Supplemental
Natural Environment Study

(Minimal Impacts)

City of San Bernardino, San Bernardino County, California

08-SBd-0-Mount Vernon Avenue

Federal Project Number: BRLS-6507(003)

EA: 965120

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and
STATE OF CALIFORNIA
Department of Transportation

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Summary

The San Bernardino County Transportation Agency (SBCTA), in cooperation with the California Department of Transportation (Caltrans), is proposing to replace the existing Mount Vernon Avenue Bridge (Bridge Number 54C-066) over the Burlington Northern Santa Fe (BNSF) rail yard in the city of San Bernardino, San Bernardino County, California.

Preparation of a Natural Environment Study (Minimal Impacts) (cover date March 2006) for the project was originally approved in June 2006 in support of a National Environmental Policy Act (NEPA) Finding of No Significant Impact (FONSI), which was adopted for the project in June 2011. The project, which involves a road/railroad grade separation, is statutorily exempt from the California Environmental Quality Act (CEQA). Since the NEPA document was adopted, it has been noted that additional project improvements/refinements are needed that were not included in the adopted NEPA document, requiring supplemental environmental review and documentation.

Habitat evaluations for special-status plant and animal species as well as depleted natural communities were conducted on the project site and within a 300-foot buffer around the site (i.e., Biological Study Area [BSA]). Potential suitable habitat for several special-status birds and bats exists within the BSA. Focused surveys for rare plants and jurisdictional waters were not conducted because of the lack of suitable habitat/resources in the BSA. No impacts on any special-status species, including listed species, are anticipated with implementation of avoidance and minimization measures. Table S-1 summarizes the biological resources that could be affected by the proposed project as well as the required avoidance, minimization, and mitigation measures. No environmental permitting related to special-status species or jurisdictional waters would be required.

Table S-1. Biological Resources Potentially Affected by the Proposed Project and Associated Avoidance, Minimization, and Mitigation Measures

Biological Resource	Impact	Avoidance, Minimization, and/or Mitigation Measures
Nesting birds	Potential direct impacts and disturbance	**BIO-1, BIO-3, BIO-4,** and **BIO-7**
Special-status bats	Potential direct impacts and disturbance	**BIO-2, BIO-3,** and **BIO-4**
Invasive species	Potential spread	**BIO-5** and **BIO-6**

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Table of Contents

Summary **S-1**

1 – Introduction **1-1**

1.1 History 1-1

1.2 Project Purpose and Need 1-1

1.2.1 Project Purpose 1-1

1.2.2 Project Need 1-1

1.3 Project Description 1-2

2 – Study Methods **2-1**

2.1 Report Terminology 2-1

2.2 Regulatory Requirements 2-1

2.2.1 Federal Requirements 2-1

2.2.2 State Requirements 2-1

2.2.3 Agency Coordination and Professional Contacts 2-1

2.2.4 Limitations That May Influence Results 2-1

2.3 Studies Required 2-2

2.3.1 Literature Search 2-2

2.3.2 Field Review and Survey Methods 2-2

2.3.3 Personnel and Survey Dates 2-2

3 – Results: Environmental Setting **3-1**

3.1 Description of the Existing Biological and Physical Conditions 3-1

3.1.1 Study Area 3-1

3.1.2 Physical Conditions 3-1

3.1.3 Biological Conditions in the Study Area 3-1

3.1.4 Natural Communities and Vegetation 3-1

3.1.5 Wildlife 3-1

3.1.6 Aquatic Resources 3-2

3.1.7 Invasive Species 3-2

3.1.8 Habitat Connectivity 3-2

3.2 Regional Species and Habitats and Natural Communities of Concern 3-2

4 – Results: Biological Resources, Discussion of Impacts, and Mitigation **4-1**

4.1 Habitats and Natural Communities of Special Concern 4-1

4.2 Special Status Plant Species 4-1

4.3 Special-Status Animal Species Occurrences 4-1

4.4 Discussion of Animal Species: Coopers Hawk 4-1

4.4.1 Survey Results 4-2

4.4.2 Project Impacts 4-2

4.4.3 Avoidance and Minimization Efforts/Compensatory Mitigation 4-2

4.5 Discussion of Western Yellow Bat 4-2
4.5.1 Survey Results 4-2
4.5.2 Project Impacts 4-3
4.5.3 Avoidance and Minimization Efforts/Compensatory Mitigation 4-3
4.6 Discussion of Crevice Dwelling Species 4-3
4.6.1 Survey Results 4-3
4.6.2 Project Impacts 4-3
4.6.3 Avoidance and Minimization Efforts/Compensatory Mitigation 4-4
5 – Conclusions and Regulatory Determination 5-1
5.1 Federal Endangered Species Act Consultation Summary 5-1
5.2 Wetlands and Other Waters Coordination Summary 5-1
5.2.1 Invasive Species 5-1
5.2.2 Bird Protection 5-2
6 – References 6-1

Appendices

Appendix A: Special-Status Species with Potential to Occur

Appendix B: USFWS IPaC Species List

Appendix C: Photo Log

List of Tables and Figures

Table **Page**

S-1 Biological Resources Potentially Affected by the Proposed Project and Associated Avoidance, Minimization, and Mitigation Measures.....S-1

Figure **Page**

1-1 Regional Vicinity Map.....1-3
1-2 Project Location.....1-4
1-3 Project Layout Map Sheet Index.....1-7
1-3 Project Layout Map Sheet 1.....1-8
1-3 Project Layout Map Sheet 2.....1-9
1-3 Project Layout Map Sheet 3.....1-10
1-3 Project Layout Map Sheet 4.....1-11
2-1 Biological Study Area.....2-3

Abbreviations and Acronyms

BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
EBL	Eligible Bridge List
FO	Functionally Obsolete
FONSI	Finding of No Significant Impact
HBP	Highway Bridge Program
IPaC	Information, Planning, and Conservation
NEPA	National Environmental Policy Act
NESMI	Natural Environment Study (Minimal Impacts)
NMFS	National Marine Fisheries Service
PCI	Paint Condition Index
RWQCB	Regional Water Quality Control Board
SBCTA	San Bernardino County Transportation Agency
SD	Structurally Deficient
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1 – Introduction

1.1 History

The San Bernardino County Transportation Agency (SBCTA), in cooperation with the California Department of Transportation (Caltrans), is proposing to replace the existing Mount Vernon Avenue Bridge (Bridge Number 54C-066) over the Burlington Northern Santa Fe (BNSF) rail yard in the city of San Bernardino, San Bernardino County, California.

Preparation of a Natural Environment Study (Minimal Impacts) (NESMI) for the project was originally completed in March 2006 and approved in June 2006 (Caltrans 2006). A National Environmental Policy Act (NEPA) Finding of No Significant Impact (FONSI) was adopted for the project in June 2011. The project, which involves a road/railroad grade separation, is statutorily exempt from the California Environmental Quality Act (CEQA). Since the NEPA document was adopted, it has been noted that additional project improvements/refinements are needed that were not included in the 2011 adopted NEPA document. The project and these additional improvements are discussed in detail in the following sections.

1.2 Project Purpose and Need

1.2.1 Project Purpose

The purpose of the proposed project is to provide a bridge that is structurally safe, meeting current seismic, design, and roadway standards.

1.2.2 Project Need

Seismically Deficient

The existing bridge, constructed in 1934, incorporated steel girders salvaged from an earlier 1907 structure. As part of the Local Bridge Seismic Safety Retrofit Program, a seismic analysis and retrofit study were conducted in 1996. The Final Seismic Retrofit Strategy Report, issued in June 1997, determined that the bridge fell under Category 1, a category for bridges that could collapse in a seismic event and threaten public safety.

Sufficiency Rating

Caltrans maintains the *National Bridge Inventory—Structure Inventory and Appraisal* for bridges both on and off the federal highway system in the state. The inventory includes a sufficiency rating for each bridge. The sufficiency rating is typically determined by three considerations: (1) structural adequacy and safety, (2) serviceability and functional obsolescence, and (3) essentiality for public use. A special reduction factor is considered to account for conditions related to detours, traffic safety features, and structure type. When a bridge has a deficient sufficiency rating, it is placed on the Federal Highway Administration Eligible Bridge List (EBL) to receive high priority for retrofit/rehabilitation or replacement under the federal Highway Bridge

Program (HBP).[1] A deficient bridge is defined as having a sufficiency rating ≤ 80 and a status of Structurally Deficient (SD). Bridges with a sufficiency rating ≤ 80 and an SD or Functionally Obsolete (FO) status are eligible for rehabilitation, while bridges with a sufficiency rating ≤ 50 and an SD or FO status are eligible candidates for replacement. In 2002, the sufficiency rating for the Mount Vernon Avenue Bridge was 45.6, with flags for both SD and FO. The major bridge deficiencies in 2002 were identified as poor deck condition, nonstandard deck geometry, and nonstandard underclearance at West Third Street. With the results of the 2004 bridge inspections, the sufficiency rating for the Mount Vernon Avenue Bridge has dropped to 2.0, which was reconfirmed in the latest bridge inspection report, dated December 27, 2016. The very low sufficiency rating for the bridge is the result of the following factors: low superstructure capacity, poor substructure condition, serious deck condition, inadequate deck geometry, and substandard vertical clearance at West Third Street. Additionally, the capacity of the existing bridge railing does not meet current standards.

Structurally Deficient (SD)

The bridge has a low superstructure capacity, poor substructure conditions, and deck deficiencies. The deck has moderate and severe transverse cracks and spalls at various locations. The steel bents have structural damage and heavy corrosion on almost all steel connections. The girders received a score of 0.0 for operating and inventory ratings due to several severe fatigue cracks on the girder-to-cap beam connections; however, the bridge remains open because temporary supports were installed in the early 2000s. Inventory and operating capacity is calculated at 20.8 and 35.4 metric tons, respectively.

Functionally Obsolete (FO)

The existing bridge is considered to be FO because of the nonstandard deck geometry, misaligned south approach, and nonstandard vertical clearance at West Third Street.

Other Deficiencies

In addition to the previously described deficiencies, other serious conditions exist, such as substandard vertical clearance over the railroad and substandard vertical clearance for Third Street. Additionally, the bridge was last painted in 1954. The Paint Condition Index (PCI) dropped from 74.5 in 2000 to 38 in 2016. Bridges on the EBL with a PCI of 65.0 or less qualify as a stand-alone painting project under the federal HBP guidelines. Additionally, the existing bridge has nonstandard vertical and horizontal clearances at the BNSF railroad yard.

1.3 Project Description

The project is located in the city of San Bernardino, San Bernardino County, California (Figures 1-1 and 1-2), along Mount Vernon Avenue Bridge 54C-066, Section 7, Township 1 South, and Range 4 West, on the San Bernardino South U.S. Geological Survey (USGS) 7.5-minute quadrangle map.

[1] Formerly known as the federal Highway Bridge Replacement and Rehabilitation (HBRR) program.

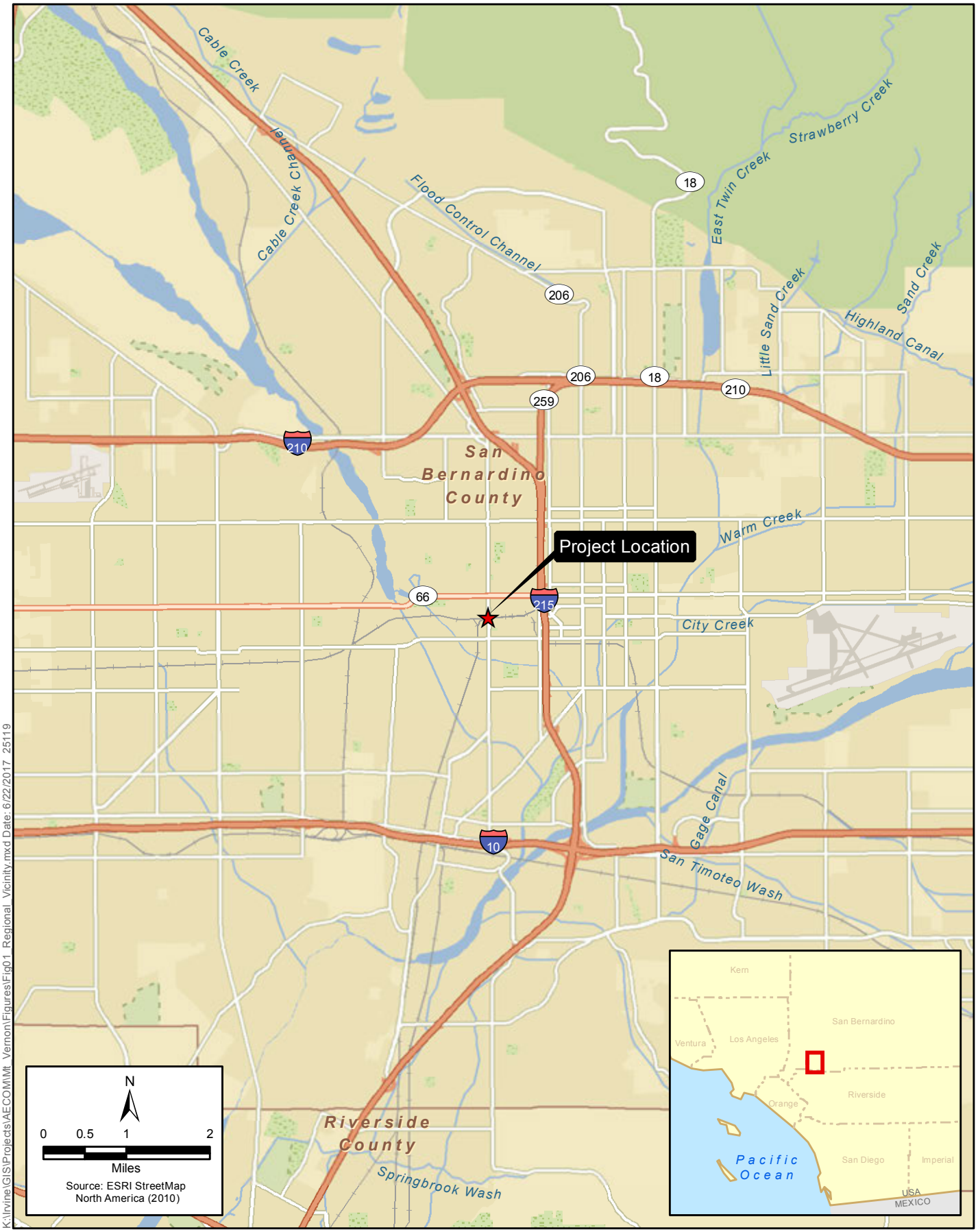

Figure 1-1
Regional Vicinity Map
Mount Vernon Avenue Bridge Project

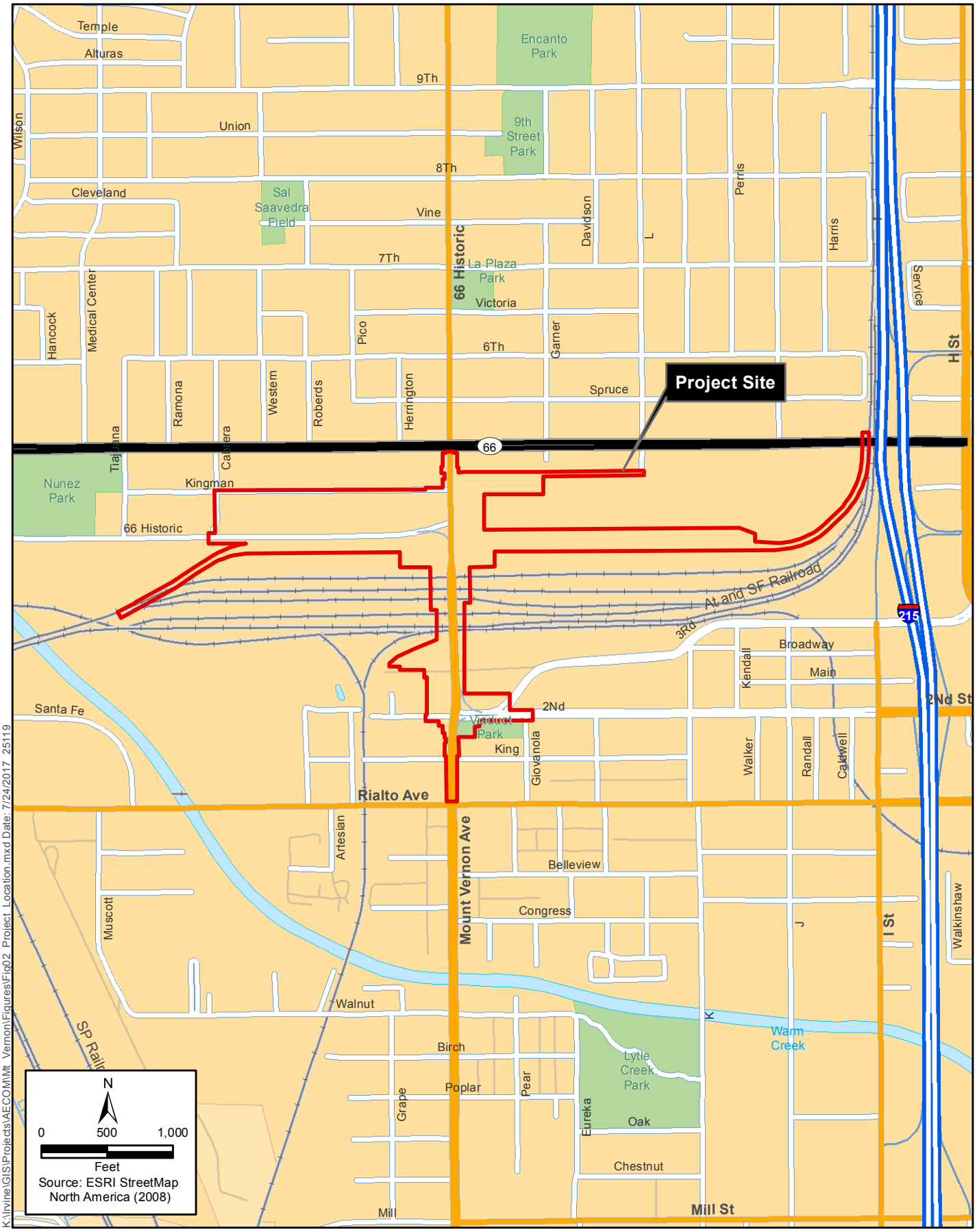

Figure 1-2
Project Location
Mount Vernon Avenue Bridge Project

The Preferred Alternative (Alternative 3 – Bridge Replacement), identified in the adopted NEPA document, extended from just south of Fifth Street to just north of Kingman Street. Based on the identified project improvements/refinements, the project would now extend from just south of Fifth Street to Rialto Avenue (see Figure 1-3). The proposed improvements/refinements to the project are listed below.

- A portion of the BNSF intermodal operations/parking area east of the bridge on the north side of the existing tracks would be removed and a new paved area between Kingman Street and West Fourth Street and from Cabrera Avenue to Mount Vernon Avenue would be constructed (this would involve acquisition and removal of existing residences/ businesses within these limits). A 20-foot-tall block wall and a 20-foot-wide landscape buffer would be constructed around the new paved area to shield it from surrounding uses.
- West Fourth Street would be cul-de-saced at Cabrera Avenue rather than at Mount Vernon Avenue.
- The existing Eagle Building and four associated buildings would be relocated from the east side of Mount Vernon Avenue to the west side of Mount Vernon Avenue.
- The two existing crane repair pads would be relocated north of their current location (one on either side of Mount Vernon Avenue).
- Two temporary tracks (Tracks 218 and 219), identified in the adopted NEPA document, would now be permanent rail tracks.
- Tracks 216 and 217 would be realigned in the immediate vicinity of the new bridge.
- The structures located at the southwest end of the bridge, bordered by Mount Vernon Avenue to the east, the alley behind the structures to the west, West Third Street to the north, and West Second Street to the south, would be acquired and removed.
- The access associated with structures fronting Mount Vernon Avenue south of West Second Street and north of Kingman Street would be reconstructed as needed to match the new road/sidewalk grade.

Consistent with the updated project layout, the following would be incorporated:

- Utilities would be relocated as needed to accommodate the proposed improvements.
- Best management practices for water quality treatment would be provided as part of the proposed project where feasible.
- Signage would be incorporated within the project's limits of disturbance where necessary.
- Pedestrian facilities would be compliant with Americans with Disabilities Act standards.
- Geotechnical borings would be conducted within the project's limits of disturbance as needed for the design of the project.
- Temporary advanced signage would be required during construction, which would involve portable changeable message signs or other temporary signage that would not require ground disturbance.

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Figure 1-3
Project Layout Map Sheet Index
Mount Vernon Avenue Bridge Project

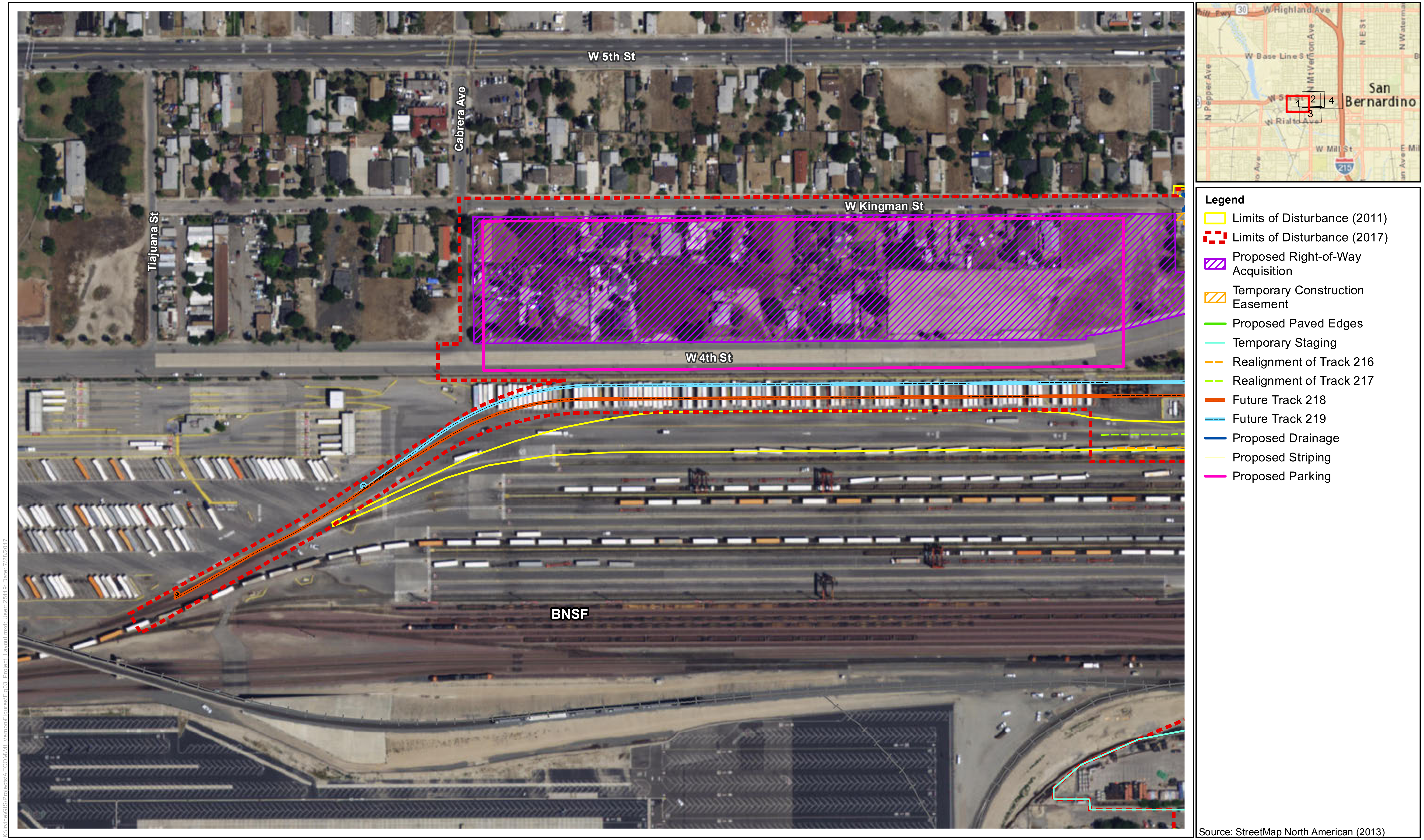
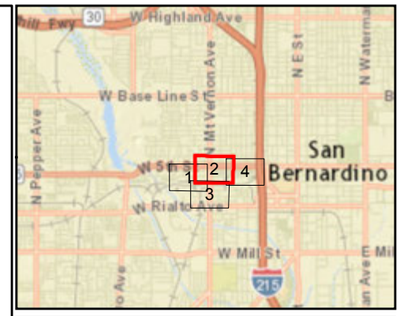


Figure 1-3 - Sheet 1
Project Layout Map
Mount Vernon Avenue Bridge Project



Legend

- Limits of Disturbance (2011)
- Limits of Disturbance (2017)
- Proposed Right-of-Way Acquisition
- Temporary Construction Easement
- Proposed Paved Edges
- Temporary Staging
- Realignment of Track 216
- Realignment of Track 217
- Future Track 218
- Future Track 219
- Proposed Drainage
- Proposed Striping
- Proposed Parking

Source: StreetMap North American (2013)

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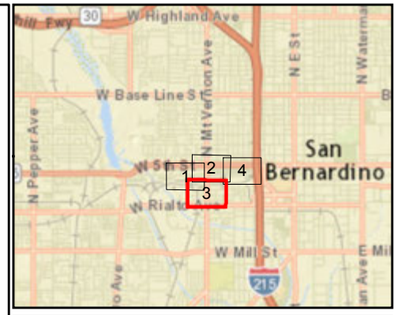
Figure 1-3 - Sheet 2
Project Layout Map
Mount Vernon Avenue Bridge Project



Legend

- Limits of Disturbance (2011)
- Limits of Disturbance (2017)
- Proposed Right-of-Way Acquisition
- Temporary Construction Easement
- Proposed Paved Edges
- Temporary Staging
- Realignment of Track 216
- Realignment of Track 217
- Future Track 218
- Future Track 219
- Proposed Drainage
- Proposed Striping
- Proposed Parking

Source: StreetMap North American (2013)

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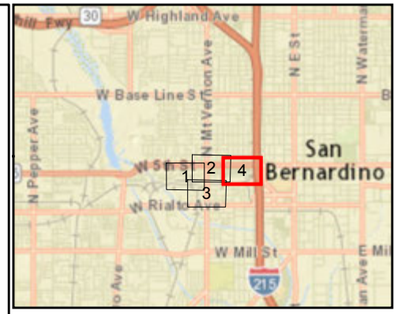
Figure 1-3 - Sheet 3
Project Layout Map
Mount Vernon Avenue Bridge Project



Legend

- Limits of Disturbance (2011)
- Limits of Disturbance (2017)
- Proposed Right-of-Way Acquisition
- Temporary Construction Easement
- Proposed Paved Edges
- Temporary Staging
- Realignment of Track 216
- Realignment of Track 217
- Future Track 218
- Future Track 219
- Proposed Drainage
- Proposed Striping
- Proposed Parking

Source: StreetMap North American (2013)

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0 100 200 Feet

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Figure 1-3 - Sheet 4
Project Layout Map
Mount Vernon Avenue Bridge Project

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2 – Study Methods

2.1 Report Terminology

The biological study area (BSA) is the area that was evaluated for biological resources. It consists of the work area footprint of the proposed project and up to a 300-foot buffer (Figure 2-1). The terms *proposed project*, *project area*, and *project impact area* are defined as the areas that have been proposed for direct impact, including permanent and temporary impacts. This is where construction would take place, including staging, storage, and access areas.

2.2 Regulatory Requirements

Regulatory requirements considered in the review of this project included the following:

2.2.1 Federal Requirements

- National Environmental Policy Act
- Clean Water Act, Sections 401 and 404
- Federal Endangered Species Act (under U.S. Fish and Wildlife Service [USFWS] and National Marine Fisheries Service [NMFS])
- Migratory Bird Treaty Act
- Executive Order 11990—Protection of Wetlands
- Executive Order 13112—Invasive Species

2.2.2 State Requirements

- California Environmental Quality Act
- California Fish and Game Code Sections 1600–1616
- Porter-Cologne Water Quality Control Act
- Coastal Zone Management Act
- California Endangered Species Act
- California Fish and Game Code (Sections 3503, 3503.5, 3505, 3800, and 3801.6)

2.2.3 Agency Coordination and Professional Contacts

No agency coordination has occurred to date.

2.2.4 Limitations That May Influence Results

Several areas were not accessible in the BSA because of private-property ownership issues. For these areas, surveys were conducted from a distance with the aid of binoculars, if needed. However, given the highly developed and urbanized nature of the project area in the BSA, as well as the experience and qualifications of the biologist who was involved in the evaluations, these limitations are not expected to influence the findings of this study.

2.3 Studies Required

2.3.1 Literature Search

Prior to field studies, the California Natural Diversity Database (CNDDB) (California Department of Fish and Wildlife [CDFW] 2017) and the California Native Plant Society (CNPS) Electronic Inventory (CNPS 2017) were queried for plants, animals, and natural communities in California that have special regulatory or management status and could occur in the vicinity of the BSA (see Appendix A for a compilation of database report results). Specifically, the database searches were conducted for lands that occur on the USGS 7.5-minute quadrangle map on which the BSA appears (San Bernardino South) and the surrounding or adjacent quadrangles. A complete list of the plant and animal species (including scientific nomenclature, regulatory status, and habitat requirements), as well as the natural communities that were reviewed for the proposed project, is provided in Appendix A. In addition to these resources, the original 2006 project NESMI and supporting documentation were reviewed prior to field studies.

An unofficial USFWS Information, Planning, and Conservation (IPaC) System species list (USFWS 2017) was obtained on July 13, 2017 (Appendix B). A species list was not obtained from NMFS. The project site, which is outside the NMFS jurisdictional boundary, lies in a highly disturbed urban location where habitat is marginal for special-status species. Furthermore, none of the species that are under the jurisdiction of NMFS are on the IPaC species list, dated July 13, 2017, that was obtained from the Carlsbad-Palm Springs field office. For this reason, a species list was not requested from NMFS.

2.3.2 Field Review and Survey Methods

A supplementary field review was conducted on June 26, 2017, by ICF senior biologist Shannon Crossen. During the field review, the biologist conducted a windshield survey of the BSA and walked portions of the project site. The temperature was 108°F, winds were 3 to 5 mph, and cloud cover was 0%.

The biologist reviewed the original project area as well as areas that have been proposed to be included in the project area. The BSA was carefully examined to determine 1) if any changes to biological conditions (i.e., physical conditions as well as vegetation and wildlife habitat and resources) have occurred since preparation of the 2006 NESMI and 2) the current biological conditions in all new work areas. In addition to field surveys, aerial imagery of the project BSA was also reviewed to further evaluate site conditions.

2.2.3 Personnel and Survey Dates

On June 26, 2017, ICF senior biologist Shannon Crossen conducted a field review of the project BSA. Shannon has 9 years of experience as a biologist, including experience from conducting transportation-related field surveys). Shannon also has previous experience as a Caltrans Associate Environmental Planner (Natural Science).

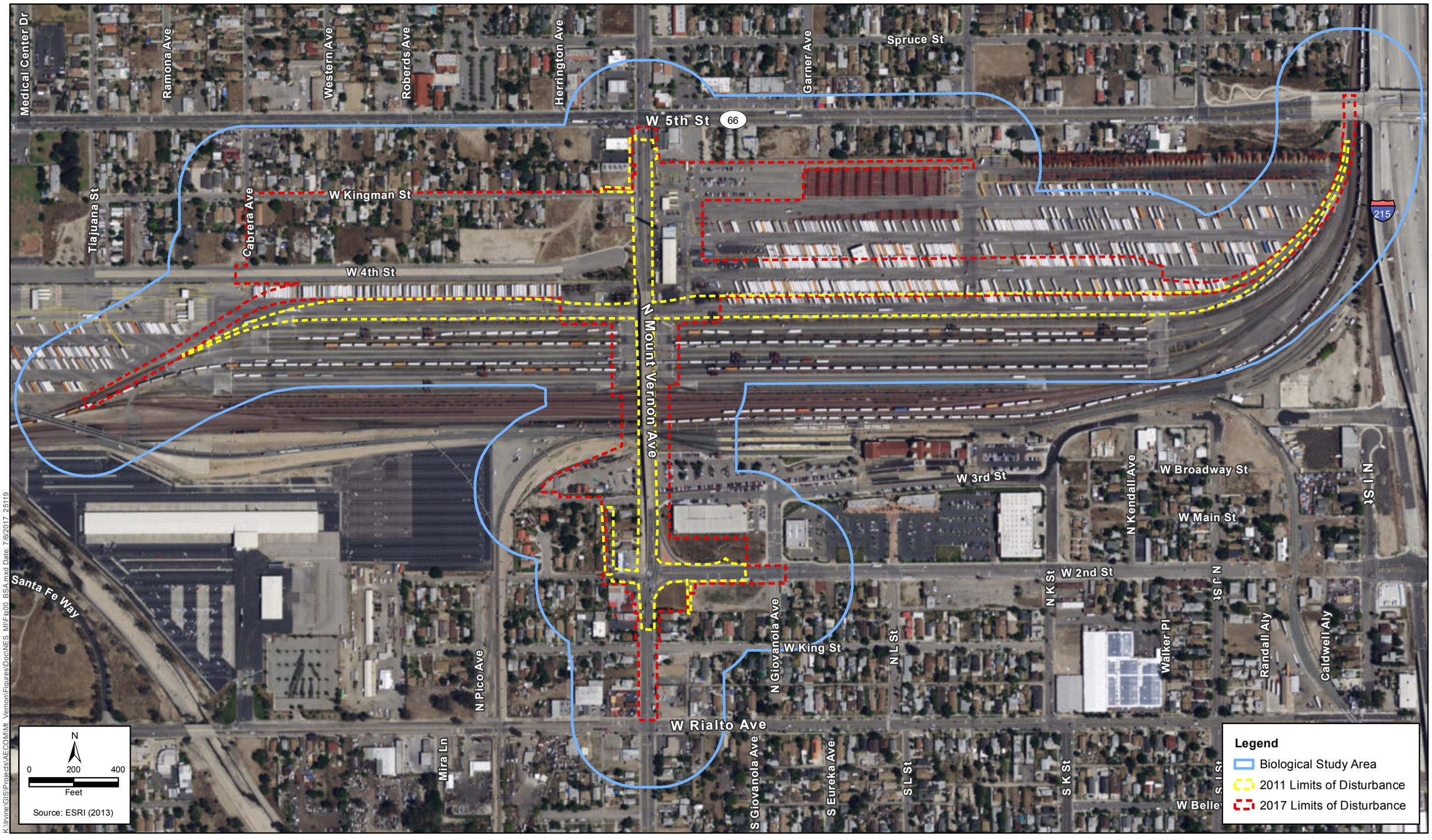

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Figure 2-1
Biological Study Area
Mount Vernon Avenue Bridge Project

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3 – Results: Environmental Setting

The environmental setting within the BSA consists primarily of developed, urbanized, and highly disturbed areas, which are dominated by roads, bridges, railroad facilities, houses, and ornamental landscaping (i.e., nonnative vegetation) (see Appendix C, Photo Log).

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 Study Area

This section describes the existing biological and physical conditions of the BSA and the surrounding area. The BSA and project impact area are depicted in Figure 2-1.

3.1.2 Physical Conditions

Consistent with the original project NESMI (2006), the BSA exists within a highly developed industrial and urbanized area, composed of high-density residential housing, roads and bridges, rail facilities, and a Metrolink station. The topography of the BSA is generally flat, ranging from approximately 1,080 to 1,100 feet in elevation (Google Earth 2017). Soils in the BSA generally consist of sandy loams (U.S. Department of Agriculture 2017). The BSA is within the Santa Ana River watershed. No evidence of hydrology was observed in the BSA.

3.1.3 Biological Conditions in the Study Area

Consistent with the original project NESMI (2006), the BSA is dominated by industrial and urban development, and no natural vegetation communities are present within or near the BSA.

3.1.4 Natural Communities and Vegetation

Consistent with the original project NESMI (2006), no natural vegetation communities were observed in the BSA. Vegetation in the BSA consists of nonnative ornamental landscape vegetation along roadways, on residential properties, and in public access areas. Several undeveloped lots are present in the BSA and vegetated by nonnative and ruderal plant species.

3.1.5 Wildlife

Consistent with the original project NESMI (2006), suitable wildlife habitat in the BSA is limited to nonnative ornamental trees and the Mount Vernon Avenue Bridge. The potential for wildlife in the BSA is limited primarily to the bat and bird roosting and nesting habitat that exists at the bridge and in the ornamental vegetation within the BSA (e.g., palm trees). Bridge hinges and pier rafters may provide nesting and/or roosting habitat for bats and birds, and bridge/pier surfaces may serve as potential nesting habitat for birds. Trees may provide both nesting and roosting habitat for bats and birds. No wildlife was observed during supplemental field surveys. Wildlife observed during the 2006 surveys included American crow (*Corvus brachyrhynchos*), house sparrow (*Passer domesticus*), California ground squirrel (*Spermophillus beecheyi*), and painted lady (*Vanessa cardui*).

3.1.6 Aquatic Resources

The BSA was evaluated for the presence of aquatic resources that are under the jurisdiction of the U.S. Army Corps of Engineers (USACE) (1987, 2008), Regional Water Quality Control Board (RWQCB), and CDFW. A drainage/detention basin, constructed sometime between 2009 and 2011 (Google Earth 2017), was observed in front of the Metrolink station on the northeast corner of Mount Vernon Avenue and Second Street. This detention basin is not shown as a USGS blue line feature, is surrounded by developments, has negligible biological function and value, and is not considered jurisdictional, based on the judgment of the reviewing biologist. Consistent with the original project NESMI (2006), no aquatic resources were observed in the BSA.

3.1.7 Invasive Species

Invasive plant species occur within the BSA as ornamental landscape vegetation and ruderal vegetation in barren areas (i.e., empty lots). Invasive plant species observed within the BSA included Mexican fan palm (*Washingtonia robusta*), Peruvian pepper tree (*Schinus molle*), and nonnative grasses (e.g. *Avena* sp., *Bromus* sp.) (California Invasive Plant Council 2017).

3.1.8 Habitat Connectivity

Because of the highly developed nature of the BSA and the absence of habitat and natural comminutes, drainages, or other features that may be used by wildlife for movement, the project area is not considered to be located within or near a wildlife corridor and does not provide connectivity to wildlife.

3.2 Regional Species and Habitats and Natural Communities of Concern

Seventy-four special-status plant species, 54 animal species, and nine depleted natural communities are known to occur within the project region, based on database searches. A list of these species and vegetation communities, as well as habitat requirements, regulatory status, and potential to occur within the BSA, is provided in Appendix A. Determinations for likelihood of occurrence are based on the presence of suitable habitat, quality of habitat, geographic range, elevation, and species-specific tolerances to disturbances within the BSA.

4 – Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Habitats and Natural Communities of Special Concern

Because of the developed environment within the BSA, no habitat or natural communities of special concern exist within the BSA or surrounding area.

4.2 Special-Status Plant Species

Seventy-four federally listed, state listed, or non-listed special-status plant species are known to occur in the project region (see Appendix A). The plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on-site.

No federally listed, state listed, or non-listed special-status plants have the potential to occur in the BSA or be affected by the proposed project. Therefore, these species are not further discussed, and no avoidance or minimization measures are proposed for these species.

4.3 Special-Status Animal Species Occurrences

Fifty-four federally listed, state-listed, and non-listed special-status animal species are known to occur in the project region (see Appendix A). Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on-site.

Several special-status animal species were determined to have the potential to be present in the BSA, with several additional species discussed in this supplemental NESMI that were not discussed in the original 2006 NESMI. These species are discussed below. All avoidance and minimization measures have been updated to account for these additional species and ensure that all measures are consistent with current standard practices. These species and updated measures are discussed below.

Measures BIO-2 through BIO-4 supersede the bat-related measures presented in the 2006 NESMI. These updated measures are equal or superior to the measures included in the 2006 NESMI with respect to efficacy and addressing issues related to the presence of bats. They reflect current resource agency standards and practices.

4.4 Discussion of Animal Species: Coopers Hawk

Cooper's hawk (*Accipiter cooperii*) is a medium-sized hawk that specializes in hunting small birds in close quarters. It is a CDFW Watch List species (California Watch List species are species that were once California Species of Special Concern but no longer merit such status; they are monitored for additional information to clarify status). This species is a locally common breeder in residential and even urban habitats throughout Southern California if tall trees are present.

4.4.1 Survey Results

Although no Cooper's hawk were observed during original or supplemental field visits, the species in known to occur in the project region and may use the ornamental trees in the BSA for nesting. Therefore, it has the potential to occur in the BSA.

4.4.2 Project Impacts

The potential exists for direct and indirect impacts during construction. Direct impacts could result from the removal of occupied trees (i.e., active nesting sites) or construction noise, which could physically harm individuals. Indirect impacts generally are farther removed in time or distance. These include activities and disturbances that may cause a species to avoid the BSA and/or interfere with reproduction or foraging.

4.4.3 Avoidance and Minimization Efforts/Compensatory Mitigation

BIO-1: Within 7 days prior to the commencement of construction activities (if between January 15 and September 1), a qualified biologist shall perform a nesting bird survey that will consist of a site visit to determine whether there are active raptor nests within 500 feet of the project site. This survey shall also identify the species and, to the degree feasible, nesting stage (e.g., incubation of young, feeding of young, near fledging). Nests shall be mapped (not by using GPS because close encroachment may cause nest abandonment). If active nests are found, construction shall not occur initially within 500 feet of a raptor's nest until the nesting attempt has been completed and/or abandoned because of non-project-related reasons. The qualified biologist can subsequently reduce this buffer, based on professional experience related to observations of behavior and specific construction activities occurring near the nest. These surveys will be conducted concurrently with general nesting bird surveys outlined in BIO-7, below.

4.5 Discussion of Western Yellow Bat

Western yellow bat (*Lasiurus xanthinus*), a CDFW Species of Special Concern, is a solitary tree-roosting bat that may be migratory or present year-round throughout Southern California, although little information is known about its range. This species is typically associated with water features in open grassy areas and scrub as well as canyons and riparian habitats. Individuals usually roost in trees, hanging from the underside of leaves. They are commonly found in the southwestern United States, roosting in a skirt of dead palm fronds in native or nonnative palm trees.

4.5.1 Survey Results

Suitable roosting habitat is present within the BSA in the large palm trees. The potential exists for this species to roost in these trees as migrants or year-round inhabitants.

4.5.2 Project Impacts

Direct or indirect disturbance, in the form of tree disturbance, tree removal, or noise adjacent to trees, may affect this species. The measure below would ensure that project impacts would be avoided and minimized to the greatest extent possible.

4.5.3 Avoidance and Minimization Efforts/Compensatory Mitigation

BIO-2: To avoid impacts on any bats that may be roosting in palm trees within the project area, all direct impacts on palm trees shall be avoided during construction, and highly vibrative and/or noisy work shall be avoided near palm trees. If it is not possible to avoid direct impacts (e.g., tree removal, tree disturbance, tree trimming) or indirect impacts (e.g., noise, vibrations near trees) on palm trees, a qualified bat biologist shall survey the trees (e.g., conduct acoustic nighttime surveys) prior to disturbance to determine whether bats are roosting in the trees. If bats are found to be present, the bat biologist shall monitor construction activities to ensure that no bats are affected during construction. The qualified bat biologist may also provide other avoidance measures to ensure that all impacts on this species are avoided and minimized.

4.6 Discussion of Crevice-Dwelling Species

Crevice-dwelling species, such as some bat and bird species, are known to use bridge hinges and joints for roosting, nesting, and rearing young. Bridge crevices, which provide shelter for these species in the absence of natural crevice habitat, are commonly used by a variety of crevice-dwelling species. Crevice-dwelling species with potential to occur in the BSA, and designated as CDFW species of special concern, include pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumpos perotis californicus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), and various bird species (e.g., swifts and swallows).

4.6.1 Survey Results

The existing bridge joints/hinges within the bridge may provide roosting or nesting habitat for crevice-dwelling species such as bats and birds. Because of the level of traffic and disturbance in the area, as well as the disturbed and urban nature of the BSA, the potential for these species to occur is low to moderate. Although there is low to moderate potential for these species to occur at the bridge, some species are well adapted to disturbance and may have higher potential to occur.

4.6.2 Project Impacts

Removal of the bridge has the potential to directly affect species that may be roosting or nesting within the bridge joints and hinges, potentially causing direct mortality to any species that may be present. The measures below would ensure that project impacts would be avoided and minimized to the greatest extent possible.

4.6.3 Avoidance and Minimization Efforts/Compensatory Mitigation

BIO-3: A qualified bat biologist who is familiar with crevice-dwelling bat and bird species shall survey the project disturbance limits and Mount Vernon Avenue Bridge in June, prior to construction, to assess the potential for the bridge's use for bat roosting, bat maternity roosting, and bird roosting/nesting because maternity roosts and nests are generally formed in spring. The qualified bat biologist shall also perform pre-construction surveys within 2 weeks prior to construction because bat and bird roosts can change seasonally. These surveys will include a combination of structure inspections, exit counts, and acoustic surveys.

BIO-4: If recommended by the qualified bat biologist, to avoid indirect disturbance of bats and birds while roosting in areas that would be subject to, or adjacent to, impacts from construction activities, any portion of the structure that is deemed by a qualified bat biologist to have the potential bat or bird roosting habitat and may be affected by the proposed project shall have temporary bat and bird eviction and exclusion devices installed under the supervision of a qualified and permitted bat biologist prior to the initiation of construction activities. Eviction and subsequent exclusion will be conducted during the fall (September or October) to avoid trapping flightless young bats inside during the summer months or hibernating/overwintering individuals during the winter. Such exclusion efforts are dependent on weather conditions, take a minimum of 2 weeks to implement, and must be continued to keep the structures free of bats and birds until the completion of construction. All eviction and/or exclusion techniques shall be coordinated between the qualified bat biologist and the appropriate resource agencies (e.g., CDFW).

5 – Conclusions and Regulatