



— BUREAU OF —  
RECLAMATION

# Hollywood Boulevard Extension

## Draft Environmental Assessment Lower Colorado Basin

Project # LC-25-09



## **Mission Statements**

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

# Hollywood Boulevard Extension

## Draft Environmental Assessment Lower Colorado Basin

Project # LC-25-09

*prepared by*



*prepared for*

**United States Department of Interior  
Bureau of Reclamation  
Lower Colorado Region  
Boulder City, Nevada**

Cover Photo: A view from where Hollywood Boulevard would cross the Las Vegas Wash facing west by WSP, September 2020

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# 1 Introduction

This Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, and in accordance with 43 CFR Part 46 and the Department of Interior Handbook of NEPA Procedures. The purpose of this EA is to evaluate the potential impacts of the Proposed Action and its alternative on the physical and human environment and determine if the impacts would be significant, thus warranting the preparation of an Environmental Impact Statement. Reclamation is considering issuing an easement to afford Clark County, NV to extend Hollywood Boulevard southward across the Clark County Wetlands Park (the Park) to connect to Wiesner Way in the City of Henderson.

## 1.1 Background to the Purpose and Need

The Sunrise Manor Planning Area of Clark County is a principally suburban residential community located in the northeast Las Vegas Valley, south of Nellis Air Force Base, between the City of Las Vegas to the west and the Frenchman and Sunrise Mountains to the east. Sunrise Manor relies heavily on its east-west arterial streets to convey traffic from the west to the Interstate (I)-515 and Boulder Highway corridors because none of the current north-south streets serving Sunrise Manor provide a direct and continuous connection into the City of Henderson.

As the City of Henderson grows and provides more opportunities for commerce and employment south and east of Sunrise Manor, residents must contend with increasing congestion on indirect routes to access the City of Henderson. The construction of a new north-south route from Sunrise Manor to Henderson would provide a shorter, faster route and relieve some of the congestion in the I-515 corridor. However, such route must cross the Park.

The Park was developed in the early 2000s and extends along both sides of the Las Vegas Wash from the urbanized area of the Whitney Planning Area approximately five miles to Lake Las Vegas. There are no vehicular crossings of the Las Vegas Wash within the Park, and the only pedestrian crossings are located at the western and eastern extremes of the Park. A new roadway and trail crossing the Park with a crossing of the Las Vegas Wash would:

- Provide vehicular, pedestrian, and bicycle access between the north and south sides of the Park that is currently not available;
- Provide connections to the existing and planned Park trail system; and
- Increase recreational opportunities for Park visitors from Sunrise Manor and Henderson.

## 1.2 Purpose and Need

Clark County, in collaboration with the Sunrise Manor Town Board, established the purpose and need for the Proposed Project, as follows:

To provide a safe multimodal connection for the residents of Sunrise Manor traveling to and from the City of Henderson to:

- Improve north-south accessibility between Sunrise Manor and Henderson;
- Improve connectivity to existing and planned development in Henderson;
- Reduce congestion in the I-515 corridor;
- Accommodate current and future traffic volumes;
- Reduce congestion in the I-515 Corridor; and

- Provide a vehicular-, bicycle-, and pedestrian-friendly facility to access recreational opportunities in the Clark County Wetlands Park.

## 2 Description of Alternatives

### 2.1 No Action Alternative

Under the No Action Alternative, the Hollywood Boulevard Extension would not be constructed. Accordingly:

- North-south accessibility between Sunrise Manor and Henderson would not be improved,
- Connectivity between Sunrise Manor and existing and planned development in Henderson would not be improved,
- The existing 2.45-mile section of Hollywood Boulevard from Vegas Valley Drive to the Sunrise Trailhead would not be widened from two lanes to four,
- Wiesner Way would not be widened from two lanes to four,
- Vehicular, pedestrian, and bicycle access to recreational opportunities within the Park would not be improved,
- The lower reach of Duck Creek at the confluence with the Las Vegas Wash would not be stabilized,
- Congestion in the I-515 Corridor would not be reduced, and
- Transportation benefits, including travel time savings and reduced vehicular emissions, would not be achieved.

### 2.2 Proposed Action

The Proposed Action would extend Hollywood Boulevard by 5.47 miles from Vegas Valley Drive in the Sunrise Manor Planning Area of Clark County to Galleria Drive in the City of Henderson. It would connect the existing Hollywood Boulevard in Sunrise Manor to the existing Wiesner Way in the City of Henderson by constructing a new connecting roadway through the Park and crossing the Las Vegas Wash and Duck Creek.

The Proposed Action would provide four 12-foot-wide travel lanes, two lanes in each direction, a multipurpose trail along the roadway through the Park, and a new trailhead at a new southern entrance to the Park.

The proposed roadway and trail would be constructed mostly at-grade with bridges over the Las Vegas Wash and over Duck Creek elevated sufficiently to allow maintenance vehicles to cross underneath the bridges to maintain existing and proposed bank protection.

Measures to stabilize the lower reach of Duck Creek, including a grade control structure (weir), rip-rap bank protection, and grading to channel flood flows, would also be included in the Proposed Action.

The proposed alignment of the new roadway is shown in Figure 1. Typical sections for the roadway and trail sections are described below (Louis Berger, 2019):

- From Vegas Valley Drive to the existing Sunrise Trailhead at the north entrance of the Park (2.45 miles), Hollywood Boulevard would be widened from two lanes to four. The existing Flamingo Arroyo Trail would be realigned along Hollywood Boulevard to maintain existing pedestrian and bicycle access to the Park from Sunrise Manor. Approximately 1.2-miles of the roadway improvements **north of the Park** are located on Reclamation lands and are subject to this federal action (Figure 1).



- From the existing Sunrise Trailhead to the proposed new south trailhead, the Proposed Action would extend north-south through the Park (1.80 miles) and construct four 12-foot-wide travel lanes (two lanes in each direction) and a 10-foot-wide multipurpose trail. The new trailhead and trail would connect to the existing and planned Park trail system providing improved recreational access to the Park. Within the Park, the Proposed Action would include bridges over the Las Vegas Wash and Duck Creek and measures to stabilize the lower reach of Duck Creek.
- From the Park to the City of Henderson Boundary (0.20 miles), the Proposed Action would extend across land owned by the Clark County Parks and Recreation Department which is planned for the expansion of the Old Silver Bowl Park, located west of the Proposed Project. A roundabout would provide improved access to the Old Silver Bowl Park and vehicular, pedestrian, and bicycle access to the proposed new south trailhead and to areas east of the Old Silver Bowl Park planned for redevelopment.
- From the City of Henderson Boundary to Wiesner Way (0.30 miles) the four 12-foot-wide travel lanes would be constructed through privately owned property planned for residential development.
- The southernmost portion of the Proposed Action would widen the existing Wiesner Way from two lanes to four (0.75 miles). An existing NV Energy transmission line would be upgraded and relocated in this area.

A U.S. Bureau of Land Management (BLM) right-of-way Grant (N-84611/A) was issued on 23 September 2021 to Clark County for the portion of the extension on BLM land.

The Proposed Action would be constructed through land owned by various departments of Clark County, including the Department of Public Works, the Department of Parks and Recreation, and the Water Reclamation District; the City of Henderson; Reclamation; and the BLM (Figure 1).

The Proposed Action would include a connection to the paved trail east of the Sunrise Trailhead. Two design options are being evaluated for a grade separation. The first design option would elevate the new roadway on an embankment approximately 15 feet high over the existing trail, which would cross under the road in a pedestrian culvert. The second design option would lower the roadway approximately 10 feet and provide a pedestrian bridge 18 feet above the depressed roadway.

Connections to existing and planned unpaved trails would be provided at the trailheads and at the bridges over the Las Vegas Wash and Duck Creek that would serve as pedestrian grade separations.



## **2.3 Alternatives Considered but Not Evaluated in Detail**

The Sunrise Manor Transportation Improvements - Hollywood Boulevard Extension Feasibility Study (Feasibility Study), October 2019, prepared by Clark County, evaluated five alternative alignments to extend Hollywood Boulevard from Sunrise Manor to the City of Henderson. Because the Park extends for five miles east of the fully developed urban core of Las Vegas, by necessity, all the alternatives would cross the Park and the Las Vegas Wash and would pass through land owned by Reclamation. In fulfilling the purpose and need for the Proposed Action, avoiding the Park, the Las Vegas Wash, and Reclamation land is not possible to connect areas north and south of these features.

From the Feasibility Study, Alternative 1B was selected as the Preferred Alternative and recommended for further evaluation in this EA. Alternative 1B centrally crosses the Park and crosses the Las Vegas Wash upstream of the Duck Creek Confluence Weir.

All the alternatives included in the Feasibility Study were found to provide substantial transportation benefits, with the benefits associated with travel time savings, reduced vehicle maintenance and operations, and reduced vehicle emissions far exceeding the estimated cost of construction.

Alternative 1A, the most westerly alignment, would provide the shortest route and required the least amount of disturbance on property owned by Reclamation. However, it would have the greatest potential impact on the floodplains of the Las Vegas Wash and Duck Creek, the greatest potential impact on wetlands, and the greatest potential impact on known cultural resources sites.

Like Alternative 1B, Alternative 1C would cross the Las Vegas Wash upstream of the Duck Creek Confluence Weir. However, Alternative 1C would have a greater impact on the Las Vegas Wash because it would cross the impoundment of Duck Creek Confluence Weir at its widest point and would conflict with the Southern Nevada Water Authority's Las Vegas Wash revegetation plan.

Alternatives 2 and 3, the easterly alternatives, would be the least expensive, but would require longer travel routes, substantially more property from Reclamation, and would have a much greater impact on known biological and cultural resources than the Proposed Action.

## 3 Affected Environment and Environmental Consequences

This section describes the existing environmental conditions, either human-made or natural, at and surrounding the proposed roadway. It provides a baseline from which to identify and evaluate changes resulting from the Proposed Action. Only those resources that have a potential to be affected are discussed as per CEQ guidance (40 Code of Federal Regulations [CFR] §1501.7(3)). The following subsections describe the existing condition for the selected resource areas being reviewed and analyze the impacts of the Proposed Action on those resources.

### 3.1 Resources not Discussed in Detail

The following resources are either considered under other resource sections or not further addressed in this document because the Proposed Action would not affect them. Therefore, the following resources will not be discussed for the reasons given:

- Prime and Unique Farmlands—No prime and unique farmlands exist on or near the Proposed Action.
- Indian Trust Assets—No Indian Trust Assets are associated with the proposed alignment.
- Indian Sacred Sites—No Indian Sacred Sites are on or near the proposed alignment.

### 3.2 Resources Discussed in Detail

The resources below are discussed in detail in the following subsections:

- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazardous Materials
- Water Resources/Floodplains/  
Wetlands
- Visual Resources
- Air Quality
- Noise
- Parks and Recreation
- Transportation

### 3.3 Biological Resources

Biological resources analyzed in this section include vegetation, wildlife, and federal threatened and endangered species.

#### 3.3.1 Vegetation Resources

##### 3.3.1.1 Affected Environment

The Proposed Action Area is in the low-elevation, arid Mojave Desert, surrounded by desert mountain terrain, within Clark County, Nevada. Elevations within the Proposed Action Area range from 1,562 feet to 1,742 feet above mean sea level. Las Vegas maintains an arid climate year-round, with an average temperature of 69 degrees Fahrenheit. The hottest month is July with an average high temperature of 104 degrees Fahrenheit. The coldest month is December with an average low temperature of 39 degrees Fahrenheit. Average annual precipitation is 4.17 inches. According to U.S. Climate Data, precipitation, which is primarily rainfall because snow is highly uncommon, occurs an average of 21 days per year, with the majority falling in the winter.

A general habitat field survey was conducted by WSP USA Inc. (WSP) between April 5 and April 7, 2021, to investigate the existing habitat conditions in the Proposed Action Area. During the field survey, vegetative cover within and surrounding the Project Area was estimated to be approximately 30% to 40%, based on a qualitative visual estimate noted during the field survey. Dominant species observed included alkali sacaton (*Sporobolus airoides*), flatcrown buckwheat (*Eriogonum deflexum*), cat-claw acacia (*Acacia greggii*), four-wing saltbush (*Atriplex canescens*), screw-bean mesquite (*Prosopis pubescens*) and six-weeks three-awn (*Aristida adscensionis*). Urban areas consisted of landscaped plantings, graded soils devoid of vegetation, and weedy vegetation recolonizing previously disturbed soil surfaces.

In the Proposed Action Area, Duck Creek is a perennially flowing desert wash. There are large, open water areas interspersed with dense stands of bulrush, cattails, and reeds growing in the large gravel rock impoundments of the existing weirs and along the channel banks of the wash. In undeveloped portions of the Proposed Project, small islands of intact habitat are fragmented and scattered among areas of disturbed vegetation. Visual signs of disturbance include denuded and damaged vegetation cover and soil surfaces.

Much of the vegetation communities within and surrounding the proposed Project Area showed signs of past and on-going human disturbance resulting from recreation, dumping, and homeless encampments. Portions of habitat along the northern and southern project portions as well as adjacent to Hollywood Boulevard have been highly impacted by rampant off-highway vehicle (OHV) driving, informal trail development, illegal dumping of small-and large-sized household debris, and trash burning. Vagrants and homeless individuals use the vicinity of the creek/wash corridor for camping and toileting. Two homeless encampments with human feces, clothing, bedding, and other trash debris were encountered in the Project Area during the field survey. Recreational mountain bikers have also contributed to the formation of an informal dirt trail network and fragmentation of habitat.

The Federal Noxious Weed Act of 1975 and Plant Protection Act of 2000 establish a federal program for controlling the spread of noxious weeds. The U.S. Department of Agriculture (USDA) designates plants as noxious weeds to control, eradicate, and prevent their spread (USDA 2017). Nevada's Revised Statute and Nevada Administrative Code direct the Nevada Department of Agriculture to develop a noxious weed list and target species for control or eradication of these species. The objective of the noxious weeds regulatory program is to eradicate newly introduced weeds noxious to Nevada or contain or slow the spread of those limitedly established by enforcing the laws set forth in the Nevada Revised Statute (NRS) and Nevada Administrative Code (NAC). Because of the invasiveness and destructive nature of noxious weeds, preventing weed establishment and spread and controlling those weeds that have become established is essential to protecting Nevada's crops, livestock, public health, wildlife, water quality, and beneficial uses of land.

Noxious weeds in the state of Nevada are regulated under NRS 555 and are classified as follows:

Category A: Weeds that are generally not found or that are limited in distribution throughout the State. Such weeds are subject to:

- (a) Active exclusion from the State and active eradication wherever found.
- (b) Active eradication from the premises of a dealer of nursery stock.

Category B: Weeds that are generally established in scattered populations in some counties of the State. Such weeds are subject to:

- (a) Active exclusion where possible.

(b) Active eradication from the premises of a dealer of nursery stock.

Category C: Weeds that are generally established and generally widespread in many counties of the State. Such weeds are subject to:

(a) Active eradication from the premises of a dealer of nursery stock.

During the field survey, four State-listed noxious weeds were observed. These include: Category A - Crimson fountaingrass (*Pennisetum setaceum*) and giant reed (*Arundo donax*); Category B - silverleaf nightshade (*Solanum elaeagnifolium*); and Category C - perennial pepperweed (*Lepidium latifolium*).

### **3.3.1.2 Environmental Consequences**

#### **3.3.1.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. Existing conditions would persist in and around the Project Area. Therefore, the No Action Alternative would not affect common plant species in or around the Project Area.

#### **3.3.1.2.2 Proposed Action**

Under the Proposed Action, short- and long-term losses of vegetation would occur. Loss of vegetation may lead to an increase in exotic/nonnative species; however, environmental commitments, including placing ground cover or reseeding with a native seed mix, and BMPs would be followed to avoid significant long-term impacts to vegetation.

