	June 2024	Upgrade of pedestrian facilities from North see Vee Lane to North Barlow Lane on both sides of U.S. Highway 395 in Bishop to Americans with Disabilities Act (ADA) standards.	Caltrans, District 9; Current Projects https://dot.ca.gov/caltrans-near-me/district-9/district-9-current-projects/meadow-farms-ada (accessed January 20, 2023).
Closure of Runway 8/26 and Conversion to Helicopter Parking and Taxiway at Bishop Airport	June 2027	Closure of Runway 8/26 to achieve the FAA standard for Runway Visibility Zone (RVZ) for the Airport.	Closure of Runway 8-26 and Conversion to Helicopter Parking and Taxiway Documented CATEX; January 22, 2019.
Rotating Beacon Replacement	March 2025	The replacement of a rotating beacon on an existing tower.	Inyo County, Airports Capital Improvement Plan, Summary 2023-2028.
Golf Course Two-Way Left Turn Lane I	August 2024	Construction of a two-way left turn lane near Bishop Country Club.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).
Construct ARFF/SRE Building	October 2024	The construction of a new building for aircraft rescue and firefighting and snow removal equipment.	Inyo County, Airports Capital Improvement Plan, Summary 2023-2028.
Airline Terminal and Ramp Construction	September 2027	Construction of a terminal and concrete ramp for commercial airline operations.	Inyo County, Airports Capital Improvement Plan, Summary 2023-2028.
Perimeter fencing upgrades	September 2025	Upgrades to the fencing surrounding the Airport.	Inyo County, Airports Capital Improvement Plan, Summary 2023-2028.
Manor Market Complete Streets	January 2029	Installation of ADA compliant sidewalks and curb ramps along State Route 168 in Bishop, CA.	Caltrans, District 9; Current Projects Quarterly Report Q2 October – December 2022; https://caltrans.maps.arcgis.com/apps/dashboards/67670a6e24ee42628f5a852c61b57abf (accessed January 20, 2023).

TABLE 3-11
PAST, PRESENT, AND REASONABLY FORESEEABLE PROJECTS

Plan/Project Name	Relevant Dates	Description	Source
The Eastern Sierra Transit Authority Operations and Administration Facility Project	Not yet scheduled	New operations and administration facility at Bishop Airport.	Eastern Sierra Transit Authority, The Bishop Operations and Administration Facility Project, Categorical Exclusion Checklist, Attachment A. https://ceqanet.opr.ca.gov/2020030386/2 (accessed August 27, 2023).

SOURCE: Environmental Science Associates, 2024.

CHAPTER 4

Environmental Consequences

4.1 Introduction

This chapter discusses potential impacts resulting from the Proposed Project when compared to the No Action Alternative for the same timeframe and whether they would be considered significant under NEPA or other special purpose laws as specified in FAA Orders 1050.1F and 5050.4B. The environmental impact categories identified in FAA Order 1050.1F and discussed in detail in Chapter 3, *Affected Environment*, are assessed for potential impacts in this chapter.

The analyses discussed in this chapter include a description of the methodologies employed, the factors considered, and the thresholds used to determine significance, and potential impacts, if any, of the Proposed Project and the No Action Alternative. Potential impacts are discussed in relation to the study areas defined in Chapter 3. Potential cumulative impacts resulting from the incremental effects of the Proposed Project when added to the effects of past, present, and reasonably foreseeable future actions are analyzed in Section 4.13, *Cumulative Impacts*.

Table 4-1 lists the environmental impact categories assessed in this EA, the thresholds of significance used to determine the potential for impacts as specified in FAA Order 1050.1F, and a side-by-side comparative summary of the potential for environmental impacts resulting from implementation of the Proposed Project under 2024 and 2029 forecasted conditions.

4.1.2 Study Years

This EA evaluates the environmental impact of the Proposed Project and No Action Alternative by analyzing the project during two different years of operation: 2024 and 2029. Study year 2024 is the year the Proposed Project would be implemented at the Airport.¹ Study Year 2029 is the fifth year after implementation of the Proposed Project. These study years provide a reasonable time frame in which to evaluate ongoing environmental impacts such as those associated with aircraft noise and air quality.

¹ Proposed Project implementation was initially scheduled for completion in 2024. However, unavoidable delays in the NEPA process pushed the completion to Spring 2025. As the effects of the Proposed Project are primarily related to construction, changing the study years for operational effects was determined to be unwarranted since the anticipated aircraft operations remain constant in the forecast.

TABLE 4-1
IMPACT SUMMARY

Environmental Impact Category	Threshold of Significance	Significant Impact?	
		2024	2029
Air Quality	The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.	No	No
Biological Resources	The USFWS or NMFS determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. The FAA has not established a significance threshold for non-listed species. Other factors in considering whether an action would impact biological resources are discussed in Section 4.3, <i>Biological Resources</i> .	No	No
Climate	The FAA has not established a significance threshold for Climate, and no specific factors to consider were identified.	No	No
Hazardous Materials, Solid Waste, and Pollution Prevention	The FAA has not established a significance threshold for Hazardous Materials, Solid Waste, and Pollution Prevention. However, factors considered in determining whether an action would have impacts are discussed in Section 4.5, <i>Hazardous Materials, Solid Waste, and Pollution Prevention</i> .	No	No
Historical, Architectural, Archaeological, and Cultural Resources	The FAA has not established a significance threshold for Historical, Architectural, Archeological, and Cultural Resources. However, factors considered in determining whether an action would have impacts are discussed in Section 4.6, <i>Historical, Architectural, Archaeological, and Cultural Resources</i> .	No	No
Land Use	The FAA has not established a significance threshold for Land Use. The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts.	No	No
Natural Resources and Energy Supply	The FAA has not established a significance threshold for Natural Resources and Energy Supply. However, factors considered in determining whether an action would have impacts are discussed in Section 4.8, <i>Natural Resources and Energy Supply</i> .	No	No
Noise and Noise-Compatible Land Use	The action would increase noise by Community Noise Equivalent Level (CNEL) 1.5 dB or more for a noise-sensitive area that is exposed to noise at or above CNEL 65 dB, or that will be exposed at or above CNEL 65 dB level due to a CNEL 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe. For example, an increase from CNEL 65.5 dB to 67 dB is considered a significant impact, as is an increase from CNEL 63.5 dB to 65 dB.	No	No
Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks	The FAA has not established a significance threshold for Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks. However, factors considered in determining whether an action would have impacts are discussed in Section 4.10, <i>Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks</i> .	No	No

**TABLE 4-1
IMPACT SUMMARY**

Environmental Impact Category	Threshold of Significance	Significant Impact?	
		2024	2029
Visual Effects	The FAA has not established significance thresholds for Visual Effects, which is broken into two categories: 1) Light Emission Effects; and 2) Visual Resources and Visual Character. However, factors considered in determining whether an action would have impacts are discussed in Section 4.11, <i>Visual Effects</i> .	No	No
Water Resources	<p><i>Groundwater</i> - The action would:</p> <ol style="list-style-type: none"> 1. Exceed groundwater quality standards established by Federal, state, local, and tribal regulatory agencies; or 2. Contaminate an aquifer used for public water supply such that public health may be adversely affected. <p><i>Surface Waters</i> - The action would:</p> <ol style="list-style-type: none"> 1. Exceed water quality standards established by Federal, state, local, and tribal regulatory agencies; or 2. Contaminate public drinking water supply such that public health may be adversely affected. <p>Factors to consider whether an action would impact groundwater and surface waters are discussed in Section 4.12, <i>Water Resources</i>.</p>	No	No
Cumulative Impacts	Factors considered in determining whether an action would result in cumulative impacts are discussed in Section 4.13, <i>Cumulative Impacts</i> .	No	No

SOURCE: Department of Transportation, Federal Aviation Administration, Order 1050.1F, Paragraph 4-3.3 and Exhibit 4-1.

4.2 Air Quality

4.2.1 Methodology

4.2.1.1 Construction

Construction emissions for both the Proposed Project and the No Action Alternative were estimated using CalEEMod software, a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with construction and operations from a variety of land use projects in California. Emissions from on-road vehicles were estimated outside of CalEEMod using emission factors for haul and material vendor trucks and worker vehicles derived from the EMFAC2021 web database.

4.2.1.2 Operations

Operational emissions of criteria air pollutants were estimated for the Proposed Project and the No Action Alternative for two future years: 2024 and 2029. Consistent with guidance provided in FAA Order 1050.1F and the FAA's *Aviation Emissions and Air Quality Handbook* (Version 3, Update 1), the following criteria air pollutants were evaluated to produce an emissions inventory

for future aircraft operations at BIH: CO, ozone precursors (VOCs and NO_x), oxides of sulfur (SO_x), PM₁₀, and PM_{2.5}.

Air quality evaluations for the No Action Alternative and the Proposed Project for aircraft and GSE were conducted using the FAA’s AEDT 3e. The air quality analysis includes emissions estimates for Airport operations anticipated to result from the No Action Alternative and Proposed Project. This analysis includes emissions estimates for aircraft operations and ground support operations that are anticipated under the Proposed Project. Emission factors for employee and visitor roadway emissions were computed for each scenario using the EMFAC2021 web database. A summary of the technical assumptions and methodologies used to conduct the air quality analysis is included in **Appendix G**.

4.2.2 Significance Thresholds

Exhibit 4-1 of FAA Order 1050.1F provides the FAA’s significance threshold for air quality, which states, “The action would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the EPA under the CAA, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.” Since the GSA is not located in an EPA-designated nonattainment or maintenance area for any of the NAAQS, the General Conformity Rule (Section 176(c)(1) of the CAA) *de minimis* thresholds are not applicable to the Proposed Project.

4.2.3 Construction Impacts

4.2.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard, current declared distances would remain in effect, and a permanently displaced threshold would be implemented on Runway 12. The implementation of a permanently displaced threshold would require relocation of the Runway 12 PAPI. This activity would require minor trenching and pouring of concrete to install the base for the PAPI. The maximum annual criteria pollutant emissions of criteria pollutants for this activity are indicated in **Table 4-2**.

TABLE 4-2
MAXIMUM REGIONAL CONSTRUCTION EMISSIONS UNDER THE NO ACTION ALTERNATIVE

	Emissions (tons per year)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Construction Phases						
Trenching	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Construction	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Construction Emissions	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

NOTE: Totals may not add up exactly due to rounding in the modeling calculations. Refer to Appendix G for details.

SOURCE: ESA, 2023.

4.2.3.2 Proposed Project

Construction activities including site preparation, grading, and skimming associated with the Proposed Project would generate temporary and short-term emissions of criteria pollutants. During the site preparation phase, clearing and grubbing activities will result in 11,276 cubic yards (cy) of material being relocated within the airport property. During the grading phase it is anticipated that the quantity of cut material would be sufficient to meet the need for fill material; however, up to 50,000 cy of soil could potentially be stockpiled on the airport property for use on future projects. Proposed Project construction is expected to commence in September 2024 and last approximately three months. A more energy-efficient and cleaner burning construction equipment fleet mix would be expected in the future, due to State regulations requiring construction equipment fleet operators to phase-in less polluting heavy-duty equipment. Thus, air quality impacts would be less than those analyzed for this analysis in the event project construction commences later than the anticipated start date.

Additionally, some variation in the anticipated construction fleet may occur due to specific needs at the time of construction. The duration of construction activity and associated construction equipment was estimated based on consultation with Inyo County Public Works and CalEEMod default assumptions. A detailed summary of construction equipment assumptions by phase is provided in modeling files included in Appendix G.

The maximum daily regional emissions from these activities are estimated by construction phase. Maximum annual criteria pollutant emissions are indicated in **Table 4-3**.

TABLE 4-3
MAXIMUM REGIONAL CONSTRUCTION EMISSIONS UNDER THE PROPOSED PROJECT

	Emissions (tons per year)					
	VOC	NO _x	CO	SO _x	PM10	PM2.5
Construction Phases						
Site Preparation	0.07	0.69	0.55	<0.01	0.04	0.02
Grading	0.42	3.94	3.53	0.01	0.39	0.22
Skimming	0.01	0.13	0.09	<0.01	0.01	<0.01
Total Construction Emissions	0.51	4.76	4.17	0.01	0.44	0.24

NOTE:

Totals may not add up exactly due to rounding in the modeling calculations. Refer to Appendix G for details.

SOURCE: ESA, 2023.

4.2.4 Operational Impacts

4.2.4.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard, current declared distances would remain in effect, and a permanent displaced threshold would be implemented on Runway 12. There would be no associated changes in activity at BIH. Air quality

emissions for the No Action Alternative in 2024 and 2029 are listed in **Table 4-4**. The emissions inventory includes aircraft operations, GSE, and off-airport vehicular travel in 2024 and 2029.

4.2.4.2 Proposed Project

Table 4-4 summarizes air quality emissions for the Proposed Project in 2024 and 2029. The Proposed Project emissions inventory includes aircraft operations, GSE, and off-airport vehicular travel in 2024 and 2029.

