

# Appendix G Environmental Screening Report

# Introduction

An environmental review of the TRK Master Plan Alternatives was conducted to identify known environmental resources or other constraints that could affect or be affected by one or more of the four alternatives (1, 2, 3, and 4). Each of the environmental resources as set forth in FAA Order 1050.1F: *Environmental Impacts: Policies and Procedures* and the *Environmental Desk Reference* was considered using existing permitting agency databases. A full comparison of each alternative by resource area is included in **Table G-1**.

#### **RESOURCES NOT AFFECTED**

The following resource areas are not located within or near the airport will neither affect, nor be affected by any alternative.

- Coastal Resources
- Farmlands
- Wild and Scenic Rivers

# **Environmental Discussion**

#### ALTERNATIVE 1 – THIRD RUNWAY (RUNWAY 16/34)

Primary environmental considerations:

- Shifts areas of noise exposure due to new Runway 16/34 orientation and approach and departure routes
- Possible wetland impacts in project area due to the undetermined borders of National Wetlands Inventory wetland in the vicinity of parallel taxiway
- Possible water quality impacts due to fill in existing low area and increased amount of impervious surface
  - Project required to direct drainage away from new impervious surface and into the existing stormwater management system.
- Possible cultural impacts in project area due to the high possibility of containing cultural resources
  - Cultural survey would be needed due to new ground disturbance

G-1



- Any resources found would require an effect determination and eligibility evaluation
- Potential for the presence of species requiring state review in unsurveyed area
- Potential for Department of Transportation Section 4(f) impacts to Alpine Meadow Campground and nearby trails should be evaluated
- Avigation easement is proposed for lands within the proposed RPZs and not on airport property. Should fee acquisition of the land be pursued, additional environmental clearance, such as a Phase I Environmental Assessment, may be required.

Level of environmental review:

- Federal: Environmental Assessment
- State: Environmental Impact Report

Sustainability considerations:

- Runway 16/34 would offer a more efficient approach that may reduce fuel burn time for approaching aircraft from current procedures.
- Runway 16/34 will require extra taxiing distance and time resulting in greater aircraft and vehicle travel times and greater fossil fuel burn.
- Runway 16/34 will require more vehicle miles from maintenance and snow removal.
- Runway 16/34 may impact drainage areas that affect overall stormwater runoff on the Airport during rain or snow events, influencing the resilience of the airfield.
- All new construction materials/pavement correspond to emissions generated in their production

#### ALTERNATIVE 2 - RUNWAY 02/20 EXTENSION AND WIDENING

Primary environmental considerations

- Likely wetland impacts and associated mitigation due to the direct impacts to the temporary stream beyond existing Runway 2 end
  - Stream is likely jurisdictional due to connection with Martis Creek Lake downstream
- Possible cultural impacts
  - Potentially eligible resources beyond either side of Runway end 2 likely to be directly impacted by the project
  - Potentially eligible resources north of Runway end 20 may be impacted by the project
  - Further survey and eligibility determination needed

Level of environmental review:

- Federal:
  - IF wetland impacts could be covered under a Nationwide or regional general permit, and IF there are no adverse effects to cultural resources protected under the NHPA/4(f), THEN possible documented Categorical Exclusion
  - IF wetland impacts require an individual permit, or IF adverse effects to cultural resources are anticipated, THEN possible full Environmental Assessment
- State: Mitigated Negative Declaration



Possible mitigation:

- Stream impacts. Further study would determine type and extent of effort required based on stream type and quality.
- Cultural resource impacts. Further documentation of affected resources may be necessary, based on eligibility determination and final project disturbance limits.

Sustainability considerations

- Stays largely within existing disturbance area, using existing facilities
- Slight increases to taxi distance and snow removal areas, but not substantial
- Impacts to water resources and corresponding mitigation would affect natural environment at the airport and could influence overall drainage and stormwater. Depending upon the nature of the mitigation, the project could maintain the quality and function of the resource.

