

**HAYFORK AIRPORT  
TAXIWAY EXTENSION PROJECT  
FINAL ENVIRONMENTAL ASSESSMENT  
HAYFORK, TRINITY COUNTY, CALIFORNIA**

*Prepared For:*

**Trinity County**

*Federal Lead Agency*

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

*Environmental Consultant*

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**August 2015**

This Environmental Assessment becomes a federal document when evaluated, signed and dated by the responsible Federal Aviation Administration official.

Responsible FAA Official:  Date: 12/3/2015

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# CONTENTS

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## LIST OF ACRONYMS

<b>EXECUTIVE SUMMARY</b> .....	i
Introduction.....	i
Purpose and Need .....	i
Effects of the Proposed Project.....	i

## 1.0 PURPOSE AND NEED

Introduction.....	1-1
Hayfork Airport Area Overview .....	1-1
Airport Facilities .....	1-2
Aviation Forecast.....	1-2
Purpose and Need for Airport Improvements .....	1-3
FAA Purpose and Need .....	1-3
Table 1.1: Aviation Forecast	
Figure 1.1: Airport Location	
Figure 1.2: Hayfork Airport and Proposed Project Locations	
Figure 1.3: Proposed Taxiway Extension, Culvert, Runway and Taxiway Safety Area Locations	

## 2.0 PROPOSED ACTION AND ALTERNATIVES

Alternatives Development .....	2-1
Alternative 1 – No Action .....	2-1
Alternative 2 (Proposed Action).....	2-1
Actions Considered but Eliminated from Further Consideration .....	2-2
Figure 2.1: Hayfork Airport, Airport Layout Plan	
Figure 2.2: Cross Section of 2-Box Concrete Culvert	
Figure 2.3: Modified Action; Proposed Culvert Location	

## 3.0 AFFECTED ENVIRONMENTS

<b>3.1 NOISE</b> .....	3-1
Figure 3.1.1: Existing Noise Contours	
<b>3.2 COMPATIBLE LAND USE</b> .....	3-1
<b>3.3 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN’S ENVIRONMENTAL HEALTH AND SAFETY RISKS</b> .....	3-3
Table 3.3.1: Population Trends – Trinity County	
Table 3.3.2: Employment Trends – Trinity County	
<b>3.4 AIR QUALITY</b> .....	3-4
Table 3.4.1: National Ambient Air Quality Standards (NAAQS)	

Table 3.4.2: Attainment Status for North Coast Air Basin	
<b>3.5 WATER QUALITY</b> .....	3-10
Figure 3.5.1: Site Photos: Kingsbury Gulch	
<b>3.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) [RECODIFIED AT 49 USC 303]</b> .....	3-11
<b>3.7 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES</b> .....	3-12
<b>3.8 FISH, WILDLIFE AND PLANTS</b> .....	3-12
Figure 3.8.1: Habitat Map	
Figure 3.8.2: Spotted Owl Territories	
Table 3.8.1: Federal Threatened, Endangered, Proposed Threatened and Proposed Endangered Species	
<b>3.9 WETLANDS, JURISDICTIONAL OR NON-</b> .....	3-20
Table 3.9.1: Wetlands and Waters of the U.S.	
<b>3.10 FLOODPLAINS</b> .....	3-21
<b>3.11 COASTAL RESOURCES</b> .....	3-21
<b>3.12 FARMLANDS</b> .....	3-22
<b>3.13 WILD AND SCENIC RIVERS</b> .....	3-22
<b>3.14 NATURAL RESOURCES AND ENERGY SUPPLY</b> .....	3-22
<b>3.15 HAZARDOUS MATERIALS AND SOLID WASTE</b> .....	3-23
<b>3.16 LIGHT EMISSIONS AND VISUAL IMPACTS</b> .....	3-23
<b>3.17 SECONDARY (INDUCED) IMPACTS</b> .....	3-24
<b>4.0 ENVIRONMENTAL CONSEQUENCES</b>	
<b>4.1 RESOURCES NOT IMPACTED BY PROJECT ALTERNATIVES</b> .....	4-1
<b>4.2 RESOURCES POTENTIALLY IMPACTED BY ALTERNATIVES UNDER CONSIDERATION</b> .....	4-3
4.2.1 AIR QUALITY .....	4-3
Table 4.2.1.1 Construction Emissions in Pounds per Year	
4.2.2 WATER QUALITY .....	4-5
4.2.3 FISH, WILDLIFE AND PLANTS.....	4-8
Table 4.2.3.1: Disturbance and Disruption Distances for Northern Spotted Owl during the Breeding Period	
4.2.4 WETLANDS AND WATERS OF THE UNITED STATES.....	4-13
Figure 4.2.4.1: Potential Impacts to Waters of the U.S.	
4.2.5 FLOOD PLAIN.....	4-14
Figure 4.2.5.1: Kingsbury Gulch 100-Year Floodplain	
4.2.6 CONSTRUCTION IMPACTS.....	4-15
<b>5.0 ENVIRONMENTAL CONSEQUENCES – OTHER CONSIDERATIONS</b> .....	5-1
Cumulative Effects .....	5-1
Hayfork Airport Projects .....	5-1
Other Projects in the Vicinity of the Airport .....	5-2
<b>6.0 REFERENCES CITED</b>	
<b>7.0 LIST OF PREPARERS</b>	