#### **3.3.1.2.3 Mitigation Measures**

A Noxious Weed Management Plan shall be developed to prevent the establishment and spread of Nevada State listed noxious weeds per NRS 555. The management plan shall include a physical survey of noxious weeds, mapping of existing noxious weed populations, appropriate eradication/control methods based on weed type, location, applicator certification, monitoring, and retreatment as necessary, as well as methods for keeping equipment, personnel, staging areas, construction and excavation sites, and roadways clear of noxious weed plants and seeds. The plan shall also address the treatment of weeds in topsoil salvage material. Equipment leaving noxious weed infested areas shall be cleaned prior to moving to areas free from noxious weeds. Equipment coming into or leaving the Project Area shall be cleaned and the cleaning area kept clear of plant material and contaminated dirt to prevent weed spread. Category A noxious weed species require active eradication wherever found, by State law.

### **3.3.2 Wildlife Resources**

The following section is based on the Biological Assessment prepared by WSP on behalf of Clark County for submittal to Reclamation and the U.S. Army Corps of Engineers (USACE) for use in consultation with U.S. Fish and Wildlife Service (USFWS), which is ongoing. The Clark County Multiple Species Habitat Conservation Plan (MSHCP) was reviewed for species known to use the Project Area. The MSHCP identified 28 mammals, 30 birds, 29 reptiles, 52 invertebrates, and 81 species of plants (Clark County 2000). In addition, the USFWS Information for Planning and Consultation (IPaC) system was accessed on March 18, 2021, and subsequently updated on August 12, 2021, and October 24, 2024, to determine species with potential to occur in the Proposed Action Area (USFWS 2021a). The IPaC report listed a number of migratory birds that may be present in the Project Area.

### **3.3.2.1 Affected Environment**

A general habitat field survey was conducted by WSP between April 5 and April 7, 2021, and between February 6 and February 7, 2024, to document the existing vegetation and verify mapped habitat types in the action area. Habitat types observed during the field survey included urban areas adjacent to roadways and residential development; desert areas (creosote scrub, saltbush scrub, and upland ephemeral washes), riparian areas (desert wash, including wetland areas); and previously disturbed undeveloped areas. Wildlife using the area are subject to disturbance from recreation, dumping, and homeless encampments.

### **3.3.2.2 Environmental Consequences**

#### **3.3.2.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. Existing conditions would persist in and around the Proposed Action Area. Therefore, the No Action Alternative would have no impact on common wildlife species in or around the Project Area.

#### **3.3.2.2.2 Proposed Action**

Under the Proposed Action, short- and long-term losses of habitat would occur that would result in some displacement of wildlife that typically use the Project Area. Animals may be disturbed and displaced by construction activities in the short-term and by vehicular traffic and maintenance activity during the lifetime of the project. However, the acreage affected is already disturbed by human activity and is minimal compared with the available habitat in the region. Wildlife crossings in the form of culverts or similar structures are planned along the length of the roadway. Thus, habitat loss and disturbance from human activity would not affect common species in the area.

#### **3.3.2.2.3 Mitigation measures**

Wildlife crossings in the form of culverts or similar structures are planned along the length of the roadway.

To prevent impacts to migratory birds, no site clearing work would be conducted during the nesting season between February 15 and September 1 during any year to prevent impacts to nesting migratory birds. If construction activities must occur during this time, surveys for nesting birds would occur within two weeks before commencement of activities. If an active nest were observed, all work would cease until consultation with the appropriate agency biologist (based on nest location) is completed. Prior to any scheduled maintenance of bridges, Clark County would survey and record the presence of migratory bird nests. If active nests were present, agency consultation (based on nest location) would be completed, and avoidance measures would be implemented.

### **3.3.3 Threatened and Endangered Species**

A list of Endangered Species Act (ESA)-protected species with potential to occur in the Action Area was obtained from the USFWS IPaC tool on March 18, 2021, and subsequently updated on August 12, 2021, and October 24, 2024. Federal-listed species considered to have potential to occur in the Action Area are listed in Table 1.

**Table 1. Federal-Listed Species with Potential to Occur within the Action Area**

Common Name	Scientific Name	Federal Listing Status
Desert Tortoise	<i>Gopherus agassizii</i>	Threatened
Monarch Butterfly	<i>Danaus Plexippus</i>	Proposed
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	Endangered
Western Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	Threatened
Yuma Ridgway's Rail	<i>Rallus obsoletus yumanensis</i>	Endangered

Desktop and field analyses of suitable habitat for these species indicated that the project may result in potential adverse effects on the ESA-listed species with potential to occur in the Action Area. As such, a Biological Assessment was prepared on behalf of Clark County for submittal to Reclamation and USACE for use in consultation with USFWS, in accordance with the legal requirements set forth under Section 7(a)(2) of the federal ESA. Reclamation concluded consultation for desert tortoise on July 2, 2025 (Biological Opinion 2025-0010734-S7-001), and the final effect determination, mitigation requirements, and incidental take permission are included below. For the remaining species, preliminary effects determinations and recommended mitigation measures are described below.

There are no USFWS-designated Critical Habitats within the Action Area, the nearest of which is 14 miles away. Further analysis and discussion of potential impacts to designated Critical Habitat resulting from the Proposed Action is not warranted.

**3.3.3.1 Affected Environment**

Desktop and field analyses of suitable habitat for ESA-protected species with potential to occur in the Action Area indicated that suitable habitat is present in the vicinity of the Action Area for four federally-listed species (desert tortoise; southwestern willow flycatcher; western yellow-billed cuckoo; and Yuma Ridgway's rail) and one species proposed for listing (monarch butterfly).

**3.3.3.1.1 Desert Tortoise**

Desert tortoises are found in the Mojave and Sonoran deserts north and west of the Colorado River in southwestern Utah, southern Nevada, southeastern California, and northwestern Arizona. They occupy a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where creosote desert scrub and suitable soils for den construction might be found.

Two areas of potentially suitable desert tortoise habitat were identified in the Action Area during 2021 coordination meetings with Reclamation, WSP, and Clark County. Surveys were conducted in these areas in April 2021, including approximately 200 meters on either side of the Action Area (Figure 2). No project-related disturbance is proposed within the surveyed buffer area beyond the Action Area limits. In total, the survey area encompassed approximately 387 acres, including 70 acres of BLM land, 222 acres of Reclamation land, 46 acres of Clark County land, and 49 acres of City of Henderson land.

Suitable desert tortoise habitat was observed on Reclamation-managed land (northern survey area). While no desert tortoises were observed during the April 2021 transect surveys, one potential desert tortoise burrow was observed (Figure 2). Portions of the northern survey area include moderate to high-quality habitat in areas that are undeveloped and do not lie adjacent to existing roads. The



northern survey area also includes areas that are highly disturbed by OHV and subject to trespass for illegal dumping, camping, and other activities that have a negative impact on this species. While no desert tortoises were observed during the April 2021 transect surveys, one potential desert tortoise burrow was observed. The survey area south of the Park is highly disturbed and developed, providing unsuitable habitat.

### **3.3.3.1.2 Monarch Butterfly**

Monarch butterflies typically inhabit prairies, meadows, grasslands, and roadsides across most of North America. Although the species feed on nectar from many types of flowering plants, monarch butterflies lay their eggs exclusively on certain types of milkweed plant species (primarily *Asclepias* spp.).

Monarch butterflies have been identified in the Action Area. There have been several observations of monarch butterflies in both spring and fall migration periods in both upland and riparian habitat in the Park. Outside of the Park, monarch butterflies are frequently observed throughout the Las Vegas area, particularly during the peak of migration between late September to late October, feeding on various flowering plant species.

Milkweed was first used in Park revegetation efforts in 2015 and the first known caterpillars within the Park were observed that same year on milkweed planted at the Nature Preserve. Milkweed has been incorporated in multiple projects since then, where appropriate. Many monarch butterflies have been observed roosting in large trees such as Goodding's willow (*Salix gooddingii*) and Fremont's cottonwood (*Populus fremontii*), believed to be providing a safe place to rest during migration.

### **3.3.3.1.3 Southwestern Willow Flycatcher**

Potentially suitable nesting habitat for the southwestern willow flycatcher consists of lowland riparian habitats generally supporting dense stands of intermediate-sized trees or shrubs, including Goodding's willow, coyote willow (*Salix exigua*), boxelder (*Acer negundo*), and tamarisk (*Tamarix* spp.; much of the tamarisk has been removed from the Las Vegas Wash channel in the Park), usually with water or moist soil present below the canopy or nearby.

No southwestern willow flycatchers were detected within or in the vicinity of the Action Area during the 2021 or 2024 field surveys. However, protocol surveys for southwestern willow flycatcher were not conducted because of the ongoing Southern Nevada Water Authority (SNWA) annual survey efforts. In 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2019, and 2024, SNWA detected southwestern willow flycatchers within the Park during their annual surveys. Southwestern willow flycatchers were detected within the Action Area in 2011, 2012, 2013, 2018, and 2019 (Figure 3); however, the Action Area does not support potentially suitable nesting habitat for this species (Figure 3; D. Van Dooremolen, personal communication, August 22, 2024). The nearest potentially suitable nesting habitat is located approximately 1.1 miles upstream and 1.4 miles downstream of the Action Area (Figure 3). In 2023, SNWA field personnel detected four resident southwestern willow flycatchers, comprising three territories and three pairs, in the passively established, native-dominated habitat above Historic Lateral Weir, approximately 1.6 miles east (downstream) of the Action Area.

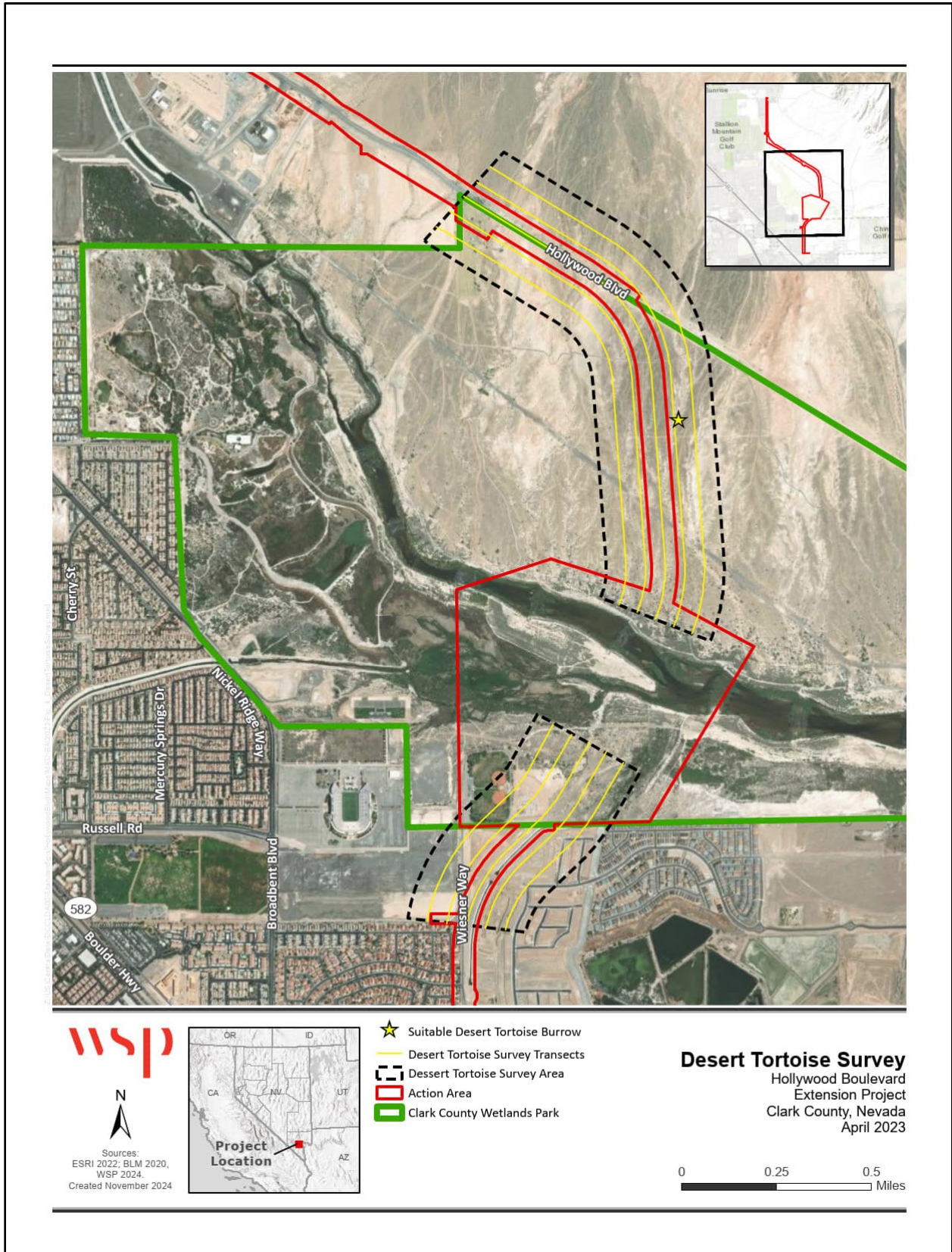


Figure 2. Desert Tortoise Survey Areas

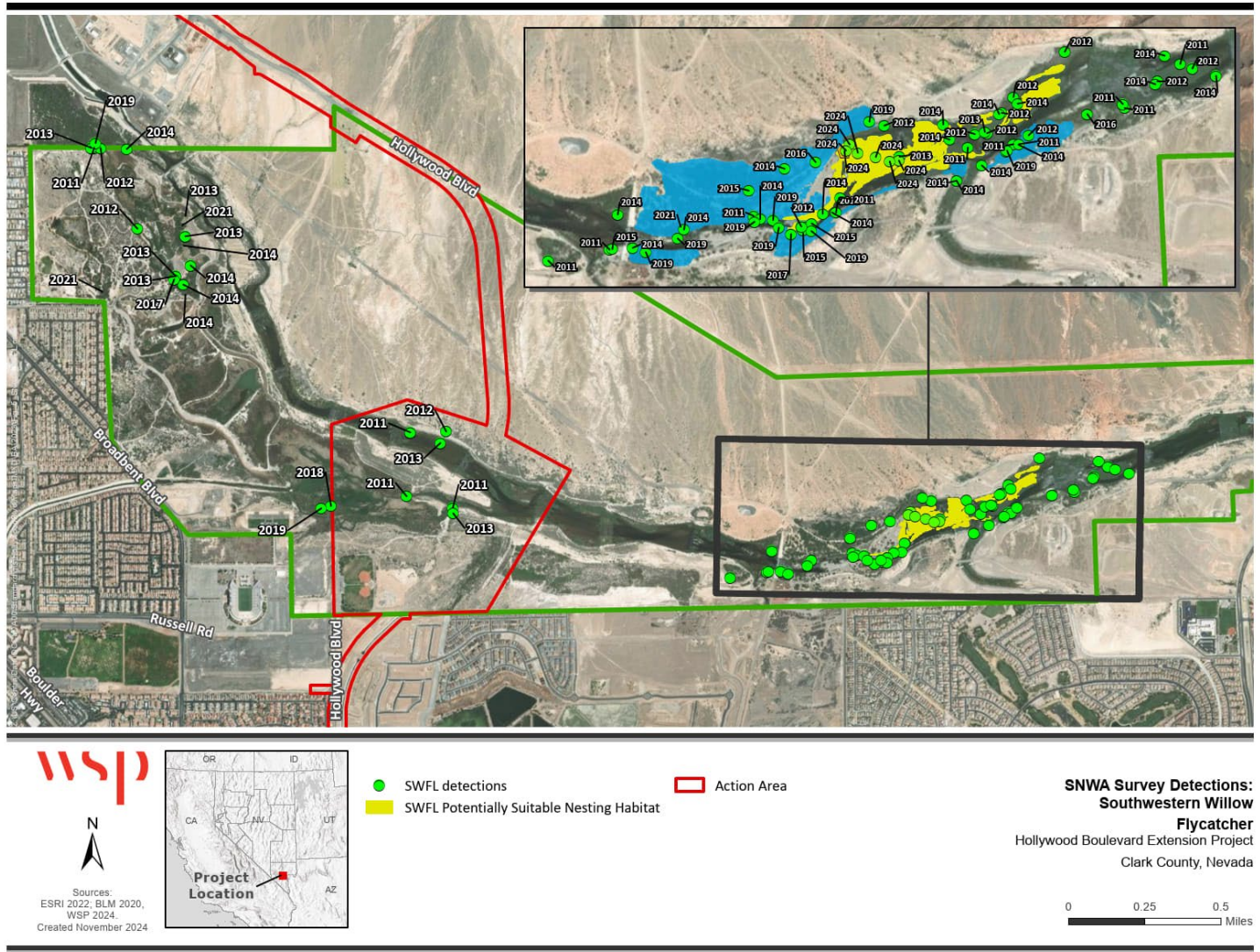


Figure 3. SNWA Survey Detections: Southwestern Willow Flycatcher

#### **3.3.3.1.4 Western Yellow-Billed Cuckoo**

Potentially suitable nesting habitat for the yellow-billed cuckoo consists of patches of native riparian vegetation with some large overstory trees, such as eastern cottonwood (*Populus deltoides*) and Goodding's willow. The understory layer typically has coyote willow and/or seep willow (*Baccharis salicifolia*). Screwbean mesquite (*Prosopis pubescens*) and honey mesquite (*Neltuma glandulosa*) thickets of suitable stature are also included. The species does not typically nest in monotypic stands of tamarisk. Western yellow-billed cuckoos rarely nest in habitat patches smaller than 20 hectares. The majority of potentially suitable habitat along Las Vegas Wash is concentrated in the area from Pabco Weir (approximately 1.0 mile downstream of the action area) to Bostick Weir (approximately 1.9 miles downstream of the Action Area). Further downstream, there is little to no potentially suitable riparian or mesquite habitat.

