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NORTH TAHOE SHARED-USE TRAIL – SEGMENT 1
WILDLIFE BASELINE REPORT

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1.0 INTRODUCTION

The purpose of this document is to conduct an initial baseline assessment for wildlife resources that satisfies the U.S. Fish and Wildlife Service (USFWS), United States Forest Service (USFS) Lake Tahoe Basin Management Unit (LTBMU), Tahoe Regional Planning Agency (TRPA), and the California Department of Fish and Wildlife (CDFW) requirements to determine potential project effects on wildlife special status species for the North Tahoe Shared-Use Trail – Segment 1 Project (project). Furthermore, the Wildlife Baseline Report will provide the project proponent with relevant resources as they pertain to special status wildlife species and habitat within the project's area of potential effect (APE) and guide the decision-making process during project design. This report summarizes the literature review and research findings, field assessment data, and potential impacts to special status species in the Lake Tahoe Basin within and adjacent to the APE. For the purposes of this report, the term special status species encompasses those species designated as federally threatened or endangered by the USFWS; those designated as state endangered, threatened, or rare by the State of California; USFS LTBMU Sensitive Species; and TRPA special interest species.

2.0 BACKGROUND

The North Tahoe Shared-Use Trail– Segment 1 project (project) will construct a regional trail connecting the communities of Tahoe Vista and Carnelian Bay, California. The project will provide public access to existing recreational trails, enhance accessibility to public land, provide educational and recreational opportunities, and provide a non-motorized transportation alternative for visitors and residents. Additionally, the project will enhance the safety of bicyclists and connect residential neighborhoods to commercial, tourism, and recreational facilities.

The trail will begin at Carnelian Bay Avenue on the west end and will terminate at a junction with the existing Pine Drop Trail within the North Tahoe Regional Park in Tahoe Vista.

The project will be on federal forest lands managed by the United States Forest Service, open space parcels managed by the North Tahoe Public Utility District (NTPUD) and will utilize one existing public easement through a private parcel.

2.1 Project Location

The project is located in the North Lake Tahoe area of Placer County, California. The project is located in Sections 10 and 11 in Township 16 North and Range 17 East of the Mt. Diablo Meridian which may be found on the following U.S. Geological Survey 7.5 minute quadrangle maps: *Martis Peak* and *Kings Beach* in Placer County, California. It is within two TRPA Priority Watersheds: Carnelian Canyon (Priority three), and Tahoe Vista (Priority three).

The project encompasses 2.52 miles of the paved trail. The trail will begin at Carnelian Bay Avenue on the west end and terminate near the northeast corner of the North Tahoe Public Utility District (NTPUD) managed North Tahoe Regional Park in Tahoe Vista, California (**Figure 1**). The Project is primarily located in wildland adjacent to rural development with a regional park in the eastern section.

The biological survey area is the same as the project APE and includes a corridor that extends 60-feet on either side of the trail centerline with a wider corridor where the trail terminates at the North Tahoe Regional Park to accommodate a paved pad with a kiosk; the total area of this survey area is approximately 39 acres.

Area plans are considered land use and zoning guidance documents for both the TRPA and the County. The APE is included within the Placer County Tahoe Basin Area Plan (Placer County 2017). Land use in the eastern portion of the APE is designated under the "recreation" subdistrict with the western section of the APE designated as "conservation".

3.0 RECORDS AND INFORMATION SEARCHES

A literature and database review were conducted to identify existing wildlife information within and adjacent to the APE. In order to understand the occurrence potential of special status species which have the ability to migrate and move around within suitable habitat zones, a buffer area of 0.5 miles around the APE was developed and all occurrence data for special status species within that buffer was recorded and reported in this report. This review assisted with the determinations contained in this document. All of the references utilized for this Report are listed in Section 8.0. The most relevant searches, reviews, and requests are listed below.

Agency/Entity	Date	Information Received
USFWS	7/20/20	• Federally Protected Species List for threatened, endangered, candidate, de-listed, and special concern species (USFWS 2020)
USFS – LTBMU	7/1/20	• Lake Tahoe Basin Management Unit Sensitive Species
USDA	8/19/2019	• CALVEG GIS layers (USDA 2009)
TRPA	7/1/2020	• TRPA Threshold Evaluation (TRPA 2015) • TRPA Special interest Species location data (TRPA 2020)
California Department of Fish & Wildlife (CDFW)	8/20/2019	• California Wildlife Habitat Relationship (CWHR) (CDFW 2020) • California Natural Diversity Database (CNDDB) (CNDDB 2019) • State & Federally Listed Endangered & Threatened Animals of California (CDFW 2020)

4.0 FIELD ASSESSMENTS AND SURVEYS

This section includes a summary of field assessments and survey information collected during the site investigation. The field investigation and assessment were conducted for presence of species, habitat, and range by NCE biologist Mack Casterman on August 30, 2019, July 8, 2020 and on October 23, 2020. The focus of this investigation was to evaluate the habitat and determine the likelihood that special status wildlife species or their associated habitats would occur within or be impacted by the project. The proposed trail alignment along with a 60-foot buffer on either side was traversed and observed species as well as habitat types were recorded. The survey area is illustrated in **Figure 1**.