#### ALTERNATIVE 3 – RUNWAY 11 DISPLACED THRESHOLD

Primary environmental considerations

Possible shifted areas of noise exposure

Level of environmental review:

- Federal: Categorical Exclusion
- State: Mitigated Negative Declaration

Sustainability considerations

- Stays within existing disturbance area, using existing facilities
- Does not require new pavement; does not increase impervious surface at the airport

#### ALTERNATIVE 4 – THIRD RUNWAY AND RUNWAY 11 DISPLACED THRESHOLD

Primary environmental considerations

- Shifts areas of noise exposure due to new Runway 16/34 orientation and approach and departure routes, as well as Runway 11 displaced threshold location
- Possible wetland impacts in project area due to the undetermined borders of NWI wetland in the vicinity of parallel taxiway
- Possible water quality impacts due to fill in existing low area and increased amount of impervious surface
  - Project required to direct drainage away from new impervious surface and into the existing stormwater management system.
- Possible cultural impacts in project area due to the high possibility of containing cultural resources
  - Cultural survey would be needed due to new ground disturbance
  - Any resources found would require an effect determination and eligibility evaluation
- Potential for the presence of species requiring state review in unsurveyed area



- Potential for Department of Transportation Section 4(f) impacts to Alpine Meadow Campground and nearby trails should be evaluated
- Avigation easement is proposed for lands within the proposed RPZs and not on airport property. Should fee acquisition of the land be pursued, additional environmental clearance, such as a Phase I Environmental Assessment, may be required.

Level of environmental review:

- Federal: Environmental Assessment
- State: Environmental Impact Report

# Table G-1: Runway Alternative Comparison by Resource Area

Environmental Review Category	Alternative 1 – Third Runway (Runway 16/34)	Alternative 2 – Runway 02/20 Extension and Widening	Alternative 3 – Runway 11 Displaced Threshold	Alternative 4 – Third Runway and Runway 11 Displaced Threshold
Air Quality/Climate (USEPA, 2022)	County Air Quality Management District. Northe the National Ambient Air Quality Standards (NA levels do not exceed the established NAAQS. I	e portion within Nevada County is in the Northern ern Sierra Air Quality Management District desigr AAQS) (ozone, particulate matter, sulfur dioxide, Placer County Air Quality Management District de	nates eastern Nevada County as in attainment for lead, carbon monoxide, and nitrogen dioxide). A esignates Placer County as nonattainment for O	or each criteria pollutant under the established n attainment area is one in which air pollution zone 8-hour, both 2008 and 2015 standards.
	Alternative 1 would require emission levels analysis of to determine the applicability of general conformity requirements. Major runway reconstruction that results in a runway that is hardened, lengthened, or widened to support a larger class of aircraft is not exempt. This alternative may also increase operations minimally due to the addition of a vertically guided approach on Runway 16/34.	Alternative 2 would require emission levels analysis of to determine the applicability of general conformity requirements. Major runway reconstruction that results in a runway that is hardened, lengthened, or widened to support a larger class of aircraft is not exempt.	Alternative 3 is presumed to conform under "Routine maintenance for existing runways, taxiways, aprons, ramps, fillets, and airport roadways includes in-kind resurfacing, re- marking of existing runways, taxiways, apron areas, etc., and runway grooving and rubber removal projects."	Alternative 4 would require emission levels analysis of to determine the applicability of general conformity requirements. Major runway reconstruction that results in a runway that is hardened, lengthened, or widened to support a larger class of aircraft is not exempt. This alternative may also increase operations minimally due to the addition of a vertically guided approach on Runway 16/34.
<b>Biological Resources</b> (Threatened and Endangered Species) (Ganda 2015, Salix, 2020; USFWS, 2022)	<ul> <li>No critical habitats are present on or near the a</li> <li>Sierra Nevada Yellow-legged Frog (<i>Rai</i></li> <li>Lahontan Cutthroat Trout (<i>Oncorhynchi</i></li> <li>Monarch butterfly (<i>Danaus plexippus</i>) –</li> <li>Biological surveys of the existing airfield and la</li> </ul>	<i>us clarkii henshawi</i> ) - threatened - candidate nds north of the airport proposed for a land excha		tential to occur within the project area:
See Attachment 1 (IPaC Resource List) for more information.	Plant Rank List were found to have moderate p Alternative 1 was not included in previous survey areas and will require a biological survey to determine any potential biological impacts.	A portion of the Airport immediately adjacent to Runway 2-20, that the Master Plan identified as an area for the planned runway extension and widening, is characterized as grassland and herblands dominated by <i>Elytrigia intermedia</i> stands. These grasses are planted and managed by the Airport. Though mixed with native species, the survey determined that these areas are unlikely to support special-status species. However, the extension to the Runway 2 end directly impacts a drainage area that is a potential wetland. A biological survey will be required to determine any potential biological impacts.	No new impervious surface is proposed, so likely no effects to biological resources.	Alternative 4 was not included in previous survey areas and will require a biological survey to determine any potential biological impacts.
<b>Coastal Resources</b> (California Coastal Commission, 2022)	TRK is not located within a Coastal Zone Mana	agement Plan designated area. No coastal resour	rces would be affected by any alternative.	