## 8.0 PUBLIC PARTICIPATION

### **APPENDICES: Attached under separate cover**

- Appendix A: Biological Assessment
- Appendix B: Cultural Resources Assessment
- Appendix C: Wetland Delineation
- Appendix D: Agency Consultation Letters
- Appendix E: Land Use Assurance Letter
- Appendix F: Affidavit of Publication
- Appendix G: Public Comments and Responses
- Appendix H: Construction Emissions

# LIST OF ACRONYMS

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ACHP	Advisory Council on Historic Preservation
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ALUCP	Airport Land Use Compatibility Plan
APE	Area of Potential Effect
BA	Biological Assessment
BAT	Best Available Technology
BCT	Best Conventional Technology
BMP	Best Management Practices
BO	Biological Opinion
CAA	Clean Air Act
Caltrans	California Department of Transportation
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CDFW	California Department of Fish and Wildlife
CHRIS	California Historical Resources Information System
CLUP	Comprehensive Land Use Plan
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
dB	Decibels
dBA	A-weighted decibel scale
DME	Distance measuring equipment
EA	Environmental Assessment (National Environmental Policy Act)
EFH	Essential Fish Habitat
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration – US Department of Transportation
FBO	Fixed Based Operator
FONSI	Finding of No Significant Impact
HUD	United States Department of Housing and Urban Development
ILS	Instrument Landing System
Ldn	Day-night average (sound) level
Leq	Equivalent Sound Level
MSA	Magnuson-Stevens Fishery Conservation Management Act
NAAQS	National Ambient Air Quality Standards
NCAB	North Coast Air Basin
NCUAQMD	North Coast Unified Air Quality Management District
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOx	Nitrogen Oxide

NPDES	National Pollution Discharge Elimination System
NPIAS	National Plan of Integrated Airport Systems
NPL	National Priority List
NHPA	National Historic Preservation Act
NRHP	National Registry of Historic Places
OFA	Object Free Area
OHWM	Ordinary High Water Mark
PM	Particulate Matter
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RWQCB	Regional Water Quality Control Board (State of California)
SFTR	South Fork Trinity River
SHPO	State Historic Preservation Officer
SONCC	Southern Oregon Northern California Coasts Coho Salmon
SWPPP	Stormwater Pollution Prevention Plan
USACOE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

# EXECUTIVE SUMMARY

---

## ***Introduction***

This summary presents an overview of the environmental impacts of the proposed near term development at the Hayfork Airport. This Environmental Assessment (EA) briefly describes the purpose and need, alternatives, affected environment and the environmental impact analysis of the proposed projects.

This EA is prepared pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) as implemented by the Council on Environmental Quality (CEQ) regulations and the Federal Aviation Administration (FAA) Order 1050.1E and Order 5050.4B for the preparation of Environmental Assessments. NEPA compliance is triggered by any ‘federal action’ that impacts the human environment. The federal action analyzed in this EA is the approval of specified near term projects depicted on the Hayfork Airport Layout Plan (ALP), and potential Airport Improvement Program funding support for those projects. The FAA is the federal lead agency for the proposed action.

All airports participating in the National Plan of Integrated Airports are required to prepare and maintain a current ALP and Airport Capital Improvements Plan in order to receive FAA Airport Improvement Program grants. The ALP depicts existing airport facilities and proposed future airport development. One of the purposes of the ALP is to guide future physical development of the Hayfork Airport..

## ***Purpose and Need***

The overall purpose of the proposed action is to plan for and construct elements necessary to accommodate airport-related development during the next five years. The proposed projects are needed to ensure economic vitality of the airport and to meet FAA safety requirements. The projects proposed include the following:

- Extend Taxiway
- Construct culvert under taxiway extension
- Grade Runway Safety Area and Taxiway Safety Area

## ***Effects of the Proposed Project***

This EA examines in detail all environmental resource effects of the proposed action and no action alternatives and recommends mitigation measures to reduce the severity of potential resource impacts where feasible.



## **1.0 Purpose and Need**

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# 1.0 PURPOSE AND NEED

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## ***Introduction***

Hayfork Airport (airport) originally began development in 1969 and is operated by Trinity County under the Trinity County Department of Transportation.

The Federal Aviation Administration (FAA) administers the Airport Improvement Program (AIP) that provides funding for eligible aviation facility improvements for airports in the National Plan of Integrated Airport Systems. All federally obligated airports are required to prepare and maintain a current ALP in order to receive federal funding under the AIP. Trinity County intends to request funding from the FAA to construct the projects identified in the Conditionally Approved ALP (2009). The FAA's approval of an ALP and federal funding are federal actions that require compliance with the National Environmental Policy Act (NEPA).

This EA is prepared in accordance with NEPA, the Council on Environmental Quality (CEQ) regulations (Title 40, Code of Federal Regulations (CFR) Parts 1500-1508), FAA Order 1050.1E, *Policies and Procedures for Considering Environmental Impacts*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions For Airport Actions*. This EA analyzes and documents the potential environmental impacts of implementing the proposed project, and recommends mitigation measures necessary to reduce potential impacts to environmental resources.

## ***Hayfork Airport Area Overview***

Hayfork Airport is a public use general aviation airport owned and operated by Trinity County. The airport is located in the center of Trinity County, in the community of Hayfork. Hayfork is the second largest community in the county, and is about thirty miles southwest of Weaverville, the county seat. Approximately 72 percent of Trinity County land is in state and federal ownership, including the Trinity National Forest, Six Rivers National Forest, and the Shasta Trinity National Recreational Area.

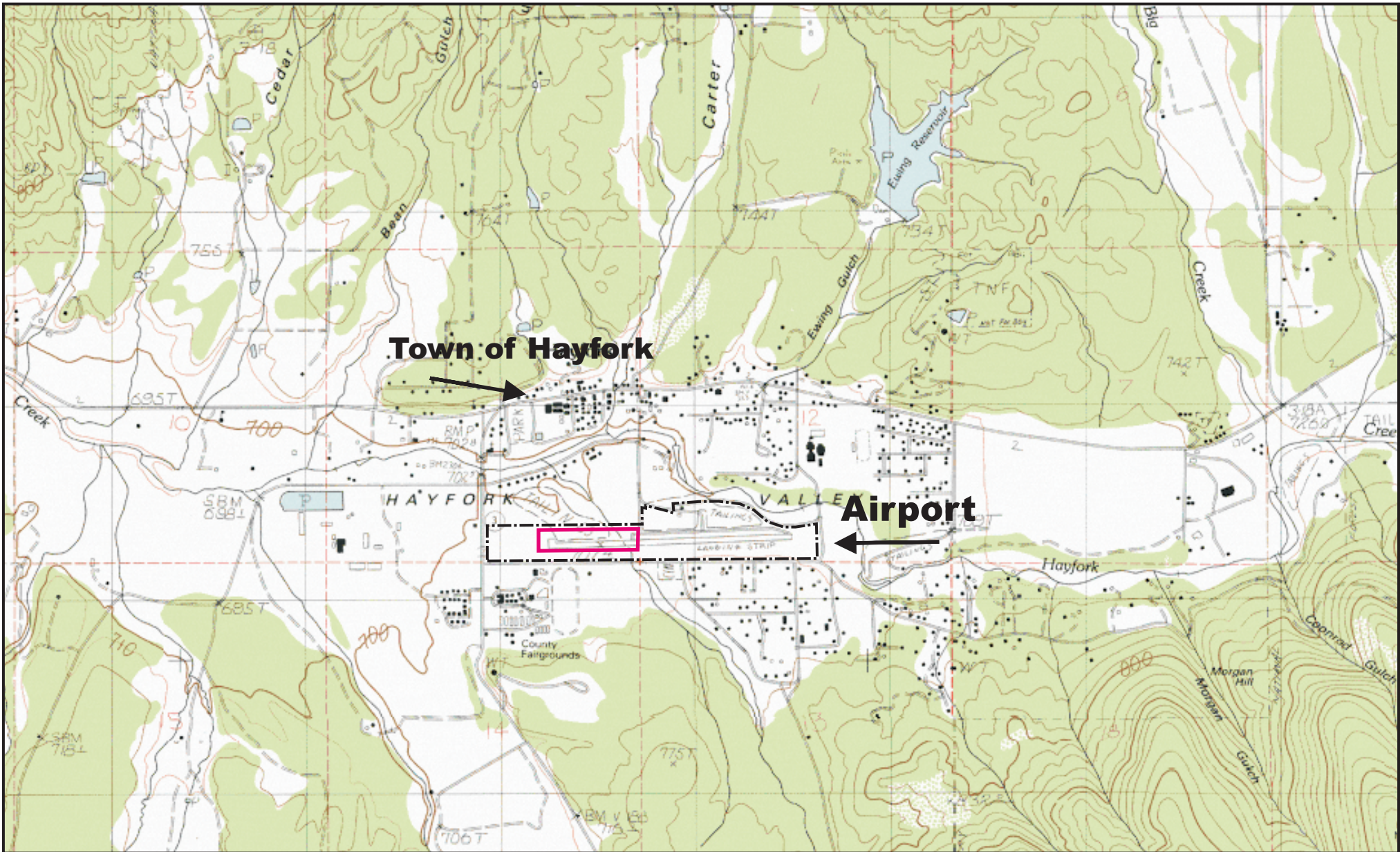
Hayfork Airport is one of five general aviation airports in Trinity County. It is the only airport in the county that is permitted for night operations. The airport occupies approximately 122 acres and is located between the center of the community and the Trinity County Fairgrounds (Figure 1.1). Residential land use occurs north and south of the airport; commercial land and open space also occur around the airport.

The Hayfork Community Plan (1996), the Trinity County Airport Land Use Compatibility Plan (ALUCP), and the Trinity County Zoning Ordinance control land use and density, and limit high occupancy structures such as schools, hotels, and hospitals in the area of the airport.

The airport site is on relatively level terrain at an approximate elevation of 2,321 feet above mean sea level. A tributary to the South Fork Trinity River, Hayfork Creek, flows along the northern edge of the airport. Kingsbury Gulch flows intermittently through the airport property, under the runway through a culvert, and into Hayfork Creek.

