

## **3.0 Affected Environments**

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## 3.1 NOISE

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### ***Federal Guidelines***

Table 1 in 14 CFR Part 150 provides federal noise guidelines for land uses within airport environs indicate that Day-Night Average Sound Levels (L<sub>dn</sub>) below 65 dB are acceptable for all sensitive land uses including residential development. The FAA recognizes the Community Noise Equivalent Level (CNEL) as an alternative metric for California. The noise contours modeled for use in the Hayfork Airport ALP (2008) were derived from the most current version of Integrated Noise Model (INM) Version 6.2a which was the most current version at the time the analysis was conducted.

### ***Local Policy***

The Noise Element of the Trinity County General Plan, adopted in 2003, establishes 60 dB L<sub>dn</sub> as acceptable for outdoor activity areas in all land use categories exposed to transportation noise sources. The Noise Element does not address temporary construction noise. There is no Noise Ordinance in effect in Trinity County.

### ***Existing Conditions***

Based on aircraft noise modeling prepared using 1,750 annual aircraft operations, in 2008 (Coffman 2008), the CNEL 60-dBA and 65-dBA noise contours remain within the immediate vicinity of the runway and do not leave the airport property (Figure 3.1.1).

## 3.2 COMPATIBLE LAND USE

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### ***Land Ownership***

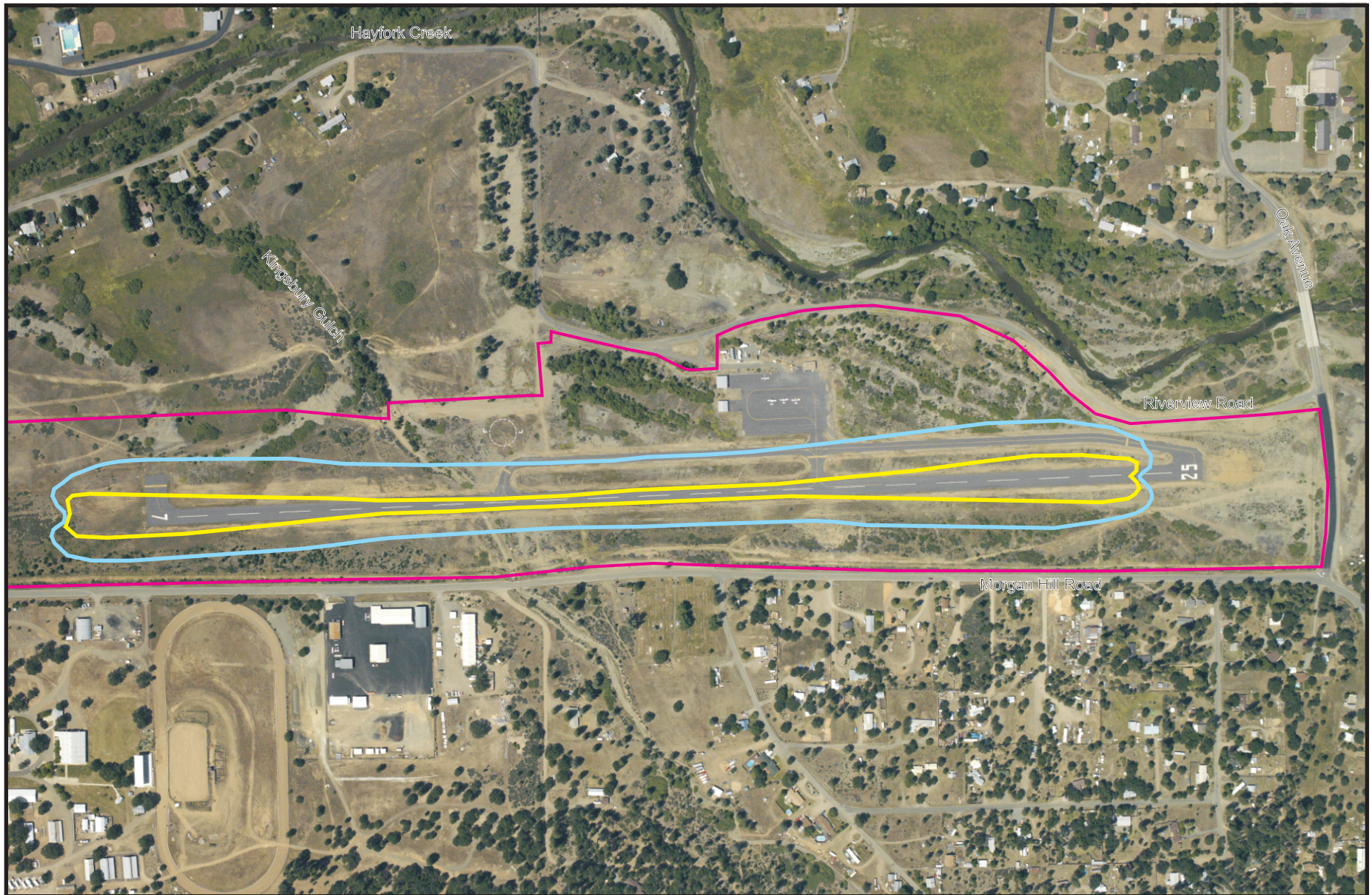
Trinity County owns the Hayfork Airport. Privately owned lands, primarily low-density commercial and residential developments, surround the County-owned airport property to the southeast and north. To the north are primarily sparsely developed residential properties bounded between Riverview Road and a perennial creek, Hayfork Creek. To the south beyond the boundary of Morgan Hill Road are mixed developments including residential. Additional County owned property is located to the south of the airport, including the County Fairgrounds. To the east of Oak Street are primarily undeveloped lands. State Highway 3 borders the airport on the west; the area west of Highway 3 is sparsely developed.

All of the land surrounding the airport is zoned to prevent land uses that are incompatible with aviation.

### ***Land Uses at the Hayfork Airport***

Hayfork Airport occupies approximately 122 acres in the community of Hayfork. Airport land uses are exclusively aviation related.

The airport has a single runway serving single -engine aircraft. Runway 7-25 is 4,115 feet long and oriented east-west. The runway has medium intensity runway lights and basic markings. A rotating beacon identifies the location of the airport at night.



**Figure 3.1.1**  
Existing Noise Contours

- Airport Fence Line
- 60 dBA Noise Contour
- 65 dBA Noise Contour

**Hayfork Airport**  
Hayfork Airport  
Environmental Assessment

WALLACE ENVIRONMENTAL CONSULTING, INC.



The general aviation area consists of the pilots' lounge building and support areas including aircraft parking apron, and two box hangars.

### ***Land Uses in the Vicinity of the Hayfork Airport***

Land uses in the airport vicinity, and potentially affected by the proposed action, include commercial, industrial, public facilities and residential.

Residential land use in the vicinity of the airport is generally confined to the area southeast of the airport and to the north. The County Fairgrounds, designated public facility, are south of the runway. Road maintenance yards operated by the County and Caltrans are also in this area. Sparsely developed land zoned Industrial/ Manufacturing is located across Highway 3 on the west side of the airport.

### ***Relevant Land Use Plans and Regulations***

#### **Hayfork Community Plan**

The *Hayfork Community Plan* (1996) sets forth the comprehensive, long-term land use goals and policies for the community of Hayfork. Specific Plans and zoning ordinances are required to be consistent with adopted Community Plan.

#### **Trinity County General Plan**

The Trinity County General Plan includes a safety element, revised in 2002, which designates safety zones for each of the five general aviation airports in Trinity County to prevent incompatible land use development. The Noise Element of the Trinity County General Plan, adopted in 2003, establishes 60 L<sub>dn</sub> as acceptable for outdoor noise in residential areas for noise generated by transportation sources.

#### **Trinity County Zoning Ordinance**

Trinity County has established specific zoning requirements for land uses around the airport.

#### **Trinity County Airport Land Use Compatibility Plan**

An Airport Land Use Compatibility Plan (ALUCP) was adopted by Trinity County in November 2009. The Trinity County ALUCP promotes compatibility between the County's five general aviation airports and the land uses that surround them by establishing compatibility zones and associated development standards. The Airport Land Use Commission has a responsibility to review proposed development plans (airport master plans and layout plans) for these airports, as well as development plans within the compatibility zones surrounding the airports, including Hayfork Airport, to ensure consistency with the ALUCP.

#### **Land Use Compatibility**

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Since the CNEL 60-dBA and 65dBA noise contours remain within the immediate vicinity of the runway and do not leave the airport property, the conclusion may be drawn that the airport is compatible with surrounding existing and planned land uses. The land uses within the airport are consistent with local, state and federal guidelines for noise compatibility.

As the airport sponsor, Trinity County has provided the FAA with documentation to support the required assurance under 49 USC 47107(a)(10) that appropriate action is being 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 normal airport operations (see Appendix E for Land Use Assurance Letter).

### 3.3 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN’S ENVIRONMENTAL HEALTH AND SAFETY RISKS

The proposed airport projects are confined to existing airport environs. Located in the center of Trinity County, airport improvements have the greatest opportunity to affect the community of Hayfork. The proposed actions do not disrupt or relocate any community and do not disrupt surface transportation or businesses and do not cause the loss or relocation of area jobs.

Table 3.3.1 shows the recent growth of Trinity County and the community of Hayfork. Table 3.3-2 shows the recent employment trends in Trinity County. The proposed action does not substantially affect the socioeconomic environment.

**TABLE 3.3.1  
POPULATION TRENDS – TRINITY COUNTY**

	2000 Population	2010 Population
Trinity County	13,022	13,786
Hayfork	2,315	2,368

\*2010 Census data is most recent data available for Hayfork  
Sources: U.S. Census Bureau 2000, 2010 <sup>1</sup>

**TABLE 3.3.2  
EMPLOYMENT TRENDS – TRINITY COUNTY**

	2000 Jobs	2005 Jobs	2010 Jobs	2014 Jobs
Trinity County	3,150	3,230	2,720	3,020

Source: California Labor Markets Information.<sup>2</sup>

#### ***Environmental Justice***

Executive Order 12898, “Federal Actions Address Environmental Justice in Minority Populations and Low-Income Populations” provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low income populations. The Executive Order makes clear that its provisions apply to programs involving

<sup>1</sup> U.S. Census July 2013 Trinity County, CA Population Estimate is 13,448.

<sup>2</sup> California EDD website – California Labor Market Review report dated 3/2015

Native Americans.

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation.

Ethnically, Hayfork's population (2,368 in 2010) is 84.7 percent white, 8.3 percent American Indian, and 4.9 percent Latino (U.S. Census Bureau, 2010). No other individual ethnic minority comprises more than one percent of the total Hayfork population. According to the U.S. Census Bureau (2010 estimate), about 19.9 percent of the total Trinity County population falls below the poverty line established by the U.S. Government. Trinity County population is concentrated in the communities of Weaverville and Hayfork.

Socioeconomic and Environmental Justice impacts and considerations contained in Executive Order 12898 and the analysis procedures described in Department of Transportation Order 5610.2 have been evaluated for the proposed projects. Neither the proposed action nor the no action alternative will have a disproportionately high and adverse human health and environmental effect on minority and low income populations since there will be no significant off-airport impacts from either alternative.

### ***Socioeconomic Impacts***

The proposed action includes aviation-related and aviation-compatible projects on airport property. None of the projects or the proposed action in general creates the need for additional social services or produces a shift in population patterns, or adversely affects businesses.

## **3.4 AIR QUALITY**

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### ***Regulatory Setting***

#### **Air Quality Management**

Air quality management responsibilities exist at federal, state and local levels of government. Air quality management planning programs developed during the past decade have generally been in response to requirements established by the federal Clean Air Act.

#### **Federal Ambient Air Quality Standards**

The federal government has established ambient air quality standards for several different pollutants. Most standards have been set to protect public health. For some pollutants, standards have been based on other values such as crop protection or nuisance avoidance. Table 3.4.1 provides the federal National Ambient Air Quality Standards (NAAQS).

Air pollution control programs were established in California before federal requirements were enacted. However, federal Clean Air Act (CAA) legislation in the 1970s resulted in a gradual merging of state and federal air quality programs, particularly those relating to industrial sources. Air quality management programs developed by California since the late 1980s generally have responded to requirements established by the federal CAA.

## ***Greenhouse Gases***

Research has shown there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions<sup>3</sup>. In terms of U.S. contributions, the General Accounting Office (GAO) reports that “domestic aviation contributes about three percent of total carbon dioxide emissions, according to EPA data,” compared with other industrial sources including the remainder of the transportation sector (20 percent) and power generation (41 percent)<sup>4</sup>. The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally<sup>5</sup>. Climate change due to GHG emissions is a global phenomenon, so the affected environment is the global climate<sup>6</sup>.

The scientific community is continuing efforts to better understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in a number of initiatives intended to clarify the role that commercial aviation plays in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., NASA, NOAA, EPA, and DOE<sup>7</sup>), has developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions. FAA also funds the Partnership for Air Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and U.S. climate and atmospheric composition. Similar research topics are being examined at the international level by the ICAO<sup>8</sup>.

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<sup>3</sup> *Considering Greenhouse Gases and Climate Under the National Environmental Policy Act (NEPA): Interim Guidance*, FAA Order 1050.1E, Change 1, Guidance Memo #3, Appendix (January 12, 2012).

<sup>4</sup> *Aviation and Climate Change*. GAO Report to Congressional Committees, (2009).  
<http://www.gao.gov/new.items/d09554.pdf>

<sup>5</sup> Alan Melrose, “European ATM and Climate Adaptation: A Scoping Study,” in *ICAO Environmental Report*. (2010).

<sup>6</sup> As explained by the U.S. Environmental Protection Agency, “greenhouse gases, once emitted, become well mixed in the atmosphere, meaning U.S. emissions can affect not only the U.S. population and environment, but other regions of the world as well; likewise, emissions in other countries can affect the United States.” Climate Change Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, *Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act 2-3* (2009), available at <http://epa.gov/climatechange/endangerment.html>.

<sup>7</sup> National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, Environmental Protection Agency, and U.S. Department of Energy.

<sup>8</sup> Lourdes Q. Maurice and David S. Lee. *Chapter 5: Aviation Impacts on Climate*. Final Report of the International Civil Aviation Organization (ICAO) Committee on Aviation and Environmental Protection (CAEP) Workshop. October 29 – November 2, 2007, Montreal.  
[http://www.icao.int/icaonet/cnfrst/CAEP/CAEP\\_SG\\_20082/docs/Caep8\\_SG2\\_WP10.pdf](http://www.icao.int/icaonet/cnfrst/CAEP/CAEP_SG_20082/docs/Caep8_SG2_WP10.pdf)



## ***Existing Air Quality Conditions in North Coast Air Basin***

### **Climate and Meteorological Conditions**

Hayfork Airport is located in the center of Trinity County. Trinity County, along with Del Norte, Humboldt, Mendocino Counties and a portion of Sonoma County, comprises the North Coast Air Basin (NCAB). Three of the counties, Trinity, Del Norte and Humboldt, are regulated by the North Coast Unified Air Quality Management District (NCUAQMD). Meteorological conditions in the NCAB are influenced by the proximity to the Pacific Ocean and a series of mountain ranges and valleys that parallel the coast. Hayfork's climate is influenced by its location in the mountainous Coast Range, with hot and dry summers and snow in the winter. Mean maximum temperatures range from 49°F in January to 94°F in July and August; mean minimums for January and July are 28°F and 50°F, respectively. Annual precipitation is approximately 38 inches, primarily falling as snow in the winter.