A western yellow-billed cuckoo was detected in the Park during the 1998 southwestern willow flycatcher surveys. From 2002 through 2004, SNWA contractors conducted annual cuckoo surveys in the Park. None were found, so the surveys were discontinued due to limited habitat availability. In 2013, following a substantial increase in potentially suitable nesting habitat, the SNWA reinitiated surveys for this species. Following the listing of the species, the Reclamation reinitiated informal Section 7 consultation with the USFWS, who concurred that the weir project may affect but was not likely to adversely affect the western yellow-billed cuckoo and recommended that annual surveys continue to be conducted.

No western yellow-billed cuckoos were detected within or in the vicinity of the Action Area during the 2021 or 2024 field surveys. However, protocol surveys for this species were not conducted because of the ongoing SNWA annual survey efforts. SNWA detected western yellow-billed cuckoos approximately 1.5 miles northwest of the action area in 2013, 2014, and 2021. The habitat northwest of the Action Area includes mesquite desert wash, dominated by honey mesquite and catclaw acacia (*Senegalia greggii*). Screwbean mesquite, creosote bush (*Larrea tridentata*), saltbush (*Atriplex* spp.), and invasive salt cedar (*Tamarix* spp.) are also present in this area (Figure 4). Western yellow-billed cuckoos were detected downstream of the Action Area during the 2014 and 2021 field surveys. In 2021, there were three detections downstream of the Action Area, all located in cottonwood dominated habitat. In 2023, SNWA field crews made 11 detections of five individuals, including two probable breeding territories.

This species has not been detected in the Action Area (Figure 4). The Action Area does not support potentially suitable nesting habitat for this species. There is a small patch of potentially suitable foraging and roosting habitat upstream of the proposed grade control structures on Duck Creek. The nearest potentially suitable western yellow-billed cuckoo nesting habitat is located approximately 1.2 miles upstream and 1.0 mile downstream of the Action Area (Figure 4). There is no known occupied nesting habitat in the Park. Migrants of this species have not been detected in the Action Area during SNWA annual surveys. However, due to the presence of western yellow-billed cuckoos within 1.5 miles of the Action Area, there is potential for migrants of this species to use the area for roosting and foraging.

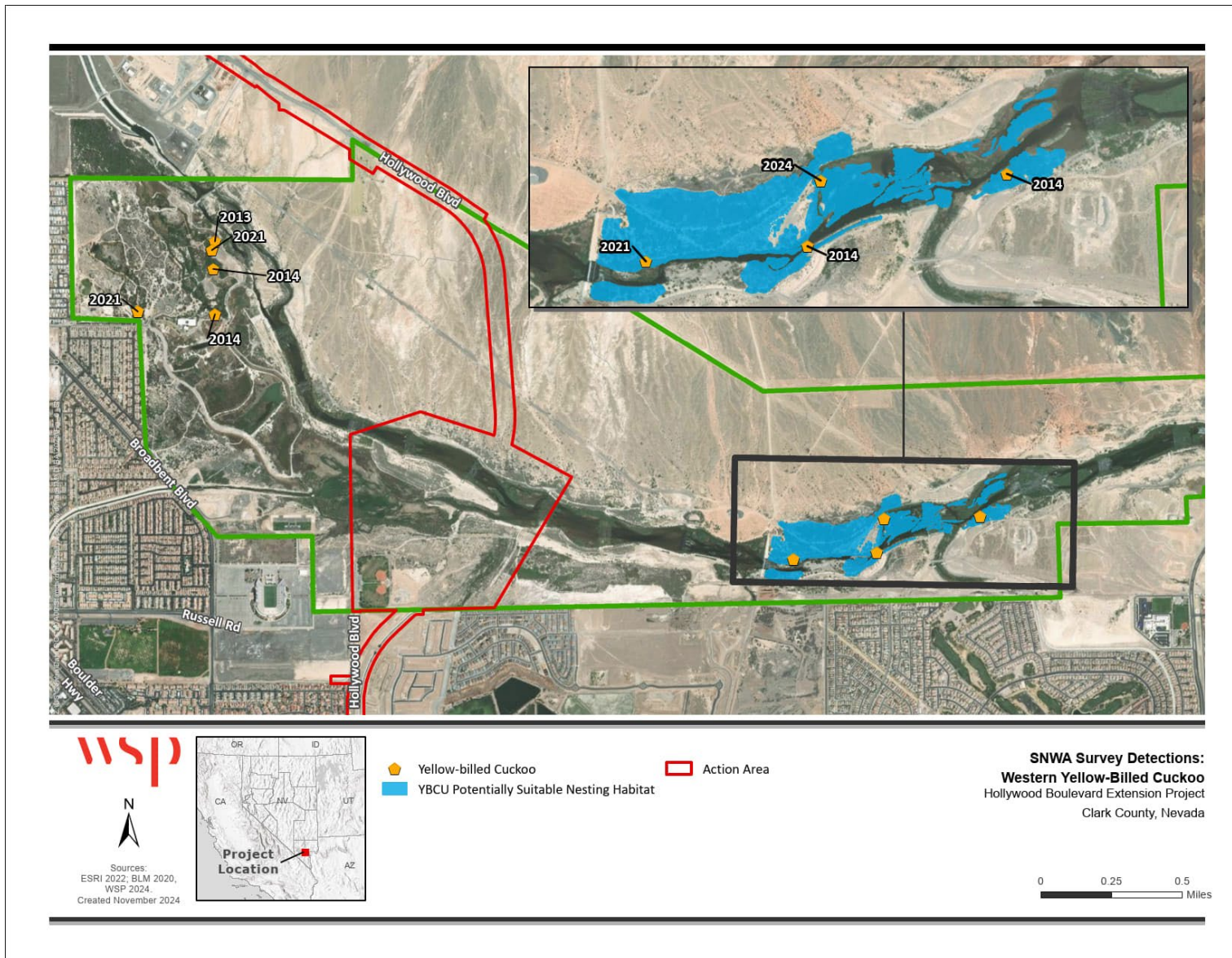


Figure 4. SNWA Survey Detections: Western Yellow-Billed Cuckoo

### 3.3.3.1.5 Yuma Ridgway's Rail

Known as the clapper rail (*Rallus obsoletus longirostris*) until 2014, the Yuma Ridgway's rail inhabits freshwater and brackish water wetlands. Yuma Ridgway's rail prefers habitat dominated by cattails and bulrush (*Schoenoplectus* spp.); however, they have also been detected in wetlands dominated by common reed, salt cedar, and willow (*Salix* spp.). Yuma Ridgway's rails rely on densities of crayfish, the most abundantly consumed prey for the species.

In the vicinity of the Action Area, shallow, open water areas with stands of emergent vegetation at different successional stages are found in the rocky impoundments of the weirs and along the channel banks of the Las Vegas Wash and may support Yuma Ridgway's rail year-round. Suitable nesting habitat for the Yuma Ridgway's rail is present within the Action Area within Las Vegas Wash and Duck Creek riparian corridors (Figure 5). Downstream from where the project is proposed to cross Las Vegas Wash, the impoundment of Duck Creek Confluence Weir is considered the most suitable potential nesting habitat for Yuma Ridgway's rail within the Action Area.

Although no Yuma Ridgway's rails were detected during the 2021 and 2024 field surveys, SNWA detected Yuma Ridgway's rail within 0.5 mile of the Action Area in 2015, 2017, and 2020 during their annual surveys (Figure 5). Surveys were conducted in habitat dominated by varying amounts of cattails, common reed, and bulrush, as well as riparian vegetation. No Yuma Ridgway's rails have been detected in the Action Area during SNWA annual surveys (Figure 5). In 2023, SNWA Field crews identified six individuals during surveys, the highest number reported during one year's surveys.

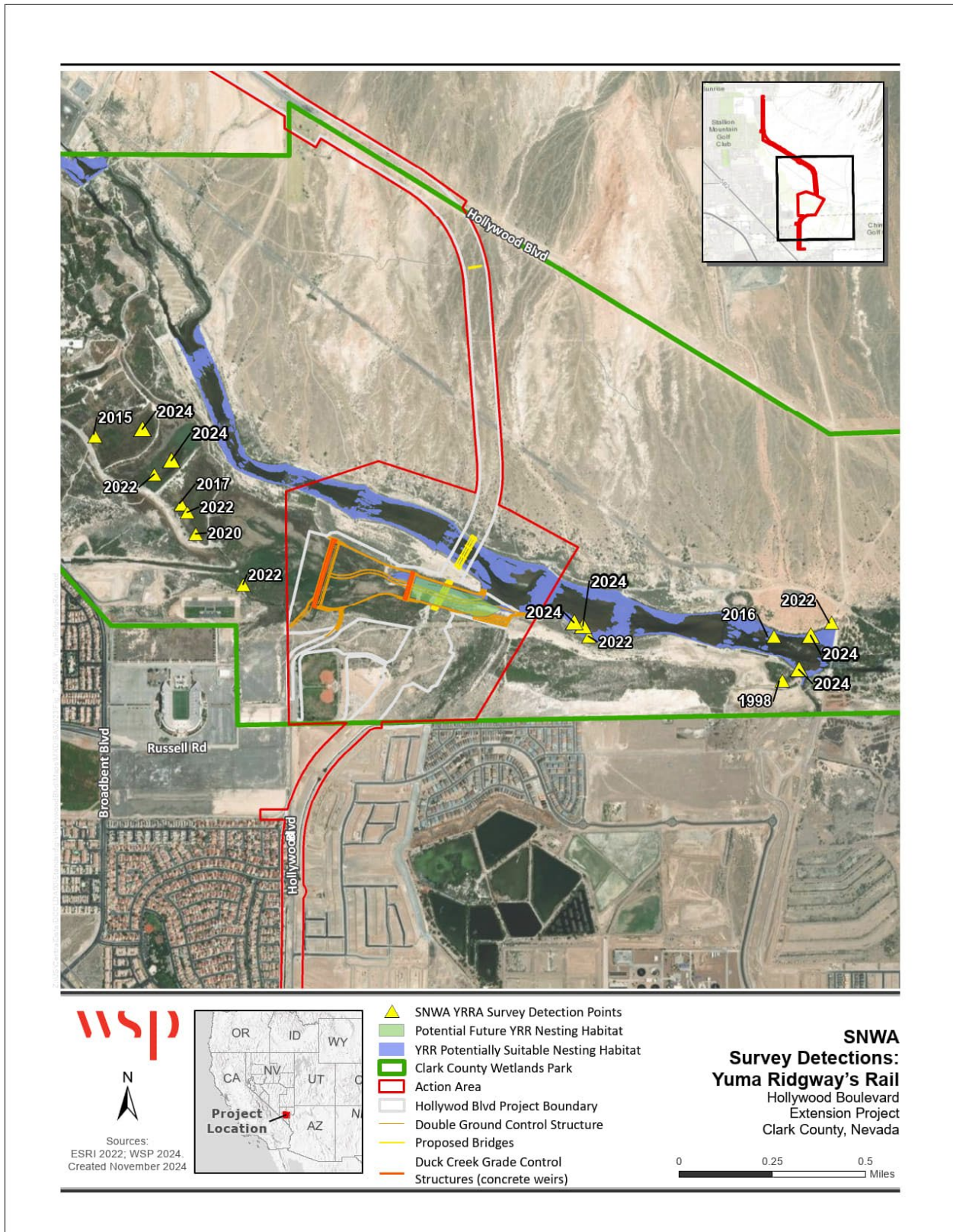


Figure 5. SNWA Survey Detections Yuma Ridgway's Rail

### **3.3.3.2 Environmental Consequences**

#### **3.3.3.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. Existing conditions would persist in and around the Proposed Action Area. Therefore, the No Action Alternative would not impact threatened or endangered species in or around the Proposed Action Area.

#### **3.3.3.2.2 Proposed Action**

Potential environmental consequences to ESA-listed species from the Proposed Action are detailed below.

##### *3.3.3.2.2.1 Desert Tortoise*

While no desert tortoises were observed during the field transect survey, one area of potentially suitable desert tortoise habitat was identified in the Action Area. The greatest potential threats to desert tortoises resulting from the Proposed Action are associated with site preparation, vegetation clearing, and vehicular travel. Tortoises could be killed or injured as a result of being crushed by project-related vehicles traveling to and from the Action Area, or by use of the roadway by the public. Tortoises in harm's way and not located before land clearing activities commence could be killed or injured. Tortoises that wander into work areas during construction could be killed or injured. To minimize potential impacts to tortoises associated with off-pavement travel, the roadway design includes guardrail along the roadway to prevent unauthorized access to the Park and post and cable fence to prevent unauthorized access outside of the Park with wildlife crossings consisting of culverts.

Areas of intact, moderately suitable desert tortoise habitat within approximately 820 feet of the Action Area would not be directly disturbed by the proposed action. This habitat would serve as areas where desert tortoises could be translocated if found in the construction zone. Any tortoises found during construction shall be moved by a USFWS-authorized biologist no more than 1,000 feet, unless otherwise directed by the USFWS. The Park does not accept relocated desert tortoise.

### **Effect Determination & Incidental Take Request**

Reclamation concluded consultation for desert tortoise on July 2, 2025 (Biological Opinion 2025-0010734-S7-001). Two desert tortoises are exempted from mortality take. All desert tortoises in harm's way may be captured or moved.

### **Mitigation measures**

With the implementation of the proposed avoidance and minimization measures outlined below, potential adverse effects to the desert tortoise or its habitat would be minimized.

The following measures will be implemented within desert tortoise suitable habitat during construction of the Proposed Action:

- a. A qualified biologist will conduct clearance surveys following installation of temporary and/or permanent tortoise fence and prior to surface-disturbing activities.
- b. The underside of vehicles and equipment will be inspected for the presence of desert tortoise prior to use.