## ***Airport Facilities***

Hayfork Airport has a single runway, oriented east-west (Figure 1.2). Runway 7-25 is 4,115 feet long and



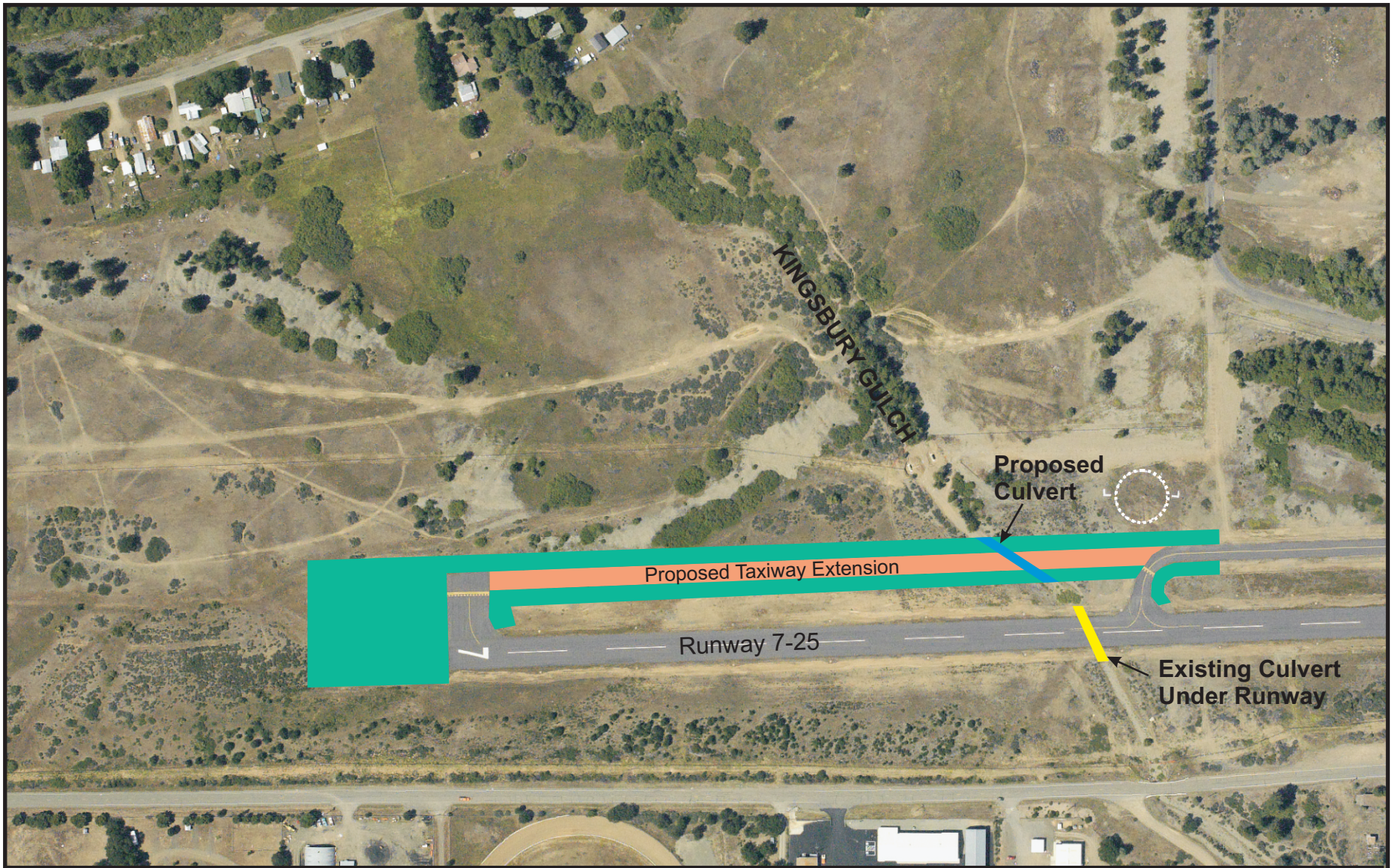
**Figure 1.1**  
Hayfork Airport Location Map

- Hayfork Airport Fence Line
- Project Location

↑  
North

**Hayfork Airport**  
Hayfork Airport  
Environmental Assessment

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**Figure 1.2**  
**Proposed Taxiway Extension, Culvert, Runway**  
**and Taxiway Safety Area Locations**