The small population and the distance from industrialized and urban areas usually result in good air quality for the NCAB as a whole.

#### **Ozone**

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>), react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

Federal standards for ozone have been set for an 8-hour averaging time. The federal 8-hour ozone standard is 0.075 ppm, not to be exceeded more than three times in any 3-year period.

#### **Carbon Monoxide**

Federal CO standards have been set for both 1-hour and 8-hour averaging times. The federal 1-hour standard is 35 ppm; the standard is 9 ppm for the 8-hour averaging period. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream.

Motor vehicles are the dominant source of CO emissions in most areas and generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion. High CO levels develop primarily during the winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

#### **Inhalable Particulate Matter**

Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Few particles larger than 10 microns in diameter reach the lungs. Consequently, the federal air quality standards for particulate matter apply to particulate matter 10 microns or less in diameter (generally designated as PM<sub>10</sub>). The federal PM<sub>10</sub> standards are 150 µ/m<sup>3</sup> as a 24-hour average.

PM10 conditions in Trinity County are a result of a mix of rural and urban sources, including wood stove and wildfire smoke, controlled burns, agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

A federal standard for particulate matter less than 2.5 microns in diameter (PM2.5) was issued in July 1997 by Executive Order of the President. PM2.5 is sometimes referred to as "fine particulate matter". The PM2.5 standard has been set at a concentration of 15  $\mu\text{m}^3$  annually and 35- $\mu\text{m}^3$  daily. The federal standard for PM10 is being maintained so that relatively larger, coarser particulate matter continues to be regulated.

### ***General Conformity Thresholds***

The U.S. Environmental Protection Agency (EPA) oversees state and local implementation of CAA requirements. It sets NAAQS for criteria pollutants (discussed below). EPA also sets emission standards for mobile sources, such as on-road and off-road motor vehicles. EPA also sets nationwide standards.

The conformity provisions of the CAA are designed to ensure that federal agencies contribute to efforts to achieve the NAAQS. EPA has issued two regulations implementing these provisions. The general conformity regulation addresses actions of federal agencies other than the Federal Highway Administration and the Federal Transit Administration. General conformity applies to a wide range of actions or approvals by federal agencies. Projects are subject to general conformity if they exceed emissions thresholds set in the rule and are not specifically exempted by the regulation. Such projects are required to fully offset or mitigate the emissions caused by the activity, including both direct emissions and indirect emissions over which the federal agency has some control. Certain Federal actions are exempt from the requirement of the General Conformity Rule because they result in no emissions or emissions are clearly below the rule's applicable emission threshold levels.

A conformity determination is required when the annual net total of direct and indirect emissions from a Federal action occurring in a nonattainment or maintenance area equals or exceeds the annual threshold levels. If a Federal action's emissions are below threshold levels, then the action does not need a conformity determination and is presumed to conform with the applicable SIP, as long as the action is not regionally significant.

The above described thresholds described are directed toward criteria pollutants. The programs in place to reduce public exposure to other pollutants, those that increase the public's risk of developing cancer, are called *hazardous air pollutants* (HAPs) (federal law) and *toxic air contaminants* (TACs) (California law).

### ***Air Quality Monitoring Data***

The existing air quality conditions in the Project area can be characterized in terms of the ambient air quality standards that the federal government has established for various pollutants (Table 3.4.1) and by monitoring data collected in the region. PM10, PM2.5, CO, and ozone concentrations are measured at several monitoring stations in the NCAB. However, the single monitoring station in Trinity County measures only PM10.

**Table 3.4.1: National Ambient Air Quality Standards (NAAQS)**

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m <sup>3</sup> )	8 hour	None	
	35 ppm (40 mg/m <sup>3</sup> )	1 hour		
Lead	0.15 µg/m <sup>3</sup>	Rolling 3 Month Average	Same as Primary	
Nitrogen Dioxide (NO <sub>2</sub> )	53 ppb (100 µg/m <sup>3</sup> )	Annual (Arithmetic Mean)	Same as Primary	
	100 ppb	1-hour	None	
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup>	24 hour	Same as Primary	
Particulate Matter (PM <sub>2.5</sub> )	12.0 µg/m <sup>3</sup>	Annual (Arithmetic Mean)	15.0 µg/m <sup>3</sup>	
	35 µg/m <sup>3</sup>	24 hour	Same as Primary	
Ozone	0.075 ppm (2008 std)	8 hour	Same as Primary	
Sulfur Dioxide			0.5 ppm	3 hour
	75 ppb	1 hour		

Source: EPA (updated October, 2011)

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

mg/m<sup>3</sup> = milligrams per cubic meter

Monitoring data concentrations are typically expressed in terms of ppm or µg/m<sup>3</sup>. The nearest air quality monitoring station in the vicinity of the project site is the monitoring station in Weaverville at the Courthouse, approximately 19-miles northeast of Hayfork.

Monitoring data represent air quality monitoring data for the last 3 years (2012–2014) in which complete data are available. The monitoring station has experienced violations of state PM<sub>10</sub> standards. There were no violations of any federal standards or state standards for 8-hour ozone, CO or PM 2.5 observed at the monitoring station during this time period.<sup>9</sup>

<sup>9</sup> California Air Resources Board iADAM Air Quality Data Statistics: Top 4 Summary <http://www.arb.ca.gov/adam>



## ***North Coast Air Basin Federal Attainment Status***

Air basins, such as the NCAB, are classified as either attainment or nonattainment with respect to federal ambient air quality standards. Comparing actual monitored air pollutant concentrations to federal standards determine these classifications. Federal definitions of attainment classifications (U.S. Environmental Protection Agency 2007) include:

- Nonattainment: any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
- Attainment: any area that meets the national primary or secondary ambient air quality standard for the pollutant.
- Unclassifiable: any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

Federal designations for the NCAB are shown in Table 3.4.2.

**Table 3.4.2: Attainment Status for North Coast Air Basin**

<b>Pollutant</b>	<b>Federal Designation</b>
Ozone (O <sub>3</sub> )	Unclassified/Attainment
Particulate Matter (PM <sub>10</sub> )	Unclassified
Particulate Matter (PM <sub>2.5</sub> )	Unclassified/Attainment
Carbon Monoxide (CO)	Unclassified/Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Unclassified/Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Unclassified
Lead	Unclassified/Attainment

Source: California Air Resources Board, 2013.

## ***Existing Emissions***

In Trinity County, the largest sources of Reactive Organic Gases (ROG) emissions are mobile sources, with recreational boats producing most of the emissions in the Other Mobile Sources category. The largest source of CO emissions is “managed burning”, according to CARB, which is categorized under Miscellaneous Processes. However, wildfires contribute significantly to air pollution in Trinity County. On-Road Motor Vehicles produce the primary source of Nitrogen Oxide (NOx) emissions. The largest source of particulate matter emissions is Miscellaneous Processes, with unpaved road dust and burning being the largest component of this category. Elevated PM10 and CO levels, are generally due to the wildfires that burn during the summers in Trinity County and surrounding counties.

## 3.5 WATER QUALITY

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### ***Introduction***

The Hayfork Airport is located at approximately 707 m (2,321 ft) in elevation. Hayfork Creek, which is a tributary to the South Fork Trinity River, flows in a well-defined channel along the northern edge of the airport, outside of airport property. The airport is located on a terrace along the south bank and mostly above the 100-year floodplain for Hayfork Creek. Kingsbury Gulch, which is an intermittent tributary to Hayfork Creek, flows from south to north through the airport and underneath the airport's only runway in a concrete culvert. The entire length of Kingsbury Gulch through the airport is within the 100-year flood plain.

### ***Climate - Rainfall***

Average precipitation in Hayfork is approximately 33-inches per year. The majority of the annual precipitation occurs during the months of November through April in the form of snow. The summer months average less than one inch of rain.

### ***Surface Water***

#### **Hayfork Creek**

Hayfork Creek, located less than a half mile north of the airport, drains a basin of 234,000 acres and is the largest tributary of the South Fork Trinity River, which flows into the Trinity River and then to the Klamath River before reaching the Pacific Ocean. The middle reach of Hayfork Creek is primarily contained within private lands and runs in an approximate east to west direction along the Hayfork Valley floor. Hayfork Creek is listed as an impaired water body under Section 303d of the Clean Water Act, due to sediment and siltation. The EPA has established a Total Maximum Daily Load (TMDL) for sediment discharges to Hayfork Creek.

#### **Kingsbury Gulch**

Kingsbury Gulch runs through the airport property and underneath Runway 7-25 through a concrete 3-box culvert. Kingsbury Gulch is an intermittent watercourse with seasonal flow and is contained within a 3,795-acre (5.9 mi<sup>2</sup>) drainage. The stream slope varies from 1.4% between the runway and Morgan Hill Road to 1.3% inside the box culverts to 0.5% downstream of the runway. Typically, the channel is dry by early summer and remains so until winter storms saturate the soil enough to result in runoff. The bankfull channel within the airport is approximately 25 feet wide. During a field review in July 2010, Kingsbury Gulch was dry (North Fork Associates 2010). (See Figure 3.5.1)

During a field review in May 2010, a few days after a rainfall event, Kingsbury Gulch was flowing at about 2 cubic feet per second and had likely been running for several months (Figure 3.5.1). One 20-ft long pool was observed, which had a maximum depth of 1 foot.

#### **Jurisdictional Wetlands**

There are several depression seasonal wetlands formed in "dredge hollows" that remain on the site from past mining activities. Most of the wetlands are outside of the project footprint, in the vicinity of the pilot's lounge and tie-down areas, but one 0.03-acre wetland is located in the area to be disturbed by the taxiway extension. (See Figures 3.8.1 and 4.2.4.1, and Sections 3.9 and 4.2.4 for more information.) The

Kingsbury Gulch at 3-box culvert under Runway 7-25.  
Photo was taken July 2010, looking north.



Kingsbury Gulch at 3-box culvert under Runway 7-25.  
Photo taken May 2010, after a rainfall event. Photo is looking south.



**Figure 3.5.1**  
Site Photos: Kingsbury Gulch



USACOE has issued a preliminary wetland jurisdictional determination for the Hayfork Airport (Appendix D).

### **Internal Airport Drainage**

Internal drainage is controlled by natural topography. In the western portion of the airport, most surface water runoff is directed into Kingsbury Gulch. In the eastern portion of the airport, most surface water runoff flows into Hayfork Creek, north of the airport. Unpaved areas on the airport are highly permeable, limiting the amount of surface runoff during most normal rain events. Kingsbury Gulch through the airport is a FEMA designated floodplain.

The surface water features on the airport were mapped and evaluated for potential jurisdictional status as waters of the United States (Hayfork Wetland Delineation, 2010). The wetland delineation identified seasonal wetlands and Kingsbury Gulch, an intermittent stream (discussed in detail in Section 3.9).

### **Flooding**

Portions of the airport are within a FEMA designated 100-year flood boundary. The entire length of Kingsbury Gulch through the airport is within the floodplain; the taxiway extension and the proposed culvert will be constructed in the floodplain. As mentioned above, Kingsbury Gulch runs underneath Runway 7-25 through a concrete culvert (see Figure 1.3 for location of Kingsbury Gulch). Section 3.10 discusses the relationship between floodplains and the airport.

### **Groundwater**

Groundwater recharge occurs through direct percolation of rainfall and stream flow seepage from the Kingsbury Gulch. Recharge may also be affected by seepage from Hayfork Creek which flows from east to west near the northern boundary of the airport. There are no groundwater wells on the airport.

### **Erosion Potential**

The soils to be disturbed consist mostly of “Atter-dumps, dredge tailings-xerofluents complex, 2 to 9 percent slopes (North Fork Associates 2010). These soils are generally alluvium formed in alluvial fans, stream terraces and flood plains and altered by dredging operations adjacent to perennial streams. They consist mainly of extremely gravelly loamy sand. They are somewhat excessively drained. Runoff is slow and the hazard of water erosion is slight. (NRCS 1998)

## **3.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) [RECODIFIED AT 49 USC 303]**

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### ***Introduction***

Section 4(f) of the US Department of Transportation Act of 1966 was re-codified in 1983 in 49 USC 303, though the provision is still commonly referred to as “Section 4(f).” Section 4(f) expressly prohibits agencies from using land from significant publicly owned parks, recreation areas, wildlife & waterfowl refuges or any significant historic site unless there is no prudent or feasible alternative to that use.

There are no publicly owned parks, recreation areas, wildlife & waterfowl refuges or any significant historic site within, or adjacent to, the Hayfork Airport.

## **3.7 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES**

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This section discusses the cultural context of the airport, identifies cultural resources in the vicinity, and describes the specific regulatory framework identified in FAA Orders 1050.1E and 5050.4B.

As specified in the National Historic Preservation Act of 1966 (NHPA), 36 CFR Part 800, an Area of Potential Effect (APE) was established as a study area for determining the presence of any potential historic, architectural, archaeological or cultural resources in the area. A comprehensive cultural resources inventory and evaluation of the APE was completed.

### ***Cultural Resources Identified in the Vicinity of the Airport***

The literature review and field survey identified no cultural resource artifacts or potentially sensitive resource areas within the APE. The survey results are provided in Appendix B of the EA. On January 21, 2011, the FAA submitted the results of the survey and its determination to the California State Historic Preservation Officer (SHPO) for concurrence. The SHPO concurred with the APE and the No Historic Properties Affected determination on March 7, 2011. Copies of the consultation letters are provided in Appendix D.

## **3.8 FISH, WILDLIFE AND PLANTS**

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This section discusses federal laws, policies and regulations that influence management and protection of biological resources. This section also provides information on biotic communities located in and immediately adjacent to the airport.

### ***Biological Resource Management***

Section 7 of the federal Endangered Species Act (ESA) applies to federal agency actions and sets forth requirements for consultation to determine if the proposed action “may affect” an endangered or threatened species. If an agency determines that an action “may affect” a threatened or endangered species, then Section 7(a)(2) requires each agency to consult with USFWS or NMFS, as appropriate, to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any Federally listed endangered or threatened species or result in destruction or adverse modification of critical habitat. Additionally, Section 9 prohibits a Federal agency from taking, without an incidental take permit, any endangered species.

The NMFS has designated a portion of the airport as Critical Habitat for the Southern Oregon Northern California Coasts (SONCC) coho salmon. This designated area is located on Kingsbury Gulch.

### ***Federally Designated Critical Habitat***

The proposed projects addressed in this EA fall within the boundaries of Critical Habitat for SONCC coho salmon (*Oncorhynchus kisutch*) as designated by the NMFS.