Environmental Review Category	Alternative 1 – Third Runway (Runway 16/34)	Alternative 2 – Runway 02/20 Extension and Widening	Alternative 3 – Runway 11 Displaced Threshold	Alternative 4 – Third Runway and Runway 11 Displaced Threshold
Section 4(f) Resources	The layout for the new runway is located within airport property. However, Department of Transportation Section 4(f) impacts to the adjacent Alpine Meadow Campground and nearby trails should be evaluated for potential impacts.	All new impervious surfaces and construction will occur entirely within airport property. There are no section 4(f) resources on the airport that would be affected by the runway extension and widening.	No new impervious surfaces are included, and construction will occur entirely within airport property.	The layout for the new runway is located within airport property. However, Department of Transportation Section 4(f) impacts to the adjacent Alpine Meadow Campground and nearby trails should be evaluated for potential impacts.
Farmlands (NRCS, 2022)	All areas within the project extent are within air	port property and are not classified as prime farr	nland.	
Hazardous Materials, Solid Waste, and Pollution Prevention (USEPA, 2022, DTSC, 2022)		ection Agency National Priorities List (NPL), nor proposed project. The nearest NPL site is Cars		
Historical, Architectural, Archeological, and Cultural Resources (USEPA, 2022, Far Western, 2015, 2020)	Cultural surveys were conducted for TRK in 20         The Alternative 1 project area is in an area         with high potential to contain cultural         resources.         Because field work has not been conducted,         potential cultural resource impacts are         unknown. A cultural survey and a         determination of effects would be required.         Depending upon the results of the survey,         tribal coordination may be required.	<ul> <li>15 and in 2020 on the airfield and for land propo</li> <li>Previously surveyed resources exist within the Alternative 2 project area.</li> <li>The 2015 report found potentially eligible segments of a historic railroad east and west of the Runway 2 end. Runway disturbance likely covers the site in the center. Another potentially eligible site is located off Runway end 20.</li> <li>Further cultural study and an eligibility determination for these resources would be required. The evaluation of eligibility would determine what, if any, impacts will occur, or what type of mitigation will be required.</li> </ul>	sed for acquisition. Numerous cultural resources No new significant ground disturbance is proposed, so likely no effects to cultural resources.	<ul> <li>were identified in and around airport property.</li> <li>The Alternative 4 project area is in an area with high potential to contain cultural resources.</li> <li>Because field work has not been conducted, potential cultural resource impacts are unknown. A cultural survey and a determination of effects would be required. Depending upon the results of the survey, tribal coordination may be required.</li> </ul>
Land Use	Alternative 1 includes a new runway that would be constructed entirely within the airport boundary. However, a third runway would trigger an update of the adopted 2016 Truckee Tahoe Airport Land Use Compatibility Plan (ALUCP). The ALUCP would designate new zones for the third runway related to runway safety, overflight, noise, and airspace that could restrict the land use potential of lands around the new runway.	Alternative 2 is entirely within airport property and the proposed extended runway end 20 was included as the future conditions in the adopted 2016 Truckee Tahoe ALUCP. As such, this alternative would not affect land use.	Alternative 3 does not include any new construction and would not affect the runway ends that were included in the adopted 2016 Truckee Tahoe ALUCP. As such, this alternative would not affect land use.	Alternative 4 includes a new runway that would be constructed entirely within the airport boundary. However, a third runway would trigger an update of the adopted 2016 Truckee Tahoe ALUCP. The ALUCP would designate new zones for the third runway related to runway safety, overflight, noise, and airspace that could restrict the land use potential of lands around the new runway.



