

# **SUMMARY**

## **S.1 INTRODUCTION**

This document is the Final Supplement to the Final Environmental Impact Statement (SEIS), prepared in support of the Federal actions related to a proposed runway and parallel taxiway extension at Gness Field Airport (DVO or Airport), a general aviation airport owned and operated by Marin County (Sponsor). DVO is located adjacent to the City of Novato in unincorporated Marin County, California. The SEIS has been prepared pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations found at Title 40, Code of Federal Regulations (CFR) §§ 1500-1508.

The Federal Aviation Administration (FAA) published a Final Environmental Impact Statement (EIS) in June 2014 in support of the Federal actions related to proposed runway and parallel taxiway extension at DVO. During the preparation of the response to comments on the June 2014 Final EIS, the FAA informally reviewed aviation operations activity from the FAA Traffic Flow Management System Counts (TMFSC) database associated with aviation activity at DVO. After that evaluation, the FAA concluded that existing conditions regarding the aviation activity at DVO may have changed from those described in the June 2014 Final EIS.<sup>1</sup> Therefore, a formal analysis was required to verify the current aviation activity level and critical aircraft for DVO.

That formal analysis was contained in an April 2016 Purpose and Need Working Paper, which was circulated for public review and comment. The April 2016 Purpose and Need Working Paper identified that the critical aircraft classification and associated runway length requirement at DVO had changed from what was described in the June 2014 Final EIS. This new information needed to be added in a supplement to the June 2014 Final EIS, and therefore, the FAA did not issue a Record of Decision (ROD) on the June 2014 Final EIS.

However, many commenters on the April 2016 Purpose and Need Working Paper stated that they believed that the number of operations identified for jet aircraft in that document, specifically for the critical aircraft identified in the June 2014 Final EIS (the Cessna 525), did not account for all of operations for that aircraft at DVO. In order to resolve whether the number of aircraft operations, particularly of the most demanding critical aircraft, had been undercounted, the FAA gathered additional data. An Updated Purpose and Need Working Paper with an increased focus on the operating levels of the Cessna 525 aircraft was subsequently prepared.

The evaluations in the February 2018 Updated Purpose and Need Working Paper identified some additional operations of jet aircraft compared to the April 2016 Purpose and Need Working Paper. However, the February 2018 Updated Purpose and Need Working Paper was consistent with the conclusion of the April 2016 Purpose

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<sup>1</sup> FAA San Francisco Airports District Office January 9, 2015 letter to Mr. Craig Tackabery, Marin County Department of Public Works.

and Need Working Paper that the critical aircraft classification for DVO had changed from the critical aircraft identified in the June 2014 Final EIS, the Cessna 525 business jet, to the family grouping of B-II turboprop aircraft. This determination is discussed in detail in Chapter 2, *Purpose and Need*, and in Appendix C-1, *Aviation Activity Forecast*.

The Updated Purpose and Need Working Paper concluded that a 300-foot runway extension would meet the purpose and need for the proposed project for the current critical aircraft at DVO. Therefore, the FAA prepared a Draft SEIS to provide an environmental impact evaluation of an additional alternative, a 300-foot runway length alternative, not included in the prior June 2014 Final EIS. The FAA circulated the Draft SEIS in July 2019 for public review. During the public review period, the U.S. Army Corps of Engineers (USACOE) agreed to assist in preparing the SEIS as a NEPA cooperating agency.

The FAA will issue a Record of Decision (ROD) on the Final SEIS. The FAA ROD will not be issued until at least 30 days after the distribution of this Final SEIS to the public. The USACOE will review the Clean Water Act (CWA) permit application for the project and issue a separate memorandum and/or ROD regarding the permit application<sup>2</sup>.

A summary of the potential impacts of all alternatives assessed in this SEIS is presented in **Table S-1** (located at the end of this section). The information contained in this SEIS will be taken into consideration by the FAA in determining the agency's decision regarding the Proposed Project.

This Final SEIS Volume 1 includes Chapters One through Seven and the Final SEIS Volume 2 includes Appendices A-1 through Q-1, which supplement the June 2014 Final EIS Chapters One through Seven and Appendices A through Q. The June 2014 Final EIS and its Appendices are provided with the Final SEIS for convenience of the readers of the Final SEIS. All documents are also available electronically at [www.gnossfieldeis-eir.com](http://www.gnossfieldeis-eir.com).

**Chapter One – Background** – *describes the history of the project and summarizes planning and environmental studies conducted by the Airport Sponsor and the FAA.*

**Chapter Two – Purpose and Need** – *describes the problem to be addressed, how the alternatives would resolve the problem, the underlying purpose and need for the action, the desires or preferences of the Airport Sponsor, and the parameters used to define a reasonable range of alternatives.*

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<sup>2</sup> In order to make this EIS easier for the reader to understand, the EIS text has used the term "Clean Water Act (CWA) jurisdiction" to represent all USACOE jurisdiction, which also includes areas within Rivers and Harbors Act (RHA) jurisdiction and is sometimes referred to collectively as "waters of the United States." Similarly, the term "CWA, Section 404, permit," is used to represent the broader term sometimes used by the USACOE of "Department of the Army (DA) permit," to represent a permit that addresses a permit authorization for waters within CWA and RHA jurisdiction.

**Chapter Three – Alternatives** – describes the range of alternatives reviewed to address the previously identified purpose and need, the process used to screen and evaluate reasonable alternatives, and the alternatives carried forward for detailed environmental evaluation.

**Chapter Four – Affected Environment** – describes the existing conditions within the Study Area.

**Chapter Five – Environmental Consequences** – describes the analytical processes used and the potential environmental impacts that would result from implementation of the proposed project and alternatives to the proposed project evaluated in detail.

**Chapter Six – Cumulative Impacts** – describes the potential combined impacts of the proposed alternatives at DVO when added to the impacts of past, present, and reasonably foreseeable future projects in the vicinity of DVO.

**Chapter Seven – List of Preparers, List of Agencies, and Persons to Whom Copies are Sent** – lists the people who contributed to the preparation of this SEIS and the agency and public distribution list.

The following appendices contain detailed information used in the development of the SEIS for the subject area noted in the Appendix title:

Appendix A-1 – Agency Scoping and Coordination

Appendix B-1 – Public Involvement

Appendix C-1 – Aviation Activity Forecast

Appendix D-1 – Runway Length Analysis

Appendix E-1 – Noise

Appendix F-1 – Air Quality

Appendix G-1 – Water Quality

Appendix H-1 – Cultural Resources

Appendix I-1 – Biological Resources

Appendix J-1 – Wetlands

Appendix K-1 – Energy and Natural Resources

Appendix L-1 – Hazardous Materials

Appendix M-1 – Geology, Soils, and Seismicity Resources

Appendix N-1 – Mineral Resources

Appendix O-1 – Land Use Assurance Letter

Appendix P-1 – Comments Received on the Draft Supplement to the Final Environmental Impact Statement

Appendix Q-1 – FAA Response to Comments Received on the Draft Supplement to the Final Environmental Impact Statement

## S.2 PURPOSE AND NEED

### S.2.1 SPONSOR'S PURPOSE AND NEED

Marin County has prepared several evaluations of the Airport's operations and facilities, including the 1989 Airport Master Plan,<sup>3</sup> the 1997 Update of the Airport Master Plan,<sup>4</sup> and the 2002 Preliminary Design Report for the proposed runway extension.<sup>5</sup> Furthermore, the FAA has approved an updated forecast and runway analysis since the publication of the June 2014 Final EIS. These studies identified the limitations regarding the Airport's ability to accommodate existing aircraft and aviation users for which the Airport was designed. Specifically, the Airport cannot fully accommodate existing aviation activity, as represented by the family grouping of critical aircraft that regularly uses the Airport under hot weather conditions.<sup>6</sup>

The existing runway at DVO is 3,300 feet long and as a result cannot fully accommodate the operations of the family grouping of critical aircraft. Therefore, the purpose of the Sponsor's Proposed Project is to:

***allow existing aircraft, as represented by the family grouping of critical aircraft at DVO, to operate without operational weight restrictions under hot weather conditions.***

### S.2.2 FAA PURPOSE AND NEED

The FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the U.S. as set forth under 49 United States Code (USC) § 47101 (a)(1). The FAA must ensure that the proposed action does not derogate the safety of aircraft and airport operations at DVO. Moreover, it is the policy of the FAA under 49 USC § 47101(a)(6) that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment of the United States.

Additionally, the purpose of the Proposed Action in connection with Marin County's request to modify the existing ALP is to ensure the proposed improvements to the

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<sup>3</sup> *Airport Master Plan Marin County Airport GROSS Field, 1989.*

<sup>4</sup> *Marin County Aviation Commission Resolution No. 97-1: A Resolution Adopting Chapter 6.0 – Airport Development Program Update 1997 – Marin County Airport Master Plan (Gross Field) and Recommendation of Approval of Chapter 6.0 1997 Update to the Marin County Board of Supervisors, February 5, 1997.*

<sup>5</sup> *Cortright & Seibold, Preliminary Design Report, Runway Extension, GROSS Field, 2002.*

<sup>6</sup> For the purpose of this Supplement to the Final EIS, hot weather is defined as the mean daily maximum temperature of the hottest month at the Airport (FAA A/C 150/5325-4B, paragraphs 201 and 506).

airport do not adversely affect the safety, utility and efficiency of the airport. Pursuant to 49 USC § 47107(a)(16), the FAA Administrator (under authority delegated from the Secretary of Transportation) must approve any revision or modification to an ALP regarding the safety, utility, and efficiency of the airport before the revision or modification takes effect. The Administrator's approval reflects a determination that the proposed alterations to the airport, reflected in the ALP revision or modification, do not adversely affect the safety, utility, or efficiency of the airport.

### **S.2.3 SPONSOR'S PROPOSED PROJECT**

Marin County developed the June 2014 Final EIS Sponsor's Proposed Project, an 1,100-foot runway extension, through the Master Plan for Marin County Airport,<sup>7</sup> the Marin County Aviation Commission Resolution No. 97-1: *A Resolution Adopting Chapter 6.0 Airport Development Program Update 1997*,<sup>8</sup> and the Preliminary Design Report Runway Extension Gness Field.<sup>9</sup> The Sponsor's Proposed Project was consistent with the runway length analysis in the June 2014 Final EIS.

### **S.2.4 FAA PREFERRED ALTERNATIVE**

Since completion of the June 2014 Final EIS, the FAA has determined the critical aircraft at DVO has changed, and the necessary runway length required by the critical aircraft to operate without operational weight restrictions in hot weather has also changed. Therefore, the FAA's Preferred Alternative is now a 300-foot runway extension.

### **S.2.5 PROPOSED FEDERAL ACTIONS**

Several Federal actions are directly or indirectly proposed to occur. Implementation of the Sponsor's Proposed Project or other build alternatives would require several Federal actions and approvals. These include:

- Unconditional approval of the Airport Layout Plan (ALP) to depict the proposed runway shift/extension and parallel taxiway extension pursuant to 49 USC §§ 40103(b) and 47107(a)(16);
- Development of air traffic control and airspace management procedures designed to affect the safe and efficient movement of air traffic to and from the proposed runway development. Such actions would include, but are not limited to, the establishment or modification of flight procedures; and
- A determination that the environmental analysis prerequisites associated with any future Airport Improvement Program (AIP) funding applications have been fulfilled pursuant to 49 USC § 47101 et seq.

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<sup>7</sup> *Airport Master Plan Marin County Airport Gness Field*, 1989.

<sup>8</sup> Marin County Aviation Commission Resolution No. 97-1: *A Resolution Adopting Chapter 6.0 – Airport Development Program Update 1997 – Marin County Airport Master Plan (Gness Field) and Recommendation of Approval of Chapter 6.0 1997 Update to the Marin County Board of Supervisors*, February 5, 1997.

<sup>9</sup> Cortright & Seibold, *Preliminary Design Report, Runway Extension, Gness Field*, 2002.

- In addition to FAA Federal Actions, the USACOE would need to review, and ultimately issue, a CWA, Section 404 permit to Marin County before the filling of waters within CWA jurisdiction can take place as part of any runway extension alternative construction.

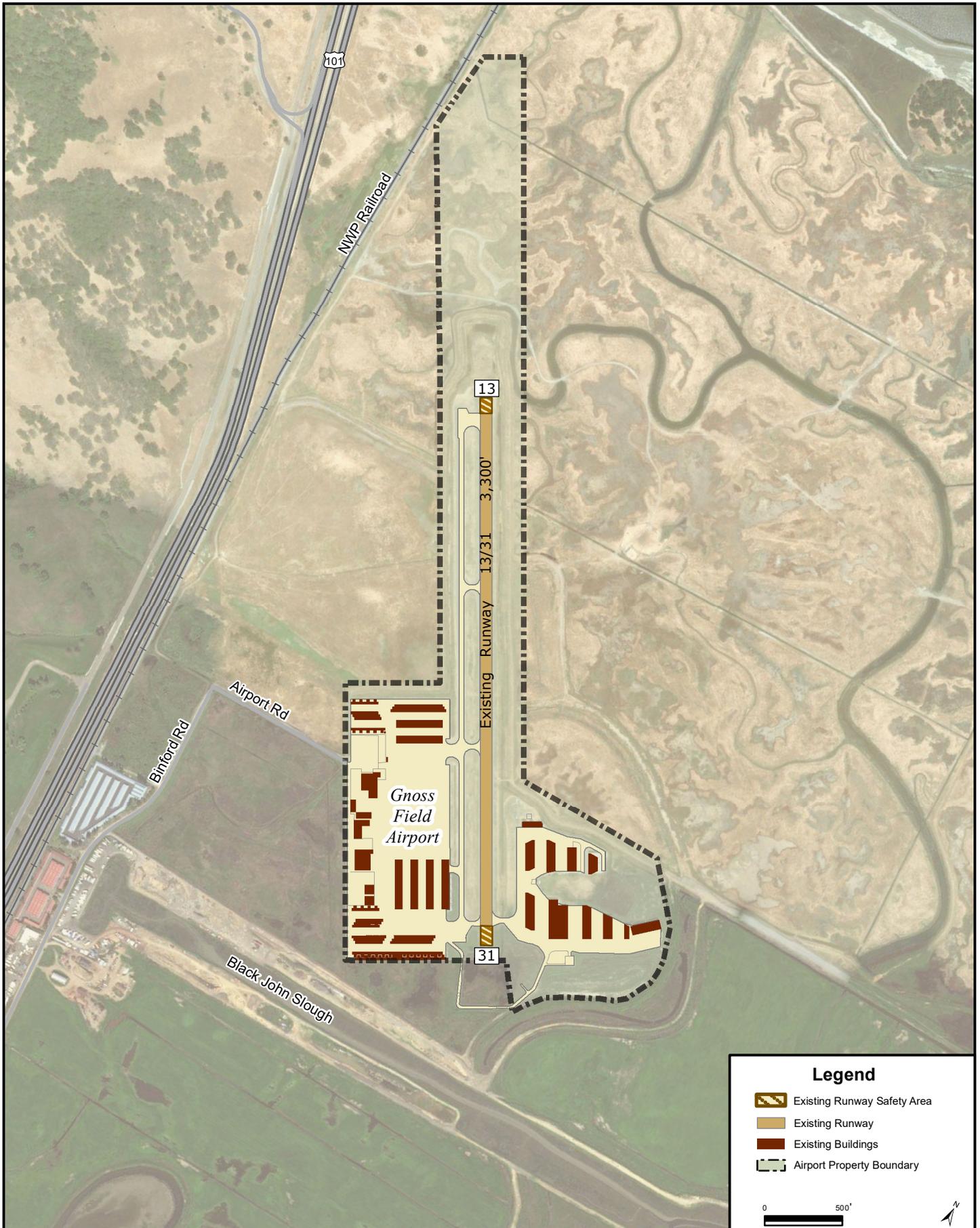
The proposed improvements under consideration in this SEIS, described as Alternatives B, D, and E in Chapter Three, are designed to allow the Airport to accommodate existing aviation traffic and passenger demand.

## **S.2.6 ALTERNATIVES**

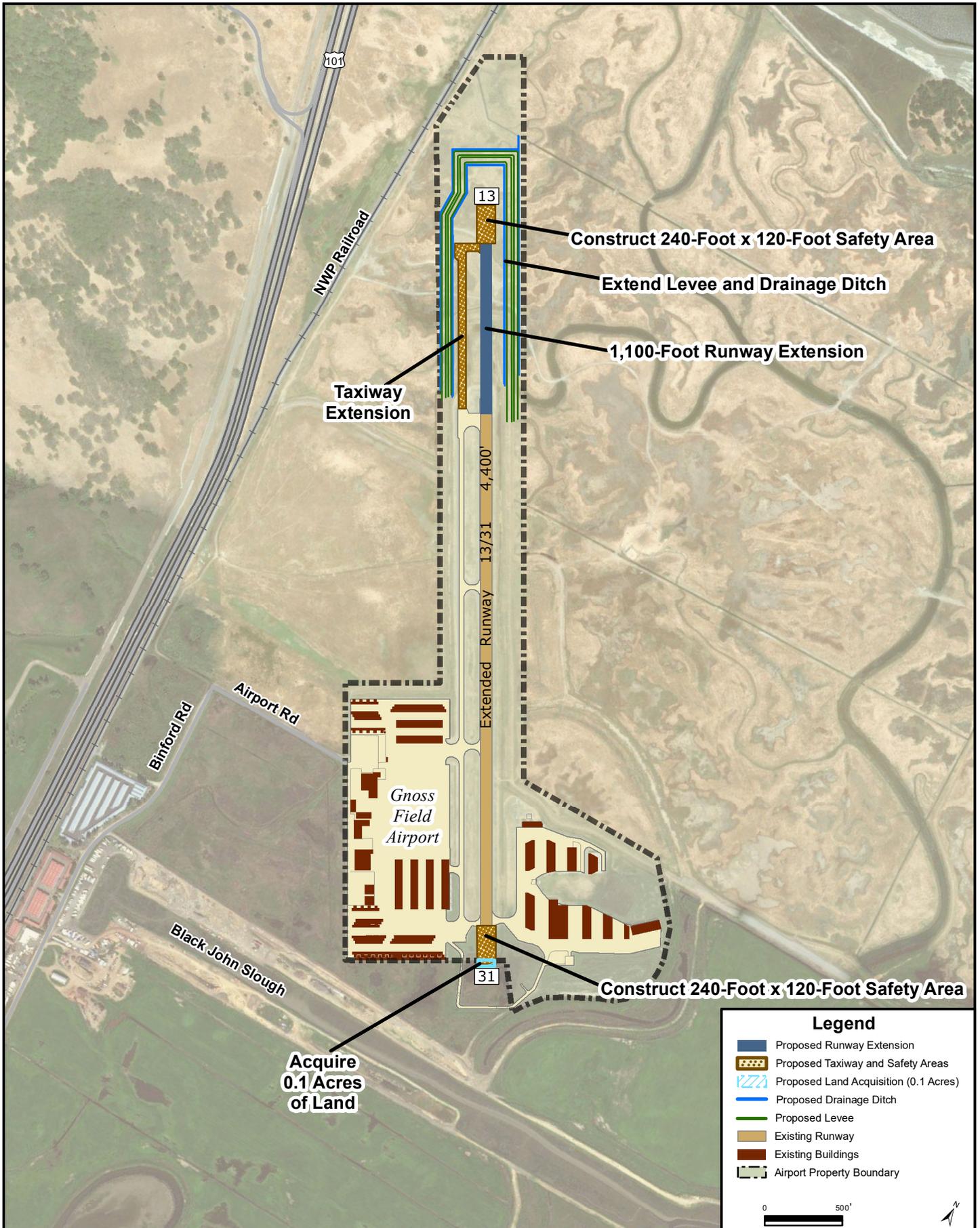
The following alternatives were evaluated in detail in the SEIS:

- Alternative A: No Action – This alternative includes no changes to the Airport. See **Exhibit S-1, Alternative A: No Action.**
- Alternative B: Sponsor's Proposed Project, Extend runway to the northwest by 1,100 feet. See **Exhibit S-2, Alternative B: Sponsor's Proposed Project - Extend Runway to the Northwest by 1,100 Feet.**
- Alternative D: Extend runway to the southeast by 240 feet and to the northwest by 860 feet. See **Exhibit S-3, Alternative D: Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet.**
- Alternative E: FAA's Preferred Alternative, Extend runway to the northwest by 300 feet. See **Exhibit S-4, Alternative E: Extend Runway to the Northwest by 300 Feet.**

An additional on-site alternative, Alternative C: Extend Runway to the southeast by 1,100 feet, was considered. Alternative C would result in greater impacts to wetlands and waterways than Alternative B, D, or E, and would require filling a portion of Black John Slough. As the same project purpose can be accomplished by implementation of Alternative B, D, or E, and the CWA, Section 404, (b)(1) guidelines only allow the U. S. Army Corps of Engineers to issue a CWA, Section 404 permit for the least environmentally damaging practicable alternative, it is not likely that the USACOE would issue Marin County a CWA, Section 404 permit to construct Alternative C, when Alternatives B, D, and E have been identified as practicable. Therefore, Alternative C was not carried forward for detailed analysis.



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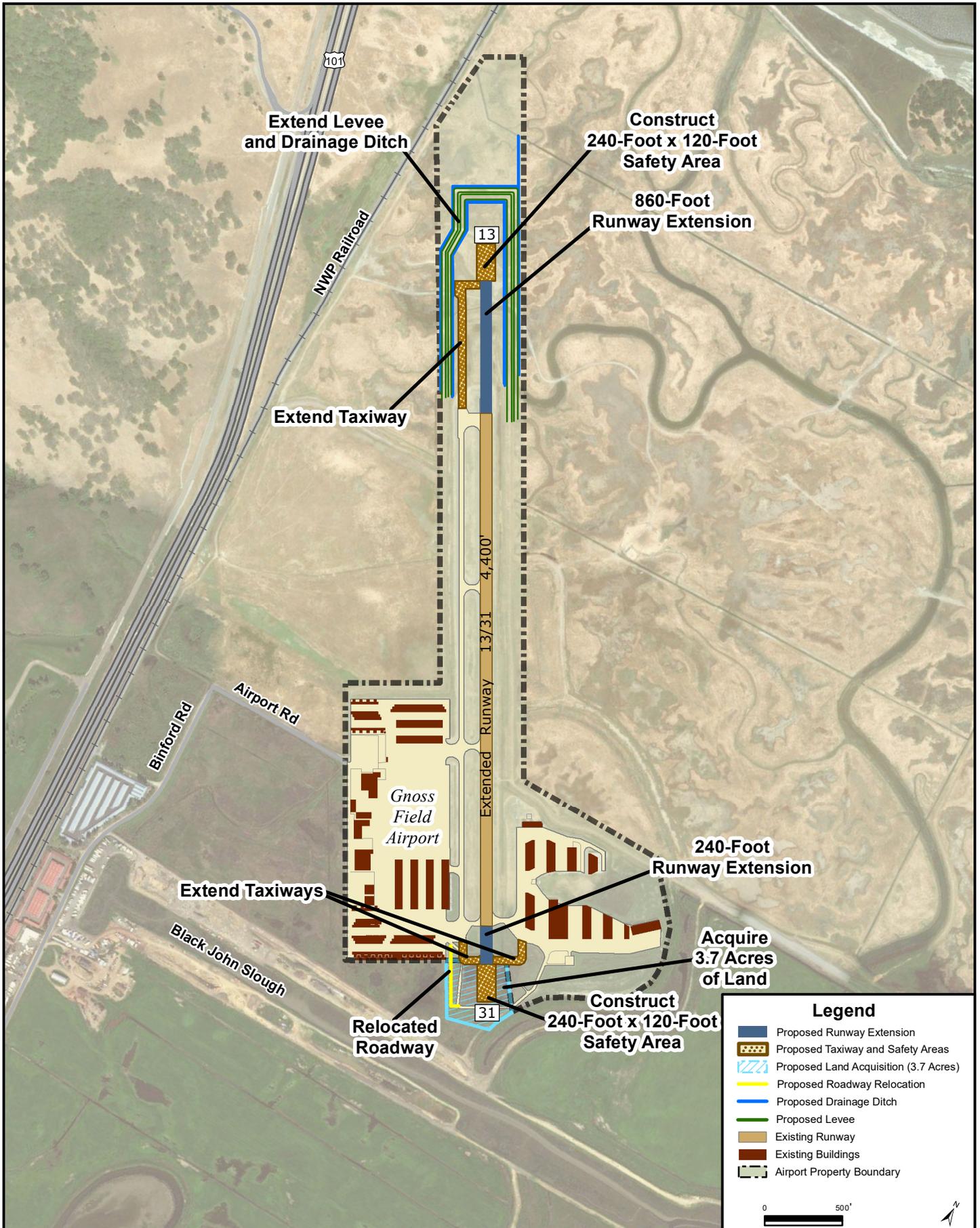
**Acquire  
0.1 Acres  
of Land**

**Legend**

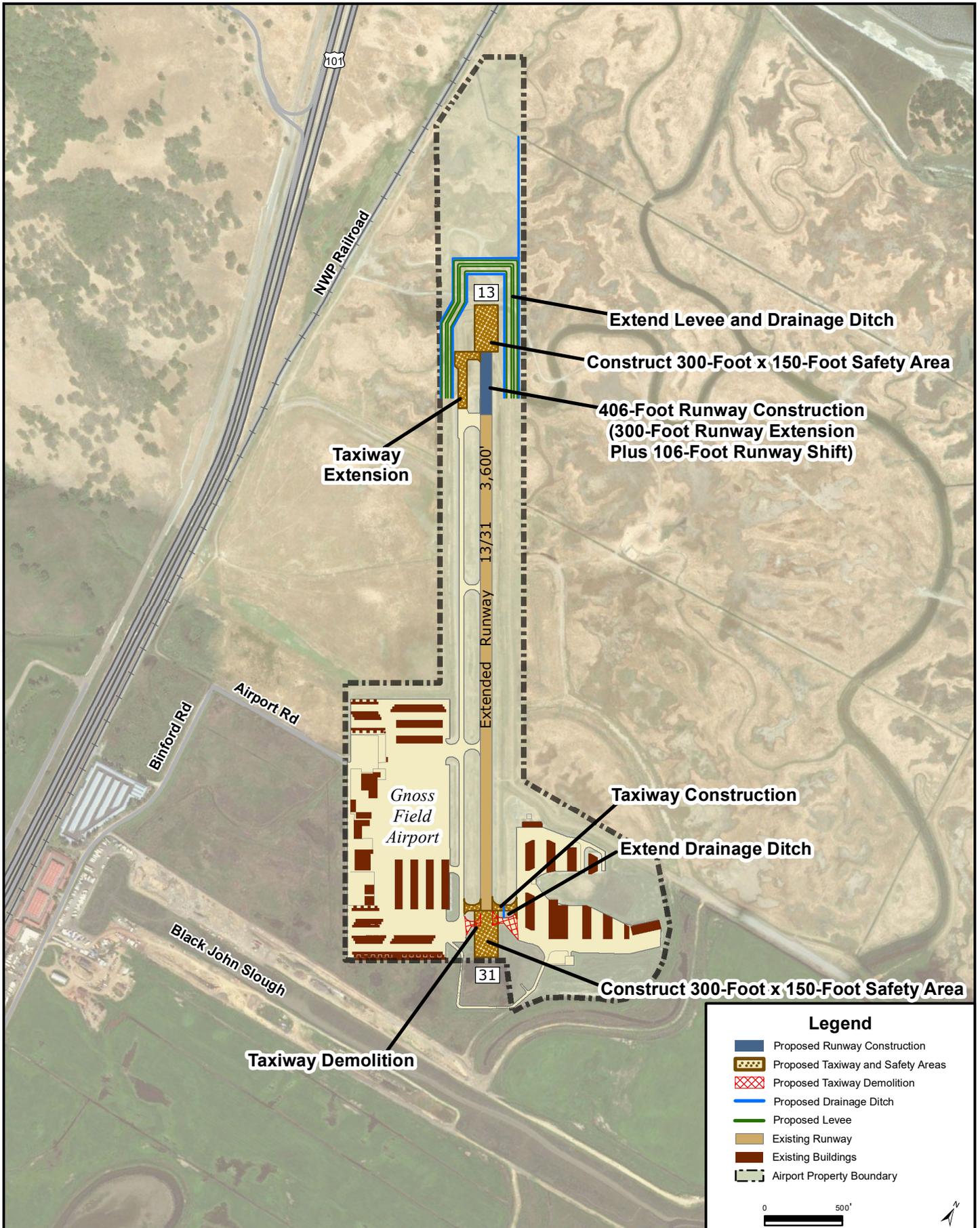
- Proposed Runway Extension
- Proposed Taxiway and Safety Areas
- Proposed Land Acquisition (0.1 Acres)
- Proposed Drainage Ditch
- Proposed Levee
- Existing Runway
- Existing Buildings
- Airport Property Boundary

0 500'

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### **S.3 ENVIRONMENTAL CONSEQUENCES**

The impacts resulting from implementation of the Sponsor's Proposed Project (Alternative B), Alternative D, Alternative E, and the No Action Alternative are disclosed in Chapter Five, *Environmental Consequences*, of this Final SEIS. The impacts of each alternative are disclosed for project year 2024. The FAA uses 2024 as a basis for analysis because it is the projected implementation year of the proposed runway extension. In addition, specific Airport activity levels and their associated air quality and noise impacts are evaluated for a condition five years beyond the opening year (2029).

The environmental consequences section forms the scientific and analytical basis for comparing the impacts of the development alternatives. It includes considerations of direct and indirect effects and their significance and possible conflicts between the alternatives and the objectives of Federal, regional, state, and local land use plans, policies and controls for the area concerned.

The environmental impacts of the alternatives have been evaluated based on the guidance provided by FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions* and FAA Order 1050.1F, *Environmental Impacts: Policy and Procedures*. A summary of the potential impacts resulting from implementation of the alternatives is also presented in Table S-1 located at the end of this section.

### **S.4 MITIGATION**

This Final SEIS identified potential impacts associated with implementation of each of the development alternatives. The Final SEIS includes mitigation possibilities (those actions considered to avoid, minimize, rectify, reduce, or eliminate potential impacts resulting from implementation of any of the runway extension alternatives) for environmental resources where potential impacts were identified. Mitigation and other conditions established in this Final SEIS, or during its review, are subsequently committed to by the FAA in its ROD. The USACOE will review the CWA permit application for the project and issue a separate memorandum for the record and/or USACOE ROD regarding the CWA permit application.

These mitigation measures would be implemented by the Airport Sponsor. The FAA would ensure implementation of such mitigation measures through the use of special conditions on grants, Grant-in-aid Agreements, contract specifications, other review or implementation procedures and other appropriate follow-up actions in accordance with Title 40 CFR § 1505.3. A summary of the mitigation possibilities associated with potential impacts is presented in Table S-1 located at the end of this section.

## **S.5 IDENTIFICATION OF FAA'S PREFERRED ALTERNATIVE**

Council on Environmental Quality (CEQ) guidance [40 CFR § 1502.14(e)] requires all Federal agencies to identify a preferred alternative. According to FAA Order 5050.4B Paragraph 1007e.(7), the approving FAA official selects the preferred alternative after reviewing each alternative's ability to fulfill the agency's mission while considering their economic and environmental impacts, and technical factors. As discussed in Chapter Two, *Purpose and Need*, the three development alternatives evaluated in detail in the SEIS would meet the project purpose and need.

**FAA's Preferred Alternative:** In selecting its Preferred Alternative, the FAA carefully considered each of the alternatives. See Section S.2.5, *Alternatives* and Chapter Three, *Alternatives*, to review the full description of each of the alternatives.

- Alternative A (No Action) does not meet the identified purpose and need.
- Alternative B (Sponsor's Proposed Project) meets the identified purpose and need for the project. However, there are increased environmental impacts and costs associated with the project as compared to Alternative E.
- Alternative D meets the identified purpose and need for the project. However, there are increased environmental impacts and costs associated with the project as compared to Alternative E.
- Alternative E meets the identified purpose and need for the project. In addition, Alternative E has the least environmental impacts of the development alternatives.

Alternative E, extend Runway 13/31 to the northwest by 300 feet, is the FAA's Preferred Alternative. Extending Runway 13/31 to the northwest by 300 feet would meet the Sponsor's purpose and need for the proposed project to accommodate existing aviation activity, as represented by the family grouping of critical aircraft that regularly uses the Airport under hot weather conditions, without derogating the Airport operations and with fewer adverse environmental impacts than Alternative B or D.

**Table S-1  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Noise</b>  Residential Housing Units or Noise-Sensitive Facilities with 65+ CNEL	None	Not Significant	Not Significant	Not Significant	Not Applicable (N/A)
<b>Compatible Land Use</b>	No Land Use/Zoning Changes; would be consistent with future plans for the land and would be compatible with local land use plans.	Acquisition of 0.1 acres of undeveloped land; implementation would be consistent with future plans for the land and would be compatible with local land use plans.	Acquisition of 3.7 acres of undeveloped land; implementation would be consistent with future plans for the land and would be compatible with local land use plans.	No Land Use/Zoning Changes; implementation would be consistent with future plans for the land and would be compatible with local land use plans.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Socioeconomic, Environmental Justice, &amp; Children's Health</b>					
Socioeconomic Impacts	Would not have a significant impact on socioeconomic resources	Acquisition of 0.1 acres of undeveloped land; Loss of \$10.43 in annual tax revenue is Not Significant. Would not have a significant impact on socioeconomic resources.	Acquisition of 3.7 acres of undeveloped land; Loss of \$551.10 in annual tax revenue is Not Significant. Would not have a significant impact on socioeconomic resources.	Would not have a significant impact on socioeconomic resources	N/A
Environmental Justice	No impact	Alternative B would not disproportionately impact any low-income or minority populations.	Alternative D would not disproportionately impact any low-income or minority populations.	Alternative E would not disproportionately impact any low-income or minority populations.	N/A
Children's Health and Safety	No impact	Would not result in the release of, nor exposure to, significant levels of harmful agents in the water, air, or soil that would affect children's health or safety.	Would not result in the release of, nor exposure to, significant levels of harmful agents in the water, air, or soil that would affect children's health or safety.	Would not result in the release of, nor exposure to, significant levels of harmful agents in the water, air, or soil that would affect children's health or safety.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Secondary (Induced) Impacts</b>					
Induced Airport Activity	Would not result in induced airport activity	Would not result in a significant impact associated with induced airport activity	Would not result in a significant impact associated with induced airport activity	Would not result in a significant impact associated with induced airport activity	N/A
Impacts to population	Would not result in shifts in patterns of population movement or growth inside or outside of the GSA.	Would not result in shifts in patterns of population movement or growth inside or outside of the GSA.	Would not result in shifts in patterns of population movement or growth inside or outside of the GSA.	Would not result in shifts in patterns of population movement or growth inside or outside of the GSA.	N/A
Public Service demands	Would not result in significant impacts to public service demands.	Would not result in significant impacts to public service demands.	Would not result in significant impacts to public service demands	Would not result in significant impacts to public service demands.	N/A
Business and economic activity	Would not result in significant impacts to business and economic activity.	Additional temporary economic activity during construction. Not anticipated to induce additional growth in the region.	Additional temporary economic activity during construction. Not anticipated to induce additional growth in the region.	Additional temporary economic activity during construction. Not anticipated to induce additional growth in the region.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Air Quality</b>	No impact	Not Significant. Would not result in significant impacts because air emissions from implementation of Alternative B would not result in exceedance of any National Ambient Air Quality Standard	Not Significant. Would not result in significant impacts because air emissions from implementation of Alternative D would not result in exceedance of any National Ambient Air Quality Standard	Not Significant. Would not result in significant impacts because air emissions from implementation of Alternative E would not result in exceedance of any National Ambient Air Quality Standard	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Water Quality</b>	DVO will continue to operate under its SWPPP and continue to implement BMPs to minimize the potential for pollutants to be discharged to the water bodies adjacent to the Airport. As such, implementation of Alternative A would not result in a significant impact on water quality.	Based on the current BMPs, SWPPP, and permits that are in place, it is not anticipated that Alternative B would exceed water quality standards, create water quality problems that cannot be avoided or mitigated, or result in difficulties in obtaining permits. Therefore, no significant impacts are anticipated with implementation of Alternative B.	Based on the current BMPs, SWPPP, and permits that are in place, it is not anticipated that Alternative D would exceed water quality standards, create water quality problems that cannot be avoided or mitigated, or result in difficulties in obtaining permits. Therefore, no significant impacts are anticipated with implementation of Alternative D.	Based on the current BMPs, SWPPP, and permits that are in place, it is not anticipated that Alternative E would exceed water quality standards, create water quality problems that cannot be avoided or mitigated, or result in difficulties in obtaining permits. Therefore, no significant impacts are anticipated with implementation of Alternative E.	N/A
<b>DOT Section 4(f) (Recodified as 303c) Resources and Land and Water Conservation Act, Section 6(f) Resources</b>	No impact	Implementation of Alternative B would <b>not</b> result in the physical taking, constructive use, or conversion of any Section 4(f) resource to other purposes, impair the use of any Section 4(f) property, or subject any Section 4(f) property to incompatible noise levels. Therefore, the implementation of Alternative B would result in only a <i>de minimis</i> impact on Section 4(f) resources and would not be significant.	Implementation of Alternative D would <b>not</b> result in the physical taking, constructive use, or conversion of any Section 4(f) resource to other purposes, impair the use of any Section 4(f) property, or subject any Section 4(f) property to incompatible noise levels. Therefore, the implementation of Alternative D would result in only a <i>de minimis</i> impact on Section 4(f) resources and would not be significant.	Implementation of Alternative E would <b>not</b> result in the physical taking, constructive use, or conversion of any Section 4(f) resource to other purposes, impair the use of any Section 4(f) property, or subject any Section 4(f) property to incompatible noise levels. Therefore, the implementation of Alternative E would result in only a <i>de minimis</i> impact on Section 4(f) resources and would not be significant.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Historical, Architectural, Archaeological, &amp; Cultural Resources</b>					
Direct Effects (Physical Impacts)	No direct effect	No direct effect	No direct effect	No direct effect	FAA will require Marin County to have an archeological monitor on-site during initial site excavation to evaluate any unanticipated discovery of unknown cultural resources.
Indirect Effects (Noise Impacts)	No indirect effect	No indirect effect	No indirect effect	No indirect effect	N/A
Summary	FAA finds implementation of the No Action Alternative would not affect any properties listed or eligible for listing on the National Register of Historic Places.	FAA finds the proposed undertaking would not affect any properties listed or eligible for listing on the National Register of Historic Places.	FAA finds the proposed undertaking would not affect any properties listed or eligible for listing on the National Register of Historic Places.	FAA finds the proposed undertaking would not affect any properties listed or eligible for listing on the National Register of Historic Places.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Biological Resources</b>	No impact	Removal of approximately 24.47 acres of plant and wildlife habitat suitable for the endangered salt marsh harvest mouse and the endangered California clapper rail, including permanent loss of 6.88 acres of high brackish marsh/annual grassland habitat, permanent loss of 1.54 acres of open water ditch/channel habitat, and temporary loss of 16.05 acres of high brackish marsh/annual grassland habitat. The losses of aquatic habitat under Alternative B are considered significant, and will be mitigated as described in detail in Sections 5.9, <i>Biological Resources</i> ; and 5.10, <i>Wetlands and Streams</i> . Impact is considered significant, but mitigatable to a not significant level.	Removal of approximately 28.29 acres of plant and wildlife habitat suitable for the endangered salt marsh harvest mouse and the endangered California clapper rail, including permanent loss of 8.24 acres of high brackish marsh/annual grassland habitat, permanent loss of 1.62 acres of open water ditch/channel habitat, and temporary loss of 18.43 acres of high brackish marsh/annual grassland habitat. The losses of aquatic habitat under Alternative D are considered significant, and will be mitigated as described in detail in Sections 5.9, <i>Biological Resources</i> ; and 5.10, <i>Wetlands and Streams</i> . Impact is considered significant, but mitigatable to a not significant level.	Removal of approximately 20.14 acres of plant and wildlife habitat suitable for the endangered salt marsh harvest mouse and the endangered California clapper rail including permanent loss of 5.60 acres of high brackish marsh/annual grassland habitat, permanent loss of 1.80 acres of open water ditch/channel habitat, and temporary loss of 12.74 acres of high brackish marsh/annual grassland habitat. The losses of aquatic habitat under Alternative E are considered significant, and will be mitigated as described in detail in Sections 5.9, <i>Biological Resources</i> ; and 5.10, <i>Wetlands and Streams</i> . Impact is considered significant, but mitigatable to a not significant level.	Marin County, as the Airport sponsor, would be responsible for developing a mitigation plan acceptable to the USFWS. During ESA Section 7 consultation, the USFWS found the conceptual mitigation options presented were suitable and developed restoration/compensation ratios for the habitat impacts. Based on the ratios, Alternative B would require between 42.9 to 57.3 acres of off-site restoration/compensation and 16.05 acres of on-site restoration. Alternative D would require between 49.9 to 66.5 acres of off-site restoration/compensation and 18.43 acres of on-site restoration. Alternative E would require between 35.52 to 47.02 acres of off-site restoration/compensation and 12.74 acres of on-site restoration.

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Wetlands and Streams</b>	No impact	<p>Would impact 11.83 acres of wetlands regulated under Section 404 of the CWA, of which 2.66 acres are also regulated under the Rivers and Harbors Act (RHA). Implementation of Alternative B would result in significant impacts to wetlands and aquatic resources unless compensatory mitigation is provided. As described in Section 5.10.6 several options for compensatory mitigation for wetland and aquatic habitat losses associated with the implementation of Alternative B are available. A detailed compensatory mitigation plan would be required to obtain the necessary authorizations to construct Alternative B. With implementation of a mitigation plan to compensate for the losses of wetland and aquatic habitat resulting from the construction of Alternative B, the environmental impact of Alternative B would not be significant.</p>	<p>Would impact 12.73 acres of wetlands regulated under Section 404 of the CWA, of which 2.56 acres are also regulated under the RHA. Implementation of Alternative D would result in significant impacts to wetlands and aquatic resources unless compensatory mitigation is provided. As described in Section 5.10.6 several options for compensatory mitigation for wetland and aquatic habitat losses associated with the implementation of Alternative D are available. A detailed compensatory mitigation plan would be required to obtain the necessary authorizations to construct Alternative D. With implementation of a mitigation plan to compensate for the losses of wetland and aquatic habitat resulting from the construction of Alternative D, the environmental impact of Alternative D would not be significant.</p>	<p>Would impact 7.27 acres of wetlands regulated under Section 404 of the CWA, of which 1.11 acres are also regulated under the RHA. Implementation of Alternative E would result in significant impacts to wetlands and aquatic resources unless compensatory mitigation is provided. As described in Section 5.10.6 several options for compensatory mitigation for wetland and aquatic habitat losses associated with the implementation of Alternative E are available. A detailed compensatory mitigation plan would be required to obtain the necessary authorizations to construct Alternative E. With implementation of a mitigation plan to compensate for the losses of wetland and aquatic habitat resulting from the construction of Alternative E, the environmental impact of Alternative E would not be significant.</p>	<p>Coordination with the USACOE and local wetland banks is ongoing. Marin County, as the Airport sponsor, would be responsible for developing a mitigation plan acceptable to the USACOE. Final mitigation ratios for restoration/compensation will be identified after coordination with USACOE is complete. However, based on Marin County policies and the likelihood that Marin County will choose to coordinate the wetland mitigation requirements identified in the CWA Section 404 permit with the habitat compensation requirements of the USFWS Biological Opinion, wetland mitigation estimates can be made. Alternative B could require an estimated 35.49 acres of restoration/compensation. Alternative D could require 38.19 acres of restoration/compensation. Alternative E could require an estimated 21.87 acres of restoration/compensation.</p>

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

IMPACT CATEGORY	ALTERNATIVE A – NO ACTION	ALTERNATIVE B*	ALTERNATIVE D*	ALTERNATIVE E	POTENTIAL MITIGATION
<b>Floodplains</b>	No impact	Would enclose approximately 13 additional acres of the approximately 3,875 acre 100-year floodplain behind the Airport levee. Implementation of Alternative B would not cause notable adverse impacts on natural and beneficial floodplain values on the existing 100-year floodplain. Therefore, implementation of Alternative B would not result in a significant impact on the 100-year floodplain.	Would enclose approximately 15 additional acres of the approximately 3,875 acre 100-year floodplain behind the Airport levee. Implementation of Alternative D would not cause notable adverse impacts on natural and beneficial floodplain values on the existing 100-year floodplain. Therefore, implementation of Alternative D would not result in a significant impact on the 100-year floodplain.	Would enclose approximately six additional acres of the approximately 3,875 acre 100-year floodplain behind the Airport levee. Implementation of Alternative E would not cause notable adverse impacts on natural and beneficial floodplain values on the existing 100-year floodplain. Therefore, implementation of Alternative E would not result in a significant impact on the 100-year floodplain.	N/A
<b>Coastal Resources</b>	No impact	No permit for this project is required from the Bay Conservation and Development Commission because DVO is located outside of the coastal zone. Construction of Alternative B would not impact the coastal zone. Therefore, construction of Alternative B on Airport property would not have a significant impact on coastal resources.	No permit for this project is required from the Bay Conservation and Development Commission because DVO is located outside of the coastal zone. Construction of Alternative D would not impact the coastal zone. Therefore, construction of Alternative D on Airport property would not have a significant impact on coastal resources.	No permit for this project is required from the Bay Conservation and Development Commission because DVO is located outside of the coastal zone. Construction of Alternative E would not impact the coastal zone. Therefore, construction of Alternative E on Airport property would not have a significant impact on coastal resources.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Wild &amp; Scenic Rivers</b>	No impact	No impact	No impact	No impact	N/A
<b>Farmlands</b>	No impact	No impact	No impact	No impact	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Energy Supply &amp; Natural Resources</b>					
Natural Resources	No impact	Alternative B would not result in a substantial increase in demand for energy, natural resources, fuel, or rare consumable natural resources, and would allow existing aircraft, as represented by the family grouping of critical aircraft operating at DVO, to increase its efficiency and sustainability by being able to operate without operational weight restrictions under hot weather conditions. Therefore, Alternative B would not have a significant impact on Energy Supply, Natural Resources, or be inconsistent with Sustainable Design.	Alternative D will not result in a substantial increase in demand for energy, natural resources, fuel, or rare consumable natural resources, and would allow existing aircraft, as represented by the family grouping of critical aircraft operating at DVO, to increase its efficiency and sustainability by being able to operate without operational weight restrictions under hot weather conditions. Therefore, Alternative D would not have a significant impact on Energy Supply, Natural Resources, or be inconsistent with Sustainable Design.	Alternative E would not result in a substantial increase in demand for energy, natural resources, fuel, or rare consumable natural resources, and would allow existing aircraft, as represented by the family grouping of critical aircraft operating at DVO, to increase its efficiency and sustainability by being able to operate without operational weight restrictions under hot weather conditions. Therefore, Alternative E would not have a significant impact on Energy Supply, Natural Resources, or be inconsistent with Sustainable Design.	N/A
Energy	No impact				N/A
<b>Visual Resources (Including Light Emissions and Visual Impacts)</b>	No impact	Alternative B would not significantly increase the intensity of light emissions from the airport or result in significant impacts to visual resources.	Alternative D would not significantly increase the intensity of light emissions from the airport or result in significant impacts to visual resources.	Alternative E would not significantly increase the intensity of light emissions from the airport or result in significant impacts to visual resources.	N/A

**Table S-1, Continued  
ENVIRONMENTAL IMPACT SUMMARY MATRIX  
Gross Field Airport**

<b>IMPACT CATEGORY</b>	<b>ALTERNATIVE A – NO ACTION</b>	<b>ALTERNATIVE B*</b>	<b>ALTERNATIVE D*</b>	<b>ALTERNATIVE E</b>	<b>POTENTIAL MITIGATION</b>
<b>Hazardous Materials</b>	No impact	Not Significant	Not Significant	Not Significant	N/A
<b>Construction Impacts</b>	No impact	Construction impacts associated with the implementation of Alternative B would not be significant.	Construction impacts associated with the implementation of Alternative D would not be significant.	Construction impacts associated with the implementation of Alternative E would not be significant.	N/A
<b>Irreversible and Irretrievable Commitment of Resources</b>	No impact	Not Significant	Not Significant	Not Significant	N/A
<b>Cumulative Impacts</b>	No impact	Not Significant	Not Significant	Not Significant	N/A

\* Appendix Q-1, *FAA Response to Comments Received on the Draft Supplement to the Final Environmental Impact Statement*, discloses the environmental impacts of implementing Alternative B or Alternative D including larger runway safety areas to accommodate FAA Airport Reference Code B-II aircraft.

Source: Landrum & Brown, 2018



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