- c. The location of designated work areas within desert tortoise habitat shall be flagged or marked before beginning any activities, and all disturbances shall be confined to these flagged areas. Project personnel will be instructed to confine activities within the flagged areas. Cross-country travel, travel outside flagged construction zones, and disturbance beyond the flagged areas will be generally prohibited.
- d. All machinery will be washed and inspected prior to arriving in undeveloped areas so that invasive and noxious weed species introductions are less likely in adjacent desert tortoise habitat.
- e. If required, prior to surface-disturbing activities associated with the Proposed Project, the proponent shall pay remuneration fees at a rate determined by the guidelines of the Clark County Desert Conservation Fund (Clark County 2021).
- f. An authorized biological monitor would be required to be available during construction activities to relocate any desert tortoises found at or near the construction site to prevent harm. Any tortoises that are found during construction would be moved no more than 1,000 feet unless otherwise directed by the USFWS. Wetland areas within the Park are not an approved relocation site for desert tortoise. Occasionally, desert tortoises are illegally placed within wetland areas in the Park by the public. When this occurs, the Park coordinates removal with the Nevada Department of Wildlife.
- g. The contractor would be required to maintain a clean work zone free of trash and litter that could attract tortoise predators.
- h. Clark County requires desert tortoise awareness training for construction contractors on federal and non-federal lands to minimize potential effects to tortoises.

The following measures will be in place during long-term operation and maintenance of the proposed action:

- a. Guardrail or post and cable fence will be installed along Hollywood Boulevard to prevent vehicles from leaving the roadway corridor along the entire length of the project. The guardrail will be installed to prevent vehicular access to the Park and maintained by Clark County. Outside of the Park, post and cable fence will be installed and maintained by BLM.
- b. Desert tortoise fencing shall be installed along Hollywood Boulevard where in tortoise habitat to prevent tortoises from entering the roadway.
- c. Signage prohibiting OHVs and other measures such as barricades to discourage off-road access will be installed.

#### *3.3.3.2.2 Monarch Butterfly*

Recreation within the Park appears to have no negative impact on the monarch butterfly. Nearby housing developments likely could have positive benefits for the species since many homeowners have planted nectar-producing plants that monarch butterflies can feed on during migration. Additional restoration efforts in the Action Area that include the establishment of pollinator plants and/or milkweed will greatly benefit monarchs during their spring and fall migration and may encourage recruitment. No reasonably foreseeable effects are expected to the monarch butterfly.

### Effect Determination

No effect determination is required since the species is not currently listed.

### Mitigation measures

To provide benefits for monarch butterflies and other pollinators, native, insecticide-free milkweed and native, insecticide-free nectar plants that bloom throughout the year will be planted, as is feasible for the location. When feasible, riparian species of milkweed (*Asclepias* spp.) will be planted in close proximity to the water. To minimize the spread of the pathogen *Ophryocystis elektroscirrha* (OE), no non-native tropical milkweed (*Asclepias curassavica*) will be planted. OE can be lethal to monarch butterflies.

When feasible, monarch butterflies, other pollinators, and their habitats will be protected from pesticides (i.e., insecticides and herbicides) using the following measures:

- The use of pesticides will be avoided when monarch butterflies may be present, i.e., approximately March 16 to November 30.
- All classes of pesticides will be screened for pollinator risk to avoid harmful applications, including biological pesticides such as *Bacillus thuringiensis*.
- The use of neonicotinoids or other systemic insecticides, including coated seeds, will be avoided any time of the year in monarch habitat due to their ecosystem persistence, systemic nature, and toxicity.
- The use of soil fumigants will be avoided.
- Non-chemical weed control techniques will be considered, when feasible.
- Whenever possible, targeted application herbicide methods will be utilized, large-scale broadcast applications will be avoided, precautions will be taken to limit off-site movement of herbicides (e.g., drift from wind and discharge from surface water flows).

#### 3.3.3.2.2.3 *Southwestern Willow Flycatcher and Western Yellow-Billed Cuckoo*

There is no potentially suitable southwestern willow flycatcher nesting habitat in the Action Area; however, migrants of this species have been detected in the Action Area. Patches of potentially suitable southwestern willow flycatcher nesting habitat are located approximately 1.1 miles northwest (upstream) and there is occupied nesting habitat 1.5 miles east (downstream) of the Action Area.

There is no potentially suitable western yellow-billed cuckoo nesting habitat in the Action Area.

Construction of the Proposed Action may affect the species and/or their habitat, typically through noise disturbance in proximity to suitable foraging and roosting habitat. No mortality is expected since southwestern willow flycatcher and western yellow-billed cuckoo can fly to adjacent habitat patches if they are displaced by construction activities.

### Effect Determination

At this time, ESA Section 7 consultation with USFWS is underway, and a Biological Opinion has not yet been issued for these species. Preliminary analyses indicate that the proposed action ***may affect, but is not likely to adversely affect*** southwestern willow flycatcher and western yellow-

billed cuckoo in the Action Area. Final effect determinations and mitigation requirements will be provided in the forthcoming USFWS Biological Opinion.

### **Mitigation measures**

With the implementation of the proposed avoidance and minimization measures outlined below, potential adverse effects to southwestern willow flycatcher and western yellow-billed cuckoos would be minimized to such a degree as to be insignificant.

- a. If ground disturbing activities occur during the nesting season (March 15 - September 30), mitigation measures, including pre-construction nest surveys and avoidance or and/or monitoring of active nests will occur. If active nests are identified, USFWS will be contacted to determine species-specific spatial avoidance areas around active nests.
- b. Workers will be prohibited from bringing animals/pets to the work site.
- c. Clark County will consult SNWA regarding annual survey results for the breeding season prior to construction. The Action Area does not contain potentially suitable nesting habitat for western yellow-billed cuckoo. However, if SNWA has detected nesting birds in the Action Area, vegetation- or ground-disturbance activities will not be conducted within 300 feet of the nest.
- d. Southwestern willow flycatcher and yellow-billed cuckoo are not expected to be present in the Park outside the breeding season (October through February); however, year-round best management practices that are beneficial to the species are recommended, including:
  - Only native species will be used in revegetation efforts.
  - Revegetation sites will be monitored regularly for noxious weeds, which are controlled as needed.
  - All solid waste or waste materials will be removed and disposed in accordance with local, regional, and federal regulations.

#### *3.3.3.2.2.4 Yuma's Ridgway Rail*

Yuma Ridgway's rails have not been detected in the Action Area during SNWA annual surveys. However, individuals have been detected directly adjacent to the Action Area. There are approximately 20.1 acres of potentially suitable Yuma Ridgway's rail nesting habitat in the Action Area.

Construction of the Proposed Action may affect the species and/or their habitat, typically through noise disturbance during construction of the bridges and weirs. Construction of the road, bridge, and weirs will remove approximately 4.1 acres of potentially suitable nesting habitat in the Action Area. Long-term, weir and channel grading in Duck Creek is likely to increase the amount of potentially suitable nesting habitat by approximately 7.7 acres as a result of widening the Duck Creek channel, stabilizing water levels, and facilitating aquatic riparian vegetation growth (e.g., cattails, bulrush) in the backwater area at the confluence of Duck Creek and Las Vegas Wash. Therefore, following construction of the weirs and channel grading in Duck Creek, the habitat lost will be replaced and expanded, resulting in a net increase of 3.6 acres of potentially suitable nesting habitat in the Action Area (Table 2).

**Table 2. Impacts on Yuma Ridgway’s rail habitat in the Action Area**

Potentially Suitable Nesting Habitat in the Action Area	Area (acres)
Existing habitat	20.1
Habitat lost as a result of the Proposed Action	- 4.1
Habitat created by channel widening, grading, and weir construction	+ 7.7
<b>Total habitat after Proposed Action is complete</b>	<b>23.7</b>
<b>Net change in habitat</b>	<b>+ 3.6</b>

The vegetation removed as part of regular, long-term operations and maintenance would represent a very small percentage of the total suitable Yuma Ridgway’s rail nesting and foraging vegetation available within the Park. Moreover, long-term operations and maintenance of the constructed weir will require periodic removal of vegetation around the structure to prevent its integrity from becoming compromised. Similarly, periodic vegetation removal will be needed under the bridge structure in order to maintain conveyance of water and reduce fire hazards. Periodic vegetation removal may temporarily and minimally affect access to foraging resources along the riparian corridor. The vegetation would be allowed to re-grow temporarily, thus much of the 4.1 acres of impacted habitat may be temporarily restored between vegetation management operations in the Action Area.

**Effect Determination & Incidental Take Request**

The amount of incidental take requested in the form of temporary habitat loss associated with the Proposed Action is no more than five acres of potentially suitable nesting habitat.

**Mitigation measures**

With the implementation of the below avoidance and minimization measures, potential adverse effects to the Yuma Ridgway’s rail would be minimized.

- a. Clark County will consult SNWA regarding annual survey results for the breeding season prior to construction. If SNWA has detected nesting birds in the Action Area, vegetation- or ground-disturbance activities will not be conducted within 300 feet of the nest from March 15 through September 30.
- b. Yuma Ridgway’s rails are year-round residents in the vicinity of the Action Area; therefore, a biological monitor will be present year-round for work conducted in suitable habitat.
- c. No night work will occur in occupied habitat.
- d. Herbicide will not be used in surface waters. Any near-water treatments will be conducted using an herbicide with an approved aquatic label and will be applied by a licensed applicator of the State of Nevada or supervised by a licensed applicator. Herbicide will not be applied in occupied or potentially suitable nesting habitat for the Yuma Ridgway’s rail. If herbicide is applied adjacent to occupied habitat, measures will be taken to ensure it does not drift into occupied habitat.
- e. No project personnel will knowingly enter an occupied patch in the breeding or first molting season (March through September). At other times of year, field personnel will limit time spent in occupied patches to the minimum needed to accomplish project-related activities and will limit noise and vegetation disturbance to the extent practicable.

- f. Clark County, in coordination with Reclamation and SNWA, will develop and implement noise attenuation measures in the breeding season. If Yuma Ridgway's rails are detected within 500 feet of ground- or vegetation-disturbance or other significant noise-producing activities, a noise attenuation plan will be implemented. If activities must occur during the breeding season at high noise areas, rail activity will be monitored to determine if any adverse effects are occurring. If effects are observed, noise attenuation measures will be implemented such as noise walls and hay bales. Noise and bird behavior will be monitored by a biologist familiar with detecting and observing Yuma Ridgway's rails or similar species to verify that attenuation measures are successful.
- g. Prior to initiation of ground or vegetation disturbance occurring in the migratory bird breeding season (March through September), a threatened and endangered species education program will be presented to all personnel who will be working in or adjacent to potentially suitable nesting habitat. This program will contain information concerning: (1) the biology and distribution of federal-listed and proposed species; (2) their legal status and occurrence in the Project Area; (3) the definition of "take" and associated penalties; (4) the measures designed to minimize the effects of project activities; (5) the means by which employees can help facilitate this process; and (6) reporting procedures to be implemented in case of encounters.

## **3.4 Cultural Resources**

### **3.4.1 Affected Environment**

The prehistory and ethno-history of the region are fully described in the 2020 cultural resource inventory of the Las Vegas Wetlands Park, prepared for Reclamation (ASM 2020).

Cultural resources present in the region include archaeological sites, landscapes, and features sacred to Native Americans; prehistoric and historic trails; historic railroad grades and associated sites; and historic mining camps and associated artifacts. The Proposed Action triggers Title 54 USC §306108, commonly known as Section 106 of the National Historic Preservation Act.

#### **3.4.1.1 Cultural Surveys and Known Archaeological and Historical Resources**

Numerous cultural resource inventories have been conducted within and adjacent to the Project Area. Known cultural resources in or near the Project Area include the Las Vegas Wash Archaeological District, the Three Kids Mine townsite, prehistoric lithic scatters, open camps, quarries, historic dumps, and artifact scatters. A detailed environmental context and culture history was prepared for the Project area by ASM Affiliates, Inc. for their Class III cultural resource survey of the Las Vegas Wetlands Park (ASM 2020).

WSP conducted a Class III cultural resource inventory and visual assessment of the Project Area under Archaeological Resources Protection Act (ARPA) Permit LC-NV-21-02, issued on September 22, 2021 (Appendix C). A files search was conducted using the Nevada Cultural Resource Information System (NVCRIS) to identify any previously recorded cultural resources and any previously conducted investigations that have occurred within the Project area or the Area of Potential Effect (APE) and within a 1.0-mile buffer around the APE (Figure 6). The files search was conducted on March 8, 2021. Twelve cultural resource inventories were conducted within 1.0 mile of the APE in support of various improvements, such as water treatment, roadways, and transmission lines, between 1977 and 2006. Fifteen cultural resources are located within 1.0 mile of

the APE, which include lithic scatters, lithic procurement, artifact scatter, rock ring, stone circle, rock feature, historic habitation, road, and trash scatter. No previously recorded resources were present within the Project area and no new resources were identified during the inventory. Eight resources were visited to determine visual impacts of the Proposed Project (WSP 2022).

### **3.4.1.2 National Register of Historic Places**

No properties within or adjacent to the Project Area are listed in the National Register of Historic Places.

## **3.4.2 Environmental Consequences**

### **3.4.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. Cultural resources would have no physical or visual effect; therefore, the No Action Alternative would have no impact on cultural resources.

### **3.4.2.2 Proposed Action**

The Proposed Action will not directly affect any cultural resources. Visual impacts from the expansion and construction are not anticipated because of the location of the Project Area along the eastern edge of the City of Las Vegas due to the extent of the development west of the APE. All eligible and unevaluated resources within the visual APE, as defined by Reclamation were visited to determine the potential for visual impacts to the sites. Based on the lack of cultural resources within the direct APE and the extensive development immediately west of the APE, a determination of No Historic Properties Affected was made.

### **3.4.2.3 Mitigation Measures**

In the unlikely event that cultural resources are discovered during construction, work would stop and the Reclamation's Regional Archaeologist, SHPO, and Clark County Sheriff would be notified immediately. Work would not resume until directed to do so by Reclamation.