Environmental Review Category	Alternative 1 – Third Runway (Runway 16/34)		Runway 02/20 Exter d Widening	nsion Altern	Alternative 3 – Runway 11 Displaced Threshold			
Natural Resources and Energy Supply	The principal materials used for the new runway and associated taxiway construction will be earth fill, aggregate, and asphalt. Construction vehicles and equipment will consume petroleum-based products such as gasoline and diesel. However, all materials are readily available and will be used in quantities that are not likely to affect available supplies.	will be aggregate a vehicles and equip petroleum-based p and diesel. Howeve available and will b	ay extension and wid nd asphalt. Construc	ening but does r ction and would and energ oline eadily that	e 3 changes the runwa not include new paven not likely affect natur y supply.	nents or fill		
Noise and Noise- Compatible Land Use	60 and 65 CNEL noise contours for the new a and the proposed 02/20 extension and 16/34 noise analysis for detailed noise information f	extend less than appr or each alternative.	oximately 1,000 feet	off property and do		ing structures		
	reduced, as shown in the Feasibility Study analysis							
Socioeconomics,	The area used to identify low-income or mino		ed five tracts surrour	nding TRK covering	a total area of 87.9 so	quare miles. T		
Environmental Justice,	Nevada Counties and the state. The county li				Nava da Oscarta	O a l'ifa ana ia		
and Children's Environmental Health		ocation Ainority population	<i>TRK (5 tracts)</i> 18%	Placer County 28%	Nevada County 15%	California 63%		
and Safety Risk		ow-income population	13%	17%	25%	29%		
(USEPA, 2022b) Light Emissions and Visual Resources	The areas around the airport have a lower mi California. None of the alternatives would hav Addition of a third runway and its associated lighting could increase visibility of the airport from residential areas in the hills around the airport. The effects of potential light emissions would need to be evaluated.	Alternative 2 would Runway 2/20, how and footprint would from the existing. A adjacent residence	high effect on minor	Alternative Alternative ghting lighting, b fferent e no t to the		cation of some		
<b>Wetlands</b> (USFWS, 2022b, EcoAtlas, 2022, Ganda,	The National Wetlands Inventory (NWI) map i south of Runway end 2. A wetland delineatio would require mitigation.	dentifies a wetland ch	annel south of Runw	ay end 2. The biolo	•			
2015) See Attachment 2 (National Wetlands Inventory Map) for more information.	The area should be surveyed for potential wetlands as part of the biological survey. The California Aquatic Resource Inventory shows a potential wetland in an area affected by the Runway 16/34 parallel taxiway. Any potential wetland areas should be delineated.	impacts the tempor wetland in the NWI should be delineate required for any fill Fill proposed for th may also impact ex	ne Runway 2 end dire rary stream classified . The wetland bound ed and mitigation wo placed within the we e Runway 02/20 extension kisting drainage path by and the road that wo nodated.	d as a lary uld be etland. ension way	ated effects on wetlan	nds.		



# Alternative 4 – Third Runway and Runway 11 Displaced Threshold

The principal materials used for the new runway and associated taxiway construction will be earth fill, aggregate, and asphalt. Construction vehicles and equipment will consume petroleum-based products such as gasoline and diesel. However, all materials are readily available and will be used in quantities that are not likely to affect available supplies.

rport boundary at the runway ends, both existing es or sensitive land uses. See Feasibility Study

Noise will be shifted slightly but overall reduced, as shown in the Feasibility Study analysis

The data was compared to both Placer and

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ada Counties and much lower than the state of

me Addition of a third runway and its associated lighting could increase visibility of the airport from residential areas in the hills around the airport. The effects of potential light emissions would need to be evaluated.

aster Plan in 2015 also identifies wetland vegetation darea. Any fill placed within the wetland area

The area should be surveyed for potential wetlands as part of the biological survey. The California Aquatic Resource Inventory shows a potential wetland in an area affected by the Runway 16/34 parallel taxiway. Any potential wetland areas should be delineated.

Environmental Review Category	Alternative 1 – Third Runway (Runway 16/34)	Alternative 2 – Runway 02/20 Extension and Widening	Alternative 3 – Runway 11 Displaced Threshold	Alternative 4 – Third Runway and Runway 11 Displaced Threshold
Floodplains (FEMA, 2022) See Attachment 3 (Flood		deral Emergency Management Agency's (FEMA) in airport property at the east property line and ne of the designated flood areas.		
Insurance Rate Map 06057C0534E) for more information.	Fill proposed for Runway 16/34 may impact mapped 100-year floodplain on east side of TRK near Martis Dam Road. (Flooding effects from Martis Creek Lake area)	No impact to mapped floodplains. However, fill proposed for the Runway 02/20 extension may impact existing drainage pathway between the runway and the road that will need to be accommodated.	No impact to floodplains.	Fill proposed for Runway 16/34 may impact mapped 100-year floodplain on east side of TRK near Martis Dam Road. (Flooding effects from Martis Creek Lake area)
Water Quality	Possible water quality impacts due to anticipated fill in existing low area and increased amount of impervious surface to construct third runway, which could result in increased runoff to surface waters. Project would be required to direct drainage away from new impervious surface and into the existing stormwater management system.	Increased impervious surface from the runway extension and widening could result in increased runoff that could affect water quality. Likewise, anticipated fill for the extension to the Runway 2 end directly impacts the intermittent stream and drainage pathway, which could result in possible water quality impacts. Project would be required to maintain existing drainage pathway between the runway and the road and direct additional drainage away from new impervious surface and into the existing stormwater management system.	No new impervious surface and no anticipated impacts to water quality.	Possible water quality impacts due to anticipated fill in existing low area and increased amount of impervious surface to construct third runway, which could result in increased runoff to surface waters. Project would be required to direct drainage away from new impervious surface and into the existing stormwater management system.
Wild and Scenic Rivers		of the North Fork American Wild and Scenic Rive	er that is located more than 18 miles southwest o	f the airport. No wild and scenic rivers would be
(USEPA, 2022)	affected by any of the alternatives.			





#### **RESOURCES AND REFERENCES**

- California Department of Toxic Substances Control (DTSC). 2022. Department of Toxic Substances Control's EnviroStor database. Available online at <u>https://www.envirostor.dtsc.ca.gov/public/map/</u>. December 13, 2022.
- EcoAtlas. 2022. California Aquatic Resources Inventory (CARI). Available online at <u>http://www.EcoAtlas.org</u>. Accessed December 14, 2022.
- Far Western Anthropological Research Group, Inc. (Far Western). 2015. Final. Cultural Resources Study for the Proposed TTAD-TTSA Land Release and Exchange Project, Truckee-Tahoe Airport, Nevada and Placer Counties. April 2020.
- Far Western. 2015. Final. Report on a Cultural Resources Survey of the Proposed Truckee-Tahoe Airport Master Plan Update Project, Nevada and Placer Counties, California. April 2015.
- Federal Emergency Management Agency (FEMA). 2022. FEMA Flood Map Service Center. Available online at <u>https://msc.fema.gov/portal</u>. Accessed December 5, 2022.
- Garcia and Associates. (GANDA). 2015. Biological Constraints Analysis for the Truckee Tahoe Airport District Master Plan Update, Placer and Nevada Counties, California, February 2015.
- Natural Resources Conservation Service (NRCS). 2022. Web Soil Survey. Available online at <a href="https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx">https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx</a>. Accessed December 5, 2022.
- Salix Consulting, Inc. (Salix) 2020. Biological Resources and Wetlands Constraints Assessment For The Truckee Tahoe Airport Two Parcel Land Exchange Near The Town Of Truckee, Nevada County, California. January 2020.
- US Environmental Protection Agency (USEPA). 2022. NEPAssist Tool. Available online at: <u>https://www.epa.gov/nepa/nepassist</u>. Accessed December 5, 2022.
- USEPA. 2022b. Environmental Justice Screening and Mapping Tool. Available online at: <u>https://www.epa.gov/ejscreen</u>. Accessed December 13, 2022.
- US Fish and Wildlife Service (USFWS). 2022. IPaC Information for Planning and Consultation. Available online at: <u>https://ecos.fws.gov/ipac/</u>. Accessed December 9, 2022.
- USFWS. 2022b. National Wetlands Inventory. "Wetlands Mapper." Available online at <u>https://www.fws.gov/wetlands/Data/Mapper.html. Accessed November 2022</u>.