Birds observed during the survey were found to be consistent with species associated in the Lake Tahoe urban setting and include Steller's jay, dark-eyed junco, American robin, mountain chickadee, northern flicker, and common raven.

Habitat type and condition were assessed using the CWHR sampling method. CWHR is a habitat modeling program developed by the California Department of Fish and Wildlife (CDFW) that supports habitat classifications described in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988). The CWHR model is used to predict regularly-occurring wildlife within a particular habitat type using physical elements, stand structure, and seral stage constraints. The APE is composed mainly of sierran mixed conifer and Jeffrey pine forest that is fragmented by urban land classification and pockets of montane chaparral and perennial grasslands (**Figure 2**). Sierran mixed conifer within the APE is characterized as moderate with patches of open cover; size class is best characterized as 4 (small trees/11-24" diameter at breast height (DBH)). Habitat type, size, and density were field verified and found to be consistent with the modeled attributes; however, the APE includes ongoing human disturbance in recreational zones and does not necessarily reflect characteristics or wildlife relationships associated with these habitats. Common disturbances include altered and non-native landscapes, litter, domestic pets, humans, and vehicular traffic. A summary of habitat classifications that exist within the project boundary are shown at the end of this section; unless otherwise noted, habitat information is taken from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988).

Based on field surveys and background research, habitat within the APE includes undeveloped wildland areas with moderate to high plant cover and diversity, in addition to snags, but the likelihood of occupancy by special status species is low as these areas occur near developed areas that contribute to an ongoing level of disturbance via noise, human presence and light.

Mixed Conifer – Pine Alliance (CALVEG Code: MP, CWHR Code: SMC)
The mixed conifer – pine alliance occurs on western and eastern slopes of the Northern Sierras at elevations between 1,900 to 7,800 feet on mesic soils. It is defined by the presence of conifer species such as ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*), Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), and sugar pine (*Pinus lambertiana*), and the absence or only trace amounts of Jeffrey Pine (*Pinus jeffreyi*). This alliance is the most common alliance within the APE.

Jeffrey Pine Alliance (CALVEG Code: JP, CWHR Code: JPN)
The Jeffrey pine alliance can be found in eastside northern Sierra Nevada habitats up to an elevation of about 7,300 feet. This alliance grows in xeric micro-environments on granitic outcrops or on glaciated soils such as tills and outwash deposits. It is prominent in the Sierra

Valley and Carson Range Subsections on the east side of the range. This forest is tall and open and is dominated by Jeffrey pine (*Pinus jeffreyi*) with a sparse understory of chaparral or sagebrush shrubs and young trees. The understory may include white fir (*Abies concolor*), greenleaf manzanita (*Arctostaphylos patula*), mountain whitethorn (*Ceanothus cordulatus*), wax currant (*Ribes cereum*), and mountain sagebrush (*Artemisia tridentata* ssp. *vaseyana*). Lodgepole pine (*Pinus contorta* ssp. *murrayana*) can be found in areas that collect more moisture (Holland 1986). This alliance is mapped throughout the APE.

Montane Chaparral (CALVEG Code: CG, CWHR Code: MCP)
Montane chaparral within the APE characterized by Greenleaf manzanita near the mixed conifer and Jeffrey pine alliances. Other mid-montane shrubs may be minimally present in this alliance, including deerbrush (*Ceanothus intergerrimus*), Snowbrush (*Ceanothus velutinus*), and bush chinquapin (*Chrysolepis sempervirens*). This alliance has been mapped at elevations between 5,000 to 8,800 feet.

Perennial Grasslands (CALVEG Code: HM, CWHR Code: PGS)
Perennial grasslands have been mapped sparsely in fourteen subsections of the Sierran zone at elevations between 2,000 – 9,400 feet. This type is a form of dry to moist grassland in which it is difficult to determine species composition without detailed onsite surveys. Some of these areas are currently being used for livestock pasture and are a mix of perennial and annual grasses and legumes that vary according to management practices. Perennial bunchgrasses introduced from Eurasia such as desert, tall, and intermediate wheatgrasses (*Agropyron desertorum, Elytrigia pontica, Elytrigia intermedia*), in addition to tall fescue (*Festuca arundinacea*), clover (*Trifolium* spp.), needlegrass (*Achnatherum* spp.), squirreltail (*Elymus elymoides*), rock cress (*Arabis* spp.), monardella (*Monardella* spp.), buckwheat (*Eriogonum* spp.), cheatgrass (*Bromus tectorum*) and others generally found in northern California may be included in the mixture. Mules-ears (*Wyethia mollis*) are a typical associate towards the east. This Alliance is often associated with moist openings in Red Fir (*Abies magnifica*) forests.

Urban or Developed (CALVEG Code: UB, CWHR Code: URB)
The urban or developed category applies to landscapes that are dominated by urban structures, residential units, or other developed land use elements such as highways or city parks. Areas mapped as urban or developed exist throughout the APE but are primarily located along the roads and southern commercial corridor. Furthermore, the entire APE can be described as a mix of forested vegetation within urban development.

