D.11 VEGETATION, WILDLIFE, AND FISH

Spaghetti Bowl Project
Vegetation, Wildlife, and Fish
Technical Report

As part of the Environmental Review Process for

I-80/I-580/US 395
Spaghetti Bowl Interchange Reconstruction
Washoe County, Nevada

Federal Highway Administration, Nevada Division

Nevada Department of Transportation

NDOT Project Number 74020
FHWA Project Number NHFP-080-1(172)

November 2018

ACRONYMS AND ABBREVIATIONS

APE	area of potential effects
BMP	best management practice
EIS	environmental impact statement
EO	element occurrence
ESA	Endangered Species Act
FHWA	Federal Highway Administration
I-580	Interstate 580
I-80	Interstate 80
LCT	Lahontan cutthroat trout
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NNHP	Nevada Natural Heritage Program
US 395	U.S. Highway 395
USFWS	U.S. Fish and Wildlife Service

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1.0 INTRODUCTION

The Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA) are studying alternatives to address the obsolete design, improve safety, and reduce travel delays in the Interstate 80 (I-80) and Interstate 580/U.S. Highway 395 (I-580/US 395) corridors and the interchange that connects these freeways, known locally as the "Spaghetti Bowl." The Spaghetti Bowl is in the cities of Reno and Sparks in southern Washoe County, Nevada.

This report describes the existing conditions of vegetation, wildlife, and fish in the area of potential effects (APE). It also describes the project's short-term and long-term direct and indirect effects on those resources and the mitigation measures that NDOT is implementing to minimize impacts to vegetation, wildlife, and fish. The Biological Assessment referenced in this report is found in Appendix D.10 of the Final Environmental Impact Statement (EIS).

The area within which vegetation, wildlife, and fish may be affected is referred to as the APE. The APE includes the upland vegetation and Truckee River corridor within the project's construction footprint and a 500-foot-wide buffer around the construction footprint (Figure 1-1) and the aquatic habitat in the Truckee River beginning at the farthest upstream portion of the construction footprint and continuing downstream to and including Pyramid Lake (Figure 1-2).

1.1 PROJECT OVERVIEW AND NEED FOR THE PROJECT

The Spaghetti Bowl is a freeway-to-freeway interchange that was constructed between 1969 and 1971, when Washoe County had a population of about 130,000 people. At that time, about 90,000 vehicles per day used the Spaghetti Bowl. In 2015, the combined population of Reno and Sparks was about 327,000 people and the population of Washoe County was about 435,000 people (U.S. Census Bureau 2016). About 260,000 vehicles per day used the Spaghetti Bowl in 2016, making it is the busiest interchange in northern Nevada.

The Spaghetti Bowl's 1960s-era design is obsolete for several reasons:

- **Interchange ramps are spaced too closely to one another.** Vehicles entering or exiting the freeway at these closely spaced interchanges must cross paths with other vehicles traveling in the same direction, sometimes across two or more lanes of traffic, which is referred to as weaving. In general, short "weave segments," like those found in the Spaghetti Bowl, result in increased congestion.

- There are five locations on I-80, I-580, and US 395 in and around the Spaghetti Bowl where a freeway lane ends. These "lane drops" are bottlenecks that cause congestion.

- There are four low-speed ramps in the Spaghetti Bowl that do not have the capacity to accommodate existing traffic volumes. These low-speed ramps are bottlenecks and are regularly congested during rush hour.

- There are multiple locations throughout the length of I-80, I-580, and US 395 where design guidelines and standards are no longer met. These locations result from design exceptions incorporated into prior projects and changes to design guidelines and standards applicable to the freeways. These affect some travelers' ability to navigate the project limits comfortably at speed, adding to congestion.

These deficiencies create congestion, contribute to a higher-than-average crash rate, and delay drivers. Based on data NDOT prepared for the project's Draft Environmental Impact Statement there is on average one injury crash in or around the Spaghetti Bowl each day. The average delay for drivers is anticipated to increase by 53 percent between 2016 and 2040 if no improvements are made to the freeway in the study area (FHWA and NDOT 2016). The Spaghetti Bowl Reconstruction Project (Spaghetti Bowl Project; project) is designed to address the obsolete design of the interchange, improve safety, and reduce travel delays by eliminating lane drops, improving ramp spacing, and replacing the low-speed loop ramps with new ramps that have more capacity and allow safe travel at higher speeds.

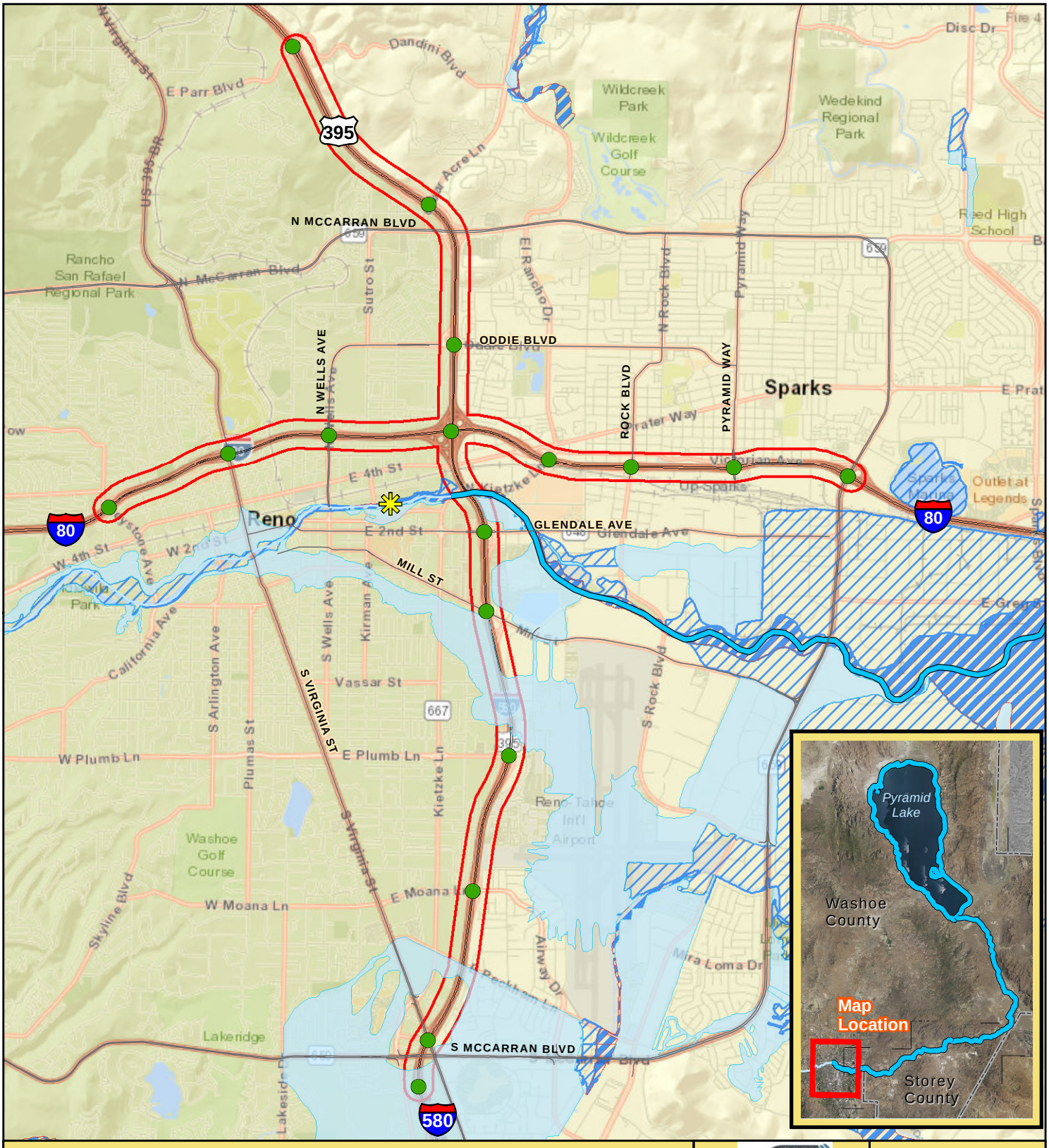
The study area (which encompasses the area within which the proposed construction would occur) includes the Spaghetti Bowl, each of the four legs of the freeway-to-freeway system, one system-to-system interchange, and 16 service interchanges that connect the freeways to local roads.

The project is in Washoe County, Nevada, within the cities of Reno and Sparks, and has the following limits:

- I-80 between Keystone Avenue on the west and McCarran Boulevard on the east, a distance of approximately 5 miles.

- I-580/US 395 between Meadowood Mall Way on the south and Parr Avenue/Dandini Boulevard on the north, a distance of approximately 7 miles (Figure 1-3).

The lead agencies for this project are NDOT and FHWA.



LEGEND

- Truckee River/Pyramid Lake: Biological Assessment Action Area
- Gaging Station 10348000
- Project Interchange
- Project Area (500 feet from Project center line)

Flood Zone

- Floodway Areas in Zone AE
- Zone AE: 1% annual chance of flood
- Zone X: 0.2% annual chance of flood

SPAGHETTI BOWL PROJECT

Reno/Sparks
Washoe County
Nevada

FIGURE 1-1
CONSTRUCTION FOOTPRINT AND BUFFER PORTION OF THE AREA OF POTENTIAL EFFECTS (APE)

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Data Sources: FEMA, USGS, CH2M, NDOT

BASE MAP SOURCE: ESRI STREETMAP

LEGEND:

- Truckee River/Pyramid Lake: Biological Assessment Action Area
- Derby Dam
- Project Area (500 feet from Project center line)

SPAGHETTI BOWL PROJECT

Reno/Sparks
Washoe County
Nevada

Figure 1-2.
Aquatic Habitat Portion of the Area of Potential Effects (APE)

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Data Sources: CH2M, USFWS NWI

BASE MAP SOURCE:USDA NAIP 2015

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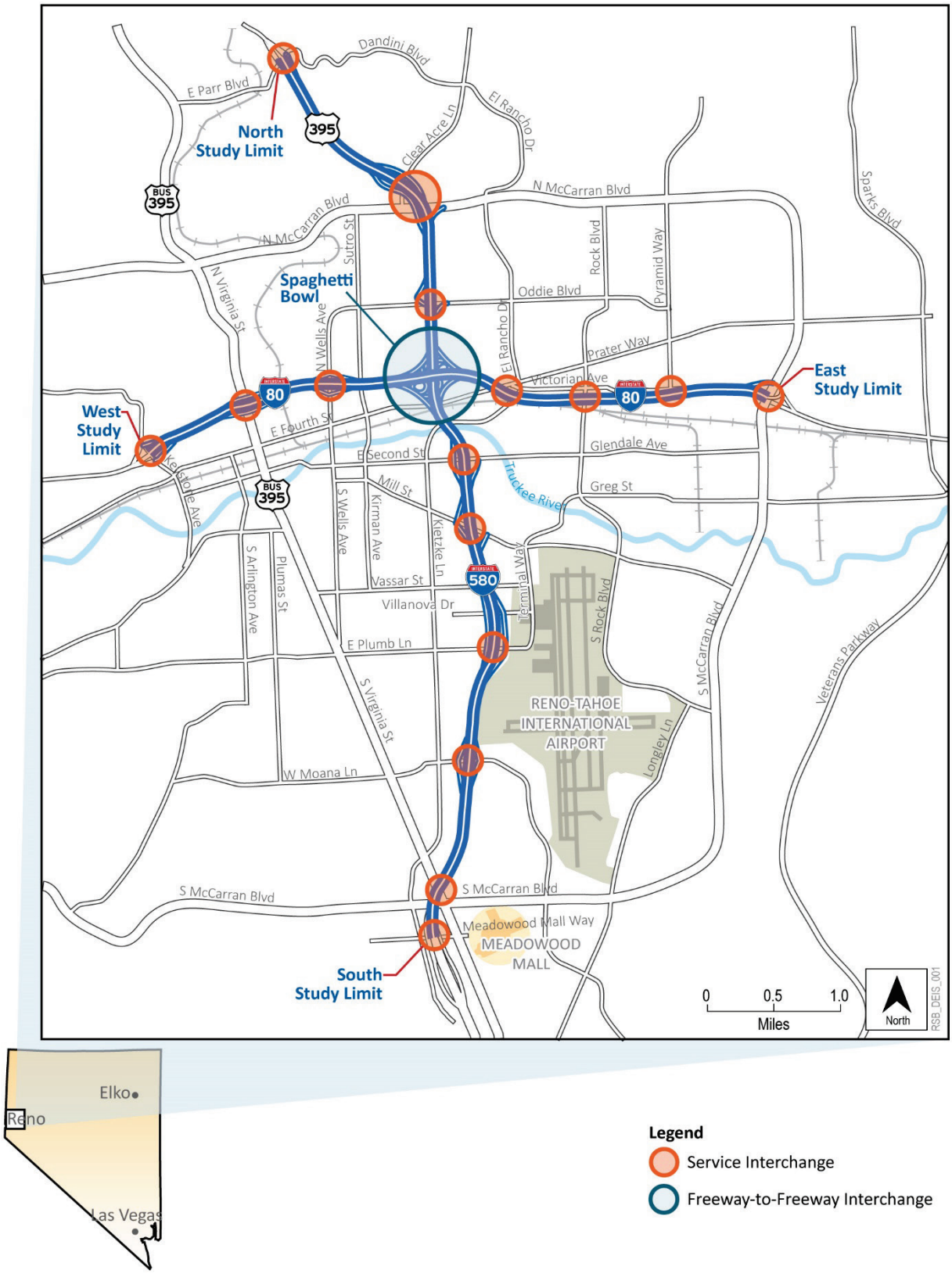


Figure 1-3. Project Vicinity

2.0 PROPOSED ACTION

NDOT and the FHWA are studying several alternatives along I-580/US 395 from the Meadowood Mall Way interchange on the south to the Parr Boulevard/Dandini Boulevard interchange on the north and along I-80 between Keystone Avenue on the west and McCarran Boulevard on the east. The alternatives would bring the freeway up to current standards, improve operations and safety, and increase capacity. They would also reduce travel delays in the I-80 and I-580/US 395 corridors and in the freeway-to-freeway interchange that connects these two freeways (known locally as the "Spaghetti Bowl"). Reconstruction of the interchanges could include new or modified ramps and frontage roads on new alignments.

2.1 DESCRIPTION OF PROJECT ELEMENTS

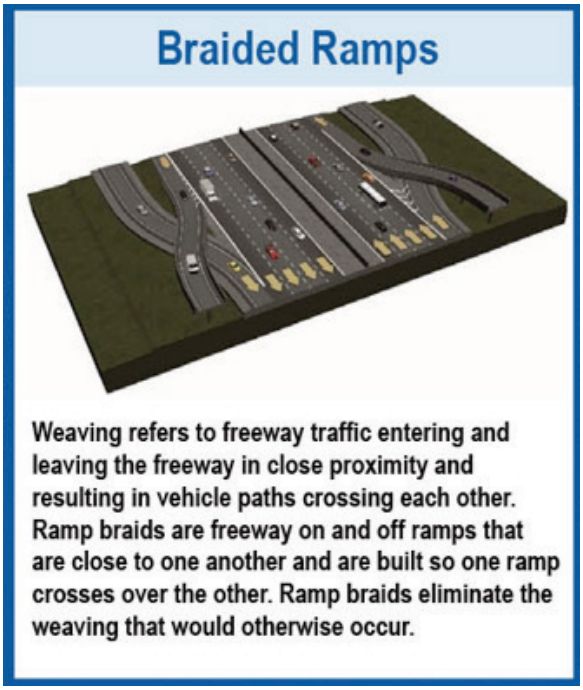
Three preliminary project alternatives are being considered and are presented on the following pages.

2.1.1 Alternatives

2.1.1.1 Alternative 1

Alternative 1 would keep all existing access between the local roads and freeway while maximizing traffic movement through the Spaghetti Bowl interchange by:

- Using longer sweeping ramps with more gradual curves to increase ramp speed (up to 50 miles per hour) in the Spaghetti Bowl. This would increase the footprint of the interchange compared to its current footprint.
- Reconstructing the Wells Avenue, Oddie Boulevard, Second Street/Glendale Avenue, Mill Street, Prater Way, Rock Boulevard, and Pyramid Way interchanges into configurations that "braid" (see inset for a description of braided ramps).



2.1.1.2 Alternative 2

Alternative 2 would modify the access between the local roads and freeway, and it would reduce the project footprint compared to Alternative 1, by:

- Reconstructing the Spaghetti Bowl into a configuration similar to the existing configuration, including converting the south-to-east and north-to-west low-speed loop ramps to longer ramps with more gradual curves that allow higher speeds and increase capacity to meet or exceed the minimum design speed standards.

- Reconstructing the Wells Avenue and Oddie Boulevard interchange so that its on- and off-ramps are braided with the adjacent Spaghetti Bowl ramps. At these locations, freeway access would be limited to the freeway on which the interchange is located. The Oddie Boulevard interchange would provide access to US 395, and the Wells Avenue interchange would provide access to I-80.

- Reconstructing the Second Street/Glendale Avenue interchange and then braiding the ramps with the adjacent Spaghetti Bowl ramps and Mill Street ramps.

- Relocating the I-80/Fourth Street/Prater Way interchange and the Rock Boulevard interchange to Kietzke Lane and then braiding the Kietzke Lane interchange on- and off-ramps with the adjacent Spaghetti Bowl ramps.

- Reducing the Spaghetti Bowl's footprint compared to Alternative 1 by modifying interchanges and reducing on- and off-ramp connections.

2.1.1.3 Alternative 3

Alternative 3 would modify the access between the local roads and freeway and reduce the project footprint compared to Alternative 1 and Alternative 2 by:

- Reconstructing the system interchange into a configuration similar to the existing configuration, while increasing capacity to meet or exceed the minimum design standards.

- Reconstructing the Wells Avenue, Oddie Boulevard, and Second Street/Glendale Avenue interchanges in new configurations to increase interchange separation between those interchanges and the Spaghetti Bowl.

- Eliminating the I-580/Fourth Street/Prater Way interchange to increase interchange separation from Rock Boulevard.

- Modifying the Mill Street interchange to access I-580 indirectly via frontage road connections to the Second Street/Glendale Avenue interchange to increase interchange separation from the Spaghetti Bowl and Plumb Lane.

- Reducing the project footprint, compared to Alternative 2 and Alternative 3, by modifying service interchanges to increase spacing and minimize the need for ramp braiding.

2.2 No Build Alternative

The No Build Alternative serves as the baseline for assessing the potential impacts of Alternatives 1, 2, and 3. The No Build Alternative does not include any safety or capacity improvements of the freeway in the study area. Only routine maintenance would be performed

on I-80 and I-580/US 395. Other planned transportation improvement projects in the study area may still move forward. The impact-causing activities of the No Build Alternative relate to its lack of action. It does not address the problems on the study area freeway system. Under the No Build Alternative, bottlenecks and vehicle crashes would continue to increase, resulting in greater travel times and less reliable travel throughout the corridor. The condition of the freeway bridges would continue to deteriorate, requiring more frequent and extensive maintenance. Additionally, more commuter traffic would shift to local streets to avoid the congested freeway, which could diminish the neighborhood and business environments along several streets in the primary study area by increasing pedestrian-vehicle conflicts. The No Build Alternative also does not provide the opportunity to treat stormwater runoff before it enters the Truckee River because there is currently no engineered treatment (e.g., detention ponds) to capture runoff. This indirectly affects water quality in the Truckee River.

3.0 EXISTING CONDITIONS

3.1 VEGETATION

The APE is predominantly a developed urban landscape dominated by landscaping plants, with the exception of the Truckee River corridor and small patches of native and ruderal (non-native, weedy) vegetation widely distributed within the APE.

The largest area of native and ruderal vegetation is adjacent to I-580, north of North McCarran Boulevard. Development there is widely dispersed with open areas of sagebrush (*Artemesia spp.*), western juniper (*Juniperus occidentalis*), cheatgrass (*Bromus tectorum*), mountain tansymustard (*Descurina incana*), and other flowering plants and grasses. NDOT identified a 0.056-acre seasonal wetland 0.4 mile west of I-580 and 0.1 mile north of North McCarran Boulevard. The highest quality vegetation in the APE is found along the Truckee River. A narrow band of Fremont cottonwoods (*Populus fremontii*) and willows (*Salix spp*.) line both banks of the river in the APE.

3.2 WILDLIFE

Wildlife in the APE are adapted to urban habitat or riparian (river) habitat. Common birds include house sparrows (*Passer domesticus*), American robins (*Turdus migratorius*), common starlings (*Sturnus vulgaris*), and mourning doves (*Zenaida macroura*). Raptors such as red-tailed hawks (*Buteo jamaicensis*) or northern harriers (*Circus cyaneus*) may also be present in the APE. Small mammals such as common house mice (*Mus musculus*), deer mice (*Peromyscus maniculatus*), raccoon (*Procyon lotor*), stripped skunk (*Mephitis mephitis*), and various mole species are expected to occupy the APE. Larger mammals such as coyote (*Canis latrans*) and mule deer (*Odocoileus hemionus*) may also occur, particularly at the edge of urban development. Reptiles and amphibians such as garter snakes (*Thamnophis spp*.) and western pond turtles (*Actinemys marmorata*) are also expected. Waterfowl, great blue heron (*Ardea Herodias*), North American beaver (*Castor canadensis*), American mink (*Neovison vison*), and California quail (*Callipepla californica*) can be found in the Truckee River corridor or ponds (Buckley 2016).

The Truckee River corridor allows wildlife to move through the APE without crossing local roads and the freeway. The Nevada Department of Wildlife (NDOW) has not identified any additional wildlife migration corridors through the APE (Freese 2018).

3.3 FISH

The NDOW periodically conducts fish surveys in the Truckee River. Fish identified in the 2015 survey (Hawks 2016) include:

- Salmonids – Non-native rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*), and the native mountain whitefish (*Prosopium williamsoni*)

- Native, nongame species - Paiute sculpin (*Cottus beldingii*), Lahontan redside (*Richardsonius egregious*), speckled dace (*Rhinichthys osculus*), mountain sucker (*Catostomus platyrhynchus*), Tahoe sucker (*Catostomus tahoensis*), common carp (*Cyprinus carpio*), and tui chub (*Gila bicolor*)

- Introduced species - green sunfish (*Lepomis cyanellus*), largemouth bass (*Micropterus salmoides*), and fathead minnow (*Pimephales promelas*)

The NDOW has stocked Lahontan cutthroat trout (LCT) (*Oncorhynchus clarkii* ssp. *henshawi*), a federally listed threatened species, in the Truckee River, but the species was not recorded in the 2015 survey. All the species NDOW recorded in the 2015 survey are likely to occupy the APE or move through it.

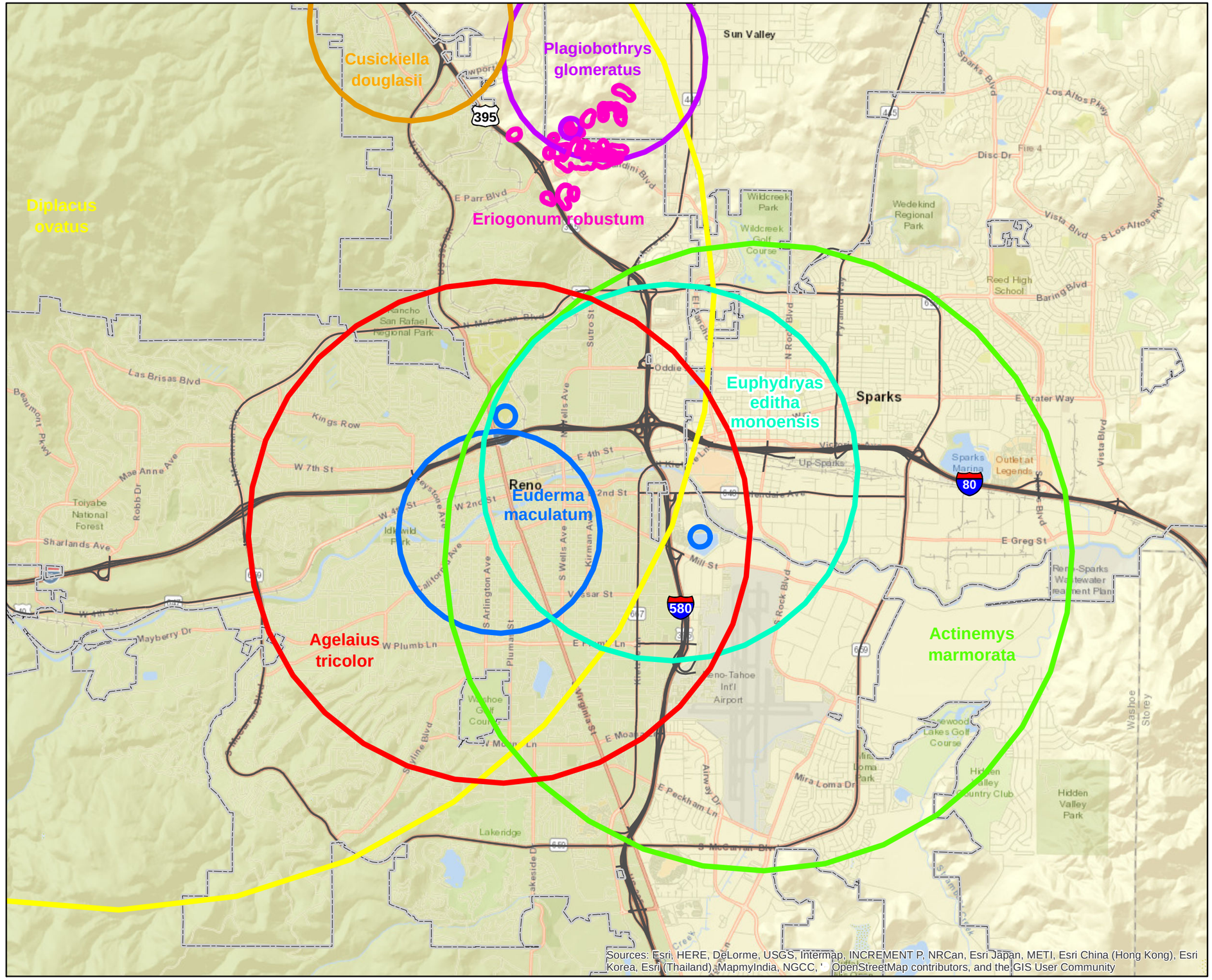
3.4 SENSITIVE SPECIES

Special-status species include species listed under the federal Endangered Species Act (ESA), species listed on the Nevada Natural Heritage Program's (NNHP's) Tracked Species list, Nevada Division of Forestry's list of fully protected plant species (a subset of the NNHP data), migratory birds protected by the Migratory Bird Treaty Act, and eagles protected by the Bald and Golden Eagle Protection Act.

3.4.1 Nevada Protected or At-Risk Species

In June 2017, NDOT requested information from NNHP on endangered, threatened, candidate, and/or at-risk plants and animals recorded in or near the APE (Simpson 2017a). NNHP provided a list of species known to be within a 1.2-mile radius of the construction footprint of the APE (Figure 3-1 and Table 3-1). In addition to those species known to be within a 1.2-mile radius of the construction footprint of the APE, the NNHP letter indicated that osprey (*Pandion haliaetus*), listed as Critically Imperiled by NNHP, and the California floater (*Anodonta californiensis*), a Nevada Bureau of Land Management and a United States Forest Service (Region 5) Sensitive Species, may occupy the APE, but have not been observed there.

Figure 3-1
NNHP* Listed Species Occurences in the Vicinity of the Spaghetti Bowl Project Reno, NV



NNHP Listed Species

Species Name

- Actinemys marmorata
- Agelaius tricolor
- Cusickiella douglasii
- Diplacus ovatus
- Eriogonum robustum
- Euderma maculatum
- Euphydryas editha monoensis
- Plagiobothrys glomeratus
- Municipal Boundary

***Nevada Natural Heritage Program**

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Source: NDOT, NNHP

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NDOT also reviewed the NNHP Tracked Species list for Washoe County and identified at-risk species with potential habitat in or near the APE (Table 3-2). NDOT submitted the list to NDOW, and NDOW's Habitat Biologist concurred that the species on the list should be evaluated in the Draft EIS (see Attachment 1). The list approved by NDOW includes the federally protected LCT and cui-ui (*Chasmistes cujus*).

Table 3-1. NNHP Species Known to Occur in or within 1.2-Mile Radius of the APE

Scientific Name	Common Name	State Rank[a]
Plants		
Cusickiella douglasii	Douglas draba	S4
Diplacus ovatus	Steamboat monkeyflower	S1S2
Eriogonum robustum	Altered andesite buckwheat	S2
Plagiobothrys glomeratus	Altered andesite popcorn flower	S2
Butterflies		
Euphydryas editha monoensis	Mono checkerspot	S1
Reptiles		
Actinemys marmorata	Western pond turtle	S1
Mammals		
Euderma maculatum	Spotted bat	S2
Birds		
Agelaius tricolor	Tricolored blackbird	S1B
Pandion haliaetus	Osprey	S1

[a] S1 = Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
S2 = Imperiled due to rarity or other demonstrable factors
S4 = Long-term concern, though now apparently secure; usually rare in parts of its range, especially at its periphery
B = Breeding status within Nevada (excludes resident taxa)

Some of the species shown in Table 3-1 are not shown in Table 3-2. Table 3-2 lists species that have suitable habitat in the APE, and does not include Table 3-1 species that are found near the APE, but have no suitable habitat within it.

A variety of protected migratory birds may be present in the APE (Attachment 2). Most species' breeding periods fall between March 1 and July 31 (Simpson 2018). Landscaping trees, native trees and shrubs, and riparian zones could harbor nests. Swallow nests may be found on bridges.

A variety of bat species may be found in the APE. They could use bridges, abandoned buildings, and trees as roosting sites.

Table 3-2. NNHP Tracked Species with Potential Habitat in the APE

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Invertebrates							
Limenitis archippus lahontani	Nevada viceroy	Insect	Track all extant and selected historical EOs			Salix exigua below 6,000 feet.	Yes
Petrophila confusalis	aquatic moth	Insect	Track on a watch list only			Fast moving rocky streams.	Yes
Anodonta californiensis	California floater	Mollusc	Track all extant and selected historical EOs		Y	In shallow sandy or muddy habitats in larger rivers, reservoirs, and lakes.	Yes
Fluminicola dalli	Pyramid Lake pebblesnail	Mollusc	Track all extant and selected historical EOs			Freshwater.	Yes
Fluminicola turbiniformis	turban pebblesnail	Mollusc	Track on a watch list only			Freshwater.	Yes
Juga interioris	smooth juga	Mollusc	Track all extant and selected historical EOs			Freshwater.	Yes
Pyrgulopsis longiglans	western Lahontan pyrg	Mollusc	Track all extant and selected historical EOs		Y	Freshwater.	Yes

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Plants							
Lupinus malacophyllus	soft lupine	Dicot	Track on a watch list only			A habitat generalist on sandy, gravelly, or clay slopes and flats in the sagebrush and pinyon-juniper zones, often forming dense stands in openings or on road banks or other recovering disturbances.	Marginal nearby
Plagiobothrys glomeratus	altered andesite popcorn flower	Dicot	Track all extant and selected historical EOs			Dry, shallow, mostly acidic (pH 3.3-5.5) gravelly clay soils mainly of the Smallcone Series, derived from weathering of hydrothermal sulfide deposits formed in andesite, or sometimes in rhyolitic or granitoid rocks, forming mostly barren yellowish to orange brown patches on ridges, knolls, and steep slopes on all aspects.	Marginal nearby
Elodea nevadensis	Nevada waterweed	Monocot	Track on a watch list only		Y	Submerged in ponds, ditches, lakes, streams, etc., often where somewhat alkaline.	Marginal
Birds							
Antigone canafensis tabida	greater sandhill crane	Bird	Track on a watch list only			Can use river banks.	Marginal
Buteo swainsoni	Swainson's hawk	Bird	Track on a watch list only			Large riparian nesting trees, agricultural fields, and open shrublands within relatively close proximity.	Marginal

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Melanerpes lewis	Lewis's woodpecker	Bird	Track on a watch list only			Open tree canopy, a brushy understory with ground cover, dead trees for nest cavities; dead or downed woody debris, perch sites, and abundant insects.	Marginal
Pelecanus erythrorhynchos	American white pelican	Bird	Track on a watch list only		Y	Rivers, lakes, reservoirs, estuaries, and marshes.	Yes
Plegadis chihi	white-faced Ibis	Bird	Track on a watch list only		Y	Marshes, swamps, ponds, and rivers, mostly in freshwater habitats.	Yes
Pandion haliaetus	osprey	Bird	Do not track		Y	Primarily along rivers, lakes, reservoirs, and seacoasts.	Yes
Fish							
Chasmistes cujus	Cui-ui	Fish	Track all extant and selected historical EOs	Listed endangered	Y	Inshore areas of Pyramid Lake with extensive shoals and shallow bars. Lower Truckee River below Derby Dam.	Yes
Oncorhynchus clarkii henshawi	Lahontan cutthroat trout	Fish	Track all extant and selected historical EOs	Listed threatened	Y	Lakes and streams with cool, well oxygenated water.	Yes
Mammals							
Aplodontia rufa	North American beaver	Mammal	Track all extant and selected historical EOs			Forests with moist microenvironments.	Yes

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Eptesicus fuscus	big brown bat	Mammal	Track on a watch list only			Roost sites include hollow trees, beneath loose tree bark, in the crevices of rocks, or in human-made structures such as attics, barns, old buildings, eaves, and window shutters.	Yes
Euderma maculatum	spotted bat	Mammal	Track all extant and selected historical EOs			Spotted bats are found in a wide variety of habitats from low-elevation desert scrub to high-elevation coniferous forests if suitable roosting habitat exists. This species primarily roosts in cracks and crevices associated with cliff faces. Spotted bats have occasionally been found roosting on or in buildings elsewhere in their range. The use of buildings as roost sites cannot be dismissed, particularly in urban settings with nearby large cliff features.	Marginal
Lasiurus cinereus	hoary bat	Mammal	Track on a watch list only			Found primarily in forested upland habitats such as pinyon-juniper and conifers, as well as in gallery forest riparian zones.	Yes
Myotis californicus	California myotis	Mammal	Track on a watch list only			Forages along margins of tree clumps, over water, and well above ground. Roosts in narrow crevices on rocky hillsides, under bark, or in human-made structures.	Yes

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Myotis ciliolabrum	western small-footed myotis	Mammal	Track on a watch list only			A crevice rooster that using mines, caves, buildings, rock crevices, hollow trees, and exfoliating bark on trees. Found in a variety of habitats including desert scrub, grasslands, sagebrush steppe, blackbrush, greasewood, pinyon-juniper woodlands, pine-fir forests, agriculture, and urban areas.	Yes
Myotis lucifugus	little brown myotis	Mammal	Track on a watch list only			Throughout its range has adapted to using human-made structures for resting and maternity sites but also uses caves, hollow trees, and rock outcrops.	Yes
Myotis thysanodes	fringed myotis	Mammal	Track all extant and selected historical EOs			Have been found day and night roosting in mines, caves, trees, and buildings. Found in a wide range of habitats from low-elevation desert scrub to high-elevation coniferous forests.	Yes
Myotis volans	long-legged myotis	Mammal	Track on a watch list only			Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Uses abandoned buildings, cracks in the ground, cliff crevices, exfoliating tree bark, and hollows within snags as summer day roosts.	Yes

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Myotis yumanensis	Yuma myotis	Mammal	Track on a watch list only			Forages just a few inches above the water, and are never found far from a pond or river. Groups of bats roost together in the summer under bridges; in buildings, mines, or caves; and in mud nests made by cliff swallows.	Yes
Parastrellus hesperus	canyon bat	Mammal	Track on a watch list only			Most common at low elevations in desert scrub and arid grassland habitats and also in adjacent woodlands. Roosts in rock crevices, beneath rocks, in burrows, mines, and buildings.	Yes
Sorex palustris	American water shrew	Mammal	Track all extant and selected historical EOs			Found in the vicinity of streams or other bodies of water. Water shrews require sufficient shelter such as dense vegetative cover, logs, rocks, crevices, etc.	Yes
Sorex preblei	Preble's shrew	Mammal	Track all extant and selected historical EOs			Habitat is ephemeral and perennial streams dominated by shrubs, primarily below 8,200 feet.	Marginal
Tadarida brasiliensis	Mexican free-tailed bat	Mammal	Track on a watch list only			Found in low desert to high mountain habitats. It roosts in a variety of sites including cliff faces, mines, caves, buildings, bridges, and hollow trees.	Yes

Scientific Name	Common Name	Minor Group	NNHP Status	ESA Status	Wetland	Habitat	Habitat Near or Present
Zapus princeps	western jumping mouse	Mammal	Track all extant and selected historical EOs			Occurs in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs.	Marginal
Reptiles							
Thamnophis couchii	Sierra garter snake	Reptile	Track on a watch list only			Habitats of this highly aquatic snake include pools of permanent or seasonal streams (often rocky), meadow ponds, lakes, reservoirs, and associated riparian zones.	Marginal
Thamnophis sirtalis	common garter snake	Reptile	Track on a watch list only			Inhabit a very wide range of aquatic, wetland, and upland habitats, mostly confined to riparian corridors in the west.	Yes
Actinemys marmorata	Western pond turtle	Reptile	Track on a watch list only			This species is found in permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, irrigation ditches, and reservoirs.	Yes
EO = element occurrence							

Eagles would not be expected to nest in the APE because of the level of human disturbance (Simpson 2018). However, both golden eagles (*Aquila chrysaetos*) and bald eagles (*Haliaeetus leucocephalus*) may occasionally use the APE. Bald eagles may use the Truckee River corridor and golden eagles may forage in the open areas on the north end of the APE.

3.4.2 Federally Listed Threatened and Endangered Species

In 2017, NDOT requested an official species list to identify federally protected species that may be in the APE through the U.S. Fish and Wildlife Service's (USFWS) online Information, Planning, and Conservation System (https://www.fws.gov/ipac/). According to the USFWS, five federally protected species may occur in the APE (Attachment 2 and Table 3-3).

Informal consultation with the USFWS confirmed that there is no habitat for the North American wolverine (*Gulo gulo luscus)*, Webber's ivesia (*Ivesia webberi*), or Steamboat buckwheat (*Eriogonum ovalifolium* var. *williamsiae*) in the APE (Simpson 2017b and 2017c). Therefore, NDOT eliminated these species from analysis in the Draft EIS and prepared a No Effects Letter (Attachment 3).

LCT occur throughout the Truckee River within Nevada, although NDOW has not stocked hatchery-raised trout since 2011. According to NDOW, the USFWS considers the entire Truckee below Mogul (on the west side of Reno) "occupied," because USFWS has been stocking LCT throughout that reach for the last 2 years (Hawks 2017). Hatchery LCT occur in the Truckee River in the construction footprint of the APE, but native LCT are not known to be present there. LCT do not spawn in the construction footprint part of the APE because Derby Dam (21 miles east of Sparks) prevents upstream movement. Natural spawning occurs below Derby Dam and in some California tributaries of the Upper Truckee River (Simpson 2017d). LCT also occur in Pyramid Lake, both from hatchery stocking by tribal hatcheries and from reproduction in the lower Truckee River below Derby Dam (Hottle 2017a).

The presence of native LCT in the construction footprint part of the APE is likely to change due to upcoming fish passage improvement projects west of the APE, including Steamboat Ditch Diversion near Verdi, Nevada (2018), Verdi Power Dam (2019), the Washoe Highlands Dam (2021), and Fleisch Diversion Dam (2022) (Hottle 2017b). When Derby Dam is rehabilitated in the next few years to allow fish passage, Pyramid Lake LCT will be able to move farther up the river into the construction footprint part of the APE (Hottle 2017a).

Table 3-3. Federally Listed Species with Potential to Occur in the APE

Common Name	Scientific Name	ESA Regulatory Status	General Habitat Description	Potential to Occur
Mammals				
North American wolverine	*Gulo gulo luscus*	Proposed Threatened	Occurs in mixed conifer, red fir, lodgepole forests. May also use subalpine conifer, alpine dwarf shrub, wet meadow, and montane riparian habitats. Prefers areas with low human disturbance. Shelters in caves, hollows in cliffs, logs, rock outcrops, and burrows, generally in denser forest stages. Dens in caves, cliffs, hollow logs, cavities in the ground, and under rocks.	None. There is no suitable habitat in the APE. In addition, human activity in the APE likely precludes this species' presence. No known observations in the APE.
Plants				
Webber's Ivesia	*Ivesia webberi*	Threatened	Shallow shrink-swell clay soils with a gravelly surface layer over volcanic, generally andesitic bedrock, on mid-elevation benches and flats.	None. There is no suitable habitat in the APE where ground-disturbing activities would occur. No known observations in the APE.
Steamboat buckwheat	*Eriogonum ovalifolium* var. *williamsiae*	Endangered	The only known habitat is in Steamboat Hills near Reno. Found on young, shallow, poorly developed, dry soils derived from siliceous opaline sinter precipitated by past thermal spring flows, in open areas with sparse *Atriplex confertifolia*, *Sarcobatus vermiculatus*, and *Chrysothamnus nauseosus*.	None. There is no suitable habitat in the APE where ground-disturbing activities would occur. No known observations in the APE.

Common Name	Scientific Name	ESA Regulatory Status	General Habitat Description	Potential to Occur
Fish				
Lahontan cutthroat trout	*Oncorhynchus clarkii* ssp. *henshawi*	Threatened	Large terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams. Known from drainages of the Truckee River, Humboldt River, Carson River, Walker River, Quinn River, and several smaller rivers in the Great Basin.	High. LCT are known to occur in the APE. Stocking of LCT is known to occur in the upper Truckee River.
Cui-ui	*Chasmistes cujus*	Endangered	Only known to occur in Pyramid Lake and the lower Truckee River below Derby Dam, within the Pyramid Lake Paiute Reservation.	High. Cui-ui are not known to occur in the immediate construction footprint but are found downstream within the APE.
Source: USFWS official species list letter (Attachment 2).				

Cui-ui only occur in the APE from Pyramid Lake to Derby Dam on the Truckee River and in Pyramid Lake. There are no fish passage facilities at Derby Dam that would allow spawning migrations of cui-ui to pass west from that point. As a result of the proposed fish passage projects described above, cui-ui are expected to be able to move upriver farther into the APE (Hottle 2017a).

4.0 DIRECT IMPACTS

4.1 VEGETATION

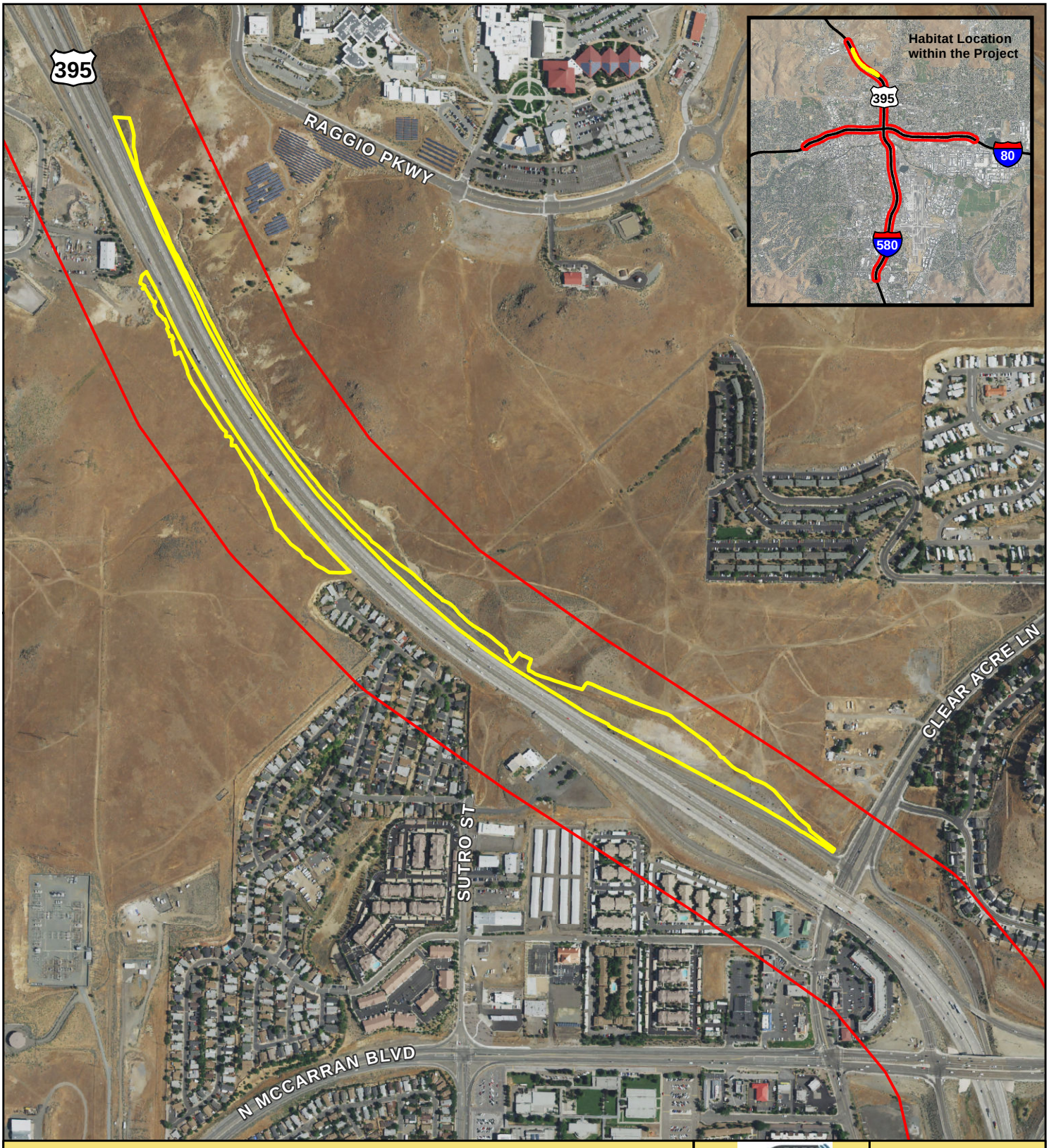
There are three types of vegetation in the APE: urban/developed, undeveloped native and weedy species, and riparian/river. The No Build Alternative would not affect vegetation in the APE. Urban/developed habitat would be the habitat type most affected through implementation of Alternatives 1, 2, and 3. Landscape plants and small areas of natural vegetation along roadways as well as a larger undeveloped area adjacent to I-580 north of Clear Acre Lane would be affected by construction. Alternatives 1, 2, and 3 would affect approximately 12.1 acres of the larger undeveloped habitat (Figure 4-1). Disturbance to landscaped plants and small scattered natural vegetation areas was not quantified.

Alternative 1 would impact a larger riparian area (1.20 acres) than Alternatives 2 and 3 due to increased shading from larger I-580 bridge decks crossing the Truckee River and from clearing of a larger construction corridor to install bridge supports (Figure 4-2). Of the total 1.20-acre area of impact, 1.02 acres would be permanently impacted by shading or construction. Approximately 0.18 acres would be temporarily disturbed during construction. Some areas under the existing bridge to be removed would no longer be shaded and would expect to eventually have riparian vegetation (0.17 acre). Alternative 1 impacts take into account the 0.17 acre of existing bridge deck that would no longer shade the river. The shading effect is considered a long-term effect, as riparian vegetation may not return to the shaded areas. The impact to areas not shaded, but impacted by construction (0.18 acre), is considered temporary, as riparian vegetation would be expected to return to those locations.

About 0.19 acre of riparian habitat would be affected by Alternatives 2 and 3 from the expansion of the I-580 bridge over the Truckee River (Figure 4-3). The impact would be caused by the loss of trees and other vegetation on the banks of the Truckee River due to increased shading and clearing a construction corridor. Of the total area of impact, 0.11 acre would be permanently impacted by shading or construction. Approximately 0.8 acre would be temporarily disturbed during construction.

4.2 WILDLIFE

The No Build Alternative would not affect wildlife in the APE. Alternatives 1, 2, and 3 would force animals inhabiting the urban/developed, undeveloped native and weedy species, and riparian/river habitat that would be removed to move to similar habitat types. If that habitat cannot support the displaced wildlife, they may be adversely affected. Given the distribution and amount of urban/developed habitat in the vicinity of the APE, Alternatives 1, 2, and 3 are not expected to result in an appreciable loss of any species described in Section 3.4.



LEGEND

- Permanently Impacted Area (12.1 acres)
- Project Area (500 feet from Project center line)

SPAGHETTI BOWL PROJECT

Reno/Sparks
Washoe County
Nevada

FIGURE 4-1
UPLAND HABITAT IMPACTS

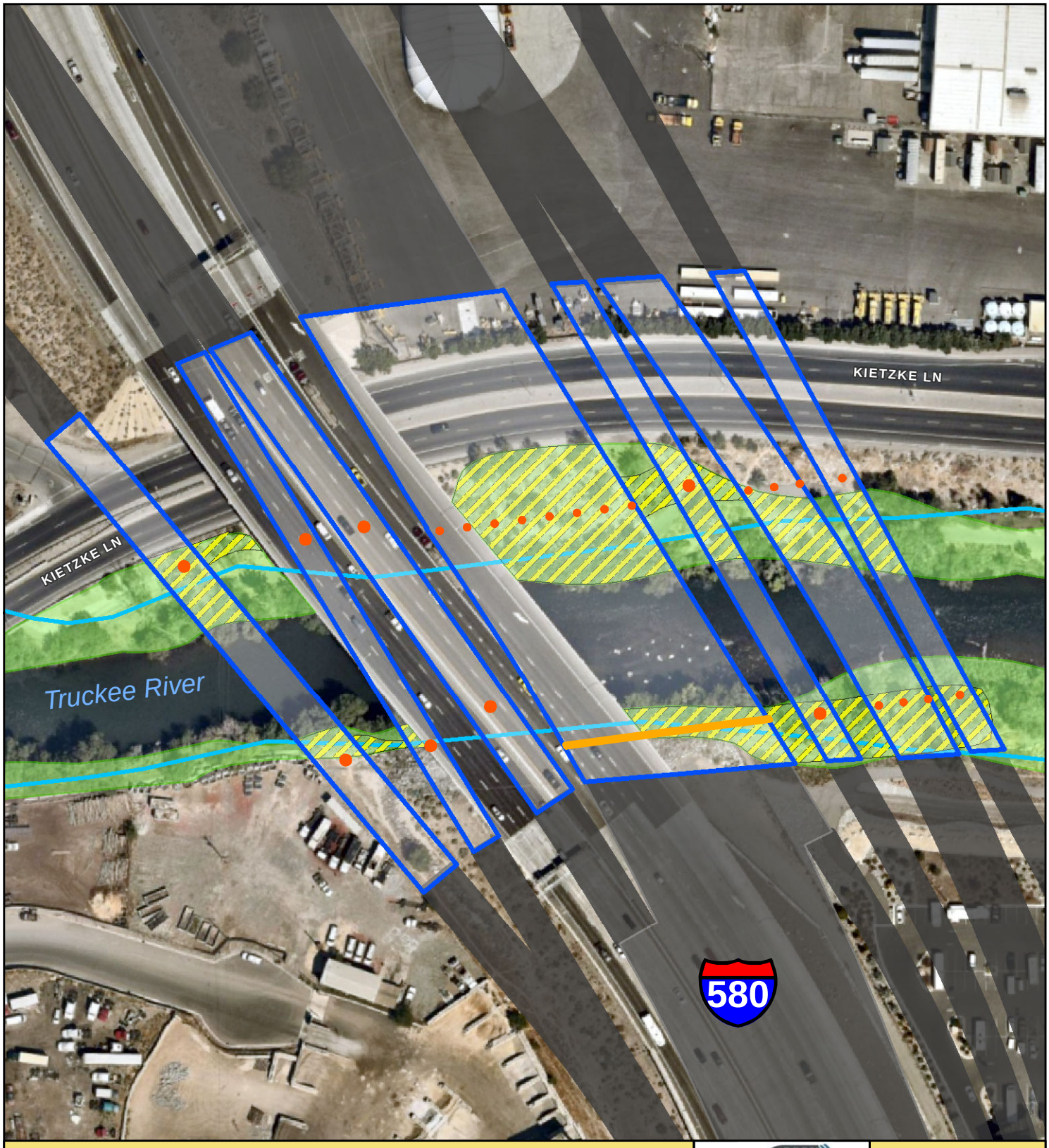
0 660 1,320
FEET

N

Data Sources: CH2M, NDOT

BASE MAP SOURCE: USDA NAIP 2017 Aerial Photo

\\mspfpp01\Proj\684384_RENO_Bowl\GIS\MapDocs\T&E\TechReport_PlantsAnimalsFish\Fig4-1_RSB_8x11P_T&E_UplandHabitatImpacts.mxd CS031687 6/20/2018



LEGEND

- New Bridge Deck
- Riparian Vegetation

Bridge support

- Pier
- Abutment
- Construction Corridor
- Alternative 1 Roadway
- Riparian impacts: Construction and/or shade
- Water Elevation at 14,000 cubic feet per second

SPAGHETTI BOWL PROJECT

Reno/Sparks
Washoe County
Nevada

FIGURE 4-2
RIPARIAN IMPACTS
TRUCKEE RIVER
ALTERNATIVE 1

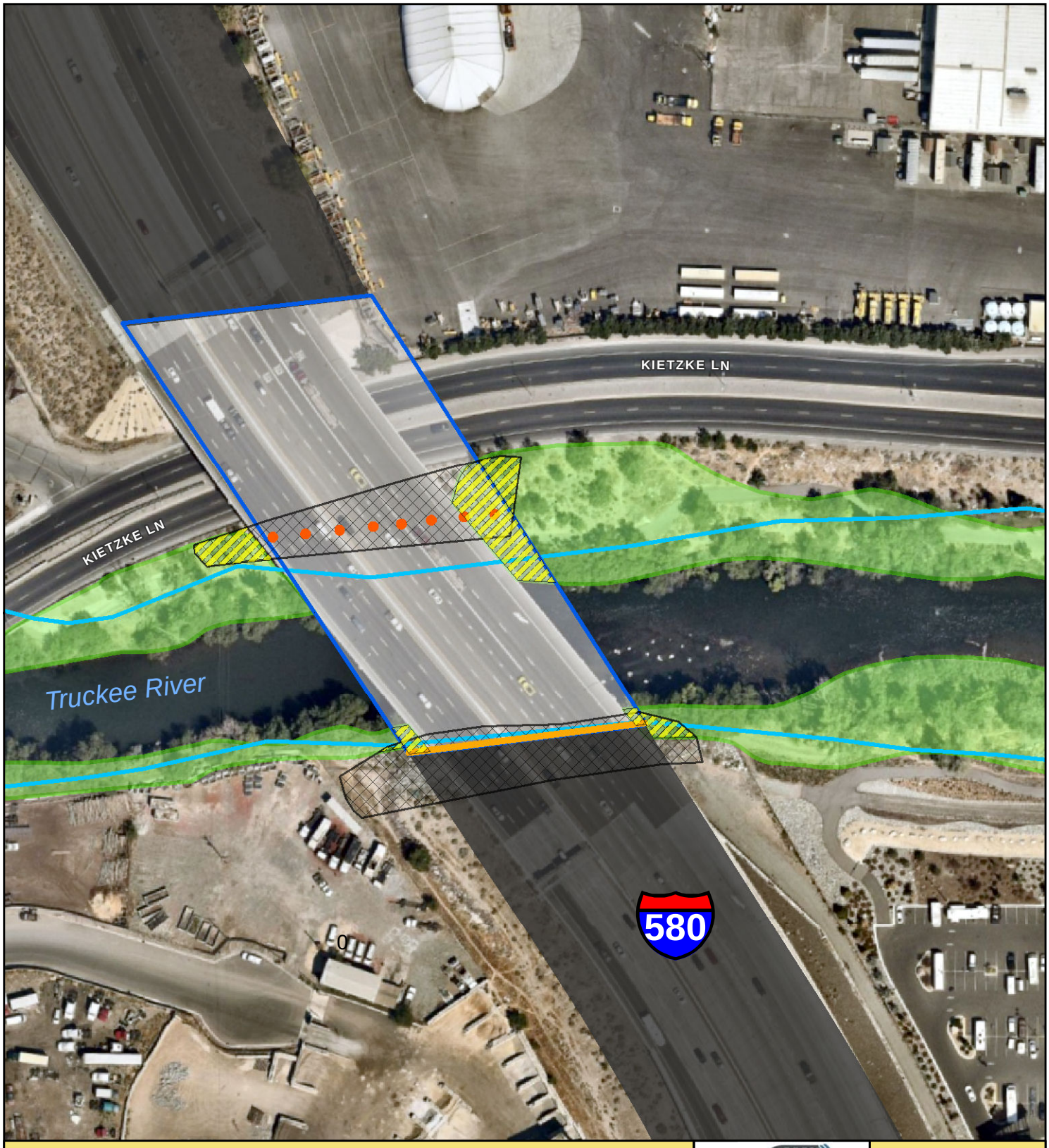
0 100 200 Feet

N

Data Sources: CH2M, NDOT, Caron Truckee Water Conservancy District

BASE MAP SOURCE: 2016 NDOT

\\nspfpp01\Proj\684384_RENO_Bow\GIS\MapDocs\T&E\TechReport_PlantsAnimalsFish\Fig4-2_RSB_8x11P_T&E_RiparianImpacts_ALT1.mxd CS031687 6/21/2018



LEGEND

- New Bridge Deck
- Riparian Vegetation
- **Bridge Support**
  - Pier
  - Abutment
- Construction Corridor
- Roadway: Alternatives 2 and 3
- Riparian impacts: Construction and/or Shade
- Water Elevation at 14,000 cubic feet per second

SPAGHETTI BOWL PROJECT

Reno/Sparks
Washoe County
Nevada

FIGURE 4-3
RIPARIAN IMPACTS
TRUCKEE RIVER
ALTERNATIVES 2 and 3

0 100 200
FEET

N

\\nspfpp01\Proj\684384_RENO_Bow\GIS\MapDocs\T&E\TechReport_PlantsAnimalsFish\Fig4-3_RSB_8x11P_T&E_RiparianImpacts_ALT2&3.mxd CS031687 6/21/2018

Data Sources: CH2M, NDOT, Caron Truckee Water Conservancy District

BASE MAP SOURCE: NDOT 2016

Animals displaced from habitat that would not be permanently removed would be able to return to their previous locations following construction. Animals displaced by the project that inhabit the Truckee River corridor would move up or downstream to similar habitat. Riparian habitat is more limited than upland habitat and therefore dispersal opportunities would be less than for urban-adapted species. However, Alternatives 1, 2, and 3 are not expected to result in an appreciable loss of any riparian species identified in Section 3.4.

4.3 FISH

The No Build Alternative would not affect fish in the Truckee River. Alternatives 1, 2, and 3 would dewater the area around an I-580 bridge pier before the pier is removed. There is potential, although small, for the species mentioned in Section 3.3 to be killed during handling when being removed from the dewatered area. The potential impacts of Alternatives 1, 2, and 3 on LCT and cui-ui are discussed in Section 4.4. Fish passage past the dewatering structure for the pier would not be affected.

Temporary impacts on fish would be limited to sediment or hazardous materials entering the river. Erosion-control best management practices (BMPs), spill prevention guidelines, and stormwater management facilities would minimize these impacts. The greatest potential for sediment release would be during installation and removal of the water diversion and associated infrastructure. However, any releases associated with the installation and removal of the water diversion are expected to be small due to the preventive measures described in Section 6.

4.4 SPECIAL-STATUS SPECIES

The No Build Alternative would not affect any NNHP tracked species or federally protected species. Alternatives 1, 2, and 3 may affect the NNHP tracked species listed below by eliminating suitable habitat. The two garter snake species and the western pond turtle would be expected to leave the APE during preconstruction activities to avoid direct impacts. Direct impacts to nesting birds protected by the Migratory Bird Treaty Act would be avoided through construction timing and surveys in the APE prior to vegetation removal as described in Section 6. Direct impacts to bald eagles, golden eagles, and osprey are not expected because they do not nest in the APE. They may experience temporary displacement from foraging in the APE, but ample foraging habitat is available adjacent to the APE to avoid harm to these species.

- Mollusks including California floater, Pyramid Lake pebblesnail, turban pebblesnail, smooth juga, and western Lahontan pyrg may be affected in the dewatered area around the I-580 bridge pier that would be removed.

- Soft lupine is the only special-status plant species with potential habitat in the APE. Preconstruction surveys in suitable habitat would be used to identify individuals.

- Bird species listed in Table 3-2 may periodically use the area for foraging and would avoid the area during construction. Lewis's woodpecker may also use large riparian snags for nesting. These include:
  - Greater sandhill crane
  - Swainson's hawk
  - Lewis's woodpecker
  - American white pelican
  - White-faced Ibis
  - Osprey
- A variety of bats, including big brown bat, spotted bat, hoary bat, California myotis, western small-footed myotis, little brown myotis, fringed myotis, long-legged myotis, Yuma myotis, and canyon bat, may use the area for roosting and foraging. Foraging activities may be affected if construction occurs at night.

If American water shrew or Preble's shrew are inhabiting the Truckee River riparian zone that would be disturbed during construction, those individuals would likely be lost. They are small, secretive creatures that would not have the mobility to escape the area. The western jumping mouse may be found in a variety of locations within the APE. They would disperse ahead of construction to avoid impacts. There is potential for some individuals to be crushed while fleeing in front of construction equipment. This would not be expected to affect the survivability of the species in the APE.

4.5 Federal Threatened and Endangered Species

As noted in Section 3.4, the North American wolverine, Webber's ivesia, and Steamboat buckwheat are unlikely to be present in the APE and would not be affected by Alternatives 1, 2, and 3. However, Alternatives 1, 2, and 3 could affect the LCT and cui-ui. The primary direct impact could occur through direct contact with the LCT during fish salvage activities when LCT may be removed by hand from the dewatered area at the I-580 bridge pier that would be removed. The ESA defines "taking" a federally protected species as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." Fish salvage efforts in the area to be dewatered around the I-580 bridge pier may result in harm, harassment, and potentially mortality of LCT. Therefore, fish salvage activities with Alternatives 1, 2, and 3 may result in take of this species. Other impacts that may affect the LCT and cui-ui include:

- Diverting stream flow from the bridge pier area during pier removal would isolate habitat around the pier and prevent access by LCT, but not prevent passage.

- Constructing the project would result in disturbance to upland areas and streambanks that contribute to in-water sediment within the Truckee River, with the potential to increase sediment loads to the Truckee River that could later be carried down to the delta area in Pyramid Lake. These effects to LCT and cui-ui only have the potential to occur over the short-term, and they would not persist once construction is completed.

Because of the project's potential impacts on the LCT and cui-ui, the ESA requires NDOT to begin consultation with the USFWS and prepare a Biological Assessment for those species (Vogt 2017). A Biological Assessment is required by USFWS when a project may affect a federally protected species. It documents an agency's conclusions regarding the effects of their proposed actions on protected resources. The USFWS determined that formal consultation would only be required for the LCT. Informal consultation would suffice for the cui-ui (Vogt 2018). Because NDOT concluded the project may affect the LCT and cui-ui, it prepared a Biological Assessment and sent it to USFWS in early 2018. The Biological Assessment, which provides a detailed description of the project's potential impacts on the LCT and cui-ui, is found in Appendix D.10 of the Draft EIS.

Direct impacts to threatened and endangered species due to sedimentation into the river, hazardous material spills into the river, or short-term denial of access to LCT habitat during construction would be minimized through implementation of BMPs as discussed in Section 6.

5.0 INDIRECT IMPACTS

Indirect impacts (sometimes called "secondary impacts") are caused by a project but are later in time or farther removed in distance.

5.1 VEGETATION

The No Build Alternative and Alternatives 1, 2, and 3 would not have indirect effects on the types of vegetation described in Section 3.4.

5.2 WILDLIFE

Traffic associated with the No Build Alternative and Alternatives 1, 2, and 3, which would result in wildlife-traffic collisions, would have indirect effects on wildlife species that have habitat on both sides of the project corridor and are mobile enough to cross the Interstate corridor. Because the 2040 No Build Alternative and Alternatives 1, 2, and 3 have the same future traffic volumes, the frequency of wildlife collisions and impacts on wildlife would be similar among the alternatives. Therefore, there would be no indirect impacts to wildlife caused by collisions as a result of project implementation. It should be noted that the only known area where wildlife movement is concentrated in the APE is along the Truckee River corridor. With all alternatives, wildlife would be able to pass under the Interstate as they currently do, thus minimizing indirect effects for species moving along the river corridor.

5.3 FISH

Indirect impacts on fish would be temporary and limited to sediment or hazardous materials moving downriver possibly as far Pyramid Lake. As discussed in Section 6, erosion-control BMPs, spill prevention guidelines, and stormwater management facilities would minimize these impacts. Any releases associated with the installation and removal of the water diversion are expected to be small due to the preventive measures described in Section 6.

6.0 MEASURES TO MINIMIZE AND MITIGATE ADVERSE IMPACTS

NDOT would implement the following measures to avoid or minimize impacts to vegetation, wildlife, and fish:

- NDOT would implement a dewatering plan and fish salvage operation as mitigation for construction associated with the dewatering structure for the I-580 bridge pier removal.
- NDOT would survey large snags along the Truckee River that would be removed to construct the proposed I-580 bridge to determine whether Lewis's woodpeckers or other species of migratory birds are nesting there. The survey would be performed no more than 5 days before the proposed tree removal date. If active nests are identified, NDOT would protect them with a buffer and limit construction until the birds leave the nest.
- All bridges and buildings would be inspected for the presence of roosting bats or nesting swallows prior to demolition. Measures would be taken to prevent nesting or roosting on structures prior to demolition. If nesting swallows or roosting bats are identified, then they would not be disturbed until the young leave the nest or roost.
- NDOT will require nesting bird surveys between March 1 and July 31 (migratory bird nesting season) and prior to the removal of trees and vegetation to minimize impacts to active nests. The survey would be performed no more than 5 days before the proposed tree or vegetation removal date. If active nests are identified, NDOT would protect them in place with a buffer and limit construction until the young leave the nest.
- NDOT would implement erosion-control BMPs during construction to minimize increased sedimentation in the Truckee River and Pyramid Lake. These BMPs include:
  - Erosion-control products
  - Fiber rolls
  - Silt fences
  - Landscaping
- In areas where work would occur near water, temporary structures such as check dams, sediment traps, dikes, or ditches may be used to trap sediment and prevent it from moving into the Truckee River.
- To minimize the potential for contaminant releases into the Truckee River during construction, NDOT's contractors would be required to fuel and maintain construction

equipment at a designated fueling location that is a minimum of 100 feet away from the river. Spills would be addressed in accordance with standard spill control procedures. Contractors would visually inspect all equipment working within the river area daily for petroleum, hydraulic, or other leaks. To control contamination from accumulated grease and oil on the machinery and minimize the potential of introducing noxious weeds or invasive aquatic species, contractors would pressure wash all equipment before the equipment enters the Truckee River.

- Practices that avoid introduction of New Zealand mud snails by construction equipment, such as thoroughly washing all equipment before using it in the river, would eliminate the possible introduction of this invasive species into the Truckee River or Pyramid Lake downstream of the construction site.

- Installation of the proposed stormwater treatment system would likely reduce the amount of sediment and road-borne pollutants entering the Truckee River and Pyramid Lake from construction, compared to existing conditions.

- Erosion-control BMPs and stormwater management facilities would protect plants from water-related erosion.

- In-water work to replace the bridge pier would be limited to the July 1 to September 30 period to avoid cui-ui and LCT spawning seasons.

- The USFWS agreed with the proposed minimization measures presented in the Biological Assessment (Appendix D.10 of the Draft EIS). The USFWS specifically addressed the following measures:

  - ✓ The in-river work window is July 1 through September 30.

  - ✓ The in-river work area is estimated to be 0.65 acre.

  - ✓ The in-river work area will be dewatered at 1 to 3 inches per hour.

  - ✓ NDOT will follow the National Marine Fisheries Service fish salvage protocols when removing fish from the dewater area through dip-netting or electrofishing.

  - ✓ Fueling areas will be at least 100 feet from the river.

  - ✓ All equipment used in or near the water will be pressure-washed prior to use. The contractor will be made aware of New Zealand mudsnail, and NDOT will provide them with a protocol to reduce risk of spreading.

- ✓ BMPs will be implemented to prevent debris or contamination from the bridge deck work.
- ✓ Water quality samples will be collected daily during the construction period upstream and downstream of the work area. Work will be suspended if a downriver sample exceeds 10 nephelometric turbidity units above the upriver sample.
- ✓ All other measures discussed in Section 2.2 of the Biological Assessment will be implemented.
- ✓ Forthcoming terms and conditions in the U.S. Army Corps of Engineers 404/401 and 408 permits will be implemented.

7.0 REFERENCES

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Hawks, T. 2017. Nevada Department of Wildlife. Personal communication (email forwarded by Mark Freese) to Denny Mengel/CH2M HILL regarding presence of LCT in the Truckee River. December 19.

Hottle, D. 2017a. 'Monster' Lahontan cutthroat making a comeback. https://www.fws.gov/cno/newsroom/featured/2017/pilot_peak_lahontan_cutthroat_trout/. Accessed December 15.

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Simpson, N.O. 2017a. Nevada Department of Transportation. Personal communication (email) to NNHP requesting a list of endangered, threatened, candidate, and/or at-risk plant and animal taxa in or near the APE. June 5.

Simpson, N.O. 2017b. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL regarding Andy Starosktka/USFWS confirmation that there is no American wolverine or Webber's ivesia habitat in the APE, that LCT will require formal consultation, and cui-ui can be addressed through informal consultation. May 31.

Simpson, N.O. 2017c. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL that there is no Steamboat buckwheat habitat in the APE. June 5.

Simpson, N.O. 2017d. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL to confirm that there are no spawning LCT in the project vicinity and that spawning occurs in the lower Truckee River and tributaries in California.

Simpson, N.O. 2018. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL discussing migratory bird and eagle issues and possible mitigation measures. January 29.

U.S. Census Bureau. 2016. 2011-2015 American Community Survey 5-Year Estimates. https://factfinder.census.gov.

Vogt, S. 2017. USFWS. Personal communication (email) to Nova Simpson/NDOT informing NDOT that formal consultation will be required for both LCT and cui-ui. July 11.

Vogt, S. 2018. Personal communication (phone call) with Denny Mengel/CH2M HILL that cui-ui can be dealt with under informal consultation with the USFWS. March 6.

Attachment 1 NDOW Concurrence with NNHP Tracked Species List for Evaluation

From: Mark Freese
To: Mengel, Denny/BOI; Kim Tisdale
Cc: Simpson, Nova O; Webb, Charlie/MKE
Subject: RE: Spaghetti Bowl Sensitive Species
Date: Tuesday, November 28, 2017 12:58:19 PM

Denny,
The list look sufficient from our perspective. As for the fish species, NDOW recommends that ***in-river*** work on the Truckee River be conducted between July 1 and September 30 to avoid impacts to spring and fall spawning fish.

Thanks

Mark Freese, Habitat Biologist
Nevada Department of Wildlife
1100 Valley Road
Reno, Nevada 89512
(775) 688-1145
markfreese@ndow.org

Support Nevada's Wildlife…Buy a Hunting and Fishing License

From: Mengel, Denny/BOI [mailto:Denny.Mengel@CH2M.com]
Sent: Friday, November 3, 2017 2:35 PM
To: Mark Freese; Kim Tisdale
Cc: Simpson, Nova O; Webb, Charlie/MKE
Subject: Spaghetti Bowl Sensitive Species

Hi Mark and Kim: At a recent meeting between NDOT and NDOW (Alan Jenne [Habitat Division Chief] and Jon Sjoberg [Fisheries Division]), Alan and Jon requested that NDOT send the state and federal sensitive and listed species list being considered for evaluation in the EIS to you and Kim for vetting. The attached list was extracted from the NNHP Tracked Species Only list for Washoe County. I deleted species on that list that would not be expected to be in the project area. Through discussions between NDOT and USFWS, only Lahontan cutthroat trout and Cui-ui need to be included in Section 7 consultation. I think the attached list has a number of species on it that will not be found in the project area, but I wanted to include any that might remotely have habitat in this first cut. Please feel free to remove or add species to this list based on your work in the project area. I will include the final list in the EIS analysis. Have a good weekend.
Thanks
Denny

Denny Mengel, Ph.D., CPSS, CF
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Attachment 2 Official USFWS List of Threatened and Endangered Species to be Considered in the Biological Assessment

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To:
Consultation Code: 08ENVD00-2017-SLI-0398
Event Code: 08ENVD00-2018-E-00335
Project Name: 74020 I-80 Reno Spaghetti Bowl

December 21, 2017

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 et seq.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be

prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of

Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (e.g., changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20gr
.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 et seq.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such

destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO

Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO
Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO

Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO

Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta	BDFWO

		smelt	
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO
Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO

Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO
Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO

Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2017-SLI-0398

Event Code: 08ENVD00-2018-E-00335

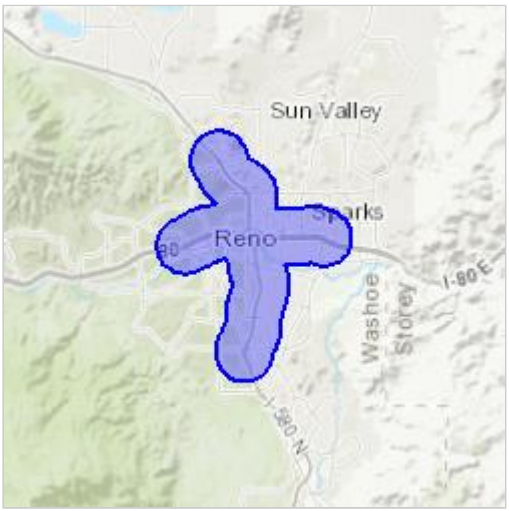
Project Name: 74020 I-80 Reno Spaghetti Bowl

Project Type: TRANSPORTATION

Project Description: Redesign and expansion of the Reno Spaghetti Bowl. Interstate intersections between I-80 and I-580.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.523857255512766N119.7859655418151W



Counties: Washoe, NV

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Fishes

NAME	STATUS
Cui-ui *Chasmistes cujus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/456	Endangered
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened

Flowering Plants

NAME	STATUS
Steamboat Buckwheat *Eriogonum ovalifolium var. williamsiae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/413	Endangered
Webber's Ivesia *Ivesia webberi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4682	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge 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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or are known to have particular vulnerabilities in your project location. To learn more about the levels of concern for birds on your list, 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 specific project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the E-bird data mapping tool (search for the scientific name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain time-frame) and the E-bird Explore Data Tool (perform a query to see a list of all birds sighted in your county or region and within a certain time-frame). 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 can be found below.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC), but is of concern in this area either because of the Eagle Act, or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Mar 20 to Sep 15
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Brewer's Sparrow *Spizella breweri*	Breeds

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	May 15 to Aug 10
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Apr 1 to Aug 31
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Sagebrush Sparrow *Artemisiospiza nevadensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 15 to Jul 31

Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
White Headed Woodpecker *Picoides albolarvatus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9411	Breeds May 1 to Aug 15
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Williamson's Sapsucker *Sphyrapicus thyroideus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeas

Wetlands

Impacts to NWI wetlands 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.S. Army Corps of Engineers District.

FRESHWATER EMERGENT WETLAND

- PEMB
- PEMC
- PEMA
- PEMFx
- PEMCx

FRESHWATER FORESTED/SHRUB WETLAND

- PFOB
- PSSB
- PFOC
- PSSC
- PSSA

FRESHWATER POND

- PUBHx
- PUBFx
- PABHx
- PUBHh
- PUBKx

LAKE

- L1UBHx

OTHER

- PUSAh
- PUSAx
- PUSCx

RIVERINE

- R3USA
- R3UBH

Attachment 3 No Effects Letter for North American Wolverine, Webber's Ivesia, or Steamboat Buckwheat

MEMORANDUM

No Effect Letter for Webber's Ivesia, North American Wolverine, and Steamboat Buckwheat

PREPARED FOR:	File
COPY TO:	Nova Simpson/NDOT
	Charlie Webb/ Jacobs CH2M
PREPARED BY:	Denny Mengel/Jacobs CH2M
DATE:	January 11, 2018
PROJECT NUMBER:	684384.01.05.06.10

This memorandum is to document a finding of No Effect on Endangered Species Act (ESA) federally listed species North American wolverine (*Gulo gulo luscus*), Steamboat buckwheat (*Eriogonum ovalifolium* var. *williamsiae*), and Webber's Ivesia (*Ivesia webberi*).

The North American Wolverine, proposed to be federally listed as a Threatened species under the ESA, are solitary mammals living primarily in arctic, boreal, and alpine regions with abundant snowfall. They prefer isolated area, but have been reported seen as far south as Lake Tahoe, Nevada (Knudson 2008). Undisturbed habitat suitable for this species is not present in the action area. Nevada Department of Transportation (NDOT) verified the lack of habitat with Andy Starostka, U.S. Fish and Wildlife Service (USFWS) on June 5th, 2017 (Simpson 2017a). The USFWS agreed that there would be No Effect on this species by the Reno Spaghetti Bowl Project.

Steamboat buckwheat, federally listed an Endangered species under the ESA, is only known from the Steamboat Hills approximately 10 miles south of Reno, Nevada (USFWS 1995). It grows there on hot spring deposits with a silica content. There is no suitable habitat in the action area. NDOT believes there will be No Effect to this species by the Reno Spaghetti Bowl Project due to lack of suitable habitat (Simpson 2017b).

Webber's Ivesia, federally listed as a Threatened species, is restricted to shallow shrink-swell clay soils with a gravelly surface layer having sparse vegetation. It grows between 4,475 and 6,237 feet in on terraces and benches (USFWS 2017). There is no suitable habitat for this species within the action area. NDOT verified the lack of habitat with Andy Starostka, USFWS on June 5th, 2017 (Simpson 2017a). The USFWS agreed that there would be No Effect on this species by the Reno Spaghetti Bowl Project.

References

Knudson, T. 2008. Sighting prompts California to expand search for elusive wolverine. Sacramento Bee. April 5.

Simpson, Nova O. 2017a. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL regarding Andy Starosktka/USFWS confirmation that there is no American wolverine or Webber's iversia habitat in the project area. May 31.

Simpson, Nova O. 2017b. Nevada Department of Transportation. Personal communication (email) to Denny Mengel/CH2M HILL that there is no Steamboat buckwheat habitat in the project area. June 5.

US Fish and Wildlife Service (USFWS). 1995. Steamboat Buckwheat Recovery Plan. Region 1. Portland, OR. September 29.

US Fish and Wildlife Service (USFWS). 2017. Species profile for Webber's ivesia. https://www.fws.gov/nevada/nv_species/webber_ivesia.html. Accessed November 26.