# U.S. Fish & Wildlife Service

# IPaC resource list

# Appendix G - Attachment 1

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

# Location

Nevada and Placer counties, California



# Local office

Sacramento Fish And Wildlife Office

**└** (916) 414-6600 **i** (916) 414-6713

Federal Building

NOTFORCONSULTATION

2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846

https://ipac.ecosphere.fws.gov/location/HDB3INCQZFEDVDMXLGJ3EMGC6A/resources

# Endangered species

# This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

 Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information. IPaC only shows species that are regulated by USFWS (see FAQ). 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

# Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog Rana sierrae Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat.	Endangered
https://ecos.fws.gov/ecp/species/9529	4
Fishes NAME	STATUS
Lahontan Cutthroat Trout Oncorhynchus clarkii henshawi	Threatened
Wherever found	
No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/3964</u>	
<u>Intips.//ecos.iws.gov/ecp/species/5964</u>	
Insects	
NAME	STATUS
Monarch Butterfly Danaus plexippus	Candidate
Wherever found	
No critical habitat has been designated for this species.	
https://ecos.fws.gov/ecp/species/9743	

# Critical habitats

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Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty  $Act^{1}$  and the Bald and Golden Eagle Protection  $Act^{2}$ .

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

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The <u>Bald and Golden Eagle Protection Act</u> of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds <u>https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds</u>
- Nationwide conservation measures for birds <u>https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf</u>

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

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

 NAME
 BREEDING SEASON

 Bald Eagle Haliaeetus leucocephalus
 Breeds Jan 1 to Aug 31

 This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
 Breeds Jan 1 to Aug 31

Black-throated Gray Warbler Dendroica nigrescens This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jul 20
<b>California Gull</b> Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Cassin's Finch Carpodacus cassinii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9462</u>	Breeds May 15 to Jul 15
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
<b>Evening Grosbeak</b> Coccothraustes vespertinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <u>https://ecos.fws.gov/ecp/species/1680</u>	Breeds Dec 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9464</u>	Breeds Mar 20 to Sep 20
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9408</u>	Breeds Apr 20 to Sep 30
Olive-sided Flycatcher Contopus cooperi This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/3914</u>	Breeds May 20 to Aug 31

Breeds Jun 1 to Aug 31

Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/6743</u>

# **Probability of Presence Summary**

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

# Probability of Presence (

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

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

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

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

# Breeding Season (=)

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

# Survey Effort (|)

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

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

# No Data (–)

A week is marked as having no data if there were no survey events for that week.

# Survey Timeframe

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

			🔳 pr	obabilit	y of pre	sence	breec	ling seas	son	survey e	effort	— no data
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC
Bald Eagle Non-BCC Vulnerable	++11	<b>I</b> + <b>I</b> +	+1++	+++	∎¢‡∔	<b></b> ŧ+∎+	<b>+</b> ++ <b>1</b>	•1+1	+++	+ #1++	+ ++ 1	+
Black-throated Gray Warbler BCC - BCR	++++	++++	++++	++++	++++	++++	<del>[]]</del> +	4 <b>0</b> 41	+∎+	+ ++++	++++	+ ++++
California Gull BCC Rangewide (CON)	++++ 2	++++	++1+	+++	++++	<del>]</del>	┼╪┼┼	++++	+++	+ #++]	++1	+ + + + + +
Cassin's Finch BCC Rangewide (CON)	; ;	<b>W</b>	ŊŇ	ш	IIII	+111	<b>†</b> # <b>†</b> #	11+1	+++		+ 1++	+ +++
Clark's Grebe BCC Rangewide (CON)	++++	++++	++++	++++	┼┼빠┼	++++	++++	++++	+++	+ +++4	+ +++	+ + + + +
Evening Grosbeak BCC Rangewide (CON)	<b> </b> + + <b> </b>	++++	+	11]]	+ <mark>₽∎</mark> ≢	ŧ∔ŧŧ	<b>ŧ</b> ┼ŧ┼	<mark>↓</mark> ++	+++	+	++++	+ ++++
Golden Eagle Non-BCC Vulnerable	++++	++++	++++	++++	+∎+∔	++++	++++	++++	+++	+ +++	+++	+ ++ +
Lawrence's Goldfinch BCC Rangewide (CON)	++++ 2	++++	++ <mark>+</mark> +	++++	++++	++++	┼┼┼┼	++++	+++	+ +∎++	++++	+ ++++
Lewis's Woodpecker BCC Rangewide (CON)	++++ 9	++++	++++	++ <mark>+</mark>	++++	++++	++++	++++	+++	+ ++++	+ +++	+ ++++