5.0 SPECIAL STATUS SPECIES

This section discusses the special status species that have the potential to occur in the APE. There are no known occurrences of special status species within the project boundary (CNDDB 2019, USFWS 2016, TRPA 2019).

All species protected by the TRPA, USFWS, and the CDFW were evaluated for the APE using CWHR, CNDDB, additional background research, and on-site investigations (**Table 1**). No historical or documented observations for special status species were found within the APE. Refer to **Table 1** for a detailed account of historical occurrences, disturbance zones (northern goshawk), modeled habitat (Sierra Nevada yellow-legged frog, deer fawning), and habitat associations for species with suitable habitat within 0.5 miles of the APE.

The USFS LTBMU manages Protected Activity Centers (PACs) for California spotted owl and northern goshawk. California spotted owl PACs include the best available 300 acres of habitat on National Forest Service lands in as compact a unit as possible surrounding a territorial owl's activity center. Northern goshawk PACs include the best available 200 acres of forested habitat on National Forest Service lands in the largest contiguous patches possible and surrounding all known and newly discovered breeding territories detected on National Forest Service lands. PACs are managed to meet the life history requirements of spotted owls and goshawks. Management activities that would modify the habitat in these areas so that it trends away from desired conditions are prohibited (USDA 2012).

The USFS LTBMU also manages Home Range Core Areas (HRCAs) for California spotted owl. HRCAs on the USFS LTBMU include 1,000 acres of the best available and contiguous California spotted owl habitat in the closest proximity to the owl activity center. The acreage in the 300-acre PAC counts toward the total HRCA acreage. As with PACs, HRCAs are also managed to meet the life history requirements of spotted owls (USDA 2012).

A USFS LTBMU PAC for California spotted owl exists adjacent to the APE, west of Carnelian Bay Avenue. USFS LTBMU has designated a California spotted owl HRCA, associated with this PAC that encompasses approximately half a mile of the trail alignment on the trail's west side (**Figure 3**). There are no northern goshawk PACs within 1 mile of the trail alignment.

Based on habitat observed within the survey area and the presence of a California spotted owl PAC adjacent to the western edge of the APE, there is moderate likelihood for California spotted owl to occur within the APE during project activities. Suitable nesting habitat is absent within the APE, but owls may use the area for foraging. Noise associated with nonmotorized recreation does not seem to pose a threat to spotted owls, and chainsaw noises at least 350 feet from a nest do not appear to decrease reproductive success nor increase stress hormones in the species (USDA 2019). Therefore, the construction of the trail and future recreational use is unlikely to negatively impact California spotted owls that may occur in the vicinity. The USDA Forest Service's 2019 "Conservation strategy for the California Spotted Owl" recommends that trees more than 30 inches DBH should not be removed from occupied California spotted owl HRCAs (aka: Territories) (USDA 2019). This recommendation would apply to the westernmost half-mile of proposed trail alignment since that area falls under an HRCA as noted above.

TRPA has identified Threshold Disturbance Zones for particular special interest species including northern goshawk. Uses, projects, or activities outside existing urban areas and within the disturbance zone of special interest, threatened, endangered, or rare species shall

not, directly or indirectly, significantly adversely affect the habitat or cause the displacement of extirpation of the population (TRPA Code, Chapter 62, Subsection 62.4.2) The disturbance zone for goshawks is the 500 acres of best suitable habitat surrounding a population site, which shall include a 0.25-mile radius around each nest site (TRPA Code, Chapter 62, Subsection 62.4.1A). The closest TRPA Threshold Disturbance Zone for northern goshawk is 0.75 miles east of the trail alignment. This project will not result in impacts to TRPA Threshold Disturbance Zones.

In summary, suitable habitat does exist within 0.5 miles of the APE for Sierra Nevada yellow-legged frog, bald eagle, California spotted owl, northern goshawk, osprey, mule deer, sierra marten, Sierra Nevada mountain beaver, Sierra Nevada snowshoe hare, and Sierra Nevada red fox. Of these, bald eagle, California spotted owl, northern goshawk, osprey, mule deer, sierra marten, and Sierra Nevada snowshoe hare have a moderate likelihood of occurring within the project boundary as suitable habitat is present and they are known to occur in this vicinity.

Sierra Nevada yellow-legged frog is not expected to occur within the APE. Although suitable habitat does exist within 0.5 miles or the project, aquatic and riparian habitat requirements for migration, breeding, and foraging are lacking within the APE. The remaining species with suitable habitat are not expected to occur as they have very isolated populations, specific habitat requirements, and/or are sensitive to human disturbances. These include Sierra Nevada mountain beaver, and Sierra Nevada red fox.

6.0 TRPA THRESHOLD STANDARDS

W-1: Threshold Standards for TRPA Special Interest Species

No TRPA special interest species were identified within the APE. There is a spotted owl Protected Activity Center that begins on the west side of Carnelian Bay Avenue, adjacent to the western boundary of the APE. This Protected Activity Center does not overlap with the APE. It is not likely project activities will impact this species as suitable nesting habitat is not present within the APE. A more detailed discussion of these zones can be found in Section 6.0 and Table 1. Therefore, the project does not have the potential to impact wildlife threshold standards for TRPA special interest species for the following reasons:

- No TRPA disturbance zones are present within the project boundary.
- Suitable meadow and fawning habitat that could sustain the reproductive and cover needs for mule deer is limited within the APE and is abundant in the area surrounding the APE.
- No improvements are proposed along the Lake Tahoe shoreline.
- TRPA approved temporary BMPs will be utilized during construction to minimize any disturbance due to project construction.

W-2: Habitats of Special Significance

Stream Environment Zones (SEZs) are absent within the APE. Water quality BMPs will be incorporated into the project design to minimize any potential impacts to SEZs due to project construction.

F-1: Lake Habitat

No improvements are proposed within lake habitat; therefore, no further analysis is necessary.

F-2: Stream Habitat

No stream modification is proposed; therefore, no further analysis is necessary.

F-3: In-Stream Flow

No in-stream flow modification is proposed; therefore, no further analysis is necessary.

F-4: Lahontan Cutthroat Trout

The APE does not contain habitat for Lahontan cutthroat trout populations (TRPA 2015); therefore, no further analysis is necessary. A discussion of Lahontan cutthroat trout can be found in **Table 1**.

7.0 SUMMARY

Background research found no historical occurrences of special status species within a 0.5 mile radius of the proposed trail alignment. Field investigations found the habitat within the APE suitable for bald eagle, California spotted owl, northern goshawk, osprey, mule deer, sierra marten, and Sierra Nevada snowshoe hare. Project activities will not affect the ability of birds or mammals in the area to forage, move, or breed. This project will not interrupt the movement of species in the region, and habitat values will remain high within and adjacent to the location of the project.

The APE represents the typical natural area adjacent to urban development found within the Lake Tahoe Basin. The APE is primarily wildland with more developed trails and recreational infrastructure in the eastern half of the trail alignment. The land surrounding the APE is primarily state land and consists of forested open space that provides habitat for a variety of common wildlife species. The likelihood of impacts to special status species identified in this report is low.

The USDA Forest Service's 2019 "Conservation strategy for the California Spotted Owl" recommends that trees more than 30 inches DBH should not be removed from occupied California spotted owl HRCAs (aka: Territories) (USDA 2019). This recommendation would apply to the westernmost half-mile of proposed trail alignment since that area falls under an HRCA.

8.0 REFERENCES

California Department of Fish and Wildlife (CDFW). (2020). California Wildlife Habitat Relationships System, California Interagency Wildlife Task Group. [online]. https://wildlife.ca.gov/Data/CWHR/Life-History-and-Range Retrieved on 7/1/20

CDFW. (2020). "Special Animals List." July, 2020. State of California Resources Agency. Sacramento, CA. [online]. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline . Retrieved on 7/15/2020.

California Natural Diversity Database (CNDDB). (2019). California Department of Fish and Wildlife, Commercial Version.

Huff, M., K. Bettinger, H. Ferguson, M. Brown, B. Altman. (2000). *A Habitat-Based Point-Count Protocol for Terrestrial Birds, Emphasizing Washington and Oregon*, USDA Forest Service Pacific Northwest Research Station.

Grinnell, J., J. S. Dixon, and J. M. Linsdale. (1937). *Fur-bearing mammals of California*. 2 Vols. Univ. California Press, Berkeley. 777pp.

Loveless, C. M. (1967). *Ecological characteristics of mule deer winter range*. Colorado Dept. Game, Fish and Parks Tech. Publ. 20.

Manley, P., and Schlesinger, M. (2000). "Imperilment and Vulnerability of Lake Tahoe Basin Terrestrial Vertebrates." in: *Lake Tahoe Watershed Assessment*, C. Knopp and D. Murphy, eds., GTR-PSW-175, Vol. 2 (M), 1-9, USDA Forest Service Pacific Southwest Region, Albany, CA.

Mayer, K., and Laudenslayer, W. (1988). *A Guide to Wildlife Habitats of California.* CDFW, Sacramento, CA.

Placer County, Tahoe Regional Planning Agency (2017). Tahoe Basin Area Plan. [online]. https://www.placer.ca.gov/3590/Tahoe-Basin-Area-Plan Retrieved on 8/15/2019.

Reynolds, R. T., R. T. Graham, M. H. Reiser, R. L. Bassett, P. L. Kennedy, D. A. Boyce Jr., G. Goodwin, R. Smith, and E. L. Fisher. (1992). *Management Recommendations for the Northern Goshawk in the Southwestern United States*. Fort Collins, Co.

Rundel, P. W., Gordon, D. T., and Parsons, D. J. (1977). "Montane and subalpine vegetation of the Sierra Nevada and Cascade Ranges " in: *Terrestrial vegetation of California*, M. G. Barbour and J. Major, eds., 559-599, John Wiley and Sons, NY.

Romsos, S. (2000). "Species Accounts for Select Focal Species: bald eagle." in: *Lake Tahoe Watershed Assessment*, *App. O*. Knopp and D. Murphy, eds. PWS-GTR-175, Vol. 2(G). USDA Forest Service Pacific Southwest Research Station, Albany, CA.

Sanders, S. D., and M. A. Flett. (1989). *Ecology of the Sierra Nevada population of willow flycatcher (Empidonax traillii)*, 1986-1987. California Department of Fish and Game.

Schlesinger, M.D., and J.S. Romsos. (2000). "Details of Models of Riparian Biodiversity and Community Diversity." Appendix D in *Lake Tahoe Watershed Assessment: Volume 2*. U.S. Forest Service - Lake Tahoe Basin Management Unit.

TRPA. (2015a). *Threshold Evaluation Report.* Chapter 8 Wildlife. Stateline, NV. [online]. http://www.trpa.org/wp-content/uploads/14_Ch8_Wildlife_FINAL_9_30_2016.pdf Retrieved on 8/21/2019.

TRPA. (2019). Tahoe Open Data, Mapping Tools and Datasets. [online]. http://data-trpa.opendata.arcgis.com/ Retrieved on 7/1/2020.

Timossi, I. C., E. L. Woodard, and R. H. Barrett. (1995). *Habitat suitability models for use with ARC/INFO: Marten*. Calif. Dept. of Fish and Game, CWHR Program, Sacramento, CA. CWHR Tech. Report No. 7. 24 pp.

U.S. Department of Agriculture (USDA). (2008). "2006/2007 Monitoring Program Annual Report." USDA Forest Service LTBMU Ecosystem Conservation Department Adaptive Management Monitoring Program, South Lake Tahoe, CA. [online]. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsm9_045889.pdf Retrieved on 7/1/2020.

USDA. (2009). "Existing Vegetation Data (CALVEG) by Tiles (EvegTile17B_05_24k_v1) in Albers for Lake Tahoe Basin Management Unit." USDA Forest Service Remote Sensing Lab, Ecosystem Planning, Last updated on 1/5/2009. [online] http://www.fs.fed.us/r5/rsl/clearinghouse/aa-ref-tmu.shtml Retrieved 2/17/2010.

USDA. (2012). Draft Revised Land and Resource Management Plan, Volume I- Draft Environmental Impact Statement, Lake Tahoe Basin Management Unit. USDA Forest Service, Pacific Southwest Region. 3-433. [online] http://clearinghouse.nv.gov/public/Notice/2013/E2013-071.pdf Retrieved 7/1/2020.

USDA. (2019). Conservation Strategy for the California Spotted Owl in the Sierra Nevada, Version 1.0. USDA Forest Service, Pacific Southwest Region. April 2019.

USDA. (2020). United States Forest Service, Lake Tahoe Basin Management Unit. List of Sensitive Species. [online]. https://www.fs.usda.gov/detail/ltbmu/home/?cid=fsm9_046611 Retrieved 7/1/2020.

U.S. Fish and Wildlife Service (USFWS). (2020). "Information for Planning and Conservation." Fish and Wildlife Service, Sacramento Field Office. Retrieved on 7/20/2020.

Verner, J., and Boss, A. S. (1980). "California wildlife and their habitats: western Sierra Nevada." GTR-PSW-37, USDA Forest Service, Berkeley, CA.

Zeiner, D., Laudenslayer, W., Mayer, K., and White, M. (1990). *California Wildlife.* CDFW, Sacramento, CA.

APPENDIX A

Tables

Table 1. Special Status Wildlife Species Considered for the North Tahoe Shared-Use Trail, Segment 1

Common Name *Scientific Name*	Federal Status+	State Status+		Local Status+	Occur within 0.5 miles of APE	Suitable Habitat within 0.5 miles of APE	Potential for Occurrence	Habitat Association (only discussed for species with a suitable habitat)
		CESA	CDFW					
Amphibians								
Northern leopard frog[1] *Lithobates pipiens*			SSC		No	No	**Not expected to occur.** This species is presumed extirpated from the Tahoe Basin (Schlesinger and Romsos 2000). Suitable habitat is not present in the APE.	
Sierra Nevada yellow-legged frog[2] *Rana sierrae*	FE, LTBMU	ST	WL		No	Yes	**Not expected to occur**. USFS designated suitable habitat exists within 0.5 miles of the APE, however aquatic habitat is absent within the APE making occurrence unlikely. It should be noted that USFS suitable habitat includes an open area to the east of North Tahoe Regional Park, however based on the field survey, this area is disturbed and lacks habitat indicators for the frog.	Typical habitat includes lakes, ponds, marshes, meadows, and streams at high elevations – typically ranging from about 4,500 to 12,000 feet. Sierra Nevada yellow-legged frogs are highly aquatic. They are rarely found more than 3.3 feet from water. Waters that do not freeze to the bottom and which do not dry up are required for breeding.
Birds								
American peregrine falcon *Falco peregrines anatum*	DL (8/99)	SD	FP	TRPA	No	No	**Not expected to occur. No Potential to Impact TRPA Threshold Standard.** Suitable habitat does not exist in the APE and this species is not known to occur in the APE.	
Bald eagle *Haliaeetus leucocephalus*	DL (8/07)	SE	FP	TRPA	No	Yes	**Moderate. No Potential to Impact TRPA Threshold Standard**. Suitable habitat exists within the APE. Species is not known to occur within or adjacent to APE, no known nesting	Bald eagles have an expansive range with breeding areas in Northern California, wintering mostly in the Klamath Basin, and a few favored inland areas of Southern California. Locally, they are yearlong residents

[1] Formerly *Rana pipiens*

[2] Formerly mountain yellow-legged frog, *Rana muscosa*

							sites within APE. No nesting sites or bald eagle activity was observed during surveys.	and migrants in the Tahoe Basin. Bald eagles use shorelines along large bodies of water and river courses for both nesting and wintering. Snags, broken-topped trees, or rocks near water are required for foraging and nesting. Most nests are located in large trees with open branches within 1 mile of a water body. In Lake Tahoe, known nesting sites include Emerald Bay and Marlette Lake. Wintering sites are located in Taylor, Tallac, Pope, and Upper Truckee Marshes (Romsos 2000)
California spotted owl *Strix occidentalis occidentalis*	LTBMU		SSC		No	Yes	**Moderate.** Suitable habitat exists within the APE. LTBMU designated "Protected Activity Center" (PAC) exists adjacent to APE to the west. Approximately 0.5 miles of the proposed trail alignment falls within LTBMU designated "Home Range Core Area" (HRCA) for this species. No individuals or nests were observed during the reconnaissance-level survey.	California spotted owl are found in Northwest California, the foothills and mid-elevation ranges of the Sierran Nevada, and localized pockets of Southern California. Locally, they are yearlong residents. They can occur in several forest types, but generally choose to breed in forested regions with high canopy cover. Because these owls are cavity dwellers, their reproductive habitat requires snags and decadent trees. Mature forests exhibit optimal habitat because they have complex forest structure, variation in tree size and age, large amounts of course woody debris, and scattered clearings that provide foraging opportunities. (USDA 2019)
Golden eagle *Aquila chrysaetos*			FP	TRPA	No	No	**Not expected to occur. No Potential to Impact TRPA Threshold Standard.** Species is not known to occur in the APE, and suitable habitat is lacking.	
Great gray owl *Strix nebulosa*	LTBMU	SE			No	No	**Not expected to occur.** Undisturbed mature red fir forests or wet meadows used for roosting and foraging are not present.	
Northern goshawk *Accipiter gentilis*	LTBMU		SSC	TRPA	Yes	Yes	**Moderate. No Potential to Impact to TRPA Threshold Standard.** There is a TRPA Northern Goshawk Disturbance Zone within 1 mile of the project. No improvements are proposed outside of the project boundary and the TRPA Disturbance Zone does not overlap with the project boundary.	Northern goshawk are distributed throughout California in middle to higher elevation forested areas, particularly in the North Coast Ranges through Sierra Nevada, Klamath, Cascade, and Warner Mountains (Zeiner et al. 1990). Locally, they can be yearlong residents and seasonal migrants. Goshawks usually nest on north-facing slopes near water and require

							This species could pass through the APE, but suitable breeding habitat is not present in the project survey area. No nesting sites or activity observed during surveys.	mature conifer or aspen forests with large diameter trees, dense canopy cover, and an open under story interspersed with meadows or shrub patches. Open areas provide foraging opportunities, while logs, snags, and broken-top trees are used as "plucking posts" to de-feather prey. Nests are usually located within the largest tree in the stand, next to the bole of the tree, in the lower third of the canopy.
Osprey *Pandion haliaetus*			WL	TRPA	No	Yes	**Moderate. No Potential to Impact TRPA Threshold Standard.** Osprey could pass through the APE, but suitable breeding and foraging habitat is not present in the APE. TRPA data exists for a nesting site approximately 1.5 miles south-west of APE. No nesting sites or activity observed during surveys.	Osprey are yearlong residents. Osprey diets are almost entirely fish; therefore, its range has a close association with open, calm, and clear waters for feeding. Platform nets are built atop large snags, living trees, and human structures. Tall, open trees called “pilot trees” are required nearby for landing approaches and flight practice for fledglings.
Waterfowl (collectively)				TRPA	No	No	**Not expected to occur. No Potential to Impact TRPA Threshold Standard.** Designated Wildlife Habitat for Waterfowl is not located within the APE. Lack of suitable habitat makes it unlikely they would nest in the APE. No nesting sites or activity observed during surveys.	
Willow flycatcher *Empidonax traillii*	LTBMU	SE			No	No	**Not expected to occur.** Willow flycatcher has very distinct habitat requirements that dictate meadow size, vegetation type, height, and access to water. No suitable habitat was identified within the APE.	
Mammals								
California wolverine *Gulo gulo luscus*	LTBMU	ST	FP		No	No	**Not expected to occur.** Suitable alpine habitat is not present in the APE. There are very few documented occurrences in the region.	
Fisher (West Coast Distinct Population Segment) *Pekania pennanti*	Proposed Threatened	SCT	SSC		No	No	**Not expected to occur.** Appropriate habitat for denning and foraging is not present within the APE; however marginal resting habitat is located within 0.5 miles of the project.	Fisher are rare residents in the Lake Tahoe Basin. They prefer woody debris, vegetated understory, and continuous, dense canopy cover is essential for foraging and cover. Fisher also favor riparian areas as rest sites.

								Dens are made in cavities of large conifers; both snags and live trees are used. Rarely enter areas of low canopy cover, or patches of large clearings.
Fringed myotis *Myotis thysanodes*	LTBMU				No	No	**Not expected to occur.** Species is not known to occur in the APE. Roosting sites (rocky outcrops, cliffs, and crevices with access to open habitats for foraging) are no present within the APE.	
Mule deer *Odocoileus hemionus*				TRPA	Yes	Yes	**Moderate. No Potential to Impact TRPA Threshold Standard.** Suitable habitat is located within APE. TRPA designated habitat exists within APE.	Mule deer have a widespread distribution throughout most of California (CDFW 2020). Locally, they are common to abundant migrants. Shrubs provide food, cover, and thermoregulation, making them essential habitat criteria. Openings interspersed through dense thickets and abundant edges are preferred. Deer require 3 quarts of water/day/100 lb. (Zeiner et al. 1990), so access to water and mineral licks are also critical features to suitable habitat.
Pallid bat *Antrozous pallidus*	LTBMU		SSC		No	No	**Not expected to occur.** Species is not known to occur in the APE. Roosting sites (rocky outcrops, cliffs, and crevices with access to open habitats for foraging) are no present within the APE.	
Sierra marten *Martes americana sierrae*	LTBMU		SSC		No	Yes	**Moderate.** CNDDB occurrence data from 1992 exists for species approximately 1 mile west of APE. Potential habitat occurs within APE however, riparian corridors are absent.	Dense, multi-storied coniferous forest that includes a high percentage of snags and downed longs in proximity to riparian corridors.
Sierra Nevada mountain beaver[3] *Aplodontia rufa californica*			SSC		No	Yes	**Not expected to occur.** Habitat requirements for cover, breeding, and foraging are lacking within the APE but are within 0.5 miles. It is not expected this species would pass through the APE as appropriate stream requirements are not found	

[3] Formerly mountain beaver, *Aplodontia rufa*

							there.	
Sierra Nevada red fox *Vulpes vulpes necator*		ST			No	Yes	**Not expected to occur.** Habitat requirements for cover, breeding, and foraging are present within and adjacent to APE. Presumed extirpated from the Tahoe Basin (Schlesinger and Romsos 2000).	Sierra Nevada red fox are found in the Cascades and from Lassen to Tulare County (CDFW 2020). Their local population size has high imperilment, but numbers are suspected to be increasing (Manley and Schlesinger 2000). Although most habitats found in the Lake Tahoe Basin are suitable for Sierra Nevada red fox, they are very rare in this region. Habitats they are found in include wet meadows, sub-alpine conifers, lodgepole pine, red fir, aspen, montane chaparral, riparian, mixed conifer, and Jeffrey pine. Open areas for hunting and covered areas for den sites are required, making habitat edges ideal.
Sierra Nevada snowshoe hare *Lepus americanus tahoensis*			SSC		No	Yes	**Moderate**. This species could use the APE for foraging and breeding. Riparian vegetation and meadows are lacking within the APE making occurrence less likely.	Typically occur in forest undergrowth, dense thickets of young conifers, especially firs where branches touch the ground, and patches of ceanothus and manzanita chaparral. Associated with brush situated close to meadows or deciduous riparian vegetation. (Zeiner et al. 1990).
Townsend's big ear bat *Corynorhinus townsendii*	LTBMU	SCT	SSC		No	No	**Not expected to occur.** There are few occurrences of this species in the Tahoe Basin, and they are not known to occur in the APE. Because roosting sites (undisturbed caves or cave surrogates) are the most important limiting resource for Townsend's big ear bat (Zeiner et al. 1990), their occurrence in the APE is unlikely.	
Fish								
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	FT			TRPA	No	No	**Absent.** Suitable aquatic habitat does not occur within the APE.	
Lahontan Lake tui chub *Gila bicolor pectinifer*	LTBMU		SSC		No	No	**Absent.** Suitable habitat does not exist within or adjacent to the APE.	
Insects								

Western bumble bee *Bombus occidentalis*	LTBMU	SCE			No	Yes	**Not expected to occur.** Potential nesting habitat exists within the APE. Foraging areas within the APE are limited due to conifer overstory. No CNDDB occurrence data within 1 mile of APE.	Species was once common throughout western North America. Species nests in underground cavities such as abandoned squirrel burrows in open west-southwest slopes bordered by trees.

Special Status Codes

[+] Federal
FE = Federally Endangered under the ESA
FT = Federally Threatened under the ESA
FC = Federal Candidate under the ESA
DL = Federally De-listed
LTBMU = USFS LTBMU Sensitive Species

State
SCT = State Candidate Threatened
SCE = State Candidate Endangered
SE = State Endangered under CESA
ST = State Threatened under CESA
SD = State Delisted

CDFW
SSC = Species of Special Concern
FP = Federally Protected
WL = Watch List

Local
TRPA = TRPA Special Interest Species

Sources: CDFW 2020, CNDDB 2019, TRPA 2015, TRPA 2019, USFWS 2019, USFS LTBMU 2019

APPENDIX B

Figures

Legend

- APE (Area of Potential Effect)
- Trail Alignment
- Construction Access and Staging

North Tahoe Shared-Use Trail - Segment 1

Project Area Map

N

1in = 1,000ft

0 500 1,000 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; NCE 2021	331.22.25	mcasterman/drios	7/10/20	11/4/2021	drios

Document Path: P:\Active Projects\Placer County PWD - A331\331.22.25 - NT Shared Use Trail\Design & Mapping\GIS\AGP\NT Trail - sbryan_CEQAv02.aprx

Document Path: P:\Active Projects\Placer County PWD - A331\331.22.25 - NT Shared Use Trail\Design & Mapping\GIS\AGP\NT Trail - mcasterman.aprx

NCE

North Tahoe Shared Use Trail

Vegetation Communities Map

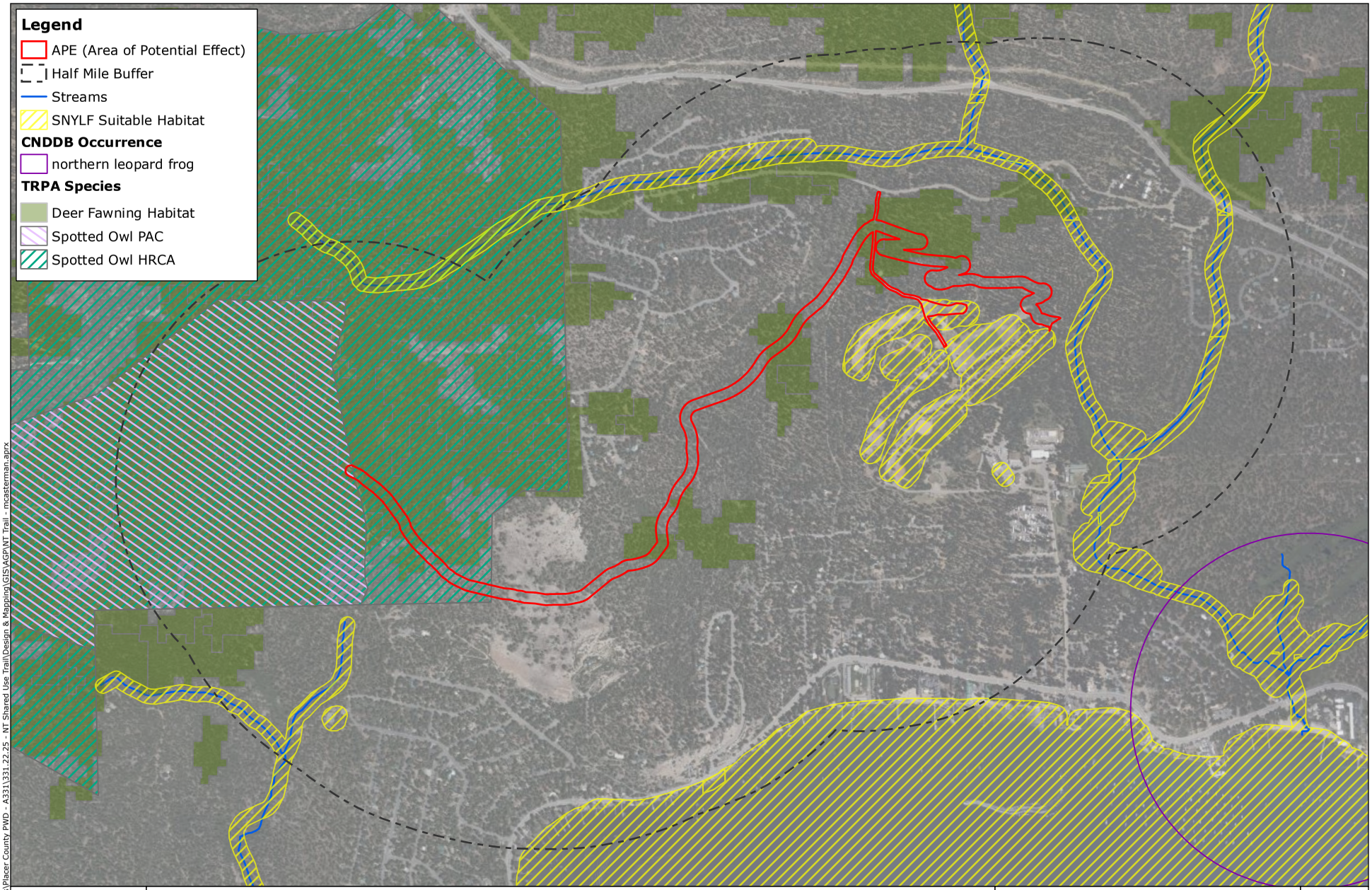
N

1in = 1,000ft

0 500 1,000 ft.

FIGURE 2

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap, CDFW	331.22.25	mcasterman	7/15/20	10/28/21	drios



North Tahoe Shared Use Trail

Wildlife Basemap

N

1in = 1,500ft

0 750 1,500 ft.

FIGURE 3

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap, TRPA, CNDDB, USFS	331.22.25	mcasterman	7/15/20	10/28/21	drios

Document Path: P:\Active Projects\Placer County PWD - A331\331.22.25 - NT Shared Use Trail\Design & Mapping\GIS\AGP\NT Trail - mcasterman.aprx