Final ruling on critical habitat for SONCC coho salmon was established by the NMFS on May 5, 1999. The designation includes all rivers (including estuarine areas and tributaries) between the Mattole River in

California and the Elk River in Oregon, inclusive (64 FR 24049):

“Critical habitat is designated to include all river reaches accessible to listed coho salmon between Cape Blanco, Oregon, and Punta Gorda, California. Critical habitat consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches (including off-channel habitats) in hydrologic units and counties identified in Table 6 of this part [includes the South Fork Trinity River (SFTR) in Trinity County]. Accessible reaches are those within the historical range of the ESU that can still be occupied by any life stage of coho salmon. Inaccessible reaches are those above specific dams identified in Table 6 of this part or above longstanding, naturally impassable barriers (i.e. natural waterfalls in existence for at least several hundred years).” No dams or barriers were identified on the SFTR (64 FR 24061).

The “adjacent riparian zone” was defined in the preamble to the Critical Habitat Designation as follows:

“...Specifically, the adjacent riparian area is defined as the area adjacent to a stream that provides the following functions: shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.” (64 FR 24055).

SONCC coho salmon designated critical habitat is present in Kingsbury Gulch upstream, within, and downstream of the airport.

### ***Essential Fish Habitat***

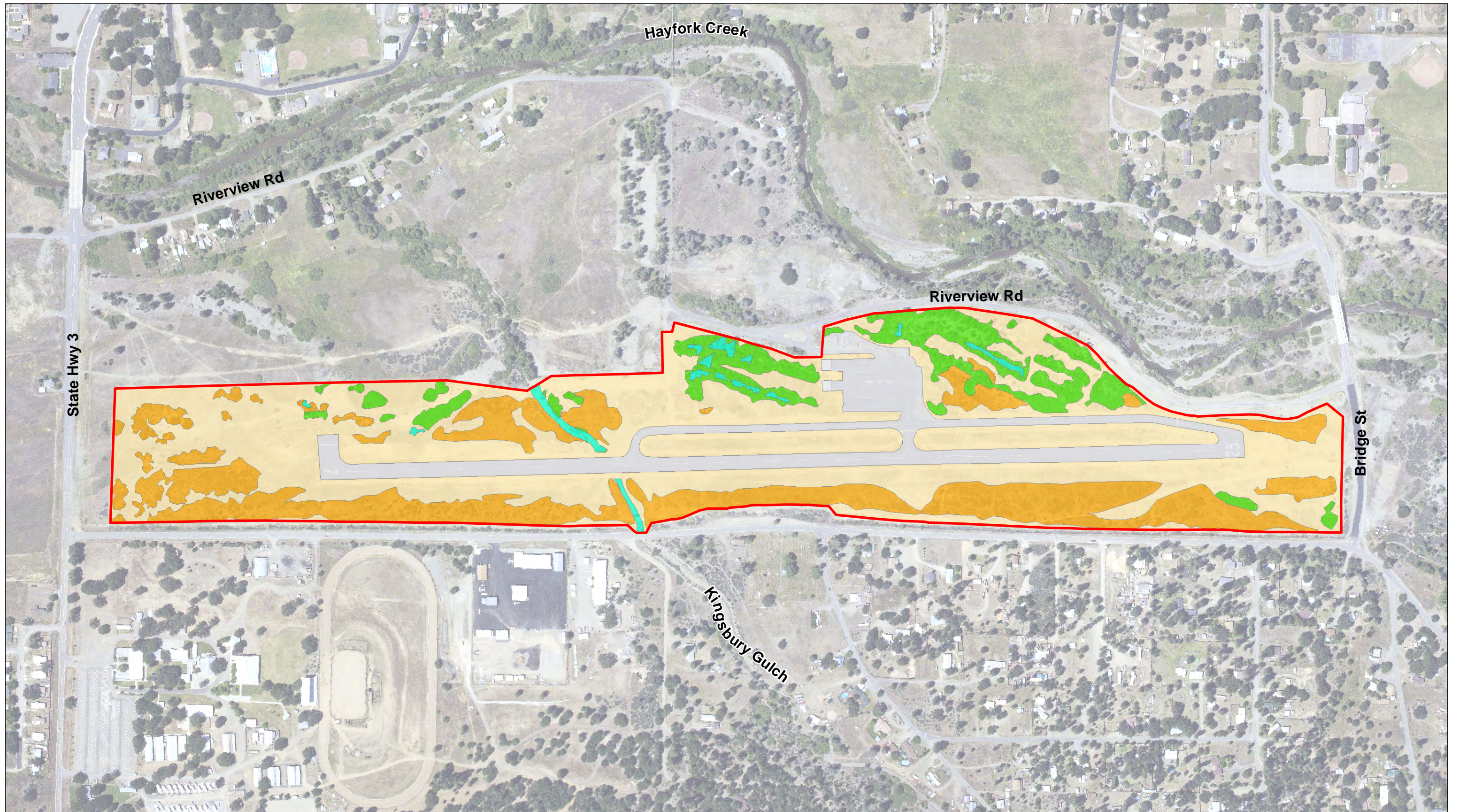
The Magnuson-Stevens Fishery Conservation Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires all Federal agencies to consult with NMFS on all actions or proposed actions (permitted, funded, or undertaken by the agency) that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to commercially important fish, including various Pacific salmon species, for spawning, breeding, feeding, and growth to maturity. Freshwater EFH for Pacific salmonids includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically, accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers, and long-standing impassable natural barriers. NMFS interprets EFH to include aquatic areas and their associated physical, chemical, and biological properties used by fish that are necessary to support a sustainable fishery and the contribution of the managed species to a healthy ecosystem.

The project area contains EFH for SONCC coho salmon. Similarly, EFH consultation is required for Upper Klamath and Trinity rivers Chinook salmon (*Oncorhynchus tshawytscha*) ESU habitat, even though this species is not listed under ESA.

### ***Biotic Communities***

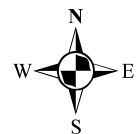
Within the airport are five biotic communities: Ruderal, Chaparral/Scrub-Shrub, Riparian, Seasonal Wetland (dredge hollow wetlands) and Developed. Vegetation of the various biotic communities located throughout the airport is described below. Figure 3.8.1 illustrates the location and extent of various habitats throughout the airport. Each community is described below. Section 3.9 describes federally listed threatened and endangered species on and near the airport.





**Figure 3.8.1**

0 100 200 400  
Scale in Feet



- |                          |                                      |
|--------------------------|--------------------------------------|
| Study Area (±86 acres)   | Shrub Scrub (±20 acres)              |
| Wetland/Waters (±1 acre) | Ruderal/Annual Grassland (±45 acres) |
| Riparian (±8 acres)      | Developed/Paved (±12 acres)          |

**HABITAT MAP**  
Hayfork Airport  
Hayfork, Trinity County, CA





## **Ruderal**

The Ruderal vegetation community is the herbaceous weedy areas that are continually cleared or do not support woody vegetation because of cobbles on the surface. This habitat occurs adjacent to all paved areas and in the infield between the runway and taxiway. Other areas that are not characterized by woody vegetation are also considered ruderal. Many of these areas are cobbly or rocky and support only a sparse vegetation layer. Common species in the ruderal areas include yellow starthistle, prickly lettuce, hedge mustard, rose clover, nude buckwheat, moth mullein, cheat grass squirreltail, and ripgut grass.

## **Chaparral/Scrub-Shrub**

The Chaparral/Shrub-scrub community support several woody species among the ruderal herbaceous species. These shrubby areas are intermixed with the ruderal areas. In areas where cobbles are not at the surface, shrubs colonize the herbaceous community and the habitat converts from ruderal to chaparral/shrub-scrub if enough years go by without scraping or disturbance. The south side of the airport, away from the runway, has not been scraped in several years and a young chaparral community is forming. Common shrubs in this community include sourberry (skunkbrush), greenleaf manzanita, buckbrush, birch-leaf mountain mahogany, and Himalayan blackberry.

## **Riparian**

The Riparian vegetation community occurs among the mined areas on the north side of the study area, associated with the undulating landscape and the “dredge hollows.” Riparian hydrophytic vegetation mixes with upland non hydrophytic vegetation higher on the slopes. Riparian vegetation includes black cottonwood, pacific and arroyo willow, Himalayan blackberry, blackcap raspberry, California rose, gooseberry, and brown dogwood.

## **Seasonal Wetland**

Several depressional wetlands are mapped on the project site. These features are Seasonal Wetlands in the generic sense but are referred to here as “Dredge Hollows” because they are a product of past mining activities. The dredge hollows occur in several locations on the north side of the runway. These depressions are characterized by rocky/cobbly side slopes with either a flat or bowl shaped bottom. Soil in the bottoms are fine grained (clays and silts) and many have a highly organic upper layer. The fines tend to retard water percolation and many (but not all) of the hollows support a wetland condition. Vegetation in the wetter hollow bottoms is typically herbaceous and hydrophytic. Vegetation in the drier hollow bottoms is typically woody and mostly hydrophytic. The slopes of the hollows, above the wetland bottom, support woody riparian vegetation. Plant species include little western bittercress, spreading rush, poverty rush, water chickweed, sticky cinquefoil, western buttercup, and curly dock.

## **Developed/Runway**

A large portion of the action area supports a developed/paved landscape. This area includes the existing runway and taxiway, airplane hangars, pilots’ lounge and apron. Little to no vegetation occurs within these areas. Patches of ruderal, weedy vegetation occur between the paved areas.

## ***Special Status Species of Flora and Fauna***

For the purposes of this EA, special status species are plants and animals that are legally protected under

the federal Endangered Species Act (ESA). Special status plants and animals are species in the following categories:

- Species listed or proposed for listing as threatened or endangered under the (federal) ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register [proposed species]);
- Species that are candidates for possible future listing as threatened or endangered under ESA; or
- Animals listed as sensitive by the USDA Forest Service.

No federally listed plant species are known to occur on the airport. A list of federally listed special status animal species known to occur on the airport and the vicinity is shown in Table 3.8.1.

**Table 3.8.1.  
Federal Threatened, Endangered, Proposed Threatened and Proposed Endangered Species**

<b>Fish</b>	
Southern Oregon/ Northern California coho salmon ( <i>Oncorhynchus kisutch</i> )	Threatened
<b>Invertebrates</b>	
Big Bar Hesperian ( <i>Vespericola pressleyi</i> )	Sensitive Species (USDA FS)
Conservancy Fairy Shrimp ( <i>Branchinecta conservation</i> )	Endangered
Vernal Pool Fairy Shrimp ( <i>Branchinecta lynchi</i> )	Threatened
Vernal Pool Tadpole Shrimp ( <i>Lepidrud packardi</i> )	Endangered
<b>Birds</b>	
Golden eagle ( <i>Aquila chrysaetos</i> )	Bald and Golden Eagle Protection Act
Western yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	Threatened
Northern spotted owl ( <i>Strix occidentalis caurina</i> )	Threatened
<b>Mammals</b>	
Fisher – West Coast DPS ( <i>Martes pennant</i> )	Proposed Threatened

### ***Federally Listed Animals***

Biological and resource data base reviews within the vicinity of the airport indicate that nine federally listed special status animal species could occur on, or near the airport. Each of those species and its likely occurrence on the airport is described below and listed in Table 3.8.1.

#### **Southern Oregon/ Northern California coho salmon (*Oncorhynchus kisutch*)**

Habitat: Spawn in large main stem rivers (i.e., Klamath/Trinity River system) in riffles and pool-tails and rear in freshwater.

Hayfork Creek and Kingsbury Gulch are designated as Critical Habitat for this species, including Kingsbury Gulch on the airport. However, the closest known species current distribution is in Olsen and Corral creeks (lower Hayfork Creek tributaries) about 29 km (18 mi) from the airport (USDA Forest Service, 2005).

The Hayfork Airport is not located within the Southern Oregon/ Northern California (SONCC) coho salmon's known distribution. However, the FAA has prepared a biological assessment to determine potential effects of the project on the designated critical habitat within the airport (Appendix A).

Coho salmon were historically distributed throughout the North Pacific Ocean from central California to Point Hope, Alaska, through the Aleutian Islands, and from the Anadyr River, Russia, south to Hokkaido, Japan (NMFS 1997). This species probably inhabited most coastal streams in Washington, Oregon, and northern and central California (NMFS 1997). After a coast-wide status review of coho salmon, NMFS proposed the SONCC ESU as threatened on July 25, 1995 (60 FR 38011). On 6 May 1997, the final rule listing SONCC coho salmon as threatened was published (62 FR 24588).

Nearly all coho salmon adults destined to spawn in the Klamath/Trinity River system enter the estuary in late-September through October as three year old fish after two growing seasons in the ocean (NMFS 1997). However, some precocious males, called "jacks," return to spawn after only six months at sea (NMFS 1997). In the Trinity River, adults spawn November through January (Hampton 1988). Coho salmon are known to spawn mostly in pool-tails and riffles with a range of water depths of 10–30 cm, substrate sizes 3.9– 8 cm in diameter, in water velocities of 0.3–0.75 m/sec., and the eggs are typically buried 18–40 cm deep (Sandercock 1991). Eggs hatch in four to 12 weeks, depending on the water temperature, and alevins (larval salmonids) remain in the nests (redds) until mid-May (Leidy and Leidy 1984). Juveniles rear in freshwater for up to 15 months before migrating to the ocean as smolts (NMFS 1997). It is assumed that the timing and habitat utilization by SONCC coho salmon in the Trinity River are similar to SONCC coho salmon in the South Fork Trinity River (SFTR).

Important habitat components for coho salmon fry are instream habitat complexity, including a mixture of pools and riffles, large woody debris, and well oxygenated cool water, with preferred temperatures ranges of 50–59°F (10–15°C) (Reiser and Bjornn 1979). Coho salmon fry initially congregate in quiet backwaters, side channels, and small creeks, especially in shady areas with overhanging branches. As they grow, they move to more open waters (Sandercock 1991). Since juvenile coho salmon prefer the slower moving sections of streams, the most productive coho nursery habitats tend to be small streams, which have a larger portion of slack water to midstream area.

The historical upper limit of SONCC coho salmon in the SFTR and Hayfork Creek is unknown. Olsen and Corral creeks (lower Hayfork Creek tributaries) represent the current known upstream extent of SONCC coho salmon distribution in Hayfork Creek (USDA-FS 2005), which is approximately 18 miles downstream of the airport. Observations of juvenile SONCC coho salmon in these locations were made in the summer/fall months of 2002 by the CDFG during presence/absence surveys (CDFG 2003, as cited in USDA-FS 2005). This observation may have

resulted from the 2001 adult escapement and was considered the widest spawning distribution in the Trinity River Basin in recent memory (USDA-FS 2005). Since SONCC coho salmon have not been observed in Hayfork Creek within 18 miles of the airport, they are not expected to be present in Kingsbury Gulch.

### **Big Bar Hesperian (*Vespericola pressleyi*)**

Habitat: Associated with conifer or hardwood forests in permanently damp areas within 200 m (656 ft) of stable streams, springs, and seeps within Trinity County, California.

No suitable habitat is present; the airport is not located within a conifer or hardwood forest.

Species previously documented in 1984 about 21 km (13 mi) from the airport (CDFW 2010).

### **Conservancy fairy shrimp (*Branchinecta conservatio*)**

Habitat: This species inhabits somewhat large, cool water vernal pools with moderately turbid water.