Olive-sided Flycatcher BCC Rangewide (CON)	++++	+ ++++	++++	┼╇ <mark>┨</mark> ║	┼║单║	1111	+111	++++	++++	++++	++++
Western Grebe BCC Rangewide (CON)	+++++++++++++++++++++++++++++++++++++++	+ ++++	++++	÷∎∎≢	++++	<b>↓</b> ┼┼+	++++	++++	¢∎+∎	++++	++++

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

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

# What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

# What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and</u> <u>citizen science datasets</u>.

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

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the <u>RAIL Tool</u> and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

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

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

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

# Details about birds that are potentially affected by offshore projects

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

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

# What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

# Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability"

#### IPaC: Explore Location resources

of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

# There are no known coastal barriers at this location.

# Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the <u>official CBRS maps</u>. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <u>https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation</u>

# Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact <u>CBRA@fws.gov</u>.

# Facilities

# National Wildlife Refuge lands

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

There are no refuge lands at this location.

# Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

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

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

# Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the <u>NWI map</u> to view wetlands at this location.

# Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

#### IPaC: Explore Location resources

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

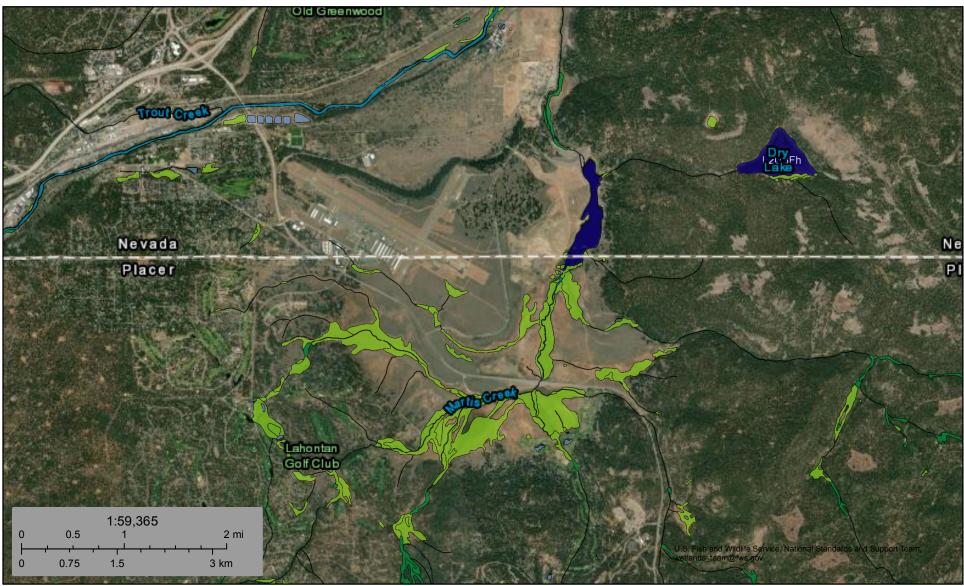
JEO



# U.S. Fish and Wildlife Service National Wetlands Inventory

# **TRK Wetlands**

**Appendix G - Attachment 2** 



#### December 6, 2022

#### Wetlands

- Estuarine and Marine Wetland

Estuarine and Marine Deepwater

- e Wetland
- Freshwater Pond

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Lake Other Riverine This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

#### NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Silivater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS construction and/or floodplain management. Coastal **Base Elong Elevations** shown on this may apply only landward di-

Constitution and/or modphain management. **Coastal Base Flood Elevations** shown on this map apply only landward of 0.0° North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the devations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10N The **horizontal datum** was NAD 83, GRS80 spheroid Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA, NNGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, Maryland 20910-3282 (301) 713-3242

To obtain current elevation, description, and/or location information for **bench** marks shown on this map, please contact the information Services Branch of the National Geodelic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the USDA National Agriculture Imagery Program (NAIP). This information was photogrammetrically compiled at a scale of 1:24,000 from aerial photography dated 2005.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic date) may reflect stream channel distances that differ from what is shown on this map.

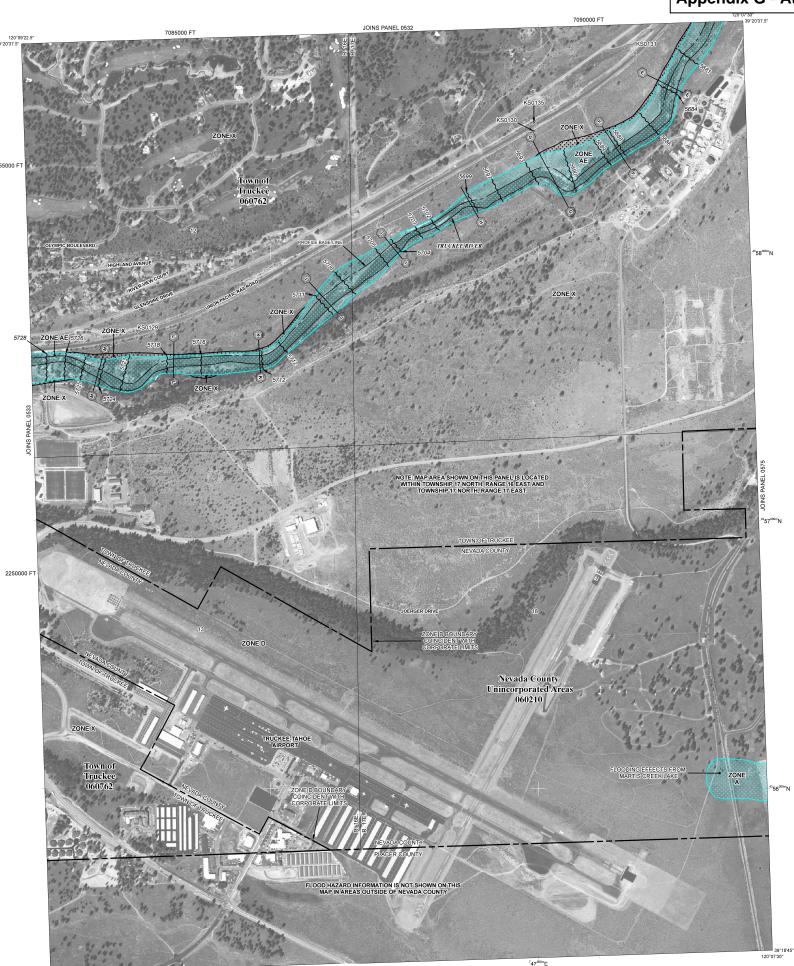
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <a href="http://msc.fema.gov">http://msc.fema.gov</a>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, piezes call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at <u>http://www.fema.gov.</u>

39°18'45" 120'09'22.5"



<sup>7</sup>46<sup>000</sup>E

# Appendix G - Attachment 3

LEGEND
SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject flooding by the TV annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AH, ABA, V, and VE. The Base Flood Elevation is the water-surface elevation of the VS annual chance flood.
ZONE A         No Base Flood Elevations determined.           ZONE AE         Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
determined. ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently detertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
FLOODWAY AREAS IN ZONE AE The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free
of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with
average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
OTHER AREAS ZONE X Areas determined to be outside the 0.2% annual charce flooringin
ZONE X         Areas determined to be outside the 0.2% annual chance floodplain.           ZONE D         Areas in which flood hazards are undetermined, but possible.
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
CRRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
LEKS areas and OPAs are normally located within or adjacent to special Flood Hazard Areas.     1% annual chance floodplain boundary
0.2% annual chance floodplain boundary     Floodway boundary
Zone D boundary
CBRS and OPA boundary Boundary dividing Special Flood Hazard Area Zones and
<ul> <li>boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.</li> </ul>
State         Base Flood Elevation line and value; elevation in feet*           (EL 987)         Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
Cross section line     Cross section line     Transect line
87°07'45", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
<sup>34</sup> 76 <sup>500</sup> N 1000-meter Universal Transverse Mercator grid values, zone 10N 5000-00 ET 5000-000 grid ticks: California State Plane coordinate
600000 FT S000-foot grid ticks: California State Plane coordinate system, zone II (FIPSZONE 0402), Lambert Conformal Conic projection
DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5 River Mile
MAP REPOSITORY Refer to listing of Map Repositories on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP February 3, 2010
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.
MAP SCALE 1" = 500' 250 0 500 1000
Herein         FEET           Herein         METERS           150         0
v 100 000
NEIP PANEL 0534E
FIRM
NEVADA COUNTY, CALIFORNIA
SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS: COMMUNITY NUMBER PANEL SUFFIX
NEWHOLD TO THE ACCOUNTY OBSIDE OF A E
Notice to User. The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.
06057C0534E
EFFECTIVE DATE
FEBRUARY 3, 2010
Federal Emergency Management Agency