TABLE 4-4
PROPOSED PROJECT AND NO ACTION ALTERNATIVE EMISSIONS INVENTORY (TONS PER YEAR) SUMMARY

	CO	VOC	NO _x	SO _x	PM ₁₀	PM _{2.5}
2024 No Action Alternative						
Aircraft	92.19	5.41	6.11	1.04	0.16	0.16
GSE	4.52	0.16	0.38	0.00	0.02	0.02
Off-Airport Vehicular Travel	3.30	0.41	1.79	0.01	0.97	0.27
Total	100.01	5.98	8.28	1.05	1.15	0.45
2024 Proposed Project						
Aircraft	92.19	5.41	6.11	1.04	0.16	0.16
GSE	4.52	0.16	0.38	0.00	0.02	0.02
Off-Airport Vehicular Travel	3.30	0.41	1.79	0.01	0.97	0.27
Total	100.01	5.98	8.28	1.05	1.15	0.45
Net Change	0	0	0	0	0	0
2029 No Action Alternative						
Aircraft	93.32	5.55	6.95	1.14	0.17	0.17
GSE	4.05	0.15	0.33	0.00	0.02	0.02
Off-Airport Vehicular Travel	2.42	0.30	1.15	0.01	0.94	0.26
Total	99.79	6.00	8.43	1.15	1.13	0.45
2029 Proposed Project						
Aircraft	93.32	5.55	6.95	1.14	0.17	0.17
GSE	4.05	0.15	0.33	0.00	0.02	0.02
Off-Airport Vehicular Travel	2.42	0.30	1.15	0.01	0.94	0.26
Total	99.79	6.00	8.43	1.15	1.13	0.45
Net Change	0	0	0	0	0	0

NOTE:

Numbers may not add, due to rounding.

SOURCE: Environmental Science Associates, 2023.

4.2.5 Comparison to Significant Impact Thresholds

Table 4-2 provides the emissions generated by construction of the No Action Alternative and Table 4-3 provides the emissions generated by the Proposed Project. Since the Proposed Project would not lead to a change in aircraft operations, changes to criteria pollutant emissions would occur only during the construction phases. Significant air quality impacts would be demonstrated if the Proposed Project would result in an exceedance of one or more of the NAAQS or increase in the frequency or severity of any such existing violations for any of the time periods analyzed when compared to the No Action Alternative. As stated in Section 3.2.2, the GSA for the Proposed Project is not within an area designated as nonattainment or maintenance for any of the NAAQS. No Proposed Project emission of criteria pollutants during construction would result in a significant air quality impact because there would be no exceedance of the NAAQS or increase in the frequency or severity of any air quality violations in the Air Basin.

Table 4-4 provides the difference in operational emissions (net change) between the Proposed Project and the No Action Alternative in 2024 and 2029. The Proposed Project would not induce any increase in operations at BIH or associated emissions from aircraft, GSE, or off-airport vehicular traffic. Thus, there is no increase in emissions of criteria pollutants when comparing the Proposed Project emissions to the No Action Alternative in either 2024 or 2029.

4.3 Biological Resources

4.3.1 Methodology

An evaluation of biological resources was conducted for the Proposed Project and No Action Alternative and includes plant and animal species listed as threatened or endangered under the ESA and/or by the California Department of Fish and Wildlife (CDFW). Biological resources within the GSA are identified using information collected during a field survey on November 1, 2022, conducted in the AA delineated for use in preparation of the BA. The AA is depicted on Figure 3-2 and discussed in detail in Section 3.3.3, *Biological Assessment Action Area*. All state and federally listed plant and animal species with potential to occur within the AA were evaluated for potential impacts as a result of the Proposed Project under 2024 and 2029 conditions. The BA is included in **Appendix H**.

The 1050.1F Desk Reference establishes factors to consider in evaluating potential environmental impacts to biological resources. However, these factors are not intended to be thresholds for significance determination. If any of the factors are present, then the FAA must evaluate these factors in the context of the Proposed Project. Other factors used in evaluating potential impacts include consideration of whether a project would have the potential for:

- A long-term or permanent loss of unlisted plant or wildlife species;
- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats;

- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or,
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality, or ability to sustain the minimum population levels required for population maintenance.

4.3.2 Significance Thresholds

Order 1050.1F and the 1050.1F Desk Reference provide the FAA's significance thresholds for determining impacts to biological resources. A significant impact to biological resources would occur when "the USFWS or NMFS determines that the action would be likely to jeopardize the continued existence of a federally-listed threatened or endangered species or would result in the destruction or adverse modification of federally-designated critical habitat."

4.3.3 2024 and 2029 Impacts

4.3.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance that would have no effect on listed species or critical habitat. No cutting, filling, or grading would occur in the RSA, and there would be no change in activity at BIH. Therefore, no impacts would occur under the No Action Alternative in either 2024 or 2029.

4.3.3.2 Proposed Project

Federally Listed Species

The official species list secured from the USFWS IPaC identifies six federally listed threatened or endangered species with the potential to occur within the AA. One candidate species is also found in the AA. A list and evaluation summary of those species is included in Table 3-4 in Section 3.3.3.2, *Wildlife*. The analysis of the Proposed Project in the BA did not identify any potential effects on federally listed fish, plant, and avian species within or immediately surrounding the AA (see Appendix H). No federally designated critical habitat was identified within one mile of the AA or GSA. The FAA considered the information in the BA and determined that the Proposed Project would have *no effect* on federally listed species or designated critical habitat.

Migratory Birds

The USFWS IPaC also listed migratory birds of concern that have been identified in the vicinity of the AA. Sixteen species of birds were identified in the BA to be of particular concern either because they occur on the USFWS Birds of Conservation Concern list or warrant special attention. They include hawks, raptors, and other species of birds protected under the *Migratory Bird Treaty Act of 1918* (16 U.S.C. §§ 703-711). The complete list of migratory bird species with potential to occur in the AA is included in the BA (see Appendix H).

It is important to note that historically, bird strikes have not been a major issue at BIH. Although the Proposed Project would enhance the Runway 12/30 RSA to comply with FAA design standards, it would not induce operations or alter the frequency of aviation activity in wildlife corridors. Therefore, no bird populations or migratory patterns would be affected by the Proposed Project.

State-Listed Species

The BA identifies nine state-listed special status species (i.e., threatened, endangered, or a species of special concern) with the potential to occur within the AA. A list of those species is included in Table 3-5. Investigation into the presence of these species at the Airport indicated that no known state-listed endangered or threatened species were documented to occur within the AA. During field surveys conducted in 2019 and 2020 for a previous project, three species of special concern were identified within the AA: Northern Harrier, Yellow Warbler, and Yellow-breasted Chat. Although these species were identified during field surveys, any available habitat for supporting these species in the AA is considered to be of low quality. As such no nesting sites associated with any listed species of special concern are anticipated to be impacted by the Proposed Project.

4.3.4 Comparison to Significant Impact Thresholds

A significant impact would occur if the Proposed Project would jeopardize the continued existence of federally listed, threatened, or endangered species, or the destruction or adverse modification of federally designated critical habitat.

Based on the information provided in the BA, the Proposed Project would have no effect on federally listed threatened or endangered species or designated critical habitat. Furthermore, no state-listed species or associated habitat would be affected by the Proposed Project. Since there are no significant impacts; Section 7 consultation was not required.

4.4 Climate

4.4.1 Methodology

Per FAA Order 1050.1F, a NEPA document prepared by the FAA must consider the potential incremental change in CO₂ emissions that would result from a proposed action when compared to a no action alternative for the same timeframe. In January 2023, the CEQ released updated interim guidance requiring agencies to quantify GHG emissions individually as well as in terms of CO₂ equivalence.² A projection of the GHG emissions was estimated consistent with the guidance in the 1050.1F Desk Reference. The analysis of GHG emissions generally follows the same methodology and modeling tools as the air quality criteria pollutant emissions analysis discussed in Section 4.2, *Air Quality*. GHG emissions inventories for 2024 and 2029 were prepared for the Proposed Project and No Action Alternative. The GHG emissions inventories account for direct and indirect emissions from airside sources (aircraft operations and GSE) and landside sources (area, energy, and mobile). A summary of the technical assumptions and methodologies used to conduct the climate analysis is included in Appendix G.

² 88 Fed. Reg. 1196, January 9, 2023.

4.4.2 Significance Thresholds

The FAA has not established significance thresholds for assessing impacts to climate. There are currently no standards identified by the FAA to even consider in evaluating the significance of GHG emissions.

According to Current CEQ guidance, “it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions, as such direct linkage is difficult to isolate and to understand.”³ However, the latest guidance from CEQ does establish that comparisons to global or nation-level emissions are inadequate for describing climate change effects of a project or its alternatives. Instead, the relevant context in which to consider GHG emissions specified by the guidance is relative to any local and regional climate action plans. Although Inyo County does not currently have an adopted climate action plan, A climate action plan for the larger Sierra Nevada Region was adopted in 2009. Policies of the plan regarding climate and GHGs focus on reducing emissions through efficiency and land use decisions made at the local government level and preserving forests and woodlands for carbon sequestration.

4.4.3 2024 and 2029 Impacts

4.4.3.1 No Action Alternative

Construction

Construction activities associated with the No Action Alternative would result in emissions of CO₂ and, to a lesser extent, CH₄ and N₂O. These emissions would be associated with construction activities associated with relocation and installation of the Runway 12 PAPI. Construction emissions associated with the No Action Alternative are summarized according to the individual GHG contributors as well as CO₂e in **Table 4-5**.

TABLE 4-5
NO ACTION ALTERNATIVE - CONSTRUCTION GREENHOUSE GAS EMISSIONS

Emissions Sources	CO₂ (Metric Tons per Year)	CH₄ (Metric Tons per Year)	N₂O (Metric Tons per Year)	CO₂e (Metric Tons per Year)
Off-Road Equipment	0.18	0.0000600	0.00000	0.18
On-Road Sources	0.12	0.0000506	0.00167	0.12
Project Total GHG Emissions	0.30	0.0001106	0.00167	0.30

NOTES: Totals may not add up exactly due to rounding in the modeling calculations. The CO₂e totals reflect the relatively high proportion of CO₂ and rounding of the totals. Refer to Appendix G for details.

CO₂e = carbon dioxide equivalent

SOURCE: ESA, 2023

³ Department of Transportation, Federal Aviation Administration, 1050.1F Desk Reference, <https://www.faa.gov/about/office_org/headquarters_offices/apl/enviro_policy_guidance/policy/faq_nepa_order/desk_ref/> (accessed August 26, 2020).

Operations

Fossil fuel combustion is the primary source of GHG emissions at the Airport. The GHG emissions estimate for the No Action Alternative in both 2024 and 2029 was completed using the FAA's AEDT 3e model and the EMFAC2021 web database. GHGs associated with the No Action Alternative include emissions from aircraft operations and motor vehicles. Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard, and current declared distances would remain in effect. No cutting, filling, or grading would occur, and daily operations would not increase. Thus, the No Action Alternative would not result in significant climate impacts.

Modeled emissions under the No Action Alternative are summarized in **Table 4-6**.

TABLE 4-6
NO ACTION ALTERNATIVE - GREENHOUSE GAS OPERATIONAL EMISSIONS INVENTORY

Operational Year	Emission Source	CO ₂ (Metric Tons per Year)	CH ₄ (Metric Tons per Year)	N ₂ O (Metric Tons per Year)	Estimated GHG Emissions Inventory in CO ₂ e (MT/year)
2024	Aircraft	2,023.20	10.10	40.80	2,074.10
	Off-Airport Vehicular Travel	1,416.41	0.03	0.16	1,463.85
	Total	3,439.61	10.13	40.96	3,537.95
2029	Aircraft	2,425.00	9.80	42.30	2,477.10
	Off-Airport Vehicular Travel	1,176.69	0.02	0.12	1,214.27
	Total	3,601.69	9.82	42.42	3,691.37

NOTE:

CO₂e = carbon dioxide equivalent

SOURCE: ESA, 2023.

4.4.3.2 Proposed Project

Construction

Construction activities associated with the Proposed Project would result in emissions of CO₂ and, to a lesser extent, CH₄ and N₂O. These emissions would be associated with operation and movement of heavy equipment used for cutting, filling, and grading. Construction emissions associated with the Proposed Project are summarized individually as well as CO₂e in **Table 4-7**.

TABLE 4-7
PROPOSED PROJECT - CONSTRUCTION GREENHOUSE GAS EMISSIONS

Emissions Sources	CO ₂ e (Metric Tons per Year)	CH ₄ (Metric Tons per Year)	N ₂ O (Metric Tons per Year)	CO ₂ e (Metric Tons per Year)
Off-Road Equipment	853.37	6.59	0.00	859.96
On-Road Sources	91.60	0.04	3.06	94.70
Water and Office	112.04	0.13	0.19	112.35
Project Total GHG Emissions	1,057.01	6.76	3.24	1,067.02

NOTES: Totals may not add up exactly due to rounding in the modeling calculations. The CO₂e totals reflect the relatively high proportion of CO₂ and rounding of the totals. Refer to Appendix G for details.