Conservancy fairy shrimp is a small crustacean in the Branchinectidae family. Similar to other vernal pool crustaceans, the life cycle of Conservancy fairy shrimp is closely tied to the ephemeral conditions of the pool in which they live. Vernal pools that support Conservancy fairy shrimp generally persist until June. The average age of maturity is 49 days, and individuals may live up to 154 days. The female fairy shrimp carries its eggs in a brood sac. Eggs then either drop to the bottom of the pool or remain in the brood sac until the mother dies and sinks to the pool bottom. The eggs subsequently dry out as the pool dries at the end of the rainy season. The resting eggs, known as cysts, remain in the dry pool bed until rain stimulates hatching in the following season. Hatching of the eggs can begin within the same week that the pool starts to fill with rainwater.

The CNDDDB does not document occurrence of Conservancy fairy shrimp within the project region (CDFW 2013). Potential habitat for Conservancy fairy shrimp does not occur in the study area.

### **Vernal pool fairy shrimp (*Branchinecta lynchi*)**

Habitat: Vernal pool fairy shrimp occur in a variety of vernal pool habitats, including grassy and rock-bottomed pools, but are most often found in smaller vernal pools measuring less than 0.05 acres.

Vernal pool fairy shrimp is a small crustacean that occurs in association with vernal pools. This species is adapted to survive the seasonal flooding and drying of the pools in which they live. The average time of maturity of vernal pool fairy shrimp is 41 days, but can be as little as 18 days in warmer pools. After maturing this species breeds and produces eggs that are dropped to the bottom of the pool. Adult fairy shrimp then die at the end of the wet season after the pool dries out. Remaining eggs are then protected throughout the dry season by a thick outer covering.

The CNDDDB does not document occurrence of Vernal pool fairy shrimp within the project region (CDFW 2013). Potential habitat for Vernal pool fairy shrimp does not occur in the study area.

### **Vernal pool tadpole shrimp (*Lepidurus packardii*)**

Habitat: shallow pools found in grass-bottomed swales in unplowed grasslands.

Vernal pool tadpole shrimp is a small crustacean that inhabits vernal pools and swales of the Central Valley, containing clear to highly turbid water. The life history of this species is closely tied to the seasonal cycle of the vernal pool that it inhabits and similar to that of vernal pool fairy

shrimp. After winter rainwater fills the pool, the population is reestablished from cysts that lie dormant in the dry pool sediments. The species matures at approximately three to four weeks after the pools have been filled. Some cysts hatch immediately, while others remain dormant until the subsequent rainy season.

The CNDDDB does not document occurrence of Vernal pool tadpole shrimp within the project region (CDFW 2013). Potential habitat for Vernal pool fairy shrimp does not occur in the study area.

### **Golden eagle (*Aquila chrysaetos*)**

Habitat: Associated with open woodlands and oak savannahs, grasslands, chaparral, sagebrush flats; nests on steep cliffs or medium to tall trees.

Species may occur while foraging. No suitable nesting habitat present.

Species previously documented in 2004 about 1.5 miles from the Project along Big Creek, a tributary to Hayfork Creek (CDFW 2010).

### **Western yellow-billed cuckoo (*Coccyzus americanus*)**

Habitat: Associated with dense, closed canopy riparian forest with dense understory. Distribution limited to scattered locations in the Sacramento Valley.

Species unlikely to occur as the airport is not located within the known species distribution. A limited amount of closed riparian forest is present along Hayfork Creek near the airport; however, no suitable habitat is present in the Taxiway Extension.

### **Northern spotted owl (*Strix occidentalis caurina*)**

Habitat: Usually found in mature and old-growth coniferous forest with dense multi-layered structure.

No suitable nesting or roosting habitat occurs in the airport; however, possible foraging habitat is present.

Known spotted owl territories have been documented at a distance greater than 3 km (2 mi) from the airport (CDFW 1998, 2010), which is greater than the northern spotted owl noise disturbance distance for planned construction (USFWS 2008). No suitable nesting or roosting habitat will be removed.

Designated Critical Habitat for the northern spotted owl is located about 7.3 km (4.5 mi) from the airport.

Spotted owl pairs typically occupy the same territories each year as long as suitable habitat is present. However, nesting may not occur every year, and survival of offspring varies annually and geographically. Nest trees are often used more than one year, but occasionally a pair will switch to a new nest tree within its home range. Spotted owls begin their annual breeding cycle in late winter (late February to early March) when pairs begin to roost together (Thomas 1990). One to three eggs (usually two) are laid in March or April. Incubation lasts for approximately 30 days, and juvenile owls leave the nest three to five weeks after hatching. Many leave the nest site well before they are able to fly. Both parents feed the young until August or September. The young

become independent in September or October, at which time they disperse from the parental nest areas.

Spotted owls are mainly found in old-growth forests characterized by high canopy closure (> 70 percent), multi-layered canopy structure, large-diameter trees, downed logs, and snags (Thomas 1990, Buchanan 1991). The multi-layered canopy provides various microclimates, which helps spotted owls regulate their body temperature and provides foraging, roosting, and nesting habitat. While nests are found mainly in mature stands, they have also been observed in younger stands where the forest has been managed for uneven-aged stand composition, or in areas managed for rapid tree growth, facilitating habitat development in a relatively short period. Nests are found in tree or snag cavities, on platforms (abandoned raptor or raven nests, squirrel nests, mistletoe brooms, debris accumulations), or on top of broken-off snags. In more mature forests, spotted owls tend to use broken-top trees and cavities more frequently than platforms (LaHaye 1988, Buchanan 1991, Gutiérrez et al. 1995). Dispersal habitat includes stands that have at least an 11-inch average tree diameter and at least 40% canopy closure (Thomas 1990).

Barred owls (*Strix varia*), which have expanded their distribution into the western United States, occupy a similar ecological niche as that of spotted owls. They forage in similar habitats and have overlapping diets, although barred owls appear to be more tolerant of disturbance and habitat fragmentation (Dark et al. 1998). Barred owls exhibit a behavioral dominance, which can lead to either displacement of spotted owls (Hamer 1988) or hybridization with spotted owls (Hamer et al. 1994). Competition by barred owls for foraging, roosting, and nesting resources results in reduced site occupancy, reproduction, and survival (USFWS 2008a). There is also some indication that barred owls may actually prey on spotted owls (Leskiw and Gutiérrez 1998).

Past habitat loss, current habitat loss, and competition with barred owls are the most pressing current threats to the northern spotted owl (USFWS 2008a). The result of climate change on vegetation and disease (e.g., sudden oak death, West Nile virus) may also threaten northern spotted owl survival; however, at this time, these threats are uncertain (USFWS 2008a).

The USFS and CDFG provided best available data on current northern spotted owl territories and activity centers near Hayfork Airport (Figure 3.8.2) (P. Krueger and C. Trillo, USFS, unpublished data, December 2009 and CDFG 1998). A total of 13 northern spotted owl territories were located within a 8-km (5-mi) buffer of Hayfork Airport and were last verified between 1982 and 2002; however, none were located within a 3.2-km (2-mi) buffer of the airport. The closest northern spotted owl activity center and territory were 4.9 km (3 mi) and 4.1 km (2.5 mi), respectively, from the project area.

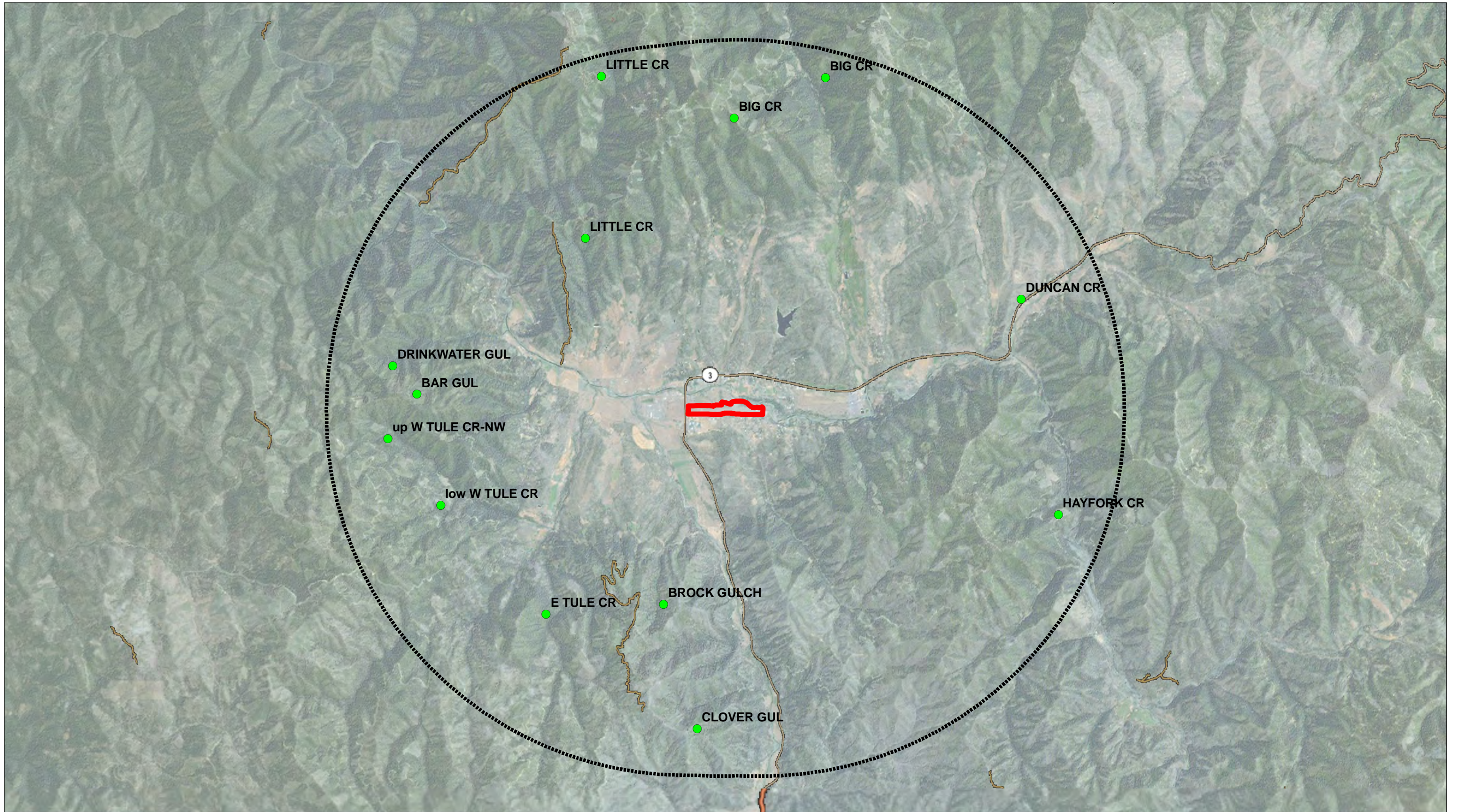
### **Fisher – West Coast DPS (*Martes pennant*)**

Habitat: Associated with cavities, snags, logs, and rocky areas for cover and denning within mature, dense forest with high percent canopy closure.

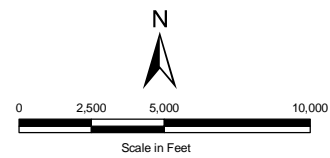
No suitable habitat is present in the airport.

Species was documented in 1968 within 1.1 km (0.7 mi) of the airport and in 1986 within 2.7 km (1.7 mi). The accuracy of both identifications was 1.6 km (1 mi) (CDFG 2010).





**Figure 3.8.2**



- Spotted Owl Territories Selection
- Study Area
- 5-Mile Buffer

Aerial Photo: ESRI 2007

**Hayfork Airport**

**Spotted Owl Territories**

*Trinity County, CA*

7/22/2010



### 3.9 WETLANDS, JURISDICTIONAL OR NON-JURISDICTIONAL

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Waters of the United States, including wetlands, are defined under Title 33 of the Code of Federal Regulations (CFR), Section 328, to include navigable waterways, their tributaries, perennial and intermittent streams and drainages, lakes, seeps and springs, emergent marshes, seasonal wetlands and wetlands adjacent to other waters. Other waters of the United States are drainage features or water bodies as described in 33 CFR 328.4.

Wetlands and waters of the United States on the airport were delineated by North Fork Associates in 2010 (see Appendix C); the wetland delineation has been verified by the USACE (USACE File No. 2010-00387, October 26, 2010). In the ±86-acre study area, two categories of waters of the U.S. were mapped: seasonal wetlands and intermittent stream. A summary of the delineated waters of the United States by type and acreage is provided in Table 3.9.1.

**Table 3.9.1.**  
**Wetlands and Waters of the United States**

<b>Habitat Type</b>	<b>Acreage</b>
<b>Wetlands:</b> Seasonal Wetland (Dredge Hollow Wetlands)	<b>0.61-acre</b>
<b>Other Waters:</b> Intermittent Stream (Kingsbury Gulch)	<b>0.46-acre</b>
<b>Total</b>	<b>1.07-acres</b>

Source: Wetland Delineation for the ±86-Acre Hayfork Airport Study Area, North Fork Associates, September 2010.

#### **Seasonal Wetland (Dredge Hollow)**

Several depressional wetlands are mapped on the project site. These features are Seasonal Wetlands in the generic sense but are being referred to as “Dredge Hollows” because they are a product of past mining activities. The dredge hollows occur in several locations on the north side of the runway. These depressions are characterized by rocky/cobbly side slopes with either a flat or bowl shaped bottom. Soil in the bottoms are fine grained (clays and silts) and many have a highly organic upper layer. The fines tend to retard water percolation and many (but not all) of the hollows support a wetland condition. Vegetation in the wetter hollow bottoms is typically herbaceous and hydrophytic. Vegetation in the drier hollow bottoms is typically woody and mostly hydrophytic. The slopes of the hollows, above the wetland bottom, support woody riparian vegetation.

#### **Intermittent Stream (Kingsbury Gulch)**

An Intermittent Stream (Kingsbury Gulch) flows south to north across the project area. The stream flows under the runway and into Hayfork Creek. Kingsbury Gulch flows intermittently from the beginning of the wet season through the winter and spring months. It was dry during a field visit by North Fork Associates in mid July 2010. The streambed is mostly unvegetated. Willow and cottonwood intermittently line the banks, particularly the east bank. The channel bed is a mix of gravel and rocks.

## 3.10 FLOODPLAINS

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### ***Introduction***

Executive Order 11988 directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by flood plains. Federal agencies are required to make a finding that there is no practicable alternative before taking action that would encroach on a base floodplain based on a 100-year flood event.

### **Kingsbury Gulch**

Hayfork Airport is located within the 100-year flood plain for Kingsbury Gulch (*Flood Insurance Rate Map 06105C0591D, 06105C0592D*, September 2009). (Figure 1-2 in Appendix A.) Construction of the proposed taxiway extension and culvert would take place within the 100 year flood plain. According to FEMA, Kingsbury Gulch, as it flows through the airport and beneath the runway in a box culvert, is located in Zone A, the 1 percent-annual chance floodplain.

The existing runway and culvert are also located in the floodplain.

## 3.11 COASTAL RESOURCES

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### ***Coastal Zone Management***

In 1976, the California Legislature enacted the California Coastal Act, which established a far-reaching coastal protection program and made permanent the California Coastal Commission. The Commission plans and regulates development and natural resource use along the coast in partnership with local governments and in keeping with the requirements of the Coastal Act. The Commission exercises jurisdiction over all California coastal areas except San Francisco Bay, which has its own coastal management program.

Hayfork Airport is not located within the jurisdiction of the California Coastal Commission. The proposed actions do not affect coastal resources.

### ***Coastal Barriers***

The Coastal Barriers Resources Act applies only to coastal resources along the Atlantic and Gulf coasts and the Great Lakes.

## 3.12 FARMLANDS

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The Farmland Policy Act regulates federal actions with the potential to convert farmland to non-agricultural uses. The proposed action does not convert farmland and does not remove highly productive soils from potential agricultural uses. The areas of disturbance are located within active portions of the airfield, adjacent to a runway and taxiway. Historically, these lands have been maintained to control

weeds and have never been placed in agricultural service. The active portions of the airfield are generally considered annual grassland habitat and most of the soils are considered adequate for grazing. No commercial grazing occurs on the airport, and therefore there is no loss of farmland resulting from the proposed action.

Four soil units have been mapped on the airport (North Fork Associates, 2010).

- Atter-dumps, dredge tailings-xerofluvents complex, 2 to 9 percent slopes;
- Carrcreek gravelly loam, 0 to 2 percent slopes;
- Haysum gravelly loam, 0 to 2 percent slopes; and
- Jafa gravelly loam, 0 to 2 percent slopes

### **3.13 WILD AND SCENIC RIVERS**

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The Wild and Scenic Rivers Act (1968, as amended) describes those river systems designated or eligible to be included in the Wild and Scenic River System. The South Fork Trinity River, located approximately 14 miles west of the airport, has segments which are designated Wild and Scenic. Hayfork Creek is not included in the Wild and Scenic River System. The project area is not near the designated segments of the Trinity River; no impact will occur.

### **3.14 NATURAL RESOURCES AND ENERGY SUPPLY**

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Expansion of the taxiway and grading the runway safety does not directly contribute to increased demand for energy or services. The airport, with implementation of the proposed action, will continue to serve aircraft that consume aviation fuel. Near-term consumption levels would be consistent with those for aircraft currently served by the airport. Increased aviation fuel consumption would occur on an incremental level with increased taxiing operations. The supply of aviation fuel is expected to support future demand; there are no fuel services on the airport.

The proposed action does not increase the demand for services. There are no anticipated demands for potable water, sanitary sewers or storm drainage from the proposed projects. Any increase is considered minor.

### **3.15 HAZARDOUS MATERIALS AND SOLID WASTE**

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#### ***Hazardous Materials***

A phase I Environmental Site Assessment was completed by Huang Engineering in November 2009. A hazardous materials database search and a site visit in October 2009 did not uncover any evidence of hazardous materials that might cause concern. There is no evidence of spill of hazardous substances and petroleum waste products, PCBs, or solid waste disposal on the airport.

There are no sites within the Hayfork Airport listed or under consideration for the National Priority List

(NPL). No hazardous wastes as defined by 40 CFR part 261 (RCRA) will be generated, disturbed, transported or treated, stored or disposed by the proposed projects.

### ***Solid Waste***

Trinity County's Solid Waste Department handles solid waste management, including waste disposal. Solid waste is taken to one of nine county transfer stations and is shipped from there to the Anderson Landfill in Shasta County. Estimates indicate that the landfill has the capacity to meet demands up to the year 2055.

## **3.16 LIGHT EMISSIONS AND VISUAL IMPACTS**

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### ***Light Emissions***

Aviation lighting required for security, obstruction clearance, and navigation are the chief contributors to light emissions radiating from airports. An analysis is necessary when projects include the introduction of new or the relocation of existing airport lighting facilities that may affect residential or other sensitive areas. Runway 7-25 is equipped with medium intensity runway lighting (MIRL). A rotating beacon assists pilots in locating the airport at night. The proposed project does not include any additional lightning or changes to the current lighting at the airport.

### ***Visual Impacts***

Hayfork Airport is located on relatively flat terrain in the community of Hayfork, between the center of the community and the Trinity County Fairgrounds. Residential land use occurs north and south of the airport; commercial land and open space also occur around the airport.

The visual components at Hayfork Airport are typical of an airport environment, with a perimeter fence, hangars, paved tie down areas, vehicle parking spaces and a pilots' lounge. The proposed project does not include any new structures or facilities that would have an aesthetic impact. The proposed taxiway extension would not disrupt existing landscape character, or create visually intrusive structures.

### **3.17 SECONDARY (INDUCED) IMPACTS**

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According to FAA Order 1050.1E, secondary impacts are typically those associated with major development proposals – where the potential for induced impacts results to the extent influenced by the airport development. Typically, induced impacts will not be significant unless there are also significant impacts in other categories, which is not the case for the proposed taxiway extension project. The proposed taxiway extension project is not a major development; it will not result in shifts in population movement and growth, increased public service demands, or changes in business and economic activity. It is concluded that proposed project would not have adverse secondary (induced) impacts.

# 4.0 Environmental Consequences

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## 4.1 RESOURCES NOT IMPACTED BY PROJECT ALTERNATIVES

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As outlined within paragraph 706.f of FAA Order 5050.4B, concise analysis was undertaken only for the potential impacts that the alternatives under consideration may cause. A number of resources, discussed below, will not be impacted by implementing the proposed action or by the “no action” alternative and therefore, are not discussed in detail within this chapter of the EA.

- **Noise** - The implementation of the proposed projects at Hayfork Airport would not result in a change to the aviation activity levels at the airport. As shown in Table 1.1 the Aviation Forecast approximately 2,250 total operations are predicted to occur in 2016. No changes to current airport operations will take place and the CNEL 65 dB noise contour would remain within the airport boundary.
- **Compatible Land Use** - The proposed action would not result in effects on land use within the airport. Proposed construction of the taxiway extension and grading of the TSA and RSA would occur entirely within areas currently devoted to or designated for aviation uses. The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport’s noise impacts. Since the CNEL 60-dBA and 65dBA noise contours remain within the immediate vicinity of the runway and do not leave the airport property, the conclusion may be drawn that the airport is compatible with surrounding existing and planned land uses. The land uses within the airport are consistent with local, state and federal guidelines for noise compatibility.
- **Socioeconomic Impacts, Environmental Justice, and Children’s’ Environmental Health and Safety Risks** – Located in the center of Trinity County, airport improvements have the greatest opportunity to affect the community of Hayfork; however, the proposed actions do not disrupt or relocate any community and do not disrupt surface transportation or businesses and do not cause the loss or relocation of area jobs. The proposed actions will not result in environmental health risks or safety risks which could disproportionately affect children. Neither the proposed action nor the alternatives will have a disproportionately high and adverse human health and environmental effect on minority and low income populations since there will be no significant off-airport impacts from either alternative.
- **Department of Transportation Act Section 4(f)** - The proposed action is entirely within the existing property boundaries of the Hayfork Airport. The proposed action does not represent a taking, constructive use, or a substantial impairment of any 4(f) resource.
- **Historical, Architectural, Archaeological, and Cultural Resources** - As identified in the Affected Environment Chapter Section 3.7 there are no historic, architectural, archaeological, or cultural resources within the APE. On January 21, 2011 the FAA submitted its determination to the California SHPO that there are no properties listed or eligible for listing on the National Register of Historic Places within the APE. On March 7, 2011 the SHPO concurred with the FAA’s determination. Therefore the No Action and Proposed Action would have no impact to this environmental resource.

- **Coastal Resources** - Hayfork Airport is not located within the jurisdiction of the California Coastal Commission. The proposed actions and alternatives do not affect coastal resources.
- **Farmlands** - The active portions of the airfield are generally considered annual grassland habitat and most of the soils are considered adequate for grazing. No commercial grazing occurs on the airport, and therefore there is no loss of farmland resulting from the proposed action.
- **Wild and Scenic Rivers** – The South Fork Trinity River, located approximately 14 miles west of the airport, has segments which are designated Wild and Scenic. Hayfork Creek is not included in the Wild and Scenic River System. The project area is not near the designated segments of the Trinity River; no impact will occur.
- **Natural Resources and Energy Supply** - The proposed action does not increase the demand for services. There are no anticipated demands for potable water, sanitary sewers or storm drainage from the proposed projects.
- **Hazards Materials and Solid Waste** – There are no sites within the Hayfork Airport listed or under consideration for the National Priority List (NPL). No hazardous wastes as defined by 40 CFR part 261 (RCRA) will be generated, disturbed, transported or treated, stored or disposed by the proposed projects. Construction of the proposed action or alternatives would not increase amount of solid waste produced at the airport.
- **Light Emissions and Visual Resources** – The proposed action and alternatives do not include any additional lightning or changes to the current lighting at the airport. Neither alternative would disrupt existing landscape character, or create visually intrusive structures.
- **Secondary (Induced) Impacts** – The proposed action and alternatives are not considered major development activities and will not result in shifts in patterns of population movement and growth; public service demands; or changes in business and economic activity.

## **4.2 RESOURCES POTENTIALLY IMPACTED BY ALTERNATIVES UNDER CONSIDERATION**

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The following sections describe potential impacts to resources located within the airport environs and any mitigation measures needed to be protective of resources or necessary to reduce the impacts below the thresholds of significance outlined within FAA Order 1051.1E. For each impact category, a description of the resource is provided along with a general description of the FAA defined significant impact threshold. This includes an analysis of the proposed action and “no action” alternatives on the identified resource.

### **4.2.1 AIR QUALITY**

Neither the proposed action or “no action” alternative will alter the number of aviation operations on the airport or increase emissions from aircraft. There are 6 single engine aircraft based at the airport. 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).

Two primary laws apply to air quality: The National Environmental Policy Act (NEPA) and the Clean Air Act (CAA). NEPA and CAA Amendments of 1990 have separate requirements and processes; however, their steps are integrated and combined for efficiency. As a Federal agency, the FAA is required under NEPA to prepare an environmental document for major federal actions that have the potential to affect the air quality of the human environment.

When a NEPA analysis is needed, the proposed action’s impact on air quality is assessed by evaluating the impact of the proposed action on the NAAQS. The proposed action’s “build” and “no-build” emissions are inventoried for each reasonable alternative. The inventory includes both direct and indirect emissions that are reasonably foreseeable.

#### **4.2.1.1 Threshold of Significance**

FAA Order 1050.1E states that potentially significant impacts to air quality associated with an FAA project or action would be demonstrated by the project or action exceeding one or more of the NAAQS. The proposed project would not have a significant impact on air quality.

#### **4.2.1.2 No Action Alternative**

No Action Alternative: Under the “no action” alternative, the forecast aviation activity levels identified in Table 1.1 would continue to utilize the partial parallel taxiway. Aviation related Air Quality emissions would not result in a significant impact.

#### **4.2.1.3 Proposed Action Alternative**

The proposed action would extend the existing parallel taxiway to the west to connect with the end of Runway 7 and runway and taxiway safety areas would be graded to meet airport design standards in FAA Advisory Circular (A/C) 150/5300-13A (Airport Design Standards). The type and frequency of aviation operations would not change as a result of the project. At the Hayfork Airport, based on the nature of the project and consultation with state and local air quality agencies, additional analysis is not deemed appropriate, because the proposed action would not result in a change in the airport aviation activity identified in Table 1.1, and a conformity analysis is not required for the proposed action because Trinity

County and the NACB are classified as Attainment or Unclassified for NAAQS constituents identified in Table 3.4.2. Additionally, the proposed taxiway extension is Presumed to Conform, as Non-Runway Pavement Work since it is an improvement to an existing taxiway that will not affect runway use, nor increase the airport capacity or type of aircraft operations occurring at the airport. No significant impact to Air Quality would occur with implementation of the proposed action alternative.

#### 4.2.1.4: Construction Equipment Emissions

Construction equipment (vehicle) emissions are regulated by the State of California. Construction of the proposed action would result in the temporary generation of emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>. Construction-related emissions would result from construction equipment exhaust, construction employee vehicle exhaust, dust from land clearing, wind erosion of exposed soil and paving. Construction-related emissions would vary substantially, depending on the level of activity, length of construction period, the specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture.

Construction would include grubbing/clearing, excavation and grading, using both heavy duty and light-duty construction equipment. Specific equipment to be utilized may include, but is not limited to, track-mounted excavators, dump trucks, backhoes, graders, compactors and dozers. Based on construction equipment to be used on the project, Table 4.2.1.1 summarizes construction emissions.

Construction of the proposed action would result in the temporary generation of emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>. Construction emissions for the proposed project are below the conformity *de minimis* thresholds of 100 tons per year of CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Additionally, the proposed taxiway extension is Presumed to Conform as Non-Runway Pavement Work. No significant Air Quality construction impacts would occur.

**Table 4.2.1.1: Construction Emissions in Tons per Year**

	Carbon Monoxide	Lead	Nitrogen dioxides	PM-10	PM-2.5
Grading [3-7 days]	2.5	na	4.3	1.76	0.52
Paving [[3-7 days]	0.50	na	2.40	0.20	0.18

Values estimated from Urbemis Model, 2007 Version 9.2.4

#### Mitigation Measure: Air Quality Best Management Practices

Implementation of the following measures will further minimize any effects from construction activity on air quality:

- 1 Water all active construction sites at least twice daily, except when naturally wet.
- 2 Limit on-site vehicle speed to less than or equal to 15 mph (excluding aircraft on runways).
- 3 Suspend all construction activities that could emit dust or volatile chemicals when ambient wind speeds exceed 20 mph.
- 4 Cover inactive storage piles, or stabilize such piles through watering, covering or dust suppression agents.
- 5 Post a sign visible to the public that gives the telephone number and name of the site contact regarding dust complaints.
- 6 As soon as possible after work is completed, cover, landscape, or stabilize all disturbed ground surfaces to minimize dust emissions.
- 7 No open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped for mulch or delivered to waste energy or composting facilities.

## **4.2.2 WATER QUALITY**

The project area would remain as it currently exists under the “no project alternative; there would be no impacts to water quality.

Construction of the proposed action would have direct effects on surface water resources. These would include effects on seasonal wetland and Kingsbury Gulch.

### **4.2.2.1 Threshold of Significance**

A significant impact to water quality would occur if an action has the potential to exceed water quality standards, there are water quality problems that cannot be avoided or satisfactorily mitigated, or there would be difficulty in obtaining a permit or authorization (FAA Order 5050.4B, Table 7-1).

### **4.2.2.2 No Action Alternative**

Kingsbury Gulch will continue its intermittent flow underneath Runway 7/25 in a concrete culvert. The partial parallel taxiway will connect with the runway to the east of the intermittent tributary. Water Quality would not be impacted by continued airport operations.

### **4.2.2.3 Proposed Action Alternative**

Similar to aviation operations on Runway 7/25, operations on the proposed western parallel taxiway extension would be elevated above the intermittent Kingsbury Gulch drainage with no significant impact to water quality. The taxiway extension would increase impermeable surfaces on the airport. The increased impermeable surfaces do not contribute significant surface water and the existing drainage system has the capacity to handle the minor surface water runoff increases. The soil on the airport property and in the project area consists mainly of extremely gravelly loamy sand which is somewhat excessively drained. Runoff is slow in this type of soil and the hazard of water erosion is slight (NRCS 1998). The highly permeable soils surrounding the taxiway have the capacity to absorb the small amount of additional runoff from the new impermeable surface of the taxiway without significantly increasing runoff. No impact to Water Quality would occur from operation of the proposed action alternative.

### **4.2.2.4: Construction - Potential for Increased Erosion and Sedimentation and Decreased Surface Water Quality during Construction**

Project construction activities such as grading, stockpiling of spoil materials, and other construction-related earth-disturbing activities could result in soil erosion and subsequent sediment transport to adjacent properties, roadways, or water courses, including Kingsbury Gulch and Hayfork Creek. Sediment transport to local drainage facilities such as culverts could result in reduced storm flow capacity, resulting in localized ponding or flooding during storm events. The potential to increase erosion and sedimentation and decrease surface water quality during construction could be significant if construction were to occur during a time when Kingsbury Gulch was an active watercourse during the winter months. Construction during periods when Kingsbury Gulch is dry as described in Section 3.5 and implementation of the following mitigation measures minimizes the potential for a water quality impact.

### **Mitigation Measure: Erosion Control Measures**

All construction activities will comply with the NPDES General Construction Permit, which contains standards to ensure that water quality is not degraded. As part of this permit, standard erosion control measures and Best Management Practices (BMPs) will be implemented during construction to reduce sedimentation of waterways and loss of topsoil. These BMPs include:

- Watering active construction areas to control dust generation during earthmoving activities; using water sweepers to sweep streets and haul routes;
- Installing erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, and sandbag dykes) to prevent silt runoff to public roadways, storm drains or waterways;
- Covering Runway Safety Area and Taxiway Safety Areas with stabilized soil and suitable planting material meeting Airport Design Standards;
- Grading to eliminate flow paths that could concentrate water and result in rilling and gullying;
- No disturbed surfaces will be left without erosion control measures in place during the rainy season, which generally occurs between October 15 and April 15.

#### **4.2.2.5: Construction - Direct Effects on Surface Water Resources**

The construction of the taxiway extension and culvert would have a localized effect on hydrology. Construction of the taxiway extension will result in filling one 0.03-acre seasonal wetland and disturbance and culverting of a 0.07-acre portion of Kingsbury Gulch, an intermittent seasonal watercourse. The construction of the 2-span bottomless crossing structure will involve excavations to bedrock and pouring concrete into forms within and immediately adjacent to Kingsbury Gulch.

#### **Mitigation Measure: Control Sediment and Concrete Releases during Culvert Construction**

The following BMP's will be implemented during construction of the bottomless box culvert to prevent release of concrete or sediment to Kingsbury Gulch:

- Excavation in Kingsbury Gulch shall be limited to the period when the stream is dry (late spring through mid-fall).
- If dewatering of excavations is necessary, groundwater shall be pumped to an unlined sediment basin where it will percolate back into the soil without discharging to surface water bodies. Existing non-wetland depressions on site may be used for this purpose.
- No contact of wet concrete with the live stream will be allowed. Groundwater that comes in contact with wet concrete during construction of the piers and footings will not be allowed to enter the creek but will be pumped to a concrete washout device.
- Concrete washouts of adequate size to treat anticipated concrete waste from construction, including concrete-contaminated groundwater, shall be installed. Treated concrete waste solids shall be transported offsite. Liquid washout waste that is free of concrete solids may be disposed of in a permeable upland sediment basin and percolated back into the soil.
- If drilling muds are used to drill holes within the ordinary high-water zone, all drilling muds and fluid within all drilled holes will be pumped through a closed system, contained on-site in tanks, removed from the project area, and disposed of off-site at an appropriate facility.
- The contractor will dispose of the spoils materials from the drilled or excavated pier holes in a manner that will not result in discharge of runoff of sediment into Waters of the United States.

In addition, Trinity County will obtain coverage under Nationwide Permit 14, Linear Transportation Crossings, from the USACOE, pursuant to Section 404 of the Federal Clean Water Act. Trinity County will abide by the general conditions of the Nationwide Permit as required by the USACOE. It is not anticipated that regional or project specific conditions will be required by the USACOE permit.

## **4.2.3 FISH, WILDLIFE AND PLANTS**

### ***Special Status Federal Animal Species***

Critical habitat for two federally protected animal species has been identified on, or near, the airport: the SONCC coho salmon and the northern spotted owl.

#### **4.2.3.1 Threshold of Significance**

Implementation of the proposed action would have a significant effect on fish, wildlife and plants if it would exceed the following significance thresholds:

- Consultation with the USFWS or NMFS determines a proposed action would likely jeopardize a federally-listed species' continued existence or destroy or adversely affect a species' critical habitat. (FAA Order 5050.4B, Table 7-1);
- Analysis or consultation with agencies having jurisdiction over or special expertise with regard to a non-listed species indicates that a project would have a substantial adverse effect on such species. This could include substantial effects on reproductive success rates, natural or non-natural mortality rates, and the ability of a species to maintain adequate population levels.
- Input from USFWS, NMFS or CDFG indicates that substantial, project-induced damage to wildlife cannot be mitigated to minimal levels; or
- Project implementation would result in the loss of a substantial amount of habitat, of habitat that supports rare species, or of small amounts of sensitive habitat with a significant accompanying loss of plant communities and displacement of wildlife when these adverse impacts to wildlife or wildlife habitat cannot be mitigated to the satisfaction of the resource agencies.

#### **4.2.3.2 No Action Alternative**

Under the no action alternative, the proposed taxiway extension and runway and taxiway safety area grading would not be implemented and aviation operations would continue to occur with the existing airfield configuration. No impacts to fish, wildlife, or plants would occur.

#### **4.2.3.3 Proposed Action Alternative**

The FAA prepared a biological assessment (BA) (January 2011; Appendix A of this EA) in accordance with legal requirements found in Section 7 (a)(2) of the Endangered Species Act (16 U.S. C 1536(c)) and with FAA regulation, policy and guidance. The BA provides technical information and reviews the proposed airport improvement projects at the Hayfork Airport in sufficient detail to determine to what extent the proposed actions may affect threatened, endangered or proposed species.

The FAA conducted informal consultation with NMFS due to effects on coho salmon critical habitat and essential fish habitat. (Appendix D, FAA letter to NMFS, dated January 21, 2011). In a letter dated April 7, 2011, NMFS concurred with the FAA's determination that "the proposed project may affect, but is not likely to adversely affect federally threatened SONCC coho or their critical habitat." (Appendix D).

The FAA also conducted informal consultation with USFWS regarding potential impacts on northern spotted owl (Appendix D, FAA letter to USFWS dated January 26, 2011). USFWS concurred with the FAA determination that the project "is not likely to adversely affect the northern spotted owl or its habitats." (Appendix D, USFWS letter to FAA dated February 22, 2011).



#### **4.2.3.4: Construction – Loss of Riparian Vegetation**

The extension of the taxiway will result in the removal of a few willow and alder patches. However, the bulk of the native riparian vegetation coverage is located downstream of the airport property line. The loss of the minor amount of vegetation within the project reach would likely have minimal effect on fish or their habitat because Kingsbury Gulch is dry during the months when the riparian vegetation could provide shade to the channel and the bottomless culvert for the proposed taxiway extension will result in a net increase in the amount of instream shade. The proposed project would not have a significant impact on riparian vegetation coverage.

#### **4.2.3.5: Construction – Fish Passage**

Migration passage for anadromous salmonids in Kingsbury Gulch is currently restricted by three culvert barriers (Riverview Road, Hayfork Airport runway, and Morgan Hill Road). However, the presence of steelhead fry and an age 2+ juvenile steelhead/resident rainbow trout indicate that adult and larger juvenile salmonids can pass these culverts during some flow conditions.

The taxiway extension will pass over Kingsbury Gulch. An approximately 120 foot long 2-span hydraulic conveyance structure with an open bottom would be constructed where the taxiway extension crosses Kingsbury Gulch. The structure would be approximately 6.7 feet high and would extend 20 ft beyond the north and south edge of the taxiway pavement. Implementation of Fish Passage Mitigation Measure will help reduce any potential effects of the project on fish passage.

#### **Mitigation Measure: Fish Passage**

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. Therefore, the proposed project will not result in additional impediments to fish passage than already exists in Kingsbury Gulch

#### **4.2.3.6: Construction - Hydrocarbon Contamination**

Hydrocarbon contamination of aquatic habitats could potentially occur during construction operations, however compliance with all applicable standard BMPs would be required. All equipment is serviced on an as-needed basis with any necessary fueling and lubrication conducted at the construction staging area, which will be in the pilot's parking area 1,000 feet from Kingsbury Gulch. Accidents, such as a breaking of a hydraulic line, would require immediate clean-up of the area before the onset of flow conditions. Therefore, aquatic habitat would not be affected by hydrocarbon contamination during construction activities.

#### **4.2.3.7: Construction - Intrusion of Fine Sediment**

Grading associated with construction activities may result in the new ground surface having a higher proportion of exposed fine-grained materials than undisturbed ground. The graded surface could then be exposed to rainfall impact and runoff that could result in sheet and rill erosion that would entrain fine sediment. Some of this entrained fine material could be delivered to Kingsbury Gulch and eventually intrude into spawning gravel. However, the amount of fine sediment transport and delivery is dependent on the area of disturbance and the erosion control measures employed at the construction site. In addition, the significance of project area fine sediment delivery to potential spawning gravel is dependent on location of spawning sites and the suspended and fine sediment load already entrained in the receiving waters.

Project operations for the taxiway extension will include grading and placement of base rock that will be topped with asphalt. These activities will likely result in a short-term increase in sediment delivery and instream turbidity. However, impacts associated with sediment delivery will likely be relatively short-lived and quickly return to normal background patterns.

Installation of the culvert will involve excavation in the bed and banks of Kingsbury Gulch. This activity will be done when Kingsbury Gulch is dry. All soil removed from the excavations will be stockpiled outside of the ordinary high water channel of Kingsbury Gulch. It will be either incorporated into the backfill behind the bridge abutments, used as fill elsewhere on the taxiway extension or RSA improvement projects, or spread in an upland area where it cannot be washed back into Kingsbury Gulch or other surface water bodies.

Grading and clearing the RSA and TSA will include grading to eliminate the uneven topography and brush. The RSA will be graded and cleared 60 ft on either side of the runway centerline (30 feet from edge of existing pavement) and 240 feet beyond the end of Runway 7. Following the initial grading and clearing of brush, soil within the RSA areas would be stabilized in a manner consistent with Airport Design Standards. The flat terrain and high permeability of the soils result in little runoff from the RSA and TSA actually reaching Kingsbury Gulch. Implementation of BMP erosion control measures would result in any increases in fine sediment delivery being short-lived and occurring only during the first year post completion of construction.

#### **4.2.3.8: Construction - Anadromous Salmon Species**

Spring-run Chinook salmon currently exist in low numbers within Hayfork Valley streams. Spring Chinook salmon habitat (deep and cool pools) is not present in Kingsbury Gulch and spawning activity of this species tends to peak prior to Kingsbury Gulch having flow. Therefore, the implementation of the erosion control measures coupled with the lack of suitable habitat should result in little or no impact on occupied spring-run Chinook salmon spawning habitat. In a letter dated April 7, 2011, NMFS concurred with this conclusion, stating that “[t]he proposed Project contains adequate measures to avoid, minimize, mitigate or otherwise offset the adverse effects to EFH.”

Kingsbury Gulch through the airport is designated critical habitat for coho salmon and EFH for both coho and Chinook salmon, even though these species do not occupy Kingsbury Gulch. The project may result in a short-term increase in sediment intrusion into spawning gravel that is considered a component of critical habitat and EFH. In their April 7, 2011 letter, NMFS stated that “the project area is outside of SONCC coho salmon critical habitat” and that [n]o information exists to suggest that coho salmon have ever occupied Kingsbury Gulch.” NMFS concurred with the FAA’s determination that “the proposed project may affect, but is not likely to adversely affect Federally threatened SONCC coho or their critical habitat.”

Due to the lack of water and absence of coho salmon within the project area during the anticipated instream construction period (late spring through mid-fall), there is no potential for direct effects on fish. Therefore, no mitigation measures are proposed.

#### **4.2.3.9: Construction - Noise Effects on Northern Spotted Owl**

The proposed project may include the use of chainsaws, trucking/hauling, and heavy equipment for clearing and grubbing, grading, crossing construction, and paving. The noise generated by these activities has the potential to disturb or disrupt normal breeding and/or nesting activity of northern spotted owls. Noise effects diminish as the distance between the activity and receptor increases. Disturbance and disruption distances (Table 4.2.4.1) are defined as follows (USFWS 2008b):

**Table 4.2.3.1.** Disturbance and disruption distances<sup>a</sup> for northern spotted owl during the breeding period

Source of disturbance	Disturbance distance	Disruption distance	
	Entire breeding period (1 February–31 August)	Critical breeding period (February –July 9)	Late breeding period (July 10–August 31)
Hauling	0 yd	0 yd	NA
Chainsaw use	440 yd (0.4 km [0.25 mi])	65 yd (0.06 km [0.04 mi])	NA
Heavy equipment use	440 yd (0.4 km [0.25 mi])	35 yd (0.03 km [0.02 mi])	NA

<sup>a</sup> Disturbance distances are based on an informal consultation of a vegetation management project in the Willamette Province, OR (USFWS 2008b). Noise distances were developed from a threshold of 92 dB (Livezey 2003).

The nearest known northern spotted owl activity center and territory are 3 miles and 2.5 miles, respectively, from the Project Area. Based on the largest noise disturbance or disruption distance buffer, developed from a noise contribution of 92 dB, that may result from these types of activities, the Analysis Area was defined as 440 yd (0.25 mi) from the Project (Table 4.2.3.1). The closest northern spotted owl activity center and territory is farther away than the noise disturbance or disruption distance created from the Project; therefore, no direct noise effects on northern spotted owls are anticipated to occur.

In a letter dated February 22, 2011, USFWS concurred with the FAA’s determination that “the proposed action is not likely to adversely affect the northern spotted owl or its habitats, on or near the project site.”

#### **4.2.3.10: Construction - Northern Spotted Owl Habitat Removal**

The Project Area does not include northern spotted owl nesting or roosting habitat. The area is dominated by herbaceous/meadow and interspersed chaparral/scrub-shrub and riparian forest communities. The proposed project will not remove multi-layered forest canopy structure, large-diameter trees, or snags.

Because there will be no loss of large nesting or roosting trees, there will be no modification to northern spotted owl nesting or roosting habitat. Although a small number of northern spotted owls may occasionally forage within Hayfork Airport property, it is expected that the species would avoid construction activities and forage in nearby meadow and forest habitat.

Northern spotted owls eat small mammals (e.g., mice). Small mammal burrows are present in the Project Area. Therefore, construction activities associated with the proposed project could disturb or eliminate small mammal habitat. This could have an indirect effect on foraging juvenile and adult northern spotted owls. However, given that the Project is surrounded by similar habitat (chaparral/scrub-shrub and herbaceous/meadow) and a substantial amount of nesting, roosting, dispersal, and foraging habitat is present within the surrounding Shasta-Trinity National Forest, it is unlikely that the small footprint of the Project would have any effect on prey availability.