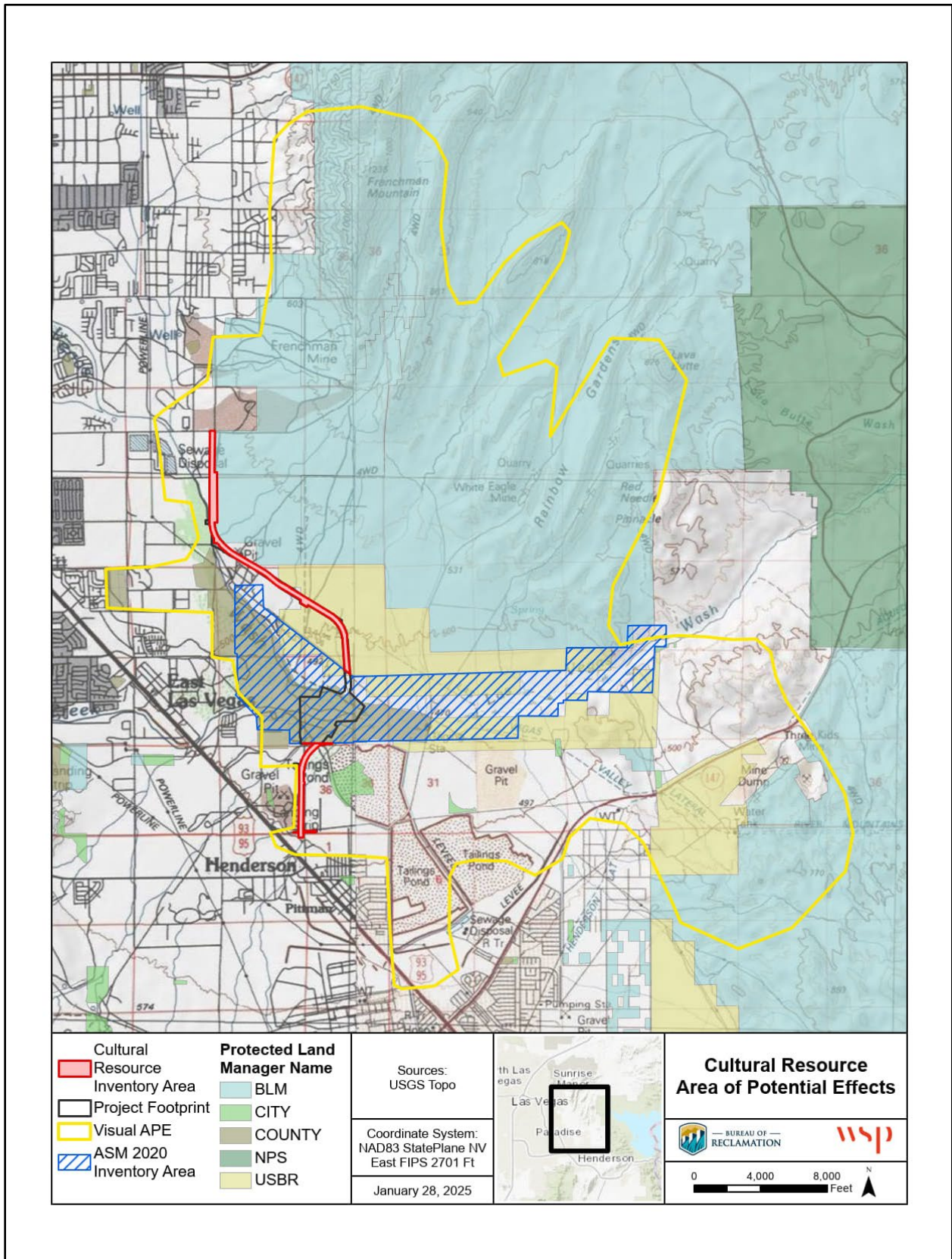


Figure 6. Cultural Resource Area of Potential Effects

## 3.5 Geology and Soils

### 3.5.1 Affected Environment

The USDA, Natural Resource Conservation Service's Web Soil Survey maps most of the soil underlying the Project Area as Bracken very gravelly fine sandy loam, Aztec very gravelly sandy loam, and Caliza extremely cobbly fine sandy loam (USDA 2021). These well-drained soils form on alluvial flats in areas that receive 4 to 6 inches of rain annually.

The Project Area is situated in the Basin and Range physiographic province, which is characterized by recent fault movement (since the Oligocene, within the last 33 million years), forming numerous elongated mountain ranges separated by similarly shaped valleys (basins). Much of the drainage within this province is interior, so playa formation is common.

Two primary types of bedrock geology underlie the mountains surrounding the Las Vegas Valley: older sedimentary rocks or younger igneous rocks, which include both volcanic and, to a lesser extent, plutonic rocks. The sedimentary rocks are predominantly carbonates (limestone and dolomite), although there are also clastic formations (sandstone and shale), caliche (a natural sedimentary cement of calcium carbonate), and some quartzite (metamorphosed sandstone). The mountains to the west (Spring Mountains), north (Desert, Sheep, and Las Vegas Ranges), and east (Frenchman, Sunrise, and Muddy Mountains) are composed of these sedimentary rock formations. The igneous rocks primarily include basalts and other undifferentiated volcanic rocks and other smaller occurrences of intrusive rocks, rhyolite, and other undifferentiated rock types. Mountains to the south (McCullough Range and El Dorado Mountains) and east (Black Mountains) of the valley are composed of volcanic rocks, while plutonic rocks are exposed at several locations in the southern mountains (Longwell et al. 1965).

The Las Vegas Valley is structural in origin and has a considerable accumulation of Quaternary alluvium derived from the surrounding mountains and transported to the valley. Coarse material has been deposited closest to the mountain fronts in alluvial fans, while the finer particles have reached the valley bottoms where they were deposited in alluvial floodplain and lacustrine environments (Longwell et al. 1965). The alluvial sediments generally become finer grained from west to east within the valley.

Bedrock beneath the Las Vegas Valley generally consists of deeply buried Precambrian metamorphic rocks; Precambrian and Paleozoic carbonate rocks; Permian, Triassic, and Jurassic clastic rocks; and Miocene igneous rocks. The most widespread bedrock beneath the Las Vegas Valley consists of Precambrian limestone and dolomite, which is most abundant in the Spring Mountains, Frenchman Mountain, the Las Vegas Range, and Sheep Range (Plume 1989).

### 3.5.2 Environmental Consequences

#### 3.5.2.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. Existing soil and geological conditions would persist; therefore, the No Action Alternative would have no impact on geology and soil resources.

#### 3.5.2.2 Proposed Action

Under the Proposed Action, ground-disturbing activities would have minor, short-term impacts on soils in the Project Area, during and immediately following construction because erosion and



sedimentation may increase. There would also be short-term impacts on soils from vegetation clearing. BMPs would be employed to minimize the potential for impacts from erosion and sedimentation.

In the unimproved area north of the Sunrise Trailhead, illegal dumping is an ongoing problem, and trash accumulation is an unsightly nuisance for the residences to the west. With increased use of the roadway, the Proposed Action would decrease the amount of illegal dumping.

Minor, long-term impacts on soils would also result from construction of the paved roadway, paved trail, trailhead, weir and channel grading.

### **3.5.2.3 Mitigation Measures**

Erosion control would be addressed through preparation of a stormwater pollution prevention plan (SWPPP). Excavated material will be used as fill on-site or disposed of on-site to flatten slopes. Soil sampling for selenium will be required prior to construction.

## **3.6 Hazardous Materials**

### **3.6.1 Affected Environment**

#### **3.6.1.1 Hazardous Waste Screening Study**

A Hazardous Waste Screening (HWS) study of the Hollywood Boulevard corridor was performed between Vegas Valley Drive in Clark County and Galleria Drive in the City of Henderson, Nevada (WSP 2021b). The study identified one site of potential environmental concern within the Project Area that has the potential to affect the Proposed Action based on listings in various state and federal environmental databases and historical and current operations. The Black Mountain Industrial (BMI) Complex, located east of Wiesner Way, was responsible for historic releases that affected the groundwater and is currently engaged in remediation.

In 1941, the U.S. government deeded approximately 5,000 acres of vacant desert land that became the world's largest magnesium plant. The BMI Complex played a critical role in the World War II effort when manganese from area mining was used in military weapons and equipment. After the war ended, portions of the land were leased to various industrial, government, and business entities primarily involved in the production of chemicals.

These industrial plant operations created a variety of industrial and municipal effluents that were disposed of on-site in unlined evaporation ponds, transported off-site via ditches, or disposed of on the land surface. Even though these disposal practices were industry-standard and legal at the time, some of the effluents migrated into the Las Vegas Wash, creating water quality concerns and contaminating the surrounding land.

NDEP is the regulatory agency that has provided remediation oversight since the 1970s of the soil and groundwater impacted by the contamination from each of the sites in the BMI Complex. Since 1987, more than 25 tons of hexavalent chromium have been removed from the environment; approximately 5,700 tons of perchlorate have been removed through active ion exchange treatment since 1999; and from 2010 to 2019, 585,100 cubic yards of contaminated soil have been removed from the site.

Currently, several studies are underway to evaluate different cleanup approaches, and remedial investigation reports and two feasibility study reports are being prepared to address the future cleanup of the BMI Complex (NDEP no date).

Given the identified status of the BMI Complex and its conditions, distance from the proposed Hollywood Boulevard corridor, and proposed construction activities that would entail relatively shallow excavation and “typical” cut and fill methods, the BMI Complex is not expected to impact the project.

Based on a review of historical aerial photographs, Boulder Highway, west of the Project Area, has been present since at least 1950. Mining operations located east of the Project Area have been occurring since the 1950s. Several gravel pits and sewage treatment facilities have been located in the surrounding area since at least 1965. Hollywood Boulevard, north of the Project Area, was developed by 1976. The Las Vegas Wash and Duck Creek have historically accommodated flood flows in the area creating dense vegetation in these channels.

### **3.6.1.2 NDEP eMap**

A review of the NDEP eMap database and files was conducted for information regarding any active remediation at facilities in the vicinity of the Project Area. No open cases of concern were found within or nearby the project corridor that would affect the Project Area.

## **3.6.2 Environmental Consequences**

Intrusive soil and/or groundwater sampling within the Project Area is not recommended at this time. However, sampling for selenium may be required. Material management plans designed to support the Proposed Action would identify provisions for managing, handling, transporting, and disposing of contaminated non-hazardous soil. Contingent provisions would be established in the event hazardous material is identified during subsequent sampling and analysis. Specific protocols and procedures would be developed to manage and dispose of this material if encountered. All transportation and disposal of contaminated or potentially contaminated soil and/or groundwater would be performed in accordance with applicable federal and state regulations.

Based on the suspected shallow depth to groundwater (varies less than 10 feet), and especially during work in the existing waterways, dewatering may be necessary during construction and excavation activities. All appropriate permits at a minimum to include stormwater and dust would be procured in accordance with all applicable federal, state, and local regulations, which may require sampling and laboratory analysis prior to discharge.

### **3.6.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no material disturbance would occur; therefore, the No Action Alternative would have no impact to hazardous materials.

### **3.6.2.2 Proposed Action**

Hazardous materials used or generated during operation of the new alignment would be handled according to applicable law and regulations. Therefore, impacts related to hazardous materials/waste are not anticipated.

While no further investigation of the corridor is proposed, coordination with NDEP to adhere to the NDEP discharge permit will be followed including testing of groundwater for perchlorate and other potential contaminants of concern, and adherence to the assigned land use conditions would be required prior to construction of the Proposed Action.

### **3.6.2.3 Mitigation Measures**

During construction, temporary secondary containment equipment would be used where practicable to ensure accidental releases of hazardous material are prevented or limited in scope. Portable catch basins, containment berms, and other similar equipment would be used for refueling equipment where feasible. Spill kits would be kept on-site to provide easily accessible cleanup materials should a spill occur.

Construction contractors would stop all subsurface activities if potentially hazardous materials were encountered, an odor was identified, or significantly stained soil were discovered. Contractors would follow all applicable regulations from Nevada Division of Environmental Protection (NDEP) regarding discovery and response for hazardous materials encountered during the construction process. Construction contractors will need to coordinate with NDEP to adhere to the NDEP discharge permit including testing of groundwater for perchlorate and other potential contaminants of concern, and adherence to the assigned land use conditions. Material management plans designed to support the project would identify provisions for managing, handling, transporting, and disposing of contaminated non-hazardous soil. Contingent provisions would be established in the event hazardous material was identified during subsequent sampling and analysis. Specific protocol and procedures would be developed to manage and dispose of this material if encountered. All transportation and disposal of contaminated or potentially contaminated soil and/or groundwater would be performed in accordance with applicable state and federal regulations.

## **3.7 Water Resources/Floodplains/Wetlands**

### **3.7.1 Affected Environment**

Las Vegas Wash begins northwest of the city of Las Vegas, flows southeast through the Las Vegas Valley, and ends in Las Vegas Bay of Lake Mead. Once an ephemeral drainage, the Las Vegas Wash now flows year-round as a result of outflow from urban runoff, shallow groundwater, reclaimed water, and stormwater. Lake Las Vegas is directly downstream from the Project Area and is contained by a dam built in 1991 and filled with water from Lake Mead. Las Vegas Wash water does not flow into Lake Las Vegas; instead, it bypasses the lake via 2 84-inch concrete pipes buried underneath the lake.

According to the State of Nevada, Department of Conservation and Natural Resources, Clark County-owned (Sanitation District) wells installed within the same Township and Range as the Project Area were installed up to 30 and 40 feet below ground surface. The Department of Conservation and Natural Resources' well log database shows static water level measurements generally below 10 feet below ground surface in the Project Area.

Land subsidence in the Las Vegas Valley due to pumping has been documented for decades (Plume 1989), and groundwater depth and flow direction may be influenced by seasonal variation in precipitation, pumping demand, and other natural and anthropogenic factors. Based on the apparent relatively shallow nature of groundwater at the Las Vegas Wash, groundwater is expected to follow topography and generally flow to the east.

Downstream of the Project Area, flood flows that exceed the bypass pipe capacities enter Lake Las Vegas and, when necessary, flows from the lake are released back into the wash through spillways. Lake Mead is the endpoint of the Las Vegas Wash and, as such, the ultimate catch basin for the Las Vegas Valley drainage (National Park Service 2013). The primary water quality issues of concern in the Las Vegas Wash include sediment, selenium, perchlorate, nutrient loading, and urban chemicals. Other water quality concerns include pesticides, heavy metals, human pathogens, hydrocarbons, and

the presence of endocrine disrupters. The Las Vegas Valley Water District, Southern Nevada Water Authority, Las Vegas Wash Coordination Committee, Las Vegas Stormwater Quality Management Committee, Reclamation, and the National Park Service routinely sample water in the Las Vegas Wash and/or Lake Mead for water quality.

Water quality is largely determined by the quality of the treated discharge from treatment facilities along the Las Vegas Wash upstream of the Park. The volume of effluent discharge significantly dilutes most of the parameters used for water quality monitoring except for nutrient levels, which tend to increase as a result of the treated effluent. However, the nutrients get absorbed and used by the wetlands along the wash (Ryan 2008).

The Las Vegas Wash is a floodway included in a recent Federal Emergency Management Agency (FEMA) the Letter of Map Revision. Parts of the Project Area outside the floodplain are in areas of minimal flood hazard. The FEMA flood hazard area mapping shows that the Project Area, near the Las Vegas Wash is located in Zone AE, with the outer floodplains determined as Zone A, both with a one percent annual chance of flooding (Figure 7).

Wetlands are defined according to hydrophytic vegetation, hydric soils, hydrology, and other characteristics. The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory maps freshwater forested/shrub wetland habitat and freshwater emergent wetland habitat along the Las Vegas Wash (USFWS 2021). These surface water features are further characterized as perennial streams with unconsolidated bottoms. Multiple wetlands alongside the Las Vegas Wash are a mechanism for improving water quality because urban flows enter the wash on their way to Lake Mead and the Colorado River system. Continued degradation and deepening of the wash channel by erosion have affected wetlands within the wash. The wetlands in the Project Area are fringe wetlands, typified by their occurrence alongside the wash channel. These wetlands are within the palustrine (non-tidal) system of wetlands and are classified as a combination of emergent and scrub-shrub under the Cowardin classification system (Cowardin et al. 1979). These wetlands may have plants that are woody or herbaceous, perennial, and generally less than 20 feet tall. Where there is high moisture, there are patches of cattail and common reed (*Phragmites*), mixed with tamarisk and wetland annual plants. In the drier areas, the primary vegetation is saltbush (*Atriplex spp.*) and arrowweed (*Pluchea sericea*). Water resources in the Project Area are shown in Figure 8.