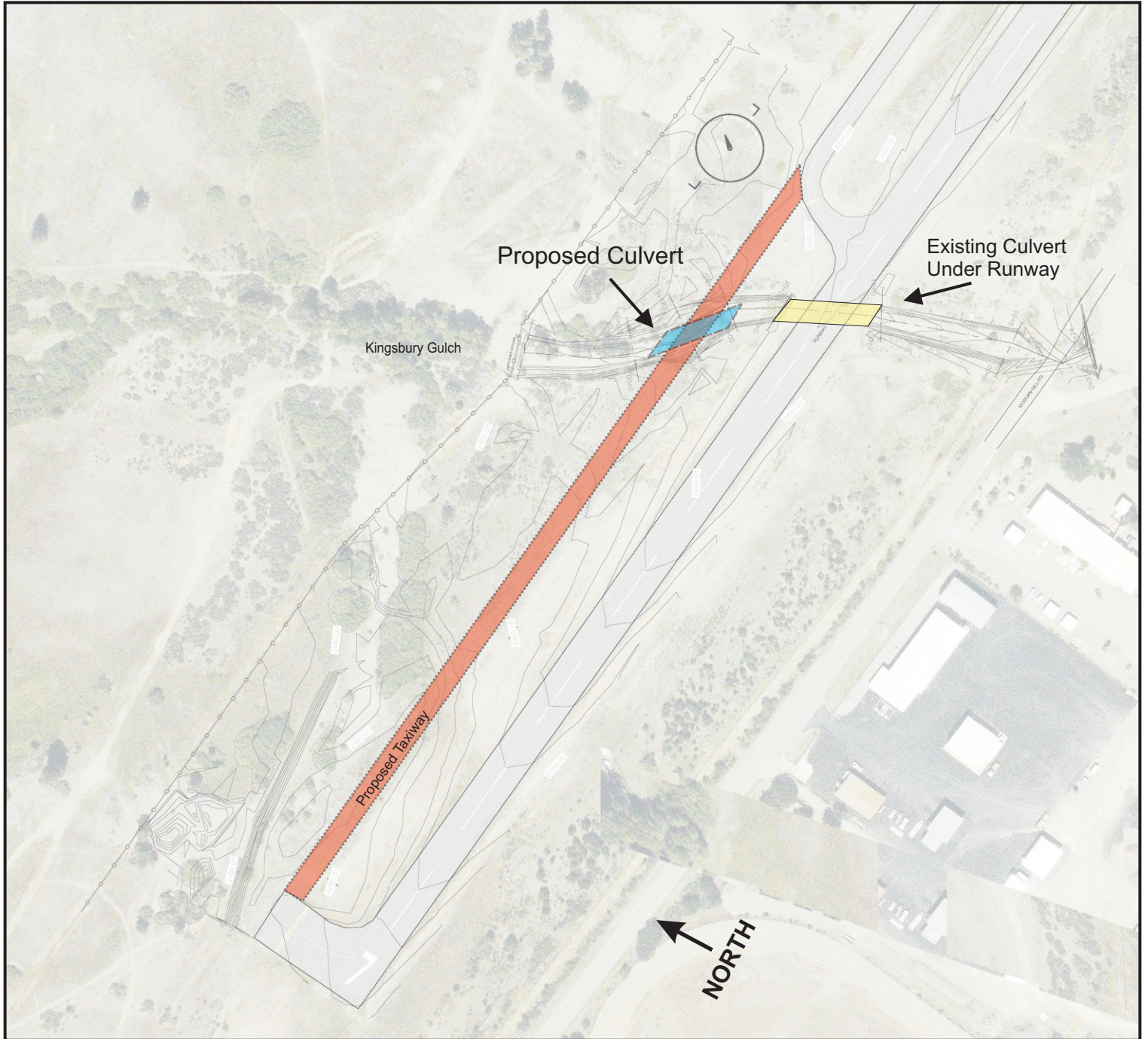
 Runway and Taxiway Safety Area Grading

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**Figure 1.3**  
Proposed Taxiway Extension and Culvert Location

Image from Trinity County Road Department

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**Hayfork Airport**  
Hayfork Airport  
Environmental Assessment

August 2015

60 feet wide. A partial parallel taxiway is located north of Runway 7-25 and serves the eastern two-thirds of the runway. Aircraft regularly using the runway are all single-engine aircraft.

A pilots' lounge is located on the northeast corner of the apron in a 2,000 square foot building. Two box hangars, approximately 4,400 square feet, are located on the west end of the apron. An aircraft parking apron is also located on the north side of the runway. There is no Fixed Based Operator (FBO) on the airport.

### **Aviation Forecast**

Hayfork Airport serves general aviation aircraft for the southern portion of Trinity County. Four other general aviation airports operate in the county: Hyampom Airport, Ruth Airport, Trinity Center Airport, and Weaverville Airport.

Currently there are 6 aircraft based at the airport. Forecasts in the *Hayfork Airport Layout Plan and Report* (Coffman, 2008) indicate that the total number of aircraft to be based at the airport by the year 2026 will be approximately 11. The majority of aircraft will continue to be single-engine.

Annual operations at the airport, which include take-offs and landings, are currently 1,500. The projected operations are expected to increase to approximately 2,750 by the year 2026 (Airport Layout Plan and Report, 2008).

**TABLE 1.1: AVIATION FORECAST**

	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2026</b>
<b>Annual Operations</b>				
Itinerant	1,050	1,400	1,575	1,925
Local	450	600	675	825
<b>Total Operations</b>	<b>1,500</b>	<b>2,000</b>	<b>2,250</b>	<b>2,750</b>
<b>Based Aircraft</b>				
Single Engine	6	7	8	9
Multi-Engine	0	1	1	2
<b>Total Based Aircraft</b>	<b>6</b>	<b>8</b>	<b>9</b>	<b>11</b>

Source: *Hayfork Airport Layout Plan and Report*, Coffman, 2008.