CO₂e = carbon dioxide equivalent

SOURCE: ESA, 2023

Operations

GHG emissions in the Proposed Project would result from fuel burn associated with aircraft operations, GSE, and motor vehicles. **Table 4-8** presents estimated levels of GHG emissions at BIH in 2024 and 2029 for the Proposed Project. Because there would be no change in the number of operations between the Proposed Project and the No Action Alternative, the estimated emissions would remain the same under both scenarios.

TABLE 4-8
PROPOSED PROJECT - GREENHOUSE GAS OPERATIONAL EMISSIONS INVENTORY

Operational Year	Emission Source	CO ₂ (Metric Tons per Year)	CH ₄ (Metric Tons per Year)	N ₂ O (Metric Tons per Year)	Estimated GHG Emissions Inventory in CO ₂ e (MT/year)
2024	Aircraft*	2,023.20	10.10	40.80	2,074.10
	Off-Airport Vehicular Travel	1,416.41	0.03	0.16	1,463.85
	Total	3,439.61	10.13	40.96	3,537.95
2029	Aircraft*	2,425.00	9.80	42.30	2,477.10
	Off-Airport Vehicular Travel	1,176.69	0.02	0.12	1,214.27
	Total	3,601.69	9.82	42.42	3,691.37

NOTES:

CO₂e = carbon dioxide equivalent

* Includes emissions from GSE

SOURCE: ESA, 2023.

4.4.4 Comparison to Significant Impact Thresholds

As stated in Section 4.4.2, there are no significance thresholds established for aviation GHG emissions, and the FAA has not identified specific factors to consider in making a significance determination for GHG emissions, particularly where application to a single project is concerned. Due to minimal emissions of GHG anticipated during construction and the negligible change the Proposed Project would have on the Airport's existing operational footprint, there would be little, if any, increase in vulnerability to future climate impacts from the implementation of the Proposed Project.

As indicated in Table 4-7, construction of the Proposed Project would result in 1,067 MT of CO₂e. Per Table 4-8, there would be no increase in BIH CO₂e emissions from aircraft, GSE, or off-airport vehicular travel following construction. As such, the Proposed Project would only be responsible for a temporary increase of 1,067 MT of additional GHG emissions due to construction. In comparison, California emissions for 2020, the latest year for which emissions data is available, was 369.2 million MT of CO₂e⁴. The Proposed Project's contribution to GHG emissions would comprise a miniscule fraction of the State of California's GHG emissions.

Interim guidance issued by CEQ on the consideration of GHG emissions as part of the NEPA process encourages agencies to consider how project emissions would relate to climate action commitments and policies.⁵ The State of California has established GHG emissions reduction

⁴ California Air Resources Board, *California Greenhouse Gas Emissions for 2000 to 2020, Trends of Emissions and Other Indicators* - , 2022, <https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf> (accessed February 7, 2023).

⁵ White House Council on Environmental Quality, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, CEQ-2022-0005-0001, January 8, 2023, <<https://www.regulations.gov/document/CEQ-2022-0005-0001>>(accessed March 27, 2023).

targets aimed at reducing the state's GHG emissions to 40% below 1990 levels by 2030⁶, and eventually carbon neutrality by 2045.⁷ Inyo County has not established GHG emissions goals or targets. However, the State of California tracks trends in emissions of GHGs through a program of mandatory reporting. Organizations subject to mandatory GHG emissions reporting in Inyo County include three electricity generation facilities with annual GHG emissions totaling 314,759 MT of CO₂e in 2020; all of which was attributable to emission of CO₂.⁸ The reported emissions for Inyo County are summarized in a Facility Emissions Report included in Appendix G-2. The Proposed Project's total construction emissions of 1,067 MT would represent only 0.34% relative to those emissions in comparison. Regardless, the Proposed Project's GHG emissions would incrementally contribute to the effects of climate change, although to a comparatively small degree.

Published climate projections for Inyo County indicate temperatures will rise 4.4 degrees Fahrenheit from the historical average by 2099 under a low emissions scenario and 7.5 degrees in a high emissions scenario.⁹ Rising temperatures can exacerbate hot and arid conditions in Inyo County. Consequences can include increased risk of wildfire, flooding, food insecurity, and socioeconomic instability; the impacts of which are often most significant for vulnerable populations. The social cost of the GHGs emitted during Proposed Project construction would total \$122,425.42 when quantified using 2020 United States government rates for individual GHGs.¹⁰ The construction activity associated with the No Action Alternative would only result in \$45.53 of costs to society when likewise quantified. Thus, the Proposed Project would incur an extra \$122,379.89 in social costs compared to the No Action Alternative.

Considering the minimal emissions of GHGs that would be generated by the Proposed Project, it is unlikely that they would disproportionately affect the State's GHG emissions targets. The social cost of the GHGs emitted during Proposed Project construction represent a one-time cost, as the Proposed Project would not influence the operational output at the Airport. The Proposed Project would instead preserve the safe and efficient operation of Runway 12/30 and the associated economic benefits of the Airport, whose operations contributed to \$350.6 billion generated nationwide by the civil aviation industry in 2020 alone.¹¹ In 2022, newly introduced commercial passenger service activity at BIH resulted in \$163,000 in direct revenue. Accordingly, when compared to the No Action Alternative for the same time frame, the Proposed Project, would not result in a significant impact to climate or the costs incurred by society.

⁶ AB 32, the California Global Warming Solutions Act of 2006, Div. 25.2 Health and Safety Code.

⁷ California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*, December 2022.

⁸ California Air Resources Board, CARB Pollution Mapping Tool (v2.6), Facility Emissions by Facility Report, https://www.arb.ca.gov/carbapps/pollution-map/?_ga=2.245928068.1897110376.1701199784-2104383424.1611872372# (accessed November 28, 2023).

⁹ California Department of Public Health, *Climate Change and Health Profile Report – Inyo County*, February 2017.

¹⁰ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990*, February 2021.

¹¹ Federal Aviation Administration, *The Economic Impact of U.S. Civil Aviation: 2020*, August 2022.

4.5 Hazardous Materials, Solid Waste, and Pollution Prevention

4.5.1 Methodology

The potential to encounter any known areas of environmental concern, areas with known contamination, and areas subject to past or present remediation that may be affected by the Proposed Project were evaluated using USEPA's NEPAAssist database. The locations of known, or potential environmental contamination or other hazards located within the GSA are described in Section 3.5, *Hazardous Materials, Solid Waste, and Pollution Prevention*. This analysis of potential impacts related to hazardous, materials, solid waste, and pollution prevention is based on known characteristics of BIH land uses and the individual elements of the Proposed Project under 2024 and 2029 conditions. The results of the evaluation were compared to appropriate regulatory guidelines and criteria, including the potential for the Proposed Project to violate applicable laws or regulations; involve a contaminated site on the USEPA's NPL; or change the quantity, type, or collection of hazardous or solid waste that could exceed local capacity.

The FAA has identified factors to consider when evaluating the environmental impacts on hazardous materials as a result of the Proposed Project and the No Action Alternative in 2024 and 2029. FAA Order 1050.1F provides the following factors to consider:

- Actions that may violate applicable federal, state, tribal, or local laws or regulations for hazardous materials and/or solid waste management;
- Actions that may involve a contaminated site, including but not limited to sites listed on the USEPA's NPL;¹²
- Actions that produce an appreciably different quantity or type of hazardous waste;
- Actions that generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; and
- Actions that adversely affect human health and the environment.

4.5.2 Significance Thresholds

The 1050.1F Desk Reference provides guidance on the framework for evaluating impacts associated with hazardous materials or wastes. However, the FAA has not established a significance threshold for hazardous materials, solid waste, or pollution prevention.

¹² The NPL or National Priorities List identifies known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories.

4.5.3 2024 and 2029 Impacts

4.5.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance well away from any identified RCRA sites. No cutting, filling, or grading would occur within the RSA, and there would be no change in daily operations. Therefore, no impacts would occur under the No Action Alternative in either 2024 or 2029.

4.5.3.2 Proposed Project

Hazardous Materials

As discussed in Section 3.5, *Hazardous Materials, Pollution Prevention, and Solid Waste*, there are no NPL properties located within or adjacent to the GSA. One RCRA site was identified within the GSA south of Poleta Road. However, there are no sites physically located within the areas to be cut, filled, or graded.

The Proposed Project would not result in any expansion of operations at BIH. Consequently, there would be no increase in fueling or maintenance of aircraft, GSE, or Airport vehicles. Nor would there be any associated escalation in use of fuel storage tanks.

Solid Waste

The Proposed Project would not induce any intensification of activity at BIH which would increase the volume of solid waste generated. Construction of the Proposed Project would produce some construction waste associated with clearing and grubbing of existing vegetation, fencing, and other debris. However, grading of the RSA will primarily involve filling below-grade areas and is not anticipated to generate excess soil to be hauled off site for disposal. There is no likelihood of exceeding existing waste processing capacity, including the capacity of the Bishop-Sunland Landfill. The Bishop-Sunland Landfill has a maximum permitted capacity of 160 tons of solid waste per day and a cease operation date of 2064. It also has a capacity of 6 million cy with a remaining capacity of 3.3 million cy.

Pollution Prevention

The Proposed Project would not result in major changes to existing pollution prevention activities. During construction of the Proposed Project, any hazardous materials, including fuel, coolants, lubricants, and any other potentially hazardous substances, will be handled in accordance with all federal, state, and local regulations and best management practices to minimize the potential for spills.

4.5.4 Comparison to Significant Impact Thresholds

Based on the above information, the Proposed Project would not result in significant impacts to hazardous materials, solid waste, or pollution prevention.

4.6 Historical, Architectural, Archaeological, and Cultural Resources

4.6.1 Methodology

This section analyzes the potential for direct and indirect impacts to historical, architectural, archaeological, and cultural resources (cultural resources) due to the Proposed Project. Also discussed in this section is the FAA's consultation with the California SHPO pursuant to Section 106 of the NHPA and its implementing regulations at 36 CFR Part 800.

The Proposed Project would cut, fill, and grade portions of the Runway 12/30 RSA. As such, the FAA has undertaken a consultation process with federally recognized Native American Indian tribes regarding cultural resources in the APE. The tribal consultation is ongoing, and any developments regarding tribal cultural resources will be disclosed as they occur.

As discussed in Section 3.6, *Historic, Architectural, Archaeological, and Cultural Resources*, an APE, as depicted in Figure 3-3, was established for determining where the Proposed Project might directly or indirectly alter the character of any cultural resources. Based on a historical/archaeological resources records search at the eastern information center (EIC) of the California Historical Resources Information System (CHRIS) at the University of California Riverside, 14 cultural resources studies were identified within a ¼-mile radius of BIH property. The records search indicated the existence of six cultural resources occurring within portions of the APE. Due to the sensitivity of these sites, the precise locations will not be disclosed in this document. None of these resources has been determined to meet the requirements for eligibility for listing on the NRHP.

In assessing the potential significance associated with a proposed action, one of the factors that the FAA considers is whether it would result in a finding of Adverse Effect through the Section 106 process. However, an adverse effect finding does not automatically trigger preparation of an EIS (i.e., a significant impact).

According to Section 106 of the NHPA, a proposed project has an effect on a historic property when the project may alter characteristics of the property that may qualify it for inclusion in the NRHP. An effect would be considered adverse when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects include the physical destruction of all or part of the property, changes to aspects of the property's setting, or alteration of character-defining features [36 CFR § 800.9(b)].

4.6.2 Section 106 Consultation

Based on the results of the cultural resources survey, there are no cultural resources eligible for listing in the National Register of Historic Places or that qualify as "historic properties" according to the criteria of the NHPA found within the APE. Tribal consultation letters were prepared in December 2023 and were submitted by the FAA to tribal historic preservation contacts in January 2024 to initiate consultation. The FAA did not receive any responses from the tribes. The FAA determined that the Proposed Project would not alter, directly or indirectly, any of resources within

or intersected by the APE as defined in 36 CFR § 800.5. On May 20, 2024, the FAA submitted its finding of *no adverse effects on historic properties* to the California SHPO. The California SHPO's response of July 25, 2024, stated that the APE was delineated adequately and agreed with the conclusion that the undertaking will not adversely affect historic properties. Copies of the consultation letters are provided in Appendix E.

4.6.3 Significance Thresholds

As discussed in FAA Order 1050.1F, the FAA has not established a significance threshold for Historical, Architectural, Archaeological, and Cultural Resources.

4.6.4 2024 and 2029 Impacts

4.6.4.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance well away from any identified cultural resources. No cutting, filling, or grading would occur in the RSA and there would be no potential to impact any known or yet undiscovered cultural resources. Therefore, no impacts to cultural resources would occur under the No Action Alternative in 2024 or 2029.

4.6.4.2 Proposed Project

Compliance with Section 106 of the National Historic Preservation Act resulted in the FAA and the California SHPO concurrence that the Proposed Project would result in no adverse effect to historic properties. Although areas within the Runway 12/30 RSA would be cut, filled, and graded, the records search of cultural resource inventories as well as the site survey conducted within the APE have indicated low potential for occurrences of cultural resources in these areas. The establishment of protocols for unanticipated discoveries of artifacts and human remains is required in accordance with California Law.¹³ Adherence to these provisions is anticipated to alleviate the already low potential for encountering cultural resources during construction. Recommended best management practices would also include cultural resources awareness training for all personnel involved in Proposed Project construction and adherence to a cultural resources monitoring plan. Additionally, monitoring by tribal representatives during construction is recommended and should be encouraged. Following construction there would be no further activity in the RSA with potential to disturb cultural resources in the APE.

4.6.5 Comparison to Significant Impact Thresholds

The Proposed Project would not disturb any known cultural resources, and recommended provisions to be implemented during construction would reduce the potential for disturbance of any previously undiscovered cultural resources. Accordingly, when compared to the No Action Alternative, the Proposed Project, would not result in a significant impact to cultural resources.

¹³ California Code of Regulations, Section 15064.5(d)-(f).

4.7 Land Use

4.7.1 Methodology

The evaluation of land use impacts in this section considers the following:

- Direct or indirect impacts (other than aircraft noise) that would affect land use in the vicinity of BIH;
- Consistency with approved local and state plans;
- Possible conflicts between the Proposed Project and the objectives of federal, regional, state, and local land use plans, policies, and controls; and
- That appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with its safe operation.

The analysis included a review of the general plans and zoning ordinances of Inyo County as well as applicable local land use management plans, such as the OVLMP. The purpose of this review was to identify whether the Proposed Project would conflict with local and regional land use plans. Inyo County and LADWP establish the land use plans and policies for areas surrounding BIH. No state or federal agencies have established specific land use plans applicable within the GSA. Future planned land uses in the GSA are depicted on Figure 3-6.

Land use compatibility as it relates to aircraft noise, is discussed in Section 4.9, *Noise and Noise-Compatible Land Use*.

4.7.2 Significance Thresholds

Per FAA Order 1050.1F significance thresholds for impacts to land use have not been established. Guidance provided in the Order 1050.1F Desk Reference states that a determination that there are significant impacts to land use is normally dependent on whether there are significant impacts in other environmental impact categories. Potential impacts on noise compatible land use are discussed in Section 4.9, *Noise and Noise-Compatible Land Use*. Potential impacts to land use related to potential for disruptions to communities or relocation of residences or businesses is discussed in Section 4.10, *Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks*. This section of the EA focuses on the Proposed Project's consistency with land use plans, zoning ordinances, and other planning documents.

4.7.3 2024 and 2029 Impacts

4.7.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated. This would have no effect on existing land use and the No Action Alternative would have no potential to affect local land use.

4.7.3.2 Proposed Project

General Plan Land Use

The Proposed Project would ensure a standard RSA for Runway 12/30 RSA through cutting, filling, and grading nonstandard surfaces within the RSA beyond both runway ends. This would include areas beyond the BIH lease boundary that are currently designated for natural resources and agriculture.

As shown on Figure 3-6, the Inyo County General Plan designates the majority of BIH as Public Service Facilities (PF) with Light Industrial (LI) land use located in the southwestern corner of the Airport lease area. The Proposed Project would be consistent with both land use designations. A standard RSA would also be consistent with the OVLMP which allows airport-oriented uses on lands associated with business leases, provided it results in significant public benefit.¹⁴

The Airport is surrounded by land primarily designated for Agriculture (A) with areas immediately north of the Airport designated for Natural Resources (NR). Most areas around the Airport property are used for open space or agricultural grazing. Much of the clearing and grading required to bring the Runway 12/30 RSA into compliance with FAA standards would occur on land with A and NR designations. The Airport perimeter fence would be relocated to separate 17.5 acres of A and 9.4 acres of NR land from similarly designated lands. Per the Inyo County General Plan, public and quasi-public uses are allowed on land with the (A) Agriculture designation.¹⁵ A fully compliant RSA on land with an (A) Agriculture designation would thus be consistent with the policies of the Inyo County General Plan. Land with the NR designation is intended to remain open in character for the preservation or cultivation of natural resources and for potential recreational use.¹⁶ Although the Proposed Project would clear, grade, and fence a 9.4-acre portion of land with this designation, the land would otherwise be left open and unimproved. While a patrol road will be routed around the proposed new fence line, this would be consistent with the existing dirt roads currently located throughout the area surrounding BIH.

Zoning

BIH is located in the Public (P) zoning district as identified in the Inyo County Zoning Ordinance. The lands immediately surrounding BIH are zoned for Open Space (OS), which provides for the continued use of these areas for agricultural purposes.¹⁷ The RSA improvements would clear, grade, and fence areas extending into lands zoned as OS. According to the Inyo County, California County Code, “[a]irports, landing fields and airstrips” are conditional uses subject to planning commission approval and special requirements in OS zones. The code does not provide specific criteria for these conditional uses. However, the proposed improvements are immediately adjacent to a public use airport and have been determined necessary to provide a standard RSA intended to

¹⁴ Los Angeles Department of Power and Water and Ecosystem Sciences, *Owens Valley Land Management Plan*, April 28, 2010, p. 8-2.

¹⁵ *Inyo County General Plan*, December 2001, p. 4-24.

¹⁶ *Id.*

¹⁷ Inyo County Code §18.12.010.

protect public health, safety, and welfare. Thus, approval of the Proposed Project by the planning commission would be a reasonable expectation.

4.7.4 Comparison to Significant Impact Thresholds

As noted in Section 4.7.2, there are no established significance thresholds for potential impacts to land use. The Proposed Project does not present any substantial conflicts with local and regional plans and objectives.

BIH is subject to grant assurances associated with receipt of Airport Improvement Program funding. One such grant assurance requires proposed projects to be consistent with local plans published by the land use authorities for areas surrounding the Airport. Inyo County's compatible land use assurance letter is included in **Appendix E-5**. The extension of the Runway 12/30 RSA and associated clearing, grading, and fence and patrol road realignments at BIH would present no conflicts with existing zoning, as airports and related uses are consistent with permissible uses in the P zoning district as identified in Title 18 of the Inyo County Code. Per section 18.12.040(G) of the Inyo County Code, the Proposed Project would also be conditionally permissible in the OS zoning district subject to planning commission approval and any applicable special requirements specified by the commission.

4.8 Natural Resources and Energy Supply

4.8.1 Methodology

Demands on natural resources and energy supplies were determined by evaluating the extent to which the Proposed Project would result in changes in demand for electricity and fuel, as well as whether the change would cause demand to exceed available or future natural resources such as water and clean fill material. This section analyzes whether the Proposed Project would have the potential to exceed the local energy and natural resources supplies when compared to the No Action Alternative. The analysis includes a discussion of future demands for energy and natural resources, including changes in demand for utility services and fuel consumption for operations.

Per FAA Order 1050.1F, Exhibit 4-1, the analysis should consider situations in which the proposed action or alternative(s) would have the potential to cause demand to exceed available or future supplies of these resources.

4.8.2 Significance Thresholds

The FAA has not established significance thresholds for determining impacts to Natural Resources and Energy Supply.

4.8.3 2024 and 2029 Impacts

4.8.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. No cutting, filling, or grading would occur, and there would be no change in daily operations. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated,

requiring minimum amounts of ground disturbance, requiring a minimal use of energy and natural resources. Based upon capacity identified in Section 3.8, *Natural Resources and Energy Supply*, sufficient resources are available to support continued operations.

4.8.3.2 Proposed Project

The Proposed Project would standardize the Runway 12/30 RSA in areas beyond each runway end. This would involve cutting, filling, and grading areas within the RSA as well as relocation of an existing service road beyond the Runway 12 end and existing fencing beyond both runway ends. The Proposed Project would not result in any increase in operations at BIH, and any rise in consumption of electricity, fuel, or water or aggregate supplies would solely be associated with the construction phase and would be minimal and temporary. The primary natural resources that would be utilized as part of the Proposed Project are water and fill material (clean dirt or rock). Water would be used during construction activities for reducing dust, achieving soil compaction, and cleaning equipment; however, once construction is complete, there would be no further increased demand for water resources associated with the Proposed Project. Due to limitations on the pumping capacity associated with well water supplies at BIH, water requirements for construction activities will be imported from the City of Bishop. Any consumption of water during construction would be minimal and it is not anticipated demand would exceed local supplies. The approximately 11,300 cubic yards of clean fill material necessary for the Proposed Project is anticipated to be supplied by existing on-site material. Although no off-site borrow pits have been identified in the event additional fill material is required, it is not anticipated that the demand for fill material associated with this project would overwhelm any selected borrow pit operation(s) or restrict regional supply for other actions in the area.

As discussed in Section 3.8, two monitoring wells maintained by LADWP are located north of BIH. Both wells are located outside of the area of cut, fill, and grading at the Runway 12 end, and no fencing or patrol road realignment would be anticipated to impact either well. As discussed in Section 4.5, any hazardous materials, including fuel, coolants, lubricants, and any other potentially hazardous substances, will be handled in accordance with all federal, state, and local regulations and best management practices to minimize the potential for spills. Thus, there is minimal potential for groundwater contamination during construction.

4.8.4 Comparison to Significant Impact Thresholds

Any associated increase in energy demand from the Proposed Project would be temporary and unlikely to exceed existing or future energy supplies. Similarly, fuel consumption attributable to construction vehicles and equipment is unlikely to exceed available fuel reserves. Finally, because the existing water pump for the on-site groundwater aquifer is only sufficient to produce enough water to meet daily needs at the Airport, water needed for construction would be purchased from the City of Bishop and imported to meet demands during the construction phase. There is more than sufficient water available through the City to meet this temporary need. Fill material necessary for the grading of the RSA would be taken from existing on-site stockpiles and would not exceed regional supplies. Accordingly, no significant impacts to natural resources or energy supplies are anticipated.

4.9 Noise and Noise-Compatible Land Use

4.9.1 Methodology

The FAA requires preparation of a noise analysis when a project may result in changes in aircraft noise exposure in areas surrounding an airport. As discussed in FAA Order 1050.1F, and further explained in the 1050.1F Desk Reference, a noise analysis requires use of an FAA-approved computer model to assess aircraft noise impacts. The FAA’s AEDT 3e, was used to prepare CNEL contours for both the Proposed Project and the No Action Alternative.

As discussed in Section 3.9, inputs used by the AEDT noise model include the number of annual average daily daytime, evening, and nighttime aircraft operations, flight paths, and flight profiles of aircraft, along with its extensive internal database of aircraft noise and performance information, to develop CNEL contours. Flight tracks were developed based on a review of published flight procedures, as well as the consideration of terrain in the vicinity of BIH. The Proposed Project is intended to enhance safety around Runway 12/30 and is not anticipated to induce an increase in aircraft operations. Thus, there is no deviation in the number of forecast operations between the Proposed Project and the No Action Alternative. **Table 4-9** provides a summary of forecasted aircraft operations used in modeling noise for Existing Conditions (2022), and 2024 and 2029 under both the Proposed Project and the No Action Alternative. The *Noise Analysis Technical Report*, provided in **Appendix J**, provides further information on the assumptions used in modeling noise for this EA.

TABLE 4-9
AIRCRAFT OPERATIONS SUMMARY

Aircraft Category	2022		2024		2029	
	Operations	Split	Operations	Split	Operations	Split
Single-Engine Piston	3,000	25.1%	3,000	38.1%	3,000	35.0%
Single-Engine Turboprop	2,120	17.7%	2,120	26.9%	2,120	24.7%
Multi-Engine Turboprop	1,040	8.7%	1,040	13.2%	1,040	12.1%
Jet	728	6.1%	1,440	18.3%	2,142	25.0%
Helicopter	5,080	42.4%	280	3.6%	280	3.3%
Total	11,968	100.0%	7,880	100.0%	8,582	100.0%

NOTES:

In November 2022, the County of Inyo provided the 2022, 2024, and 2028 proposed aircraft operations with aircraft types, schedule, and destination. These operations varied slightly from those in the BIH Aviation Activity Forecast.

SOURCE: BIH Aviation Activity Forecast, 2022; FAA TAF, 2022; County of Inyo, 2022.

4.9.2 Significance Thresholds

For purposes of identifying noise impacts the FAA’s significance thresholds are provided in FAA Order 1050.1F, Exhibit 4-1, and further detailed in the 1050.1F Desk Reference. A significant noise impact would occur if a proposed action, when compared to a no action alternative for the same timeframe, “would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed

to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.”

As part of the noise analysis, the 1050.1F Desk Reference requires that the following information be disclosed for future conditions:

- The number of residences or people residing within each noise contour where aircraft noise exposure is at or above CNEL 65 dB and the net increase or decrease in the number of people or residences exposed to that level of noise;
- The location and number of noise-sensitive uses in addition to residences (e.g., schools, churches, hospitals, parks, recreation areas) exposed to CNEL 65 dB or greater; and
- If CNEL 1.5 dB increases are documented within the CNEL 65 dB contour, the identification of noise-sensitive areas within the CNEL 60 dB contour that are exposed to aircraft noise at or above CNEL 60 dB but below CNEL 65 dB and are projected to experience a noise increase of CNEL 3 dB or more.

4.9.3 2024 and 2029 Impacts

4.9.3.1 No Action Alternative

As shown in Table 4-9, aircraft operations are anticipated to increase from 7,880 to 8,582 total annual operations between 2024 and 2029, an approximate increase of nine percent.

Figure 4-1 depicts the No Action Alternative CNEL contours for 2024 and **Figure 4-2** depicts the No Action Alternative CNEL contours for 2029. As depicted on these figures, the CNEL 65 dB contour is almost entirely contained within the Airport lease boundary in both 2024 and 2029. In 2024, only a small portion of the CNEL 65 dB extends beyond the Airport lease boundary near the Runway 30 end. In 2029, the area within the CNEL 65 dB contour includes approximately 5,000 square feet of land off-airport property. However, as the CNEL contours are almost entirely limited to Airport property, and both the area on and off Airport property are devoid of uses such as homes or schools, no noise sensitive land uses would be exposed to CNEL 65 dB or higher under the No Action Alternative in either 2024 or 2029.

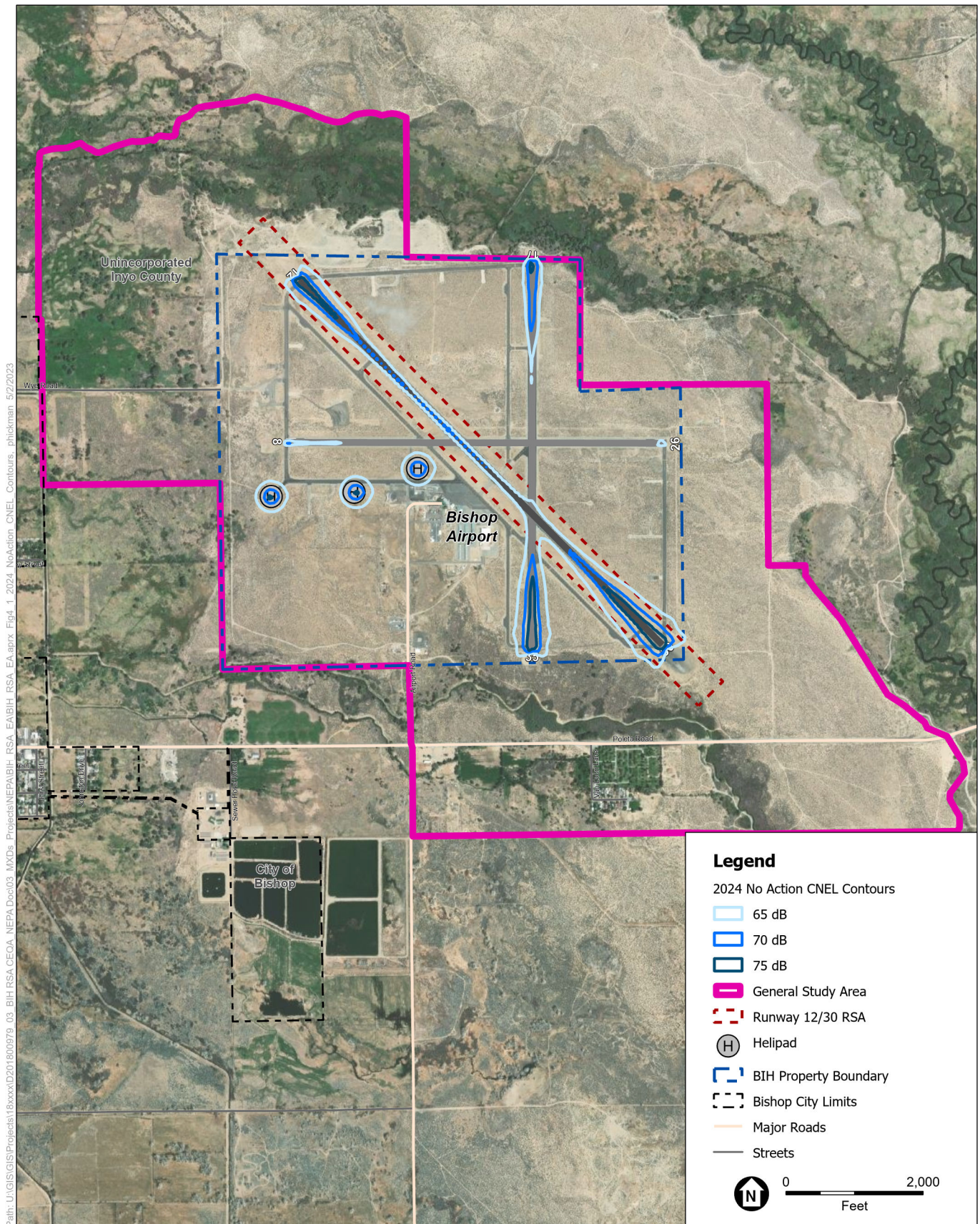
4.9.3.2 Proposed Project

The projected Proposed Project aircraft operations in 2024 and 2029 are listed along with the projected No Action Alternative operations for the same years in Table 4-9.

Figure 4-3 depicts the Proposed Project CNEL contours for 2024 and **Figure 4-4** depicts the Proposed Project CNEL contours for 2029. As depicted on the figures, and reflective of the equal number of operations between the Proposed Project and No Action Alternative, the CNEL 65 dB contours for the Proposed Project in 2024 only vary slightly from the No Action Alternative 2024 contours due to the inclusion of a permanently displaced threshold as part of the No Action Alternative. As with the No Action Alternative, the Proposed Project CNEL 65 dB stays almost entirely within the Airport property in both 2024 and in 2029 includes approximately 5,000 square feet of land off-airport property. However, as the CNEL contours are almost entirely limited to

Airport property, and both the area on and off Airport property are devoid of uses such as homes or schools, no noise sensitive land uses would be exposed to CNEL 65 dB or higher under the No Action Alternative in either 2024 or 2029.

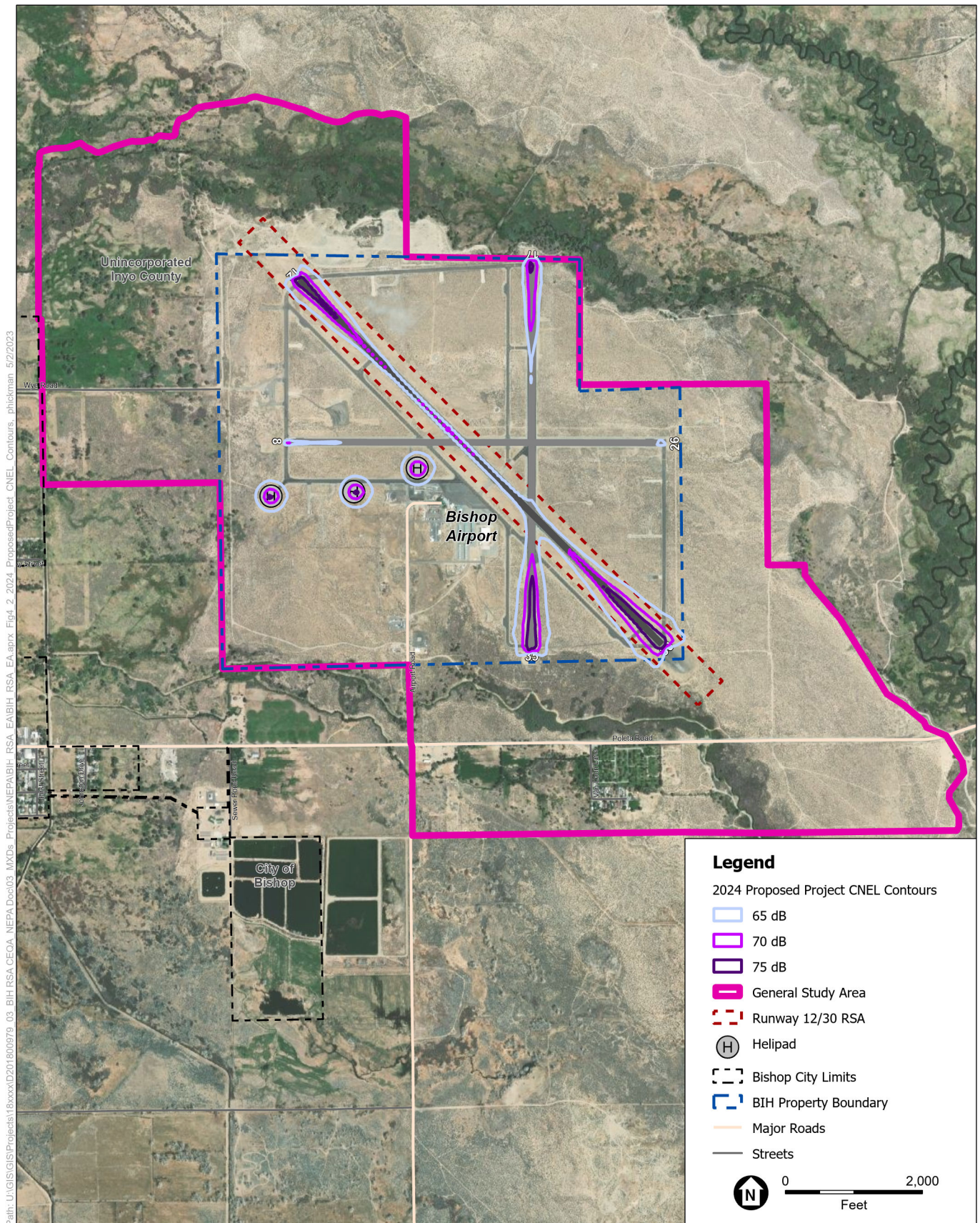
The nearest residential uses area is located approximately 1,400 feet from the project area, south of Poleta Road. A cemetery is located approximately 700 feet from the project area, adjacent to the residential use. Construction noise associated with cutting, filling, and grading of the proposed RSA improvements would be temporary and intermittent in nature. Inyo County has no construction noise ordinance; however, the general plan includes noise policies applicable to construction activities within 500 feet of existing noise sensitive uses. Although the Proposed Project area is located well beyond 500 feet from the nearest noise sensitive land use, best management practices such as adherence to established construction hours and operation of equipment compliant with all applicable regulations, will be employed during the construction period.



SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

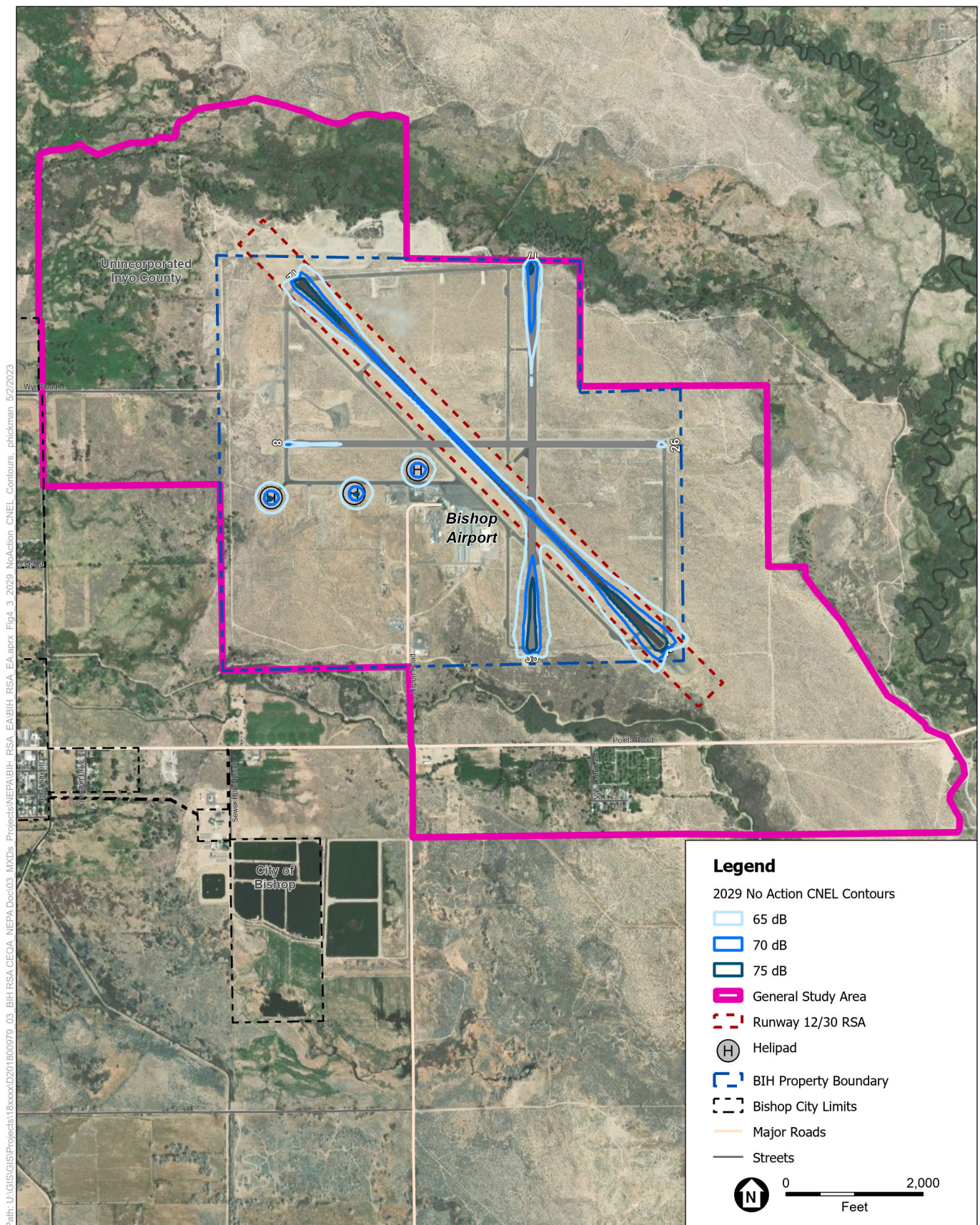
Figure 4-1
No Action Alternative
2024 CNEL Contours

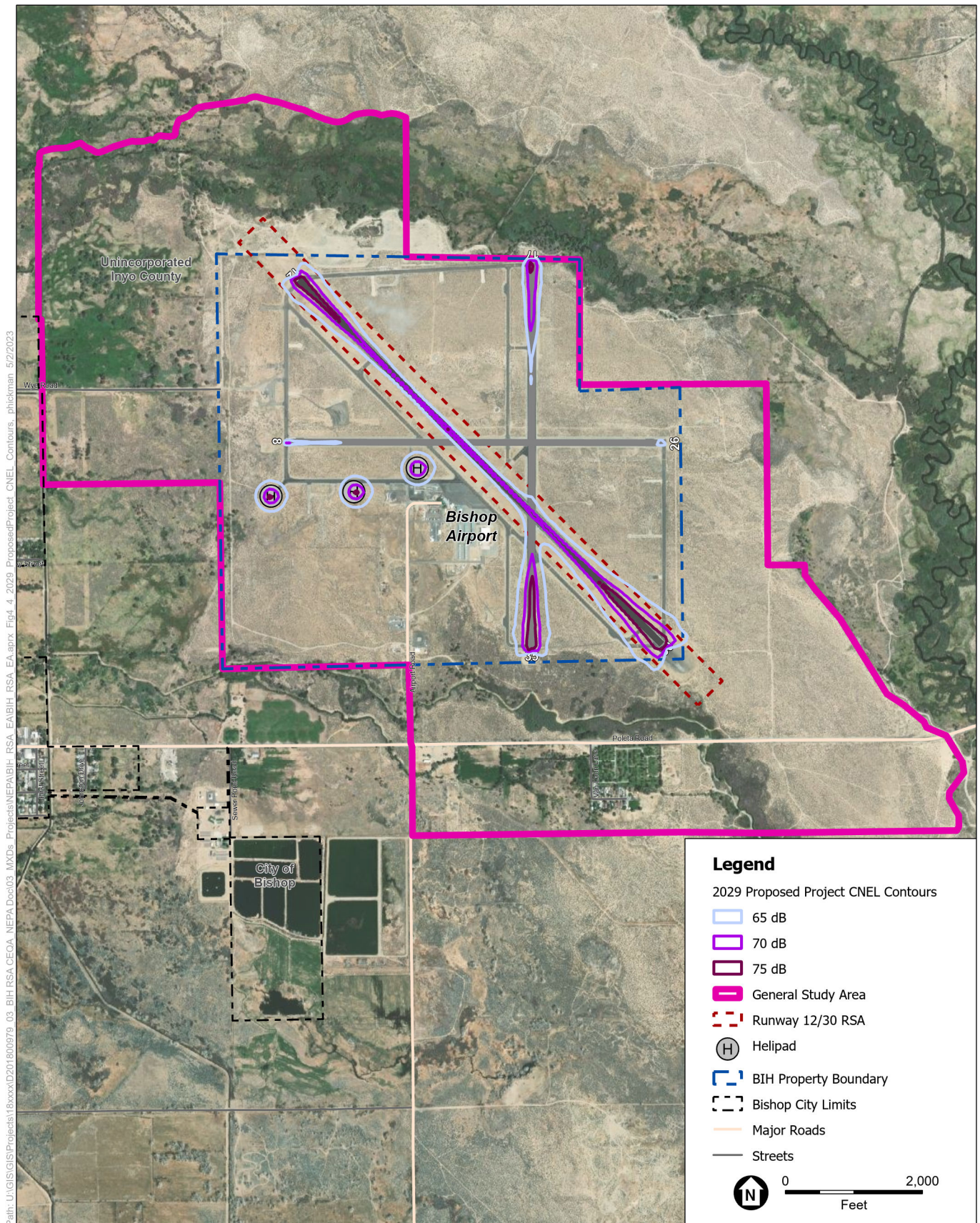


SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 4-2
Proposed Project
2024 CNEI Contours





SOURCE: ESA, 2022; Maxar, 2020; Inyo County, 2022.

Runway 12/30 Safety Area Improvement Project at Bishop Airport

Figure 4-4
Proposed Project
2029 CNEI Contours

4.9.4 Comparison to Significant Impact Thresholds

Table 4-10 presents a summary of noise exposure under both the No Action Alternative and the Proposed Project in both 2024 and 2029. The noise exposure summary includes the total area within the CNEL 65 dB contours, number of people, and noise sensitive land uses that would be exposed to aircraft noise levels of CNEL 65 dB and higher in 2024 and 2029. As shown in the table, there are no noise-sensitive land uses found within the CNEL 65 dB and higher contours under either the No Action Alternative or the Proposed Project in 2024 or 2029. The CNEL 65 dB and higher contours remain almost entirely on Airport property in both study years. Accordingly, when compared to the No Action Alternative, the Proposed Project would not result in any additional noise impacts in either 2024 or 2029.

As indicated in Table 4-8, when compared to the No Action Alternative, the Proposed Project would not result in the exposure of people or noise-sensitive land uses to CNEL 65 dB or higher in either 2024 or 2029. Therefore, the Proposed Project would not result in significant noise impacts in either 2024 or 2029.

4.10 Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks

This analysis considers the existing and future conditions of the No Action Alternative and the Proposed Project to determine whether implementation of the Proposed Project would result in socioeconomic and environmental justice impacts or affect Children’s Environmental Health and Safety Risks. Each category was evaluated according to guidance provided in FAA Order 1050.1F and the 1050.1F Desk Reference.

4.10.1 Socioeconomics

4.10.1.1 Methodology

The primary focus of the socioeconomics analysis in this EA is whether the Proposed Project would result in substantial economic impacts in the region, changes to the community tax base, or disruptions to local surface traffic conditions in the GSA. This analysis takes into consideration both existing and future conditions to determine potential outcomes for the Proposed Project and No Action Alternative and whether socioeconomic impacts would occur.

The analysis must consider certain factors, including whether a proposed action, when compared to the no action alternative, would:

- Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);

TABLE 4-10
NOISE SENSITIVE USES AND POPULATION WITHIN THE CNEL 65 dB AND HIGHER CONTOURS
PROPOSED PROJECT AND NO ACTION ALTERNATIVE - 2024 AND 2029

	Total Land Area (Acres)	Households	Population	Places of Worship	Schools	Hospitals and Residential Healthcare	Historic Resources	Day Care and Assisted Living	Parks
2024 No Action Alternative	28.6	0	0	0	0	0	0	0	0
2024 Proposed Project	28.5	0	0	0	0	0	0	0	0
2029 No Action Alternative	41.5	0	0	0	0	0	0	0	0
2029 Proposed Project	41.6	0	0	0	0	0	0	0	0

NOTES:

CNEL = Community Noise Equivalent Level

SOURCE: Environmental Science Associates, 2020.

- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities; or,
- Produce a substantial change in the community tax base.

The presence of these factors does not mean a significant impact exists. The significance of an impact is determined by evaluating its context and intensity.

4.10.1.2 Significance Thresholds

FAA Order 1050.1F does not establish a significance threshold for Socioeconomics.

4.10.1.3 2024 and 2029 Impacts

No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard, and no cutting, filling, or grading would occur in the RSA. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated. There would be no change in daily operations. There would be no increase in traffic volume associated with the No Action Alternative through 2029. The No Action Alternative would not include any physical development that would disrupt or divide the local community. Furthermore, it would not cause relocation of employees or place a strain on local housing stocks. While the Airport provides direct and indirect economic benefits to the community, the No Action Alternative would not result in an increase in economic benefits. Therefore, no significant socioeconomic impacts would occur.

Proposed Project

The physical development associated with the Proposed Project would occur in uninhabited areas and would not disrupt or divide any local community. Furthermore, it would not cause extensive relocation of employees that would place a strain on local housing stocks. The Proposed Project could potentially induce some temporary growth in employment due to demand for construction labor and related services; however, no growth in aviation operations or related economic activity is anticipated to result from the Proposed Project. The Proposed Project would bring the Runway 12/30 RSA into compliance with FAA design standards and, therefore, help to ensure continued safe aviation activity at BIH. Any related economic growth would be considered beneficial to the local economy and the Eastern Sierra region as whole.

The Proposed Project would not result in relocation of community businesses that would produce economic hardship, as bringing the Runway 12/30 RSA into compliance with FAA design standards, would not result in a substantive change in day-to-day operations or economic activity.

The construction of the Proposed Project would primarily involve cutting, filling, and grading in areas beyond each end of Runway 12/30 to enhance the RSA and bring it into compliance with applicable FAA standards. This would not induce any growth in aviation activity at BIH, and there would be no corresponding increase in daily vehicle trips relative to the No Action Alternative. No fill material would need to be imported to the site. Thus, the only vehicle trips attributable to the Proposed Project would be worker vehicles associated with construction, limited hauling, and material vendor trucks which, during the construction period, would be limited to Airport property. This would represent a temporary increase in vehicle traffic on surrounding surface roads that is anticipated to begin in late 2024 and proceed for a three-month duration. The temporary increase in vehicle trips in the GSA would be mitigated by the identification and adherence to designated haul routes that avoid populated areas and local roads to the extent feasible.

4.10.1.4 Comparison to Significant Impact Thresholds

As stated in Section 4.10.1.2, there are no established thresholds of significance for socioeconomic impacts; however, there are several factors to be considered when evaluating potential for socioeconomic impacts. When considering these factors, all potential impacts associated with the Proposed Project would produce benign or positive temporary socioeconomic effects. The Proposed Project is, therefore, unlikely to result in any significant socioeconomic impacts when compared to the No Action Alternative.

4.10.2 Environmental Justice

4.10.2.1 Methodology

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), was a federal initiative requiring federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All* (April 21, 2023), expanded the definition of environmental justice to directly address concerns such as effects of climate change, cumulative impacts, historical and institutional barriers, and access to a healthy environment. This directive also expanded the types of effects which could constitute an environmental justice impact by eliminating the emphasis on the degree of disproportion in consideration of disproportionate and adverse impacts. The previous focus on minority and low-income communities was also broadened to encompass places with a significant proportion of people of color, people having low incomes, migrant populations, and other communities which have been subjected to disparities related to “the legacy of racial discrimination and segregation, redlining, exclusionary zoning, and other discriminatory land use decisions or patterns.”¹⁸ The analysis considers whether the Proposed Project would have disproportionate and adverse human health or environmental effects on these communities.

¹⁸ EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, April 21, 2023, Federal Register Vol. 88, No. 80.

The factors to be considered in determining whether an action would have the potential to lead to a disproportionate and adverse impact to communities with environmental justice concerns include:

- Significant impacts in other environmental impact categories; or
- Impacts on the physical or natural environment that affect a community in a way that the FAA determines are unique to communities with environmental justice concerns and significant to that population.

4.10.2.2 Significance Thresholds

The FAA has not established a significance threshold for Environmental Justice.

4.10.2.3 2024 and 2029 Impacts

No Action Alternative

As described in Section 3.10.3.2, two Census block groups within the GSA have been identified as communities with environmental justice concerns. Census block groups 60270001001 and 60270004003 both feature low-income population percentages (19% and 17%) exceeding that for Inyo County (11%), and Census block group 60270001001 also features a percentage of minority populations (52%) exceeding that for Inyo County (40%). No migrant housing for agricultural workers was identified in the GSA. Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance entirely on Airport property. No cutting, filling, or grading would occur in the RSA, and there would be no change in daily operations. Consequently, no impacts to communities with environmental justice concerns would occur.

Proposed Project

Two Census block groups within the GSA have been identified as communities with environmental justice concerns (see No Action Alternative impacts). As discussed throughout this chapter, no significant environmental impacts associated with the Proposed Project have been identified in either 2024 or 2029. Therefore, the Proposed Project would not result in disproportionate and adverse human health or environmental effects to the identified communities with environmental justice concerns. Environmental justice communities could receive some economic benefit because of activity associated with construction of the Proposed Project. The continued safe and efficient functioning of Runway 12/30 would also be supported by the Proposed Project and ensure the Airport's continued economic contributions to surrounding communities.

4.10.2.4 Comparison to Significant Impact Thresholds

When compared to the No Action Alternative for the same timeframe, the Proposed Project would not result in any significant environmental justice impacts to either of the identified communities with environmental justice concerns. Nor would the Proposed Project alter the physical environment in a manner that would uniquely affect any members of the identified communities with environmental justice concerns.

4.10.3 Children's Environmental Health and Safety Risks

4.10.3.1 Methodology

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to identify and assess environmental and safety risks that may disproportionately affect children and ensure that its actions address any disproportionate risks. Environmental health and safety risks are defined as risks to health or safety that are attributable to products or substances that a child is likely to come in contact with or ingest.

As discussed in FAA Order 1050.1F, the factor to consider is if the proposed action or alternative(s) would have the potential to lead to a disproportionate health or safety risk to children.

4.10.3.2 Significance Thresholds

The FAA has not established a significance threshold for Children's Environmental Health and Safety Risks.

4.10.3.3 2024 and 2029 Impacts

No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance entirely on Airport property well away from publicly accessible areas. No cutting, filling, or grading would occur in the RSA, and there would be no change in daily operations. As discussed in Section 3.10.3.3, *Children's Environmental Health and Safety Risks*, there are no children's schools, child daycare facilities, or other facilities such as public parks where children congregate located within the GSA. Therefore, no new adverse impacts would occur and there would be no effect on children's health or safety.

Proposed Project

As discussed in Section 3.10.3.3, *Children's Environmental Health and Safety Risks*, there are no children's schools, child daycare facilities, or other facilities such as public parks where children congregate located within the GSA. The closest residential uses where children may live are located approximately half a mile southwest of the Runway 30 end and approximately a mile and half to the west of the Airport. As stated in Sections 4.2 and 4.9, the Proposed Project would not result in any significant adverse air quality or noise impacts that might affect the health of children. Per Section 4.5.3.2, there is no indication of potential for release of identified hazardous materials during construction that would be harmful to children.

4.10.2.4 Comparison to Significant Impact Thresholds

The Proposed Project does not include activity that would lead to hazards that would represent health or safety risks to children. Therefore, the Proposed Project, when compared to the No Action Alternative for the same time frame, would not result in any adverse effects on children's environmental health or represent any new significant safety risks.

4.11 Visual Effects

4.11.1 Methodology

Analysis of potential impacts associated with visual effects was accomplished by reviewing surrounding land uses for light emission sensitivity as well as the potential for the Proposed Project to interfere with the aesthetics of the surrounding area. Various factors identified in Section 13.3.3 of the FAA 1050.1F Desk Reference were reviewed and taken into consideration when evaluating the results of this evaluation for purposes of identifying potential impacts. This includes the degree to which an action may impact light emissions as well as visual resources and visual character.

- Light Emissions Effects
 - Create annoyance or interfere with normal activities from light emissions;
 - Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.
- Visual Resources and Visual Character Effects
 - Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
 - Contrast with the visual resources and/or visual character in the study area; and
 - Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

4.11.2 Significance Thresholds

The FAA has not established thresholds to determine the significance of Light Emissions and Visual Resources and Visual Character in FAA Order 1050.1F. However, the 1050.1F Desk Reference provides guidance on the framework for evaluating impacts associated with visual effects, as described above.

4.11.3 2024 and 2029 Impacts

4.11.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. There would be no cutting, filling, grading, or installation of additional fencing. The Runway 12 PAPI would be relocated to account for the displaced threshold on Runway 12; however, the shift in location would likely not be noticeable from surrounding areas. There would be no alteration of land in the GSA; nor would any additional lighting be installed. Accordingly, there would be no new source of light emissions or effects to the visual character of the surrounding area. Light emissions at the Airport would remain limited to parking areas, airport facilities, and the airfield. Visual resources and character would continue to reflect the existing conditions at BIH. As discussed in Section 3.11.3, the areas within the RSA to be graded are sparsely vegetated with relatively low-growing plants. The Proposed Project would not significantly affect or degrade the existing character of these areas.

The clearing and leveling of the comparatively small areas within the RSA would not create a contrast with the existing visual character of the GSA, and the leveling of the terrain within the RSA would not disrupt views out of or into the Airport.

4.11.3.2 Proposed Project

The Proposed Project would involve cutting, filling, and grading portions of the RSA to level uneven terrain. Additionally, an existing patrol road as well as sections of fencing would be realigned to avoid encroachment into the RSA. The areas to be filled and graded are on land currently devoted to open space and agricultural use. The existing patrol road is not lighted, and the realigned roadway segment is also not anticipated to be lighted. No new light sources would be installed as part of the Proposed Project. However, some temporary light sources may be present during the construction phase of the Proposed Project, as may be necessary to accommodate construction around airport operations. This lighting would be temporary and positioned in a manner to avoid excessive light emissions into surrounding populated areas and viewsheds.

4.11.4 Comparison to Significant Impact Thresholds

Based on the analysis described above, the Proposed Project would not result in significant visual effects to the visual environment of BIH when compared to the No Action Alternative.

4.12 Water Resources (Wetlands, Floodplains, Groundwater, and Surface Water only)

4.12.1 Methodology

This section describes effects to water resources including wetlands, floodplains, surface waters, and groundwater. The evaluation includes an analysis of potential impacts to water resource values as a result of the No Action Alternative or Proposed Project. A delineation of aquatic resources within the survey area was conducted on November 1, 2022. The field survey was preceded by a review of available background information on the survey area that included aerial photography, soils maps, topographic maps, and precipitation data, as well as data from the National Hydrography Dataset and the National Wetlands Inventory. These reviews were used to map aquatic resources known to be present in the survey area. The field survey then verified the extent of the aquatic features. Floodplains were identified using the FEMA National Flood Hazard Layer Viewer mapping tool. As stated in Section 3.12.2.2, inclusion of the 500-year floodplains in the delineated impact areas satisfies the FFRMS. The delineated aquatic resources in the survey area were then compared to the geographic arrangement of the Proposed Project elements and associated engineering data. Additional information on delineation of aquatic resources can be found in Section 3.12 and in **Appendix K**.

According to FAA Order 1050.1F, the factors to consider include, but are not limited to, if the proposed action or alternative would have the potential to:

- Adversely affect natural and beneficial water resource or groundwater values to a degree that substantially diminishes or destroys such values;

- Adversely affect surface waters or groundwater quantities such that the beneficial uses and values of such waters are appreciably diminished or can no longer be maintained, and such impairment cannot be avoided or satisfactorily mitigated; or
- Present difficulties based on water quality impacts when obtaining a permit or authorization.

4.12.2 Significance Thresholds

The FAA Order 1050.1F provides significance thresholds for surface waters and groundwater.

Wetlands

An action is considered to have a significant impact if it (1) adversely affects a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers; or (2) substantially alters the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected; or (3) substantially reduces the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public); or (4) adversely affects the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands; or (5) promotes development of secondary activities or services that would cause the circumstances listed above to occur; or (6) be inconsistent with applicable state wetland strategies.

Floodplains

An action is considered to have a significant impact if it would cause notable adverse impacts on natural and beneficial floodplain values, as defined in Paragraph 4.k of DOT Order 5650.2, *Floodplain Management and Protection*. Per the Order 1050.1F Desk Reference, any action located in the base floodplain constitutes a floodplain encroachment. If a floodplain encroachment does occur, then the FAA must determine if it is a "significant floodplain encroachment." Under DOT Order 5650.2, a proposed action would constitute a "significant encroachment" if it would result in one or more of the following impacts:

1. The action would have a high probability of loss of human life.
2. The action would likely have substantial, encroachment-associated costs or damage, including interrupting aircraft service or loss of a vital transportation facility (e.g., flooding of a runway or taxiway; important navigational aid out of service due to flooding, etc.).
3. The action would cause significant adverse impacts on natural and beneficial floodplain values.

Factors to be considered when assessing impacts to a floodplain's natural and beneficial values include evaluating the intensity of impacts to agricultural activities, aquacultural activities, aquatic or terrestrial organisms, flood control, groundwater recharge, and water quality.

Surface Waters

An action is considered to have a significant impact if it (1) exceeds water quality standards established by Federal, state, local, and tribal regulatory agencies; or (2) contaminates public drinking water supply such that public health may be adversely affected.

Groundwater

An action is considered to have a significant impact if it (1) exceeds groundwater quality standards established by Federal, state, local, and tribal regulatory agencies; or (2) contaminates an aquifer used for public water supply such that public health may be adversely affected.

4.12.3 2024 and 2029 Impacts

4.12.3.1 No Action Alternative

Under the No Action Alternative, the Runway 12/30 RSA would remain nonstandard. A permanently displaced threshold would be implemented on the Runway 12 end and the PAPI would be relocated, requiring minimum amounts of ground disturbance well away from water resources. No cutting, filling, or grading would occur in the RSA, and there would be no change in daily operations. No construction or aviation activity that could affect wetlands, floodplains, surface waters, or groundwater would occur. Therefore, there would be no significant environmental impacts to water resources under the No Action Alternative in 2024 or 2029.

4.12.3.2 Proposed Project

Wetlands

While wetlands the wetlands delineation identified wetlands in areas beyond the Runway 12 and Runway 30 ends (see Appendix K), there are no wetlands present within the areas of the RSA to be cut, filled, and graded. The horizontal alignment of the new patrol road segment will be designed to avoid existing wetlands, as will the newly realigned sections of fencing. In accordance with all applicable regulations, best management practices to prevent sediment and pollutants from entering existing wetlands would be implemented during the construction and grading phase. Therefore, no wetlands would be cleared, graded, or otherwise disturbed as part of the Proposed Project, and no significant impacts to wetlands are anticipated.

Floodplains

Portions of the RSA to be cut, filled, and graded and the patrol road beyond the Runway 12 end, totaling approximately 0.24 acres, are located within the 0.2% -annual-chance (or 500-year) floodplain. Approximately 0.63 acres of the RSA beyond the Runway 30 end is in 0.2% -annual-chance floodplain. This represents an encroachment into the floodplain. To determine whether this would constitute a significant impact for NEPA purposes, the FAA must determine whether the Proposed Project would constitute a “significant encroachment upon the existing floodplains at the Airport.” Per the criteria discussed in Section 4.12.2, the Proposed Project would not constitute a “significant encroachment” into the floodplains.

First, the Proposed Project would not result in a high probability of loss of human life. The Proposed Project is primarily located within the Airport leasehold and in immediately adjacent areas of open

space. There are no residential or other high intensity uses in the surrounding areas within the floodplain. Furthermore, under the Proposed Project, the RSA would be fenced to prevent access by the public. By cutting, filling, and grading the RSA, the Proposed Project would provide a fully standard RSA that would likely reduce the likelihood of potential damage to aircraft and injury to passengers caused by an excursion from the runway.

Second, only a small portion of the RSA beyond each runway end is located within the floodplain. The runway, taxiway, NAVAIDs, and other airport facilities are located outside the floodplain. In the event of a 0.2% flood event, the Airport would likely not be affected and there would be no effects to aircraft service.

Third, the Proposed Project would not impact natural and beneficial floodplain values. Activity included as part of the Proposed Project includes cutting, filling, and grading the nonstandard portions of the RSA and relocation of a service road beyond the Runway 12 end. Fill material would largely, if not entirely, come from the cut portions of the RSA or areas immediately adjacent to the project area. No materials foreign to the Proposed Project area with the potential to affect water quality would be introduced into the RSA, nor would the Proposed Project interfere with the floodplain's capacity to maintain desired water quality standards. The Proposed Project would avoid any water bodies adjacent to the project area and as discussed in Section 4.3, *Biological Resources*, aquatic or terrestrial organisms would not be affected by the Proposed Project. The area is already highly disturbed, and the Proposed Project would not disrupt the floodplain's ability to provide food, cover, or water to species in the area. Surfaces within the RSA would remain permeable, and the Proposed Project would have minimal if any effect on groundwater recharge. The Proposed Project would shore up an existing area within the floodplain through cutting, filling, and grading. This would have a negligible effect on the flow of floodwater and is not likely to result in an alteration of flood water flow that could produce unacceptable upstream or downstream flooding. Finally, there are no agricultural or aquacultural activities in the areas surrounding the RSA and no effect on either of these activities would result from the Proposed Project.

Surface Waters

As discussed in Section 3.3, the GSA includes several streams which drain directly into the Owens River. However, the Proposed Project would not involve any cut, fill, or grading in any existing streambed. No impervious surfaces that could increase susceptibility to non-point source pollution would be expanded as part of the Proposed Project. Nor would any ongoing aviation activity affect existing surface waters. In accordance with all applicable regulations, best management practices to prevent sediment and pollutants from entering existing surface waters would be implemented during the construction and grading phase. Transitions to existing grades outside the RSA would be stabilized with appropriate erosion control measures in keeping with industry best management practices and all applicable regulations. Likewise, appropriate barriers would be emplaced to prevent silt from entering nearby streambeds during ground disturbance activities. Specific erosion control and pollution prevention measures include potential use of materials such as fiber rolls, erosion control blankets, silt fences, and geotextiles as conditions dictate. Thus, surface waters would not be altered, modified, or filled due to the Proposed Project. Water quality impacts from stormwater pollution are also not anticipated to occur, as no additional impervious surfaces associated would be installed with the Proposed Project.

Groundwater

As discussed in Section 3.12, water is supplied to the Airport through two groundwater wells. Under the Proposed Project, these wells would continue to supply water to the Airport and its passengers. The Proposed Project would bring the existing Runway 12/30 RSA into conformance with FAA design standards. However, this would not induce an increase in operations or passenger volumes. The existing groundwater supplies would continue to adequately meet the needs of the Airport. No impervious surfaces that could increase susceptibility to non-point source pollution would be expanded as part of the Proposed Project.

During the construction phase of the Proposed Project, best management practices such as storing hazardous substances off-the ground in covered areas away from high-traffic areas and sensitive resources will be utilized in accordance with all applicable regulations to prevent spills of hazardous substances from impacting any groundwater sources.

Also in the GSA, to the north of the Airport, there are two active groundwater monitoring wells maintained by the LADWP. The best management practices implemented during the construction phase should also prevent any spills of hazardous substances from impacting these wells.

4.12.4 Comparison to Significant Impact Thresholds

The Proposed Project is not likely to result in significant impacts to water resources within or immediately surrounding the GSA. There is no anticipated change in impervious surface area or increase in stormwater quantity resulting from the Proposed Project. No wetlands will be cleared or graded during construction of the Proposed Project. There would be no “significant encroachment” on the floodplain as a result of the Proposed Project that would constitute an impact. Therefore, the Proposed Project would not have a significant effect on water resources.

4.13 Cumulative Impacts

4.13.1 Methodology

Table 3-11, *Past, Present, and Reasonably Foreseeable Projects*, lists the projects within the GSA considered in the cumulative impacts analysis. Cumulative effects and their significance may result from individually minor but collectively significant actions that take place over a period of time (40 CFR § 1508.7). In determining whether a proposed project would have a significant impact, an EA must include considerations of whether the action is related to other actions with individually insignificant but cumulatively significant impacts [40 CFR § 1508.27(b)(7)].

4.13.2 Cumulative Impact Discussion

Air Quality

As discussed in Section 4.2, emissions of criteria pollutants in 2024 and 2029 under the Proposed Project would not result in a significant air quality impact because there would be no exceedance of the NAAQS or increase in the frequency or severity of any air quality violations in the Air Basin. The past, present, and reasonably foreseeable future projects identified in Table 3-11 do not include actions that would result in significant negative impacts to air quality in the Air Basin and all

projects are presumed to conform with applicable air quality regulations. Therefore, the Proposed Project would not contribute to significant cumulative impacts to air quality when considering other past, present, and reasonably foreseeable future projects.

Biological Resources

Based on information provided in the BA and according to Section 4.3, the FAA has determined that the Proposed Project would have no effect on federally listed species within the Action Area defined for compliance with Section 7 of the *Endangered Species Act*. Projects listed in Table 3-11 occur on land previously devoted to airport activities or other forms of urbanization. For example, the Taxiway Rehabilitation and Runway 12-30 Pavement Rehabilitation and Markings are projects to maintain existing pavement of active runway and taxiways at Bishop Airport. The General Aviation Terminal Expansion project was developed on existing pavement in a previously disturbed area. None of the projects listed in Table 3-11 would impact any federally or state-listed endangered, threatened, or candidate species or designated critical habitat. As such, there are no cumulative impacts resulting from the Proposed Project in combination with the cumulative projects that would jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of federally designated critical habitat.

Climate

As discussed in Section 4.4, the FAA has not established significance thresholds for assessing impacts to climate, nor have specific factors been identified for consideration in making a significance determination for GHG emissions. No past, present, and reasonably foreseeable projects are anticipated to emit substantial amounts of GHGs. As the Proposed Project is not anticipated to produce significant adverse effects on climate, it is likewise not expected to contribute to any significant cumulative impact when considered with past, present, and reasonably foreseeable future projects.

Hazardous Materials, Solid Waste, and Pollution Prevention

As discussed in Section 4.5 above, the Proposed Project construction is not anticipated to result in disturbance or release of any hazardous material. No solid waste generated during construction would exceed the available landfill capacity, and adherence to construction activity best management practices and regulations would prevent any point or non-point source pollution from occurring. The Proposed Project would not induce any new activity at the airport which could increase instances of hazardous materials handling, produce solid waste, or result in release of pollutants.

Past projects considered for this analysis have followed all applicable federal, state, and local environmental laws, and no resulting release of hazardous materials, solid waste, or pollutants is known to have occurred. Airport staff implement best management practices during fueling operations to reduce the potential for leaks or spills at the Airport. Furthermore, any reasonably foreseeable future projects would be required to adhere to all federal, state, and local laws regarding hazardous materials, solid waste, and pollution prevention. Thus, the Proposed Project is not anticipated to contribute to any adverse cumulative effects.

Historical, Architectural, Archaeological, and Cultural Resources

The Proposed Project would involve cut, fill, and grading in areas of the Runway 12/30 RSA. An existing patrol road and segments of fencing would be relocated to avoid encroaching into the RSA. Per Section 4.6, these areas have low potential for occurrences of cultural resources. However, the associated ground disturbance will be monitored to avoid degrading any as yet undiscovered cultural resources. The past, present, and reasonably foreseeable projects identified in Table 3-11 represent changes to local land use plans or area roadway improvements and projects located on Airport property in previously disturbed areas that are largely paved. These projects are not expected to have adverse impacts to cultural resources that in combination with the Proposed Project would contribute to any cumulative impacts.

Land Use

The Proposed Project would be consistent with local plans and zoning ordinances, and relevant past and present projects considered are assumed to comply with local plans and zoning ordinances. Reasonably foreseeable future projects are also subject to local review and approval processes, which should either ensure compliance with applicable plans and zoning ordinances or result in the grant of variances or amendments as appropriate. As such, no significant cumulative impacts are expected to result from any combined impacts associated with the Proposed Project and any other past, present, and reasonably foreseeable future projects.

Natural Resources and Energy Supply

As discussed in Sections 4.8, *Natural Resources and Energy Supply*, and 4.12, *Water Resources*, the Proposed Project would not impact any existing groundwater supplies. Nor would the Proposed Project induce any natural resource consuming activities beyond construction. Energy consumption during the construction phases would not be anticipated to exceed or stress existing supplies. Natural resource needs associated with past, present, and reasonably foreseeable future projects are not anticipated to contribute to excessive demand on local supplies. Therefore, the Proposed Project is not anticipated to produce significant adverse effects on natural resources or local supplies of energy when considered with past, present, and reasonably foreseeable future projects.

Noise and Noise-Compatible Land Use

As discussed in Section 4.9, *Noise and Noise-Compatible Land Use*, the Proposed Project would not result in significant noise impacts. Noise generated by construction activities would be temporary and is not anticipated to impact any noise-sensitive receptors. Any changes to aircraft operations associated with the past, present, and reasonably foreseeable projects identified in Table 3-11 were or would be temporary and minor. Accordingly, noise exposure associated with the Proposed Project when combined with past, present, and reasonably foreseeable future projects would not result in significant cumulative noise impacts.

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

As discussed in Section 4.10, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, the Proposed Project is not anticipated to induce activity such as increased traffic with potential to significantly impact socioeconomics, environmental

justice communities, or children's environmental health and safety risks. The past, present, and reasonably foreseeable future projects identified in Table 3-11 would not result in any significant negative impacts to communities with environmental justice concerns or children. In considering the low potential of the Proposed Project to significantly impact socioeconomic factors, communities with environmental justice concerns, or children's health and safety along with the other identified past, present, and reasonably foreseeable future projects, no cumulative impacts are anticipated.

Visual Effects

No new permanent airfield lighting or structures other than segments of fencing would be introduced as part of the Proposed Project. Some temporary construction lighting may be necessary. However, any construction lighting would be temporary and positioned in a manner to avoid excessive light emissions into surrounding populated areas and viewsheds. Although some clearing of vegetation and grading of terrain would occur, the relatively small areas in which this would occur are not considered to be of unique visual interest. No visual impacts are anticipated. The past, present, and reasonably foreseeable future projects included in this analysis either have been determined to result in no impacts or would feature mitigation to eliminate potential visual impacts. There is, therefore, no expectation for any cumulative visual effects with potential to detrimentally alter visual characteristics in the GSA.

Water Resources

The Proposed Project would not have any significant impacts to wetlands, floodplains, surface waters, or groundwater resources. Stormwater best management practices would continue to be followed at BIH during and after the improvements to the Runway 12/30 RSA, and all applicable regulations and best management practices regarding construction activities and water resources would be followed during the construction phases. Groundwater wells currently utilized to meet potable water and fire suppression needs at BIH are anticipated to sufficiently meet demand through the planning horizon because the groundwater basin is regularly replenished through runoff from the nearby Sierra Nevada mountains (see Section 3.12.3).

Past, present, and reasonably foreseeable future projects considered for this analysis either have no impacts to water resources or have included mitigation strategies such as various stormwater best management practices and erosion controls implemented during construction operations which would mitigate any impacts to below thresholds of significance. There are, similarly, no impacts on water resources resulting from the Proposed Project. Therefore, there would be no contribution to any cumulative effect related to other past, present, and reasonably foreseeable projects proximate to the GSA. The Proposed Project would not introduce any new impervious surfaces, and existing management practices to convey stormwater runoff would continue to be sufficient to protect water resources. Existing groundwater quantities would not be impacted and should continue to sufficiently meet foreseeable demand. For these reasons, the Proposed Project would not contribute to significant cumulative impacts to water resources.

This Page Intentionally Left Blank

CHAPTER 5

Agency Coordination and Public Involvement

5.1 Summary of Public Outreach and Coordination

Under 40 CFR § 1501.4, federal agencies are required to involve environmental agencies, applicants, and the public, to the extent practicable, in the preparation of EAs. The primary components of the agency coordination and consultation and public involvement program for this EA include:

- Publication of the Draft EA Notice of Availability;
- Circulation of the Draft EA and for agency and public review; and
- Preparation of a Final EA that will include responses to comments received on the Draft EA.

Keeping agencies and the public informed and gathering their input is an essential component of any environmental study. A summary of the public involvement program for this EA including public scoping, public comments, and public workshops and the summary of the agency coordination is shown below.

This EA includes documentation of coordination with the California Office of Historic Preservation – State Historic Preservation Officer and Government to Government Consultation with Native American Indian tribes. More information on the Agency Coordination is provided in Appendix E

5.2 Notice of Availability of the Draft EA

A Notice of Availability (NOA) for the Draft EA was published on April 11, 2024 in the *Inyo Register* and on Inyo County’s website¹. Proof of publication is included in Appendix F of the Final EA.

Copies of the Draft EA were available for download from the County’s website.² Hard copies of the Draft EA were available for review during the comment period at the Bishop Airport, 703 Airport Road, Bishop, CA 93514.

5.3 Public Workshop

A Public Workshop was held to discuss the analyses presented in the Draft EA and to answer questions from the public. The Public Workshop was held between 5:00 p.m. and 7:00 p.m. on May 14, 2024 at Bishop Airport, 703 Airport Road, Bishop, CA 93514.

¹ <https://www.inyocounty.us/services/public-works>

² Ibid.

The Public Workshop was an Open House style workshop; there was no formal presentation. There were boards describing the NEPA process, alternatives considered, the Proposed Project, and an overview of the analyses and results of the Draft EA environmental analysis. The Study Team was available to answer questions.

5.4 Draft EA Comment Period

The 30-day comment period began April 11, 2024 and ended on May 21, 2024 at 5:00 p.m. Pacific Time. Anyone wishing to submit comments was able to do so at any time during the comment period. Comments on the Draft EA should have been mailed to: Inyo County Airports Division, ATTN: Ashley Helms, 703 Airport Rd., Bishop, CA 93514. Comments could also have been submitted electronically by emailing them to ahelms@inyocounty.us.

Comments should have been as specific as possible and have addressed the adequacy of the information presented and the analysis of potential environmental impacts. All comments received during the comment period would have been addressed in the Final EA and considered equally.

No public comments on the Draft EA were submitted during the comment period.