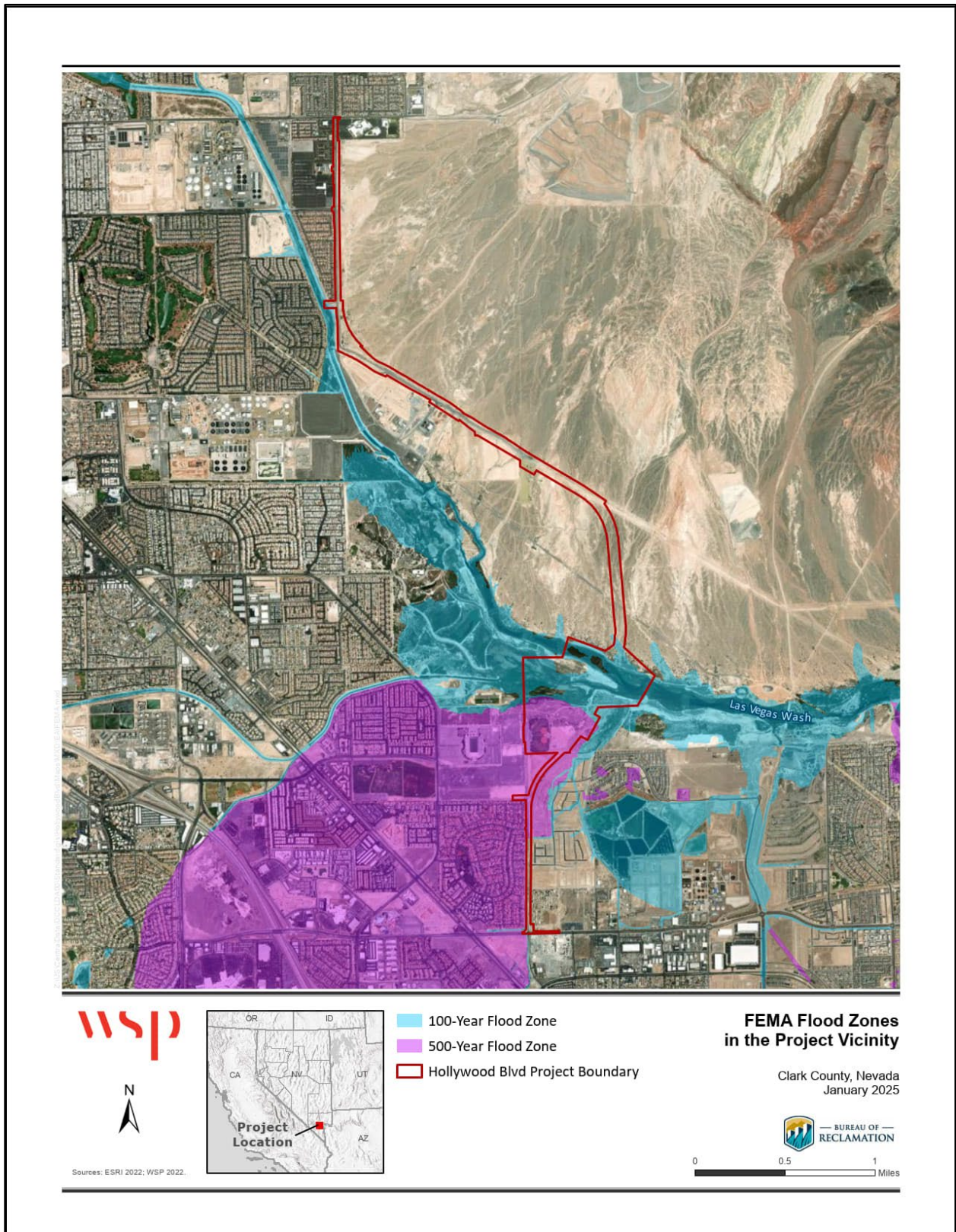


Figure 7. FEMA Flood Zones

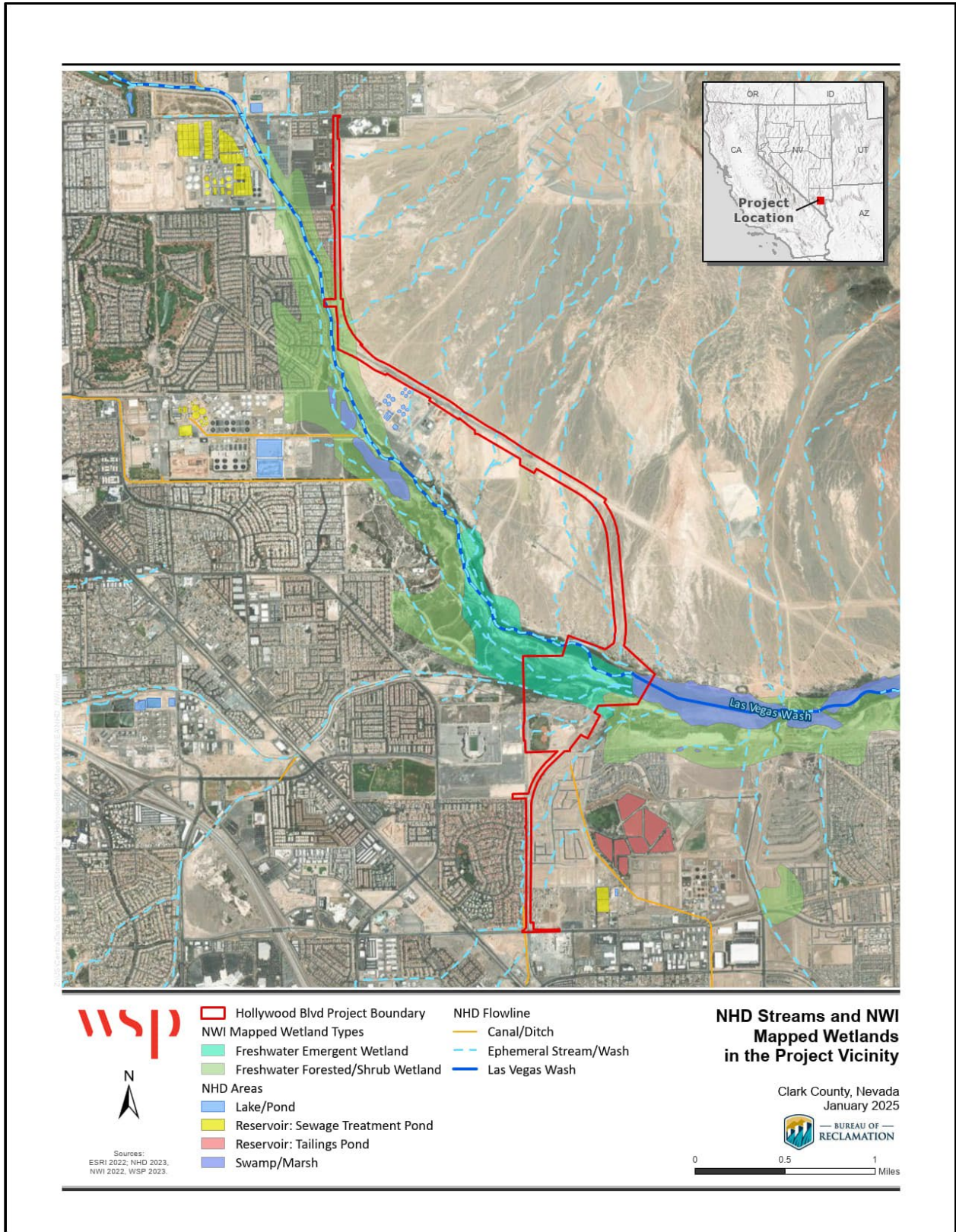


Figure 8. Water Resources

## **3.7.2 Environmental Consequences**

### **3.7.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed, and no ground disturbance would occur. There would be no impacts to the Las Vegas Wash and Duck Creek as jurisdictional waters of the U.S. Therefore, the No Action Alternative would have no impact on water resources, floodplains, or wetlands.

### **3.7.2.2 Proposed Action**

The Proposed Project would include bridges over the Las Vegas Wash and over Duck Creek elevated sufficiently to allow maintenance vehicles to cross underneath the bridges to maintain existing and proposed bank protection. In addition, measures to stabilize the lower reach of Duck Creek include a grade control structure (weir), rip-rap bank protection and grading to channel flood flows.

### **3.7.2.3 Mitigation Measures**

During construction, groundwater may be used for dust control. No long-term use of groundwater would occur following construction of the Hollywood Boulevard project; therefore, no long-term impact on groundwater quality or supply are expected. Water would be used during construction activities for dust suppression and soil compaction; water for these purposes would be drawn from municipal water supplies and would not affect groundwater.

Construction activities could disturb soils, which in turn, could increase the probability of erosion. Temporary water quality impairments could occur if a major rain event occurs while surfaces are exposed during the placement of additional fill or grading of soils before landscaping and asphalt are installed. The Proposed Project would be required to obtain coverage under the Nevada Construction Stormwater General Permit NV100000 by submitting a Notice of Intent to the Bureau of Water Pollution Control with NDEP prior to construction. In addition, the contractor would need to develop a SWPPP. SWPPP requirements include an outline of the stormwater drainage system for each discharge point, actual and potential pollutant contact, and surface water locations. The SWPPP would also incorporate stormwater BMPs, such as silt fencing and other stormwater controls. Compliance with the SWPPP would minimize potential impacts on surface water quality.

In addition to the SWPPP, temporary groundwater discharge will be required for construction of the Duck Creek weir which will require an NDEP Temporary Discharge to Waters of the State Permit and construction in the Las Vegas Wash active waterway will require an NDEP Working in Waterways Permit. A FEMA Conditional Letter of Map Revision and Letter of Map Revision will also be required.

The Proposed Project would have potential impacts on the proposed roadway from hazardous substances (i.e., anti-freeze, fuels, oils, lubricants) used during construction. Although catch pans would be used when refueling, accidental spills could occur as a result of maintenance procedures for construction equipment. A spill could result in adverse impacts on on-site soils and waters. However, the amount of fuel, lubricants, and oil would be limited, and equipment necessary to quickly contain any spills would be present when refueling. A Spill Prevention, Control, and Countermeasures Plan would be in place prior to the start of construction, and all personnel would be briefed on the implementation and responsibilities of this plan.

Other solid wastes associated with construction would include human waste and trash. Portable, self-contained toilets at worksites would be used for human waste disposal. Toilets would be

pumped, and the contents hauled away for disposal at an approved sewage disposal facility on a timely basis. All garbage and non-flammable waste material would be disposed of at an approved, off-site facility. BMPs for construction site soil erosion, as specified in the SWPPP, would be implemented to prevent the migration of soils, oil and grease, and construction debris into the local stream networks. Erosion from construction activities would be prevented through BMPs used for stormwater and sediment control. Fugitive dust would be mitigated through application of water when necessary. No significant impacts on surface water during construction are expected.

A Clean Water Act Section 404/401 permit would be required, and consultation with the Clark County Regional Flood Control District would occur for the activities planned that affect Las Vegas Wash and Duck Creek. Impacts on these waterways would be short term.

## **3.8 Visual Resources**

### **3.8.1 Affected Environment**

The Proposed Project would be constructed within the Las Vegas Valley, east of the developed urban area of Las Vegas and north of the developed area of Henderson. Areas north and east of the Proposed Project are mostly undeveloped federal lands.

The area west of the Proposed Project is the Las Vegas metropolitan area. It is generally characterized by visual elements associated with urban residential, commercial, and transportation development. The Las Vegas Resort Corridor is located west of the Proposed Project and the high-rise buildings centrally located in the Las Vegas Valley are visible from throughout the Project Area. The foreground west of the Proposed Project included two-story residential development, the Clark County Water Treatment Facility, the Las Vegas Silver Bowl Stadium, Old Silver Bowl Park ballfields and primarily undeveloped lands within the Park.

The area south of the Proposed Project consists primarily of residential neighborhoods and areas of active residential development.

From the Project Area, the distant Spring Mountains are visible on the far (west) side of the Las Vegas Valley and the Black Mountains are visible south of Henderson.

The areas north and east of the Project Area are mostly undeveloped desert land at the base of the Sunrise and Frenchman Mountains. Background views consist of these mountain ranges as well as the alluvial fans extending from the mountain bases.

Except near the Las Vegas Wash, undeveloped areas along the project alignment are sparsely vegetated desert lands. The banks of the Las Vegas Wash and associated wetland areas are densely vegetated.





**Figure 9. View from Proposed Project of urban Las Vegas and Spring Mountains**



**Figure 10. View from Proposed Project of Frenchman Mountain**



**Figure 11. View from the Proposed Project of sparse desert vegetation in the foreground**



**Figure 12. View from Proposed Project of dense vegetation along the Las Vegas Wash**



**Figure 13. View from Proposed Project of Wetlands Park trail**



**Figure 14. View from Proposed Project of the City of Henderson and Black Mountain**



**Figure 15. View from Proposed Project of residences abutting Hollywood Boulevard**

### **3.8.2 Environmental Consequences**

#### **3.8.2.1 No Action Alternative**

The area of the Proposed Project is currently developed as Hollywood Boulevard to the north and Wiesner Way to the south, with the central portion of the proposed roadway as undeveloped land within the Wetlands Park. Under the No Action Alternative, no changes would be made to the existing Project Area; therefore, there would be no visual impacts.

#### **3.8.2.2 Proposed Action**

The Proposed Action would expand existing transportation facilities and introduce new transportation facilities into the Project Area affecting existing viewsheds and creating new viewing opportunities.

Along the northern part of the Proposed Project, widening of the existing Hollywood Boulevard would not appreciably change the view of the roadway from existing residential areas or from the Water Treatment Plant and views of the Frenchman and Sunrise Mountains from these areas would not be impacted.

Along the southern part of the Proposed Project, widening of the existing Wiesner Way would not appreciably change the view of the roadway from existing residential areas and views of the Frenchman and Sunrise Mountains from these areas would not be impacted.

For motorists along the existing Hollywood Boulevard in the northern part of the Proposed Project near and far viewsheds would not change. Within the City of Henderson, new residential

development is currently changing the near viewshed from undeveloped desert land to residential properties constructed in accordance with City of Henderson standards.

Within the Wetlands Park the Proposed Project will be mostly constructed at-grade. The road and trail will be visible from locations along the existing Park trail system which are within about 1.5-mile of the Proposed Project. The affected population would be Park users of the trail system. Because the Proposed Project will be mostly at-grade, the far viewshed would not be impacted. Accordingly, the Proposed Project would not adversely affect viewsheds of the mountains surrounding the Las Vegas Valley or the urban area of Las Vegas.

The proposed crossing of Las Vegas Wash would be elevated. The bridges crossing the Las Vegas Wash and Duck Creek are at the lowest point along the alignment but will be visible from existing trails throughout much of the Park.

A proposed grade separation at an existing paved trail east of the Sunrise Trailhead would also be visible from trails throughout the Park. At this location, two design alternatives are being considered, one design alternative would elevate the road over the existing trail, the second design alternative would lower the road and partially elevate the trail over the road. The latter alternative would have a lesser visual affect.

While far viewsheds will not be impacted by the Proposed Project, elements of the Proposed Project will be visible to trail users. Importantly, however, the Proposed Project is expected to increase visitors to the Park by creating a new trailhead, a new trail and connecting to existing trails. Motorists using the new road and Park visitors using the new trail will have unobstructed views of the mountains surrounding the Las Vegas Valley, particularly the Sunrise and Frenchman Mountains, and the urban areas of Las Vegas and Henderson in the far viewshed. The near viewshed within the Park will consist of sparsely vegetated natural desert areas and the Las Vegas Wash. By elevating the road and trail over the Las Vegas Wash, new views of the Duck Creek Confluence Weir, the Archery Weir and their streamflow impoundments will be created. With the new south trailhead providing convenient access to a new trail over the Las Vegas Wash and connections to existing and planned Park trails along the Las Vegas Wash, increased visitation is expected, to take advantage of the new views of the Las Vegas Wash and its environment.

Within the Wetlands Park and on Clark County Parks and Recreation Department land adjacent to the Old Silver Bowl Park, the road, trailhead, trail and amenities would be designed in collaboration with the Clark County Parks and Recreation Department to provide aesthetics consistent with the Park environment. Context-sensitive solutions will be incorporated to minimize impacts on natural resources. These mitigation measures will help visually blend the Proposed Action with the existing environment. The design will include a selection of finish, color, and surface patterns to coordinate structures and facilities with the surrounding landscape.

## **3.9 Air Quality**

### **3.9.1 Affected Environment**

Air quality in Clark County is regulated by the Clark County Division of Air Quality. Criteria air pollutants are a group of six common air pollutants regulated by the United States Environmental Protection Agency (USEPA). USEPA developed National Ambient Air Quality Standards (NAAQS) for these pollutants to protect public health and the environment. The six criteria pollutants are ozone (O<sub>3</sub>), particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) and lead (Pb).

The Clark County Division of Air Quality monitors compliance with the NAAQS through a county-wide network of air pollution monitoring stations. The agency compiles these data and submits the data to the EPA. On a pollutant-by-pollutant basis, if the air pollutant concentration data do not exceed the applicable NAAQS, the area is designated an attainment area. If ambient air pollutant concentration data show exceedance of the NAAQS for 1 or more pollutants, the area is designated a nonattainment area for the pollutants exceeding a NAAQS. For areas designated as nonattainment, Clark County is required to develop an implementation plan to achieve compliance with the NAAQS. Once a nonattainment area demonstrates compliance with the NAAQS, the area becomes subject to a maintenance plan to prevent returning to a nonattainment designation.

The Las Vegas Valley (Hydrographic Area 212) is a marginal nonattainment area for the 2015 O<sub>3</sub> NAAQS and an attainment area subject to a maintenance plan for the CO and PM<sub>10</sub> NAAQS. Hydrographic Areas 164A, 164B, 165, 166, 167, 212, 213, 214, 216, 217, and 218 (excluding the Moapa River Indian Reservation and the Fort Mohave Indian Reservation) are attainment areas subject to a maintenance plan for the 1997 O<sub>3</sub> NAAQS. Clark County is in attainment/unclassifiable for the PM<sub>2.5</sub>, SO<sub>2</sub>, Pb, NO<sub>2</sub> and 2008 O<sub>3</sub> NAAQS.

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere and contribute to global warming (EPA 2022). Primary GHGs include carbon dioxide, methane, and nitrous oxide, which can be released into the atmosphere through the production, transportation, and burning of fossil fuels. Carbon dioxide is the predominant GHG in the atmosphere. EPA has not established ambient air quality standards for GHGs; instead, GHG emissions are regulated using national emissions standards and permit requirements.

### **3.9.2 Environmental Consequences**

#### **3.9.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed. Existing air quality conditions in and around the Project Area would persist. Therefore, compared with the Proposed Action, the No Action Alternative would have additional adverse impacts on air quality.

#### **3.9.2.2 Proposed Action**

The Regional Transportation Commission of Southern Nevada has adopted the TransCad model as a valley-wide model that forecasts traffic for the entire metropolitan street and highway network. The TransCad model was used to estimate the reduction in annual vehicle miles of travel (VMT) and annual vehicle hours of travel (VHT). The CARB B/C model was run to estimate the corresponding expected reduction in emissions that would result from the reduction in VMT and VHT over a 20-year planning horizon (see Table 3: Estimated Emissions and Emission Reduction[Valley-Wide]).

Criteria air pollutant emissions from mobile sources under the Proposed Action would be reduced over the long term in two ways. First, a continuous Hollywood Boulevard would make travel between origins and destinations result in fewer miles and hours of travel, which would reduce overall emissions. Second, a continuous Hollywood Boulevard would provide an alternative to the I-515 Freeway and Boulder Highway for north-south travel and provide a measure of congestion relief, which would reduce emissions associated with idling. Therefore, the Proposed Action would have a beneficial impact on air quality in the valley-wide region from reduced emissions from shorter travel distances and reduced congestion on alternative routes.

**Table 3. Estimated Emissions and Emission Reduction (Valley-Wide)**

Parameter	2020			2030			2040		
	No Build	Build	Reduction	No Build	Build	Reduction	No Build	Build	Reduction
Total VMT (veh-miles/yr)	13,345,494,635	13,341,242,750	-4,251,885	15,705,141,343	15,699,287,838	-5,853,505	18,064,788,050	18,057,332,925	-7,455,125
Total VHT (veh-hrs/yr)	305,313,375	305,108,975	-204,400	377,285,535	376,787,675	-497,860	449,257,695	448,466,375	-791,320
CO (metric tons)	33,043.67	33,033.14	-11	39,518.40	39,473.58	-45	45,940.63	45,887.06	-54
CO2e (metric tons)	4,396,238	4,394,837	-1,401	6,407,421	6,400,230	-7,191	9,078,443	9,067,962	-10,480
NOX (metric tons)	3,725.11	3,723.92	-1.2	4,392.54	4,390.49	-2.1	5,059.21	5,056.64	-2.6
PM10 (metric tons)	638.10	637.90	-0.2	752.59	752.31	-0.3	865.74	865.38	-0.4
SOX (metric tons)	46.07	46.05	0.0	54.22	54.19	0.0	62.44	62.41	0.0
VOC (metric tons)	2,820.90	2,820.00	-0.9	3,345.77	3,343.21	-2.6	3,869.60	3,866.49	-3.1

Note: Truck percentage remains at 3% of total VMT for No Build and Build for all years.

The Proposed Action would place additional traffic near to existing residences along Hollywood Boulevard and Wiesner Way. However, given the relatively low traffic volumes projected and the fact that traffic would be operating in a free-flow condition, no significant, adverse impacts from localized pollutant hotspots are expected. Traffic volumes would be well below the level that would indicate a “project of local air quality concern,” potentially warranting a particulate matter hot-spot analysis per USEPA guidance (e.g., 125,000 average annual daily traffic with 8 percent or greater diesel truck traffic) (USEPA 2015).

### **3.9.2.3 Mitigation Measures**

During construction, equipment would generate CO and PM<sub>10</sub>, producing localized, short-term elevated air pollutant concentrations. Fugitive dust would be minimized by maintaining optimum soil moisture during construction and implementing proper soil stockpiling methods, as prescribed by Clark County. Any ground cover or pavement removed would be promptly replaced to minimize the amount of dust generated. Therefore, the Proposed Action would not exceed the de minimis thresholds, and no long-term operational emissions are anticipated beyond those associated with minor repairs to the pavement on Hollywood Boulevard. Emissions generated through construction activities would be temporary and would end when construction is complete.

A Dust Control Operating Permit and Dust and Emissions Mitigation Plan would be required. The plan would require contractors to comply with federal, state, and local regulations for the control of air pollution, including those requiring the use of ultra-low-sulfur diesel fuel and prohibiting unnecessary idling. Standard mitigation measures and BMPs would be identified in the plan to prevent fugitive dust from becoming airborne. The plan would require exhaust emissions to be reduced whenever possible by keeping machinery engines and exhaust systems in good mechanical condition and avoiding unnecessary vehicle and equipment idling.

## **3.10 Noise**

### **3.10.1 Affected Environment**

Ambient noise within and adjacent to the Project Area includes a combination of natural (e.g., wind, wildlife) and human-caused (e.g., vehicles, bikes) sources. In general, noise levels are consistent with suburban, recreational communities. There are no quantitative baseline data for noise in and around the Project Area.

Construction activities would comply with the City of Las Vegas’s local noise ordinance. The construction contractor would include the following limitations of operations to ensure the proposed improvements would meet the City’s noise ordinance under Title 9 Chapter 9.16:

- No construction activities in residential areas would be allowed between 6:00 p.m. and 7:00 a.m.
- Construction activities would not be allowed to exceed 65 dBA in commercial areas and 55 dBA in residential areas.
- No person would engage in construction activity outside of an enclosed structure other than between these times unless the City Public Works Director, as upon application, alters the hours of construction activity for a good cause.
- The contractor would follow BMPs to reduce construction noise levels such as:
  - Ensure equipment is properly muffled and in good working condition.
  - Place noise-generating construction equipment and staging area away from sensitive uses, if possible.



- Turn off heavy-duty equipment when not in use.
- Use lower noise level equipment if possible, like electric air compressors and similar power tools rather than diesel.
- If needed and possible, implement noise attenuation measures, such as temporary noise barriers or noise blankets around stationary construction equipment.

The land use in the northern portion of the Project Area consists of the existing Hollywood Boulevard with an existing NV Energy transmission line and drainage channel. The land use in the central portion of the proposed roadway consists of undeveloped areas of the Las Vegas Wetlands Park and the Las Vegas Wash. To the south, the land use includes the existing Wiesner Way with an existing NV Energy transmission line and drainage channel. The areas surrounding the north and south portions of the Project Area are residential.

### **3.10.2 Environmental Consequences**

#### **3.10.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed. Existing noise conditions in and around the Project Area would persist. Therefore, the No Action Alternative would have no impact on noise in the area.

#### **3.10.2.2 Proposed Action**

With the Proposed Action, residential areas along the existing Hollywood Boulevard in Sunrise Manor and the existing Wiesner Way in Henderson would experience increased traffic, causing increased noise. However, the noise levels would be consistent with other collector streets in the Las Vegas Valley and the residences have concrete masonry block which provide attenuation of traffic noise.

Within the Wetlands Park, the Proposed Action would introduce a noise source into the central area of the Park from motorized vehicles which does not presently exist. Park visitors who use the remote trails in the central area of the Park would be adversely affected by noise levels that could exceed 15 db over ambient conditions. However, this would be offset by increased accessibility to trails throughout the Park and increased visitor usage.

Introducing transportation noise into the Park could adversely affect wildlife. Wildlife species that are sensitive to noise are likely to relocate away from the road, to areas of similar or better habitat upstream and downstream of the Project Area. As mitigation, concrete barrier rails will be constructed on each side of the road at the Las Vegas Wash crossing to reduce tire noise, the principal source of noise from motorized vehicles.

#### **3.10.2.3 Mitigation Measures**

During construction, the Proposed Action is anticipated to have minimal, short-term impacts to noise levels in and around the Project Area. Construction equipment would temporarily elevate noise levels during the construction period. Staging areas will be located away from residential areas. Increased noise levels which may impact other resources (e.g., wildlife) would be mitigated through the implementation of BMPs and resource protection measures throughout the duration of construction. Construction mitigation measures would be addressed in the contract documents, which would require contractors to submit a noise control plan for review and approval by Clark County and Henderson. Contract specifications would address hours of construction, muffling or

shielding requirements, performance of proper maintenance on construction equipment, and placement of stationary equipment as far away from identified sensitive receptors as feasible.

## **3.11 Parks and Recreation**

### **3.11.1 Affected Environment**

The Proposed Action would cross the Clark County Wetlands Park, which Clark County has operated as a recreational and educational resource for the public since 1991. The Park is primarily on Reclamation land managed by Clark County under a Reclamation Public Purpose Lease from Reclamation since November 2, 2000. The Park is the largest park in Clark County and comprises approximately 2,900 acres extending along the Las Vegas Wash from Sunrise Manor to the Lake Las Vegas Reservoir in the City of Henderson.

The principal feature of the Park is the Las Vegas Wash which has year-round flow fed by various water treatment plants upstream of the Park. A major undertaking, lead by the Southern Nevada Water Authority, has been successful in reconstructing the Las Vegas Wash through the Wetlands Park. The reconstruction effort has stabilized the Wash with a series of weirs and bank protection measures. The stabilization of the Wash, which has included the creation of streamflow impoundments behind man-made weirs, has created an environment suitable for the reintroduction of wetland-type vegetation and associated animal habitat that is unique in the Mojave Desert.

The Park includes a Nature Center and 210 acre Nature Preserve west of the Project Area which is accessed from Tropicana Avenue. The Park also includes a system of trails which are accessed from three trailheads, the Sunrise Trailhead on the north side of the Park and the Pabco and Wells Trailheads on the south side of the Park. At present, there are no roads providing motor vehicle access across the Las Vegas Wash within the Park to connect the north and south sides of the Park. However, two pedestrian bridges located at the extreme eastern and western limits of the Park allow pedestrians to cross the Las Vegas Wash to access trails on both sides of the Las Vegas Wash.

The Proposed Action would also cross land owned by the Clark County Parks and Recreation Department east of the Old Silver Bowl Park, which is comprised of two baseball fields. The Clark County Parks and Recreation Department's land east of the ballfields, in the Project Area, is highly disturbed and was formerly used as an archery range.

The Flamingo Arroyo Trail extends along the existing Hollywood Boulevard in Sunrise Manor from the Las Vegas Wash north of the Clark County Water Reclamation Facility to the Sunrise Trailhead, providing pedestrian and bicycle access to the north side of the Wetlands Park from the regional trail system. The 10 ft. wide paved trail crosses under Hollywood Boulevard north of the Water Treatment Plant and follows the north side of Hollywood Boulevard to the Sunrise Trailhead.

### **3.11.2 Environmental Consequences**

#### **3.11.2.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not be constructed. Therefore, the No Action Alternative would have no impact to Parks and Recreation in the area.

#### **3.11.2.2 Proposed Action**

Extension of Hollywood Boulevard across the Wetlands Park would provide motor vehicle, pedestrian, and bicycle (including electric bicycles (E-bikes) as defined by 43 CFR § 420.5(h)) access between the north and south sides of the Park, with a crossing of the Las Vegas Wash, and a new

south trailhead, all centrally located within the Park. This would provide several benefits to the Park as a public recreational facility:

- The Park trail system would be expanded, providing new pedestrian and bicycle (including E-bike) access to the central area of the Park
- Park users from Sunrise Manor would have convenient access to the south side of the Park
- Park users from Henderson would have convenient access to the north side of the Park
- Improved accessibility would increase visitor use of the Park
- Access to the interior of the Park would become available for police and emergency services

The Clark County Parks and Recreation Department has plans to expand the Park trail system into the central area of the Park. The Proposed Action is consistent with the plans of the Clark County Parks and Recreation Department to expand the Park trail system. The Proposed Action would facilitate trail expansion efforts by connecting trails north and south of the Las Vegas Wash and providing a new trail and trailhead connecting to existing and planned trails.

The proposed crossing of the Las Vegas Wash would disrupt some existing vegetated areas and wildlife habitat along the Las Vegas Wash. To-date, efforts by Clark County, the Southern Nevada Water Authority and the community have been successful in reestablishing vegetation in the Nature Preserve west of the Project Area and along the Las Vegas Wash downstream of the Duck Creek Confluence Weir east of the Project Area. The proposed crossing of the Las Vegas Wash with the Proposed Action would be located between the Nature Preserve and restored areas downstream. With minimal reestablished vegetation, the proposed crossing would cause less disturbance of restored areas than at any other potential crossing location.

With the proposed bridge crossings, new access and viewing opportunities of the Las Vegas Wash and Duck Creek will be afforded to Park visitors that are not currently available.

The Proposed Action would not affect the existing facilities of the Old Silver Bowl Park but would construct a new road, trail and trailhead on Clark County Parks and Recreation Department land east of the Old Silver Bowl Park in a highly disturbed area which was formerly used as an archery range. The Proposed Action would improve access to existing and planned facilities of the Old Silver Bowl Park, particularly for residents of Sunrise Manor. The Proposed Action includes the construction of a roundabout which would provide access to the existing ballfields, to the former archery range which is planned for redevelopment and to the new south trailhead.

With the Proposed Action, a portion of the Flamingo Arroyo Trail along Hollywood Boulevard, from north of the Water Treatment Facility to the Sunrise Trailhead, would be reconstructed to relocate it from the north side of the road to the south side of the road. Relocation of the Trail is proposed as a safety measure to avoid pedestrians and bicyclists from crossing the road twice, as they do at the present time.

Under the Proposed Action, visitor access to the Las Vegas Wetlands Park and the Old Silver Bowl Park will be enhanced, increasing visitor use of the parks. From this perspective, the Proposed Action will have a beneficial impact. The Proposed Action will not impact the Nature Preserve west of the Project Area or the revegetated areas along the Las Vegas Wash east of the Project Area. Disturbance of existing vegetation and wildlife habitat at the crossing of the Las Vegas Wash will be

offset by new access and viewing opportunities that will be afforded to Park visitors that are not currently available.

## **3.12 Transportation**

### **3.12.1 Affected Environment**

Hollywood Boulevard is a north-south collector street that extends across the northern Las Vegas Valley following the alignment of a quarter-section line and serving predominantly residential areas in Sunrise Manor, an unincorporated Planning Area in Clark County. It is an improved 50-foot-wide collector street that terminates north of the Park.

In some portions of the Project Area, no designated bicycle or pedestrian facilities are found. The Regional Transportation Commission of Southern Nevada provides fixed-route bus service on Vegas Valley Drive, Nellis Boulevard, and Boulder Highway.

### **3.12.2 Environmental Consequences**

#### **3.12.2.1 No Action Alternative**

Without the Proposed Action, Hollywood Boulevard as a shorter, more direct route between Sunrise Manor and Henderson would not be constructed. The volume of traffic between Sunrise Manor and Henderson will continue to grow and continue to contribute to the congestion on the I-515 Freeway and Boulder Highway. Without the Proposed Action, Hollywood Boulevard would remain discontinuous through the Project Area and would not serve north-south travel.

Additionally, under the No Action Alternative, bicycle and pedestrian safety would not be enhanced because currently there are no designated bicycle routes in the Project Area, and most streets do not have sidewalks.

#### **3.12.2.2 Proposed Action**

Hollywood Boulevard would become a continuous collector street carrying vehicular, bicycle, and pedestrian traffic. It would also provide a shorter, more direct route for motorists, bicyclists, and pedestrians travelling north and south through the Project Area. The proposed roadway would have a 35-miles-per-hour posted speed limit.

Substantial travel savings with the proposed improvement of Hollywood Boulevard are expected. Specifically, a continuous Hollywood Boulevard would reduce travel distances for vehicles, bicycles, and pedestrians, resulting in fewer miles of travel and reduced travel times.

Bicycle and pedestrian safety would be enhanced by providing a collector street that would reduce the volume of traffic on local residential streets. Because no designated bicycle routes currently exist in the Project Area and most streets in the Project Area do not have sidewalks, incorporating bicycle lanes and sidewalks into the Proposed Action would provide new, shorter routes and improve safety for bicyclists and pedestrians.

#### **3.12.2.3 Mitigation Measures**

Construction activities related to the Proposed Action would comply with the applicable regulations and guidance, including 29 CFR Part 1926, Safety and Health Regulations for Construction, and applicable subparts of 29 CFR Part 1910, Occupational Safety and Health Standards, and would ensure the safety and health of workers during construction. To minimize potential safety hazards to

construction workers and the public, Clark County would implement a health and safety program that ensures that construction workers are aware of the hazards associated with the Proposed Action and the safety measures that must be taken to prevent injury and hazardous conditions within and outside the working environment. The program would identify and address safety issues such as site access, construction hazards, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, unknown hazards, and fire control. It also would identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction, as well as measures to be taken during operation of the project to limit public access to potential hazards (e.g., permanent fencing, locked access).

To prevent unauthorized members of the public from entering the proposed roadway during construction, temporary fences would be installed around the perimeter of the construction site, and notification signs would be placed at all entrances to the site prior to the start of construction. In addition, construction workers would be clearly identifiable to prevent unauthorized persons from entering the site during construction.

Additionally, construction of a public road with lighting, curbs, and other street amenities would open this area to public access with increased visibility and would discourage illegal dumping and generally increase security.

### **3.13 Reasonably Foreseeable Effects**

Planned projects in the Project Area which could contribute to reasonably foreseeable effects include:

- Clark County Parks and Recreation Department improvements to the Wetlands Park,
- Southern Nevada Water Authority Revegetation of the Las Vegas Wash,
- Clark County Parks and Recreation Department improvements to the Old Silver Bowl Park, and
- Private residential development south of the Wetlands Park

Areas north and east of the Park and the City of Henderson boundary consist of federal land under the jurisdiction of the Reclamation and the BLM and are outside the BLM's disposal area. Accordingly, no reasonably foreseeable effects are expected from areas north and east of the Proposed Project outside of the City of Henderson boundary.

**Hollywood Boulevard on BLM Land:** The BLM issued a ROW grant to Clark County for APNs 161-11-801-001, 161-14-101-001 and 161-14-701-001 at the northern part of the Project Area. Clark County will make improvements to the existing Hollywood Boulevard in accordance with the project description.

**Wetlands Park:** The Clark County Parks and Recreation Department is responsible for maintaining and improving facilities within the Wetlands Park. The Clark County Parks and Recreation Department plans to expand the trail system available for use by Park visitors. The planned expansion of the trail system will increase the area of Park accessible to the public.

The Proposed Project has been coordinated with the Clark County Parks and Recreation Department and includes new trails, a new south trailhead and connections to the existing trail system. In combination with the planned Clark County Parks and Recreation Department planned trail expansion, the Proposed Project will enhance the objectives of the Clark County Parks and Recreation Department to increase accessibility for Park visitors. In particular, the new vehicular and pedestrian bridges across the Las Vegas Wash and Duck Creek will provide a central crossing so that

visitors from the south can access planned trails north of the Las Vegas Wash and visitors from the north can access planned trails on the south side of the Las Vegas Wash. By coordination with the Clark County Parks and Recreation Department, the Proposed Project and the planned trail expansion will be mutually beneficial.

**SNWA Las Vegas Wash Revegetation Plan:** The SNWA has been responsible for stabilizing the Las Vegas Wash through the Wetlands Park with a series of weirs and channelization. The SNWA program to manage the Las Vegas Wash includes plans to revegetate areas along the Las Vegas Wash, improving the quality of wildlife habitat. The area along the Las Vegas Wash planned by SNWA for revegetation begins immediately east of the Proposed Project and continues eastward along the Las Vegas Wash.

The Proposed Project includes measures to stabilize Duck Creek just upstream of the Las Vegas Wash as an extension of the SNWA stabilization program. While the Proposed Project will not affect the current SNWA revegetation plan, once the lower reach of Duck Creek is stabilized, there is an opportunity to extend revegetation into the lower Duck Creek floodplain. By coordination with the SNWA, the effects of the SNWA revegetation plan and revegetation of a stabilized lower reach of Duck Creek would be a further improvement in the quality of wildlife habitat.

**Old Silver Bowl Park Improvements:** The Clark County Parks and Recreation Department owns, operates and maintains two baseball fields immediately south of the Wetlands Park. Land on the east side of the ballfields is planned for expansion to potentially include additional ballfields or other recreational facilities. The area for planned expansion was at one time used as an archery range and is highly disturbed.

The Proposed Project will construct a road and trail through the area of the former archery range east of the existing ballfields. Through coordination with the Clark County Parks and Recreation Department, the Proposed Project will have several features which will be compatible with and enhance the expansion of the Old Silver Bowl Park. Specifically:

- A roundabout will be provided to facilitate access to the area planned for Park expansion, including a western leg providing direct access to the area planned for ballpark expansion and an eastern leg providing access to the new south trailhead and overflow parking area for the Park,
- New vehicular and trail access to the Old Silver Bowl Park for Park users, and
- New trail connections between the Old Silver Bowl Park and the Wetlands Park.

**Private Residential Development:** The home builder DR Horton is planning the construction of 1,540 single and multi-family homes immediately south of the Wetlands Park and Old Silver Bowl Park in a residential development named Cadence Neighborhood 7 which is within the boundaries of the City of Henderson. Construction of homes was scheduled to begin in 2023 with buildout expected in 2026. As part of the Proposed Project, Clark County will acquire land for the proposed new road through the land planned for residential development.

By coordination with the developer (DR Horton) and with the City of Henderson, impacts from the combined roadway project and residential development will be mitigated. Upon completion, residential development will line both sides of the proposed new road from Galleria Drive to the Wetlands Park within the City of Henderson. The posted speed on the new road in this area will be 35 mph, compatible with travel through a residential area and the new road will serve as a collector street in a residential neighborhood. Additionally, the City of Henderson approved Cadence Neighborhood 7 Traffic Study prepared by DR Horton incorporates the proposed new road into the planned residential development to:

- Facilitate future residential travel into and out of the Cadence Neighborhood 7,
- Provide future residential traffic with an alternate northern route into and out of the neighborhood, and
- Provide improvements to the Wiesner Way/Galleria Drive intersection, at the southern terminus of the Proposed Project, to accommodate combined traffic from the Proposed Project and from the planned Cadence neighborhood 7 residential development.

A residential developer has acquired and closed the Royal Links Golf Course on Valley View Boulevard in Sunrise Manor approximately 1.0-mile west of the Proposed Project. The developer is proposing to construct approximately 1,600 single and multi-family homes on the property. Construction dates are contingent on receiving zoning and building approvals from Clark County. The proposed residential development of the closed Royal Links Golf Course will not directly affect the project, and vice versa, but reinforces the need for the Proposed Project.

## 4 Coordination and Consultation

This section describes other consultation and coordination between Reclamation and other federal, state, and local agencies, and Native American Tribes during preparation of this EA. Compliance with NEPA is a federal responsibility that involves the participation of all these entities in the planning process. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. Agencies also provide opportunities for public review and comment on those evaluations.

### 4.1 Persons/Agencies Consulted

Nevada State Historic Preservation Office  
State Historic Preservation Officer  
901 S. Stewart Street, Suite 5004  
Carson City, Nevada 89701

Bureau of Land Management  
Ms. Maya Amer  
Planning & Environmental Coordinator  
4701 Torrey Pines Drive  
Las Vegas, Nevada 89130  
City of North Las Vegas

Clark County Department of Air Quality  
Marci Henson  
Director  
4701 West Russell Road, Suite 200  
Las Vegas, Nevada 89118

Nevada State Clearinghouse  
Nevada Division of State Lands  
901 South Stewart Street, Suite 5003  
Carson City, Nevada 89701

Nevada Department of Wildlife -  
Headquarters  
Ashley Sanchez  
6980 Sierra Center Parkway, #120  
Reno, Nevada 89511

Nevada Natural Heritage Program  
901 South Stewart Street, Suite 5002  
Carson City, Nevada 89701

U.S. Army Corps of Engineers  
Arizona-Nevada Area Office  
3636 North Central Avenue, Suite 900  
Phoenix, Arizona 85012

U.S. Fish and Wildlife Service  
1340 Financial Boulevard, Suite 234  
Reno, Nevada 89502

### 4.2 Section 106 of the National Historic Preservation Act

Consultation requirements with the Nevada SHPO, in accordance with Section 106 of the National Historic Preservation Act, as amended, have been completed. A complete Class I files search and Class III cultural resource inventory of the entire project footprint was completed. Reclamation reviewed the cultural resources report (WSP 2021c) in January 2022 and submitted it to SHPO in 2022. Reclamation submitted additional clarifications to SHPO in August of 2023 with no additional response from SHPO; therefore, default concurrence is assumed.

As part of its Section 106 obligations, Reclamation also consulted with interested Indian Tribes through its government-to-government relationship with Native American tribal governments. The Hopi Tribe and Moapa Band of Paiutes have requested that Native American monitors be present during the construction of the Proposed Action.



Reclamation determined that the proposed undertaking would have “no effect” on historic properties and, per this determination of effect, Reclamation’s obligations under Section 106 have been fulfilled.

### **4.3 Section 7 of the Endangered Species Act**

Desktop and field analyses of suitable habitat for ESA species indicated that the project may result in potential adverse effects on all four ESA-listed species with potential to occur in the action area. As such, a Biological Assessment was prepared on behalf of Clark County for submittal to the Reclamation and USACE for use in consultation with USFWS, in accordance with the legal requirements set forth under Section 7(a)(2) of the federal ESA. The USFWS issued Biological Opinion 2025-0010734-S7-001 for desert tortoise on July 2, 2025, and the effects determination, mitigation requirements, and incidental take permission have been noted above.

### **4.4 Public Scoping and Outreach**

Clark County Public Works (CCPW) has been working collaboratively with the Clark County Parks and Recreation Department since one of the goals of the project is to improve the accessibility to the Wetlands Park. The Project is being developed with meetings and input from numerous stakeholders including:

- City of Henderson
- Clark County Wetlands Park
- Clark County Parks and Recreation
- Clark County Water Reclamation District
- Bureau of Reclamation
- Bureau of Land Management
- Las Vegas Wash Coordination Committee (LVWCC) which is comprised of 16 local, state and federal agencies
- Southern Nevada Water Authority
- The Sunrise Town Advisory Board
- The Whitney Town Advisory Board
- Desert Wetland Conservancy and Wetlands Park Friends
- Landwell Company (major private property owner in the City of Henderson) and/or successors including DR Horton

The Sunrise Manor Transportation Improvements Hollywood Boulevard Extension Feasibility Study was prepared in October 2019. Five alternative alignments were evaluated to extend Hollywood Boulevard southward from Sunrise Manor, passing through the Clark County Wetlands Park, and providing access to Galleria Drive in the City of Henderson. All of the alternatives would provide substantial transportation benefits, with benefits from travel time savings, reduced vehicle maintenance and operations and reduced air pollution far exceeding the cost of construction. Based on the study conclusions, Alternatives 1B and 1C were recommended alignments, as they provided the best balance between cost, transportation benefits, travel distance and potential impacts to BLM lands, the Wetlands Park and the Las Vegas Wash. After review and comments from LVWCC members, SNWA and LVVWAC, Alternative 1B was the selected alternative due to having the least amount of environmental and public impact, as well as decreased impact to the restored wetland habitat.

Multiple presentations have been made and/or provided to stakeholders. These include the following:

- Sunrise Manor Advisory Board meetings – Late 2019
- Whitney Town Advisory Board meetings (March 11, 2020)
- Las Vegas Wash Coordination Committee (LVWCC) and Advisory Boards
  - The Project was initially presented at the January 2020 meeting of the Las Vegas Wash Coordination Committee (LVWCC) and a subsequent presentation in Summer 2020. The LVWCC provided recommendations in a letter dated August 13, 2020 regarding impacts to species and habitat, vegetation, etc. and identified their preferred alternative (Alternative 1B). SNWA provided a letter dated 8/13/20 regarding guidance on project components. Copies of these letters are provided in the Enclosures.
  - The preferred Alternative 1B was presented at the LVWCC January 26, 2021.
- The project was presented on October 14, 2020 at the Desert Wetland Conservancy Board Meeting.
- Presentation at Clark County Board of County Commissioners was on December 15, 2020.
- CCPW provided a PowerPoint presentation for distribution to the Wetlands Park Friends board members (Christie Leavitt) and the Desert Wetlands Conservancy board members (James Kriss), on March 25, 2021 and April 14, respectively.
- CCPW has responded to several telephone calls from the public.
- CCPW, COH, and DR Horton and the engineering design teams have a weekly coordination meeting.

## 5 Preparers

The following preparers or reviewers participated in the development of this EA.

<b>Name</b>	<b>Title</b>	<b>Organization or Agency</b>
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Toshi Yoshida	NEPA Coordinator	Bureau of Reclamation – Lower Colorado Regional Office
Justin DeMaio	Regional Archaeologist	Bureau of Reclamation – Lower Colorado Regional Office
Andrew Trouette	Natural Resource Specialist	Bureau of Reclamation – Lower Colorado Regional Office
Christopher Linehan	Recreation Planner	Bureau of Reclamation – Lower Colorado Regional Office
Louise Steeps	Project Manager	Clark County
Syndi Dudley	Project Manager	WSP
Sarah Hoffman	Environmental Lead	WSP
Deidre Duffy	Biological Resources	WSP
Emily Covalt	Visual Resources	WSP
Roger Patton	Transportation Planner	GCW

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