### **Purpose and Need for Airport Improvements**

Airside facilities need to be improved to accommodate existing and future aviation services, assure the economic vitality of the airport, and to meet FAA safety requirements. Trinity County proposes to make the following improvements to the airport over the next five years (Figures 1.2 and 1.3):

**Extend Taxiway:** Currently, the partial parallel taxiway only serves the eastern two-thirds of the runway, a length of approximately 2,700 feet. Aircraft using the Hayfork Airport are required to use a paved turnaround on the west end of the runway and to taxi directly on the runway. Extending the taxiway 1,415 to the west would match the full length of the runway. The purpose of the taxiway extension is to create a full parallel taxiway, eliminating the necessity for aircraft to taxi directly on the runway. This project is needed to improve aircraft operational safety.

**Construct Culvert Under Taxiway Extension:** The proposed taxiway extension would cross Kingsbury Gulch, just west of the existing end of the taxiway. A culvert structure would be

needed to support the taxiway extension over Kingsbury Gulch. The purpose of the culvert structure would be to carry the taxiway, provide fish passage and to provide hydraulic capacity for 100-year flood flows.

**Runway Safety Area and Taxiway Safety Area Grading:** Currently, the ground in the Runway Safety Area (RSA) is uneven and brush is present. The purpose of this project is to clear brush and level the uneven ground in the RSA and Taxiway Safety Area (TSA). The brush must be removed to remain clear of the approach surfaces. The RSA needs to be graded and improved at the end of Runway 7 to meet FAA RSA design standards. The area of the RSA to be graded and cleared extends 240 feet west of the end of Runway 7 and 120 feet north and south centered on the runway centerline. In addition, it will be necessary to grade and clear both sides of the taxiway extension to meet FAA design standards.

### ***FAA Purpose and Need***

The FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the U.S. The FAA must ensure that the proposed action does not derogate the safety of aircraft and airport operations at Hayfork Airport. Moreover, it is the policy of the FAA under 49 U.S.C. Section 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.

# 2.0 Proposed Action and Alternatives

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## 2.0 PROPOSED ACTION AND ALTERNATIVES

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### ***Alternatives Development***

In 2008, the FAA issued a Conditional Approval of the Airport Layout Plan for the Hayfork Airport. The FAA's review of the ALP and review of funding request subjects the proposed projects to the provisions of NEPA as implemented by the Council on Environmental Quality regulations, FAA Order 1050.1E, and FAA Order 5050.4B. The FAA must assess environmental effects of the projects that the County of Trinity proposes to implement at the Hayfork Airport prior to making a decision to provide any AIP funding for eligible project components.

An EA must describe a range of reasonable alternatives that could feasibly satisfy the action's basic objectives and reduce the environmental impacts of the action. Generally, the greater the degree of potential environmental impacts, the wider the range of alternatives that should be considered to avoid or minimize those impacts. However, if there are no unresolved conflicts concerning alternative uses of available resources, the range of alternatives may be limited to the no action and proposed action alternatives (FAA Order 1050.1E, paragraph 405d).

### **Alternative 1 – No Action**

The consideration of a "No Action" alternative is required under NEPA and its implementing regulations. Under the No Action alternative the taxiway would not be extended and the runway safety area would not be graded. Basically, the airport would maintain its current configuration. Maintenance activities necessary to ensure that the airport continues to operate would be completed as required. Aircraft intending to takeoff to the east would have to taxi on the runway to reach the Runway 7 threshold.

### **Alternative 2 (Proposed Action)**

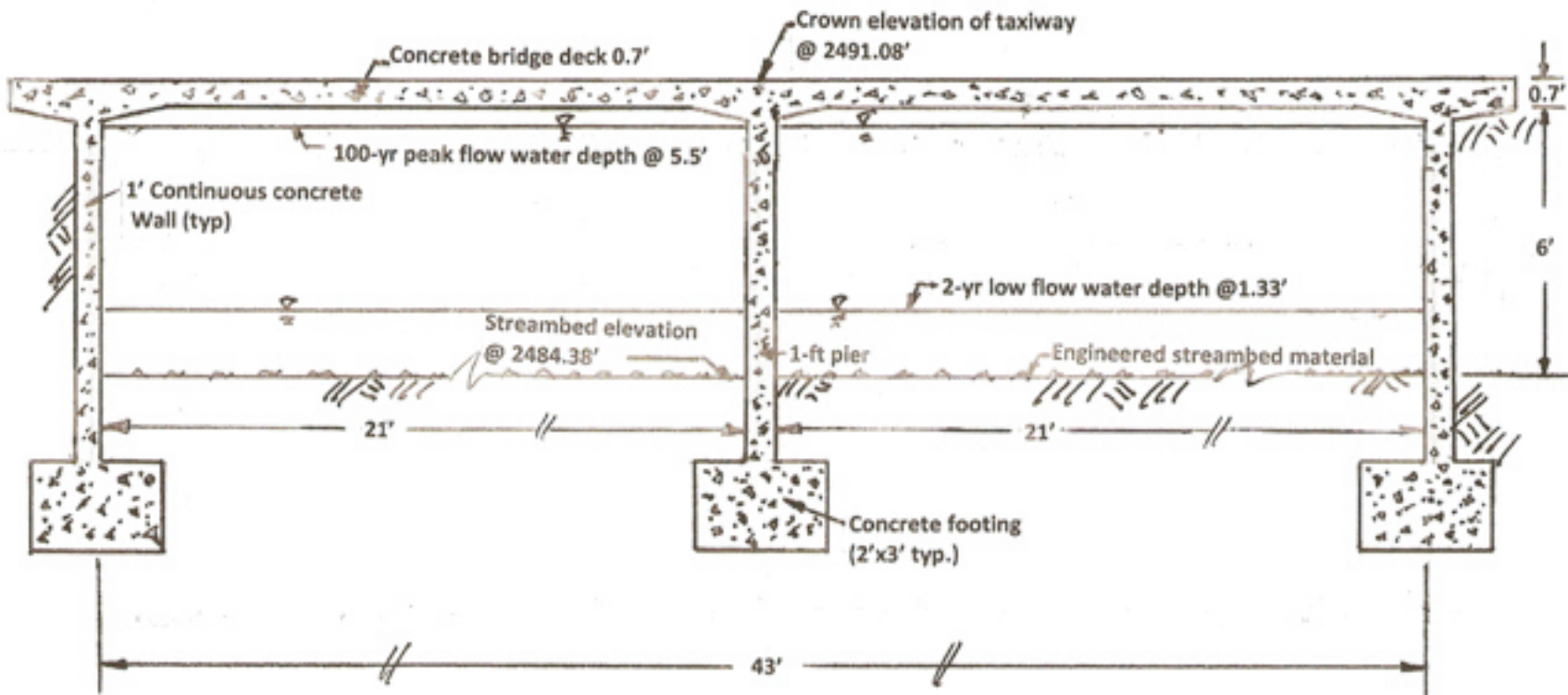
The proposed project is for FAA approval of the following near term projects depicted on the Hayfork Airport ALP (Figure 2.1), and construction of the following projects:

#### **Extend Taxiway and Install Culvert**

A 30-foot wide partial parallel taxiway currently serves the eastern two-thirds of the runway, a length of approximately 2,700 feet. The proposed taxiway extension would extend the taxiway approximately 1,415 feet to the west, to match the full length of the existing runway. The taxiway extension provides a full-length northern parallel taxiway for access to the western portion of the airport. See Figures 1.2 and 1.3.

A 2-span (two passageway) hydraulic conveyance structure with an open bottom serving to carry the taxiway and provide fish passage would be constructed where the taxiway extension crosses Kingsbury Gulch, just west of the existing end of the taxiway. The structure would be 6.7 feet high and 45 feet wide, extending 20 feet beyond the north and south edge of the taxiway pavement. The structure would be designed to match or exceed the hydraulic capacity of the existing culvert under the runway and would have a natural bottom to allow for unimpeded fish passage and erosion control. The construction of the structure beneath the proposed taxiway extension will be approximately 120 feet long over Kingsbury Gulch. See Figure 2.2.





**Figure 2.2**

Cross-Section of 2-Box Concrete Culvert

**Hayfork Airport**  
 Hayfork Airport  
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Construction of the open-bottom structure will require excavation to bedrock in the stream channel and on both sides of the stream channel to install concrete spread footings for the ends and the center pier. Plywood forms and rebar frameworks would be constructed by hand in the excavation and concrete would be poured into the forms. Kingsbury Gulch is expected to be dry during construction, but groundwater may be encountered in the excavations.

Both sides of the taxiway will be graded and cleared ten feet from the edges of the pavement, or 25 feet from both sides of the taxiway centerline, to meet FAA design standards for the Taxiway Safety Area (TSA). The ground will be cleared an additional 20 feet on either side of the taxiway to create a Taxiway Object Free Area of 90 feet centered on the taxiway centerline.

### **Runway Safety Area Grading**

The Runway Safety Area (RSA) will be graded and improved at the end of Runway 7 to meet FAA RSA design standards. Currently, the ground in the RSA (20 feet each side of the taxiway) is uneven and brush is present. The brush must be removed to remain clear of the approach surfaces. The area of the RSA to be graded and cleared extends 240 feet west of the end of Runway 7 and 120 feet north and south centered over the runway centerline. To achieve the RSA and TSA in the area west of Runway 7 the area would be graded approximately 240 feet to the west and 250 feet in the north and south direction.

## **Alternative 3, Modified Action**

### **Actions Considered but Eliminated from Further Consideration**

Aviation facilities at the airport are highly interdependent to provide safe, efficient aircraft operation. Interdependence limits the alternatives that can be considered when examining proposed aviation related projects. Trinity County considered alternatives to the extension of the taxiway. However, the alternatives were eliminated from further consideration, for the reasons stated below.

#### **Modified Culvert**

In this alternative, the taxiway would be extended and the runway safety area would be graded as described above but the construction of the culvert structure would be altered.

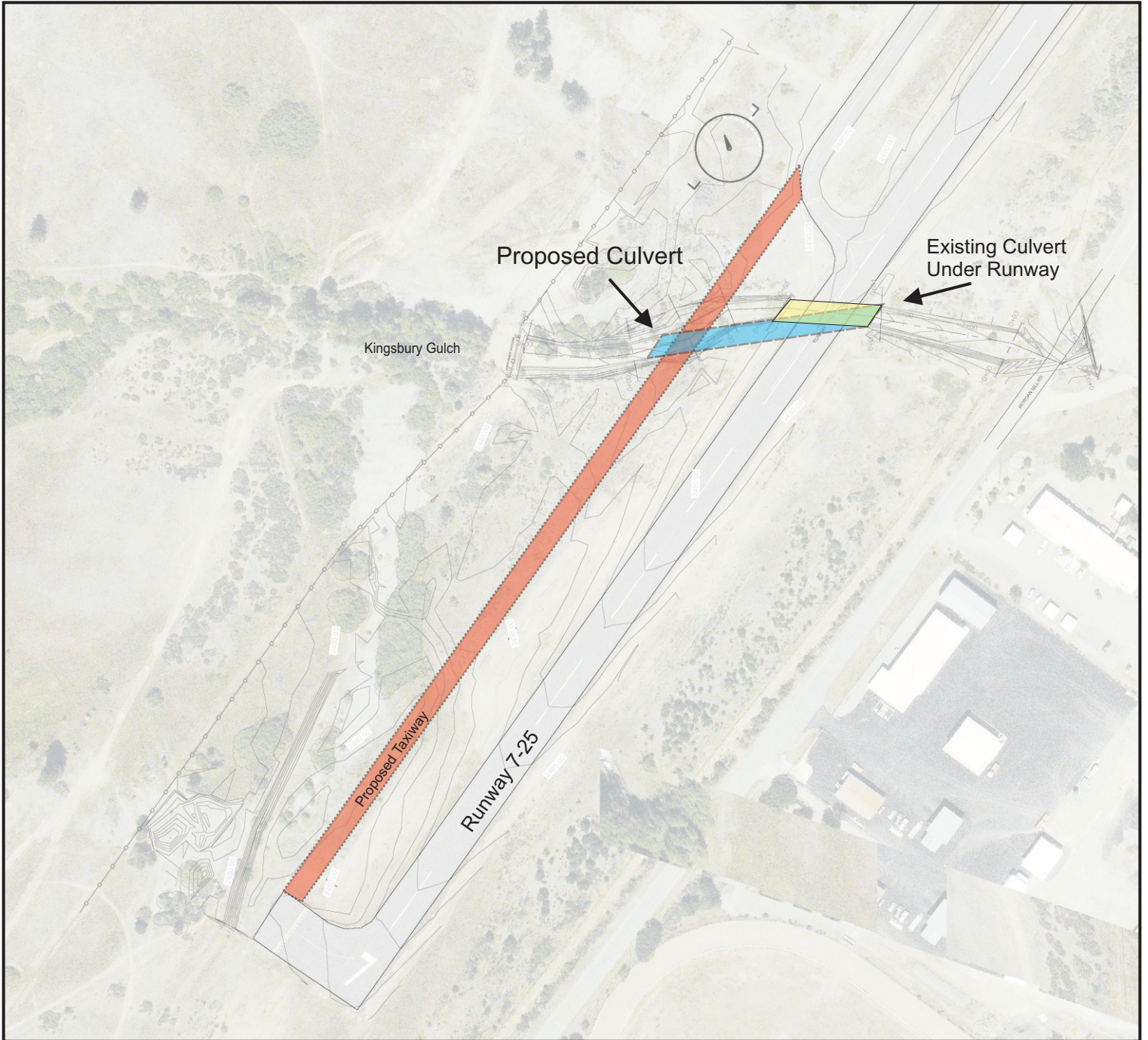
In this alternative, one continuous culvert structure would be constructed extending beneath the taxiway extension and beneath Runway 7-25. The proposed culvert in this alternative would be approximately 350 linear feet, extending 40 feet from the southern edge of the runway pavement, running beneath the width of the runway, through the Runway Safety Area (RSA) between the runway and taxiway, beneath the proposed taxiway extension and ending 20 feet beyond the north edge of the taxiway pavement (Figure 2.3). The structure would replace the existing concrete three-box structure under Runway 7-25.

The proposed culvert would be approximately forty feet wide and 6.7 feet high to allow for a 100 year flood event. The structure would be constructed as a two-box concrete culvert and have a natural bottom to allow for unimpeded fish passage and erosion control.

This project was rejected because it would require extensive alteration of the streambed alignment and would result in disturbance and reconstruction of portions of the existing runway pavement.

#### **Fill Kingsbury Gulch**

Placing fill into Kingsbury Gulch was considered as an alternative to constructing the culvert



**Figure 2.3**

Alternative 3, Modified Action  
Proposed Taxiway and Culvert Location

Image from Trinity County Road Department

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structure, but was rejected due to the adverse impacts to the floodplain and to fish migration in a designated critical habitat for federally listed threatened Coho salmon.

#### **Construction of a New Airport**

Construction of a new airport was considered as an alternative, but rejected because of its anticipated costs, likely environmental impacts and lack of available locations within Trinity County.

#### **Closing Hayfork Airport**

Permanent closure of Hayfork Airport was considered as an alternative, but was rejected because of the importance of Hayfork Airport particularly for forest fire fighting and medical operations in this remote area, as well as commercial uses. Additionally, Trinity County's closure of the airport would not comply with its AIP airport sponsor assurance requirements.