Therefore, temporary construction activities during the installation of the taxiway would not adversely affect nesting, roosting, foraging or dispersal habitat for the species.

#### **4.2.3.11: Construction - Migratory Birds**

USFWS has expressed a concern for migratory birds nesting along Kingsbury Gulch and requested measures to avoid impacts on their nesting and breeding activity (USFWS letter to FAA dated February 22, 2011). To the extent possible, removal of woody vegetation along Kingsbury Gulch will be scheduled to avoid the nesting season. This will help preclude nesting and substantially decrease the likelihood of direct impacts to migratory birds. Trees and shrubs shall be cut, but roots and stumps left in place to avoid disturbing the ground during the rainy season. The nesting season for most migratory bird species in Trinity County extends from March 15 through August. If all woody vegetation is removed outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, then Pre-Construction Migratory Bird Habitat Survey Mitigation Measure shall be implemented.

#### **Mitigation Measure: Pre-Construction Migratory Bird Habitat Survey**

If woody vegetation is to be removed during breeding season (March 15 through August), a qualified biologist shall conduct a minimum of one pre-construction survey for nesting migratory bird species within the project site and a 250-ft buffer around the site. The survey should be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey should be used to ensure that no nests of these species within or immediately adjacent to the project site would be disturbed during project implementation. If an active nest is found, a qualified biologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest until the young have fledged.

#### **4.2.4 WETLANDS**

As described within Section 3.9 of this EA, USACE verification of the wetland delineation confirmed the presence of wetlands and waters of the US within the proposed project study area. The waters of the US include 0.61 acre of seasonal wetlands and 0.46 acre of an intermittent stream identified as Kingsbury Gulch.

##### **4.2.4.1 Threshold of Significance**

A significant impact to wetlands and waters of the U.S. would occur when an action adversely affects a wetland's function to protect the quality or quantity of municipal water supply; substantially alters the hydrology needed to sustain the affected wetland's values and functions or those of a wetland to which it is connected; substantially reduces the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare; adversely affects the maintenance of natural systems supporting wildlife and fish habitat or economically-important timber, food, or fish resources of the affected or surrounding wetlands; promotes development that causes impacts; or is inconsistent with applicable State wetland strategies (FAA Order 5050.4B, Table 7-1).

##### **4.2.4.2 No Action Alternative**

Under the no action alternative the proposed taxiway extension, RSA and TSA grading would not occur; thus there would be no encroachment upon wetland areas.

##### **4.2.4.3 Proposed Action Alternative**

The Corps issued a preliminary jurisdictional determination of the extent of waters of the U.S. occurring on the site (Appendix E). The preliminary determination concurred with the results of the wetland delineation report (Appendix C), as summarized in Table 3.9.1 of this EA.

Potential direct project impacts to waters/wetlands from the construction of the taxiway extension include

(1) filling a 0.03-acre seasonal wetland and (2) excavating and culverting of a 0.08 acre portion of Kingsbury Gulch. See Figure 4.2.4.1 for wetlands impacted by the proposed taxiway extension. Coordination with the USACE indicates that the Proposed Action would qualify for a Nationwide Permit 14, Linear Transportation Crossings pursuant to Section 404 of the Federal Clean Water Act (see Appendix D, USACE email to FAA dated December 16, 2013 and Trinity County, dated November 5, 2010). Trinity County would be required to comply with USACE Nationwide Permit compensatory mitigation requirements generally at a minimum 1:1 ratio.

The County would also need to obtain Water Quality Certification (or a waiver) from the Regional Water Quality Control Board (RWQCB) and a Streambed Alteration Agreement (Section 1600) with CDFW.

By securing and abiding by the general conditions of Nationwide Permit 14 pursuant to Section 404 of the Clean Water Act, providing compensatory mitigation and obtaining Section 401 Water Quality Certification from the RWQCB, impacts to jurisdictional Waters of the U.S. and wetlands would result in no net loss to wetlands. Therefore, no significant impact to wetlands would occur with implementation of the Proposed Action.

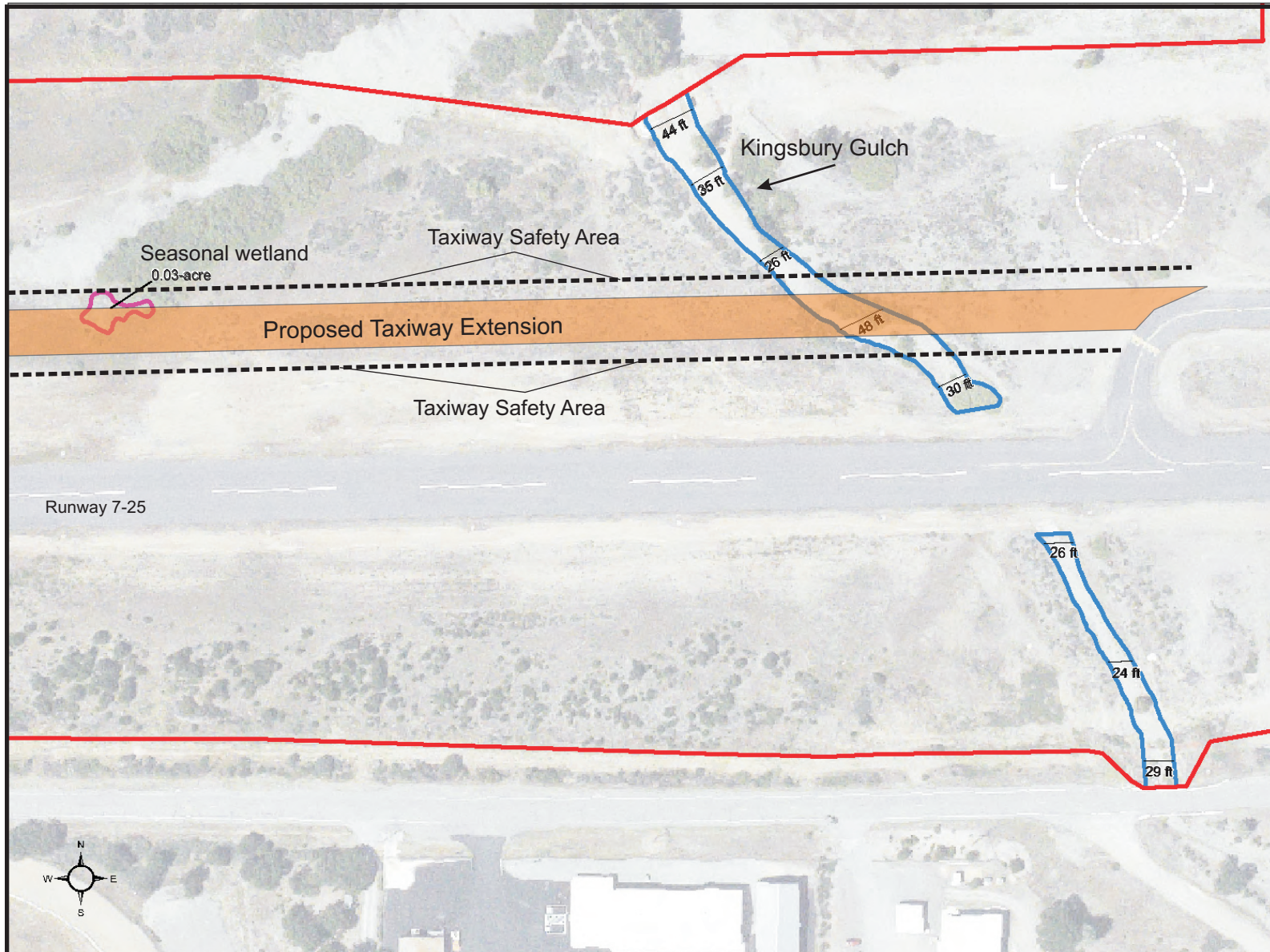
### **Mitigation Measure: Wetland Replacement**

Wetland impacts will be mitigated at a location consistent with FAA Airport Design Standards and FAA Advisory Circular 150/200-33B, *Hazardous Wildlife Attractants On or Near Airports*, agreed upon with the USACE and at a ratio consistent with USACE Nationwide Permit requirements expected to be at a 1:1 ratio. Details of the mitigation will be specified in a Wetland Mitigation and Monitoring Plan (MMP). The MMP shall include at least three years of monitoring of any restoration work in the Project Area.

### **Mitigation Measure: Wetland Conservation/BMP Measures**

To minimize potential impacts on waters/wetlands resources within the Project Area, the following measures are proposed:

1. To the extent possible, the Project footprint is to be minimized. Heavy equipment shall be kept on established roads, runways and taxiways when transporting fill and other construction materials. Equipment, when not in use, shall be stored in upland areas well away from drainages and designated wetland habitats. The pilot's parking lot shall be used for this purpose.
2. All construction equipment shall be well maintained to prevent leaks of fuels, lubricants or other fluids into waters and wetlands.
3. Service and refueling procedures shall be not conducted where there is potential for fuel spills to seep or wash into wetlands or waters.
4. Extreme caution shall be used when handling and or storing chemicals (e.g., fuel and hydraulic fluid) near waterways, and construction personnel shall abide by any and all applicable laws and regulations and follow all applicable hazardous waste BMPs. Appropriate and sufficient materials shall be on site to prevent and manage spills.
5. In-stream construction shall be scheduled to avoid flows in Kingsbury Gulch. All loose sediment and debris discharged to the creek bed shall be removed prior to October 1.
6. Erosion, sediment, material stockpile, and dust control BMPs shall be employed on site. Unnecessary fill or runoff shall not be permitted to enter wetland areas or waterways.
7. Care shall be taken when working near the channel and wetlands to minimize sediment transportation downstream of the Project Area (e.g., use silt containment fencing).



**Figure 4.2.4.1**

Potential Impacts to Waters of the U.S.

- Airport Fence Line
- Ordinary High Water Mark for Kingsbury Gulch
- Seasonal Wetland

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8. All activities associated with the construction, operation, and maintenance of the Project shall be conducted within the authorized limits of the temporary and permanent disturbance. To ensure construction occurs in the designated area and does not impact environmentally sensitive areas, the boundaries of the work area shall be clearly marked with fencing or flagging. Only designated construction activity shall take place within delineated wetland areas.
9. All trash and waste items generated by construction or crew activities shall be properly contained and removed from the Project Area.

## **4.2.5 FLOODPLAIN**

As described in Section 3.10 of this EA and shown in Figure 4.2.5.1, the Kingsbury Gulch intermittent stream is identified as a 100-year floodplain within the study area.

### **4.2.5.1 Threshold of Significance**

An impact to floodplains would be considered significant when notable adverse impacts on natural and beneficial floodplain values would occur (FAA Order 5050.4B, Table 7-1).

### **4.2.5.2 No Action Alternative**

No change to the current runway and taxiway configuration would occur. The parallel taxiway would connect to runway within the edge of the FEMA mapped boundary of the 100-year floodplain (Figure 4.2.6.1). The runway culvert allows storm flows to pass below the runway, thereby minimizing any potential impact from a 100-year storm event.

### **4.2.5.3 Proposed Action Alternative**

The extension of the parallel taxiway and grading of the RSA and TSA areas would permit storm flows to pass under the taxiway and runway thereby improving the safety of aviation operations during rain events.

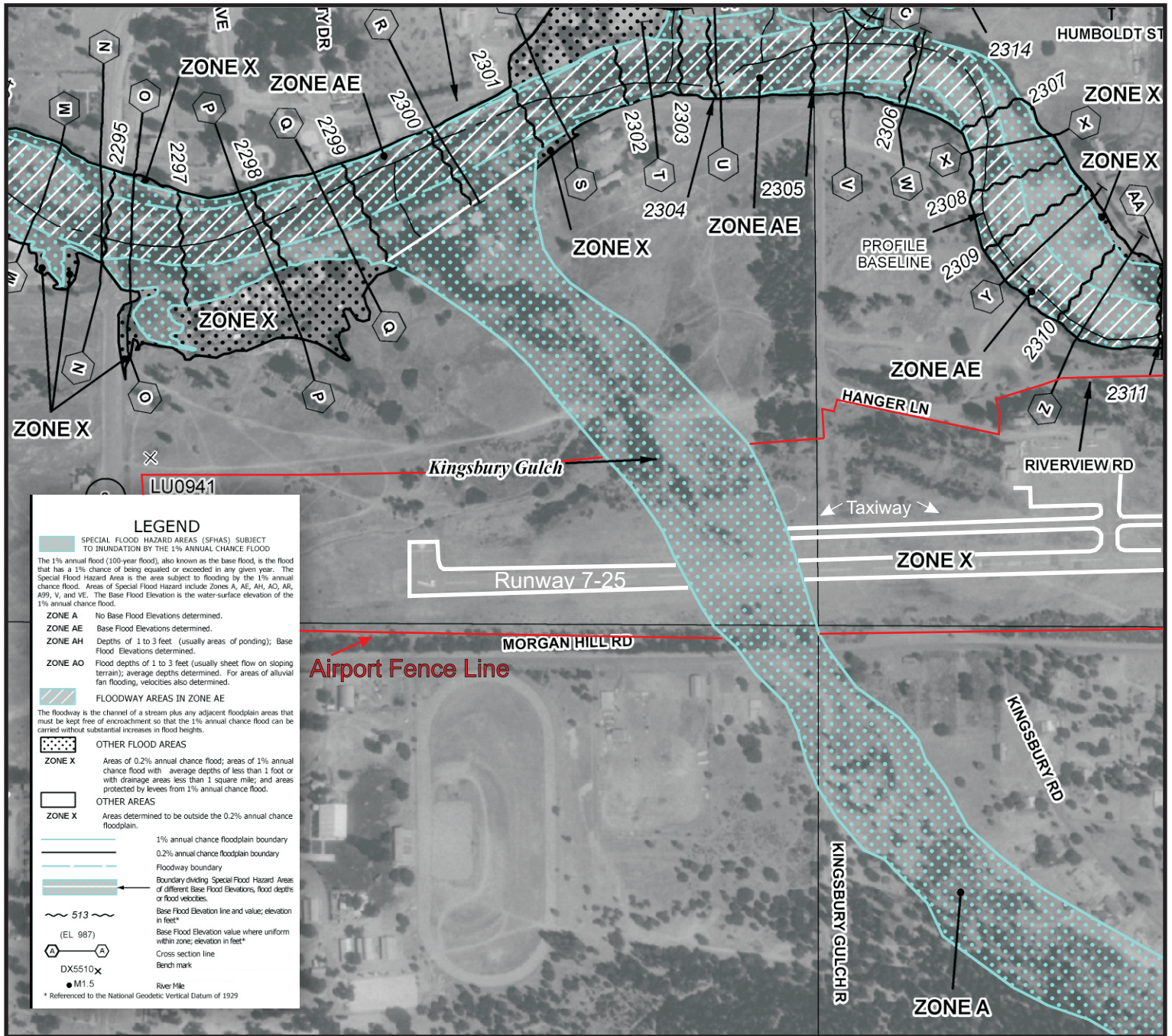
### **4.2.5.4: Construction - 100-year Floodplain**

The portion of the Hayfork Airport along Kingsbury Gulch is in the 100-year floodplain (Figure 4.2.5.1). The proposed projects in the floodplain could have an impact on local and regional hydrology during a flood event unless the culvert under the taxiway extension is designed to pass flood flows. The proposed culvert would be designed to allow 100-year flood flows to pass.

There is no practicable alternative to locating the taxiway extension in the floodplain. Impacts to floodplain resources and values are minimized because the proposed culvert will be designed to accommodate flood flows. The project will not obstruct the floodway, and will have minimal effect on flood levels or the lateral extent of flooding. The project would not adversely affect property or increase risk to human life, nor would it significantly affect the floodplain's natural and beneficial values, such as agricultural activities, aquacultural activities, aquatic or terrestrial organisms, flood control, groundwater recharge, or water quality. As an airfield improvement project, the taxiway extension would not indirectly support floodplain development.

The soil on the airport property and in the project area consists mainly of extremely gravelly loamy sand which is "somewhat excessively drained" (NRCS 1998). Runoff is slow in this type of soil and the hazard of water erosion is slight. The highly permeable soils surrounding the taxiway have the capacity to absorb the small amount of additional runoff from the new impermeable surface of the taxiway without





**Figure 4.2.5.1**

Kingsbury Gulch 100-Year Floodplain

Image and Legend from FEMA Map 06105C0591D, Rev. September 2, 2009

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significantly increasing runoff. Therefore, the post-construction hydrology of the site will closely match the pre-construction hydrologic functions of storage, infiltration and groundwater recharge, as well as the volume and frequency of discharges of runoff from the site. The use of BMPs will help offset runoff, erosion and the release of sediment during construction activities along the runway and taxiway.

No additional mitigation measures are recommended.

## **4.2.6 CONSTRUCTION IMPACTS**

Advisory Circular 150/5370-10G, *Standards for Specifying Construction of Airports*, provides guidance for reducing airport-related construction impacts for activities that FAA may undertake or authorize. Construction at airports may cause temporary short-term dust, equipment emission, stormwater sedimentation, and noise which are subject to Federal, State or local ordinances or regulations.

### **4.2.6.1 Threshold of Significance**

Construction impacts would be considered significant if the construction activities adversely affect a resource like air quality, water, fish, plants or wildlife. (FAA Order 1050.1E, Appendix A, Section 5.3).

### **4.2.6.2 No Action Alternative**

No change to the current runway and taxiway configuration would occur. No construction would occur.

### **4.2.6.3 Proposed Action Alternative**

The projects proposed in this action involve physical disturbance to the environment. No significant impacts would occur with the temporary construction activities. Additionally, the following measures are recommended to minimize any potential construction impacts.

- Construction activities will be limited to the non-rainy season, typically April 15 through October 15. Instream bed construction activities will be allowed only when Kingsbury Gulch is dry.
- Construction plans and specifications for all elements of the projects shall include provisions for erosion control in the event of nonseasonal or early seasonal rainfall during construction, and for disturbed areas that remain unvegetated during the rainy season.
- Rainy season erosion control measures shall be in place before October 1 of each year.
- All loose sediment and debris discharged to the creek bed shall be removed prior to October 1.
- Construction activities shall comply with state National Pollutant Discharge Elimination System permit requirements, including preparation and implementation of a Stormwater Pollution Prevention Plan.
- Trinity County shall prepare and implement a detailed erosion control plan as part of the Project Plans and Specifications. The plan shall, at minimum, require revegetation of disturbed areas, protection of channels and ditch bank slopes, and sediment control.
- Temporary adverse effects, such as construction runoff effects or water quality effects, shall be avoided by use of BMPs during construction and by directing surface water runoff from paved surfaces into unsurfaced areas of high permeability.
- During construction, no activities including; stockpiling soil, driving or parking any equipment or vehicles, storing supplies or containers or other materials nor creation of borrow pits, would be permitted outside of the designated construction limits, which shall be temporarily fenced.
- During construction, stockpiled construction materials (*e.g.*, soil, debris, *etc.*) would not be placed

in areas where the materials may erode into wetlands or streams through exposure to wind, rain, *etc.* Runoff from dust control practices, and oil or other chemicals used in other construction activities, would be retained in the construction site and prevented from flowing into adjacent streams or wetland areas. The runoff would be retained in the construction site by creating small earthen berms, installing silt fences or hay-bale dikes, or implementing other measures on the construction site to prevent runoff from entering the wetlands or streams.

- During construction, Trinity County would ensure that construction equipment and vehicles operated in the action area are checked and maintained daily to prevent leaks of fuels, lubricants or other fluids. The contractor would develop an approved Hazardous Materials Spill Prevention Plan before starting any construction activities. (May be included in the Stormwater Pollution Prevention Plan).

## **5.0 Environmental Consequences – Other Considerations**

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## 5.0 ENVIRONMENTAL CONSEQUENCES – OTHER CONSIDERATIONS

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### *Cumulative Effects*

A cumulative effect is an environmental effect of the project combined with the similar effects of other past, present, or future projects. That is, even individually minor effects can become collectively significant. A cumulative effect is not considered adverse if it is less than “cumulatively considerable.” This may occur when the action is required to implement or fund its fair share of the mitigation measures designed to alleviate the cumulative effect or when environmental conditions would essentially be the same, whether or not the proposed action is implemented. In any case, the analysis should be guided by standards of practicality and reasonableness, and should focus on the actual contributions of the proposed action to cumulative effects.

A cumulative effects analysis may be based on:

- List of past, present and probable projects producing related or cumulative impacts, or
- A summary of projections contained in an adopted general plan, related planning document, or adopted and certified environmental document designed to evaluate regional or area-wide conditions.

The following analysis of cumulative effects is based on past, present and probable projects, including projects on the airport and on land within the vicinity of the airport that are likely to occur, but which have not been certified or approved by an approving agency.

### **Hayfork Airport Projects**

With the exception of ongoing maintenance, there are no projects producing related or cumulative impacts currently being constructed or projects that have been completed within the past five years at the Hayfork airport.

In addition to the specific projects evaluated in this EA, the airport has identified the following projects scheduled within 15 years:

1. Straighten east end of taxiway to meet 150 foot separation standard.
2. Construct additional hangars.

In addition, ongoing maintenance is anticipated to take place on the airport; maintenance projects will not contribute to the cumulative effects of the proposed action. The potential cumulative effects of the taxiway improvement development are discussed below.

### **Taxiway Improvement**

The taxiway at the east end of the runway curves in toward the end of the Runway 25. In the future, Trinity County plans to straighten the taxiway so that the distance between the runway and taxiway meets the minimum 150-foot separation standard. The project may include relocating Riverview Road near Hayfork Creek. FAA will consult with NMFS regarding the potential impact of the construction near Hayfork Creek on SONCC coho salmon or their designated critical habitat



## Other Projects in the Vicinity of the Airport

- 1 Trinity County and the Federal Highway Administration recently completed the Hyampom Road rehabilitation project, two years ago. The project was located along 10.3 miles of County Road 301 along Hayfork Creek, approximately 3.7 miles west of Hayfork. The project consisted of widening Hyampom Road to two lanes with paved shoulders, realigning portions of the roadway, raising the profile of the existing road for approximately 0.6 miles, constructing a bottomless arch structure to replace a culvert at James Creek, widening a bridge deck, replacing culverts, and stabilizing new and existing embankment slopes with retaining wall systems. NMFS determined, through an informal consultation dated October 4, 2004, that this project was not likely to adversely affect threatened SONCC coho salmon or their designated critical habitat. US Fish and Wildlife Service (USFWS) issued a Biological Opinion containing conditions to minimize the likely adverse effects to northern spotted owl.
- 2 Trinity County replaced a single-span bridge over Hayfork Creek near the east end of the Airport in 2006. The bridge was replaced with a two-span structure to improve hydraulic conditions, allow for conveyance of flood flows, and protect against drift accumulations during high flood flows. The project included work within the active, but not wetted, channel of the creek, pile driving, bank grading, and installation of rock slope protection. NMFS determined, through an informal consultation dated September 17, 2002, that this project was not likely to adversely affect threatened SONCC coho salmon or their designated critical habitat. NMFS also determined that the project would not likely adversely affect EFH for coho and Chinook salmon.
- 3 Trinity County will replace a single-span bridge with inadequate hydraulic capacity over Hayfork Creek near its headwaters in Wildwood this summer (2015). The new bridge will have a longer span length and will be raised to convey the most probably 100-year flood and 50-year flood events with 2 feet for debris. The project will involve road realignment and re-grading of the existing bank where the old bridge abutments are removed. Riparian vegetation will be replanted and enhanced. FHWA made a “no effect” determination for northern spotted owl, based on a Biological Assessment. NMFS concurred with a “may affect, not likely to adversely affect” the coho salmon or its critical habitat.
- 4 Trinity County is planning to rehabilitate and reconstruct 6.6 miles of Wildwood Road, County Road 302, along Hayfork Creek approximately 13 to 20 river miles upstream of the Project Area. The project consists of widening Wildwood Road to two standard lanes with shoulders, realigning portions of the roadway, stabilizing the new and existing embankment slopes through placement of rock slope protection and retaining wall systems, reconstructing the structural section and underlying drainage systems. The project is in its environmental phase now. Construction will be done in three segments over six years, starting in 2020 or later. The project has federal funds through the FHWA and goes through Forest Service lands. The FHWA has completed consultation with USFWS for the northern spotted owl, with a conclusion of “may affect, not likely to adversely affect”. FHWA also consulted with NMFS, who concurred with a “may affect, not likely to adversely affect” finding for the coho salmon and its critical habitat.
- 5 The Trinity County Waterworks District is developing a golf course between Tule Creek Road and Salt Creek. This development will be to the west of the Hayfork Airport. The golf course will be irrigated with treated wastewater. Environmental studies have been completed

and the project has been approved by the Trinity County Planning Commission. However, the project has not been constructed due to lack of funding.

- 6 Trinity County received an application to subdivide a 9.5-acre property into 13 separate parcels. This project is located southeast of the airport and is not adjacent to Kingsbury Gulch. The application remains incomplete and has not been acted upon, making implementation doubtful.

The Hyampom Road, Hayfork Bridge, Wildwood Bridge and Wildwood Road projects are all road reconstruction projects adjacent to Hayfork Creek. All have completed federal consultation pursuant to section 7 of the ESA and Section 106 of the National Historic Preservation Act and other requisite studies required by NEPA. The determinations for all of these projects is that they are not expected to result in any cumulative impacts on coho salmon, designated critical habitat or EFH, or any impacts on significant cultural resources when combined with the airport project. The Hyampom Road and Wildwood Road projects may affect the northern spotted owl, but the Hayfork Airport project does not, so the effects of this project are not cumulative. With implementation of BMPs and the mitigation measures described in this document and similar commitments made on the other projects, any water quality and erosion impacts are expected to be minimized and confined to small areas and short time frames. Therefore, the combined projects will not result in cumulative adverse effects on the Hayfork Creek watershed. Noise and air quality impacts will also be short-term and minimal, and the projects will not be constructed simultaneously, so these impacts should not be cumulative.

Similarly, construction of the golf course and subdivision, if they occur, would not be likely to occur simultaneously with the short-term effects of the airport project. The golf course project and tentative subdivision, if implemented, could result in changed floodplain hydrology, increased nutrient loading into local watercourses, and short-term increases in sediment delivery to Hayfork Creek. However, these projects will be subject to County-imposed mitigation measures that are designed to protect water quality, aquatic habitat, and other beneficial uses of water. These projects, in combination with the proposed Project, are not expected to result in significant impacts on coho salmon, their designated critical habitat, or EFH. These two projects are outside of the critical habitat for northern spotted owl, in a relatively urban setting within Hayfork, and are not expected to directly affect northern spotted owl.

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# 7.0 List of Preparers

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## 7.0 LIST OF PREPARERS

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As required by Section 1502.6 of the Council on Environmental Quality regulations and FAA Orders 1050.1E and 5050.4B the Hayfork Airport Environmental Assessment was prepared and reviewed using an interdisciplinary approach.

### 7.1 Principal Federal Aviation Administration Reviewers:

#### U.S. Department of Transportation, Federal Aviation Administration

**Peter F. Ciesla**, Regional Environmental Protection Specialist, Airports Division, Western Pacific Region. B.S. Accounting, M.B.A. Finance, Certificate Program - Land Use and Environmental Planning. Over 20 years of experience. Performs FAA evaluation of environmental documentation and coordination with federal and state agencies in the FAA's Western Pacific Region.

**Camille Garibaldi**, Environmental Protection Specialist, FAA Airports Division, Western-Pacific Region, San Francisco Airports District Office, B.S. Business Management, more than 20 years environmental experience. Responsible for FAA evaluation; NEPA document reviews; and regulatory agency and special purpose law consultations.

**Barry Franklin**, Environmental Protection Specialist, Airport Division, FAA Airports Division, Western-Pacific Region, San Francisco Airport District Office. B.S. Civil Engineering, 21 years experience, Responsible for FAA review of NEPA documents and regulatory agency and special purpose law consultations.

### 7.2 Preparers

#### Trinity County

**Jan Smith**, Senior Environmental Compliance Specialist

#### Wallace Environmental Consulting Services, Inc.:

**Jim Wallace**, Principal BA, History, Humboldt State University Mr. Wallace has more than thirty years of experience as an environmental and natural resource consultant. He serves as project manager for NEPA and CEQA compliance for complex publicly financed projects and as project manager for environmental planning at mines and for mine land reclamation strategies. Mr. Wallace specializes in environmental compliance and developing workable environmental strategies for complex projects throughout northern California. Mr. Wallace has served as project manager for various NEPA compliance documents on behalf of the FAA including general aviation airports in Weaverville, Chico, Chester, Placerville, Madera, Georgetown, Cedarville, Mammoth Yosemite, Tule Lake, Lake Tahoe, Chester, Lincoln, Livermore and Napa.

#### North Fork Associates

Biological Assessment and Wetland Delineation

#### Stillwater Sciences

Biological Assessment

**Genesis Society**

Cultural Resources

**Huang Engineering & Consulting**

Phase I Environmental Site Assessment

# 8.0 Public Participation

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## 8.0 PUBLIC PARTICIPATION

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Public involvement is an important component of the NEPA and special purpose law process.

For this Environmental Assessment a public review of the Draft Environmental Assessment occurred from September 14, 2011 to October 14, 2011:

- A Notice of Availability of the Draft Environmental Assessment was published in the Trinity Journal on September 13, 2011. The public comment period was offered for 30-days after the notices were published. A copy of the Affidavit of Publication is provided in **Appendix F**.
- Copies of the Draft Environmental Assessment were made available at:
  - Hayfork Branch Library, Hyampom Road, Hayfork, CA 96041
  - Trinity County Department of Transportation, 31301 State Highway 3, Weaverville, CA 96093
  - FAA, San Francisco Airports District Office, 831 Mitten Road, Burlingame, CA 94010
- One comment letter from the North Coast Regional Water Quality Control Board was received during the public review period. A copy of the letter and the response is provided in **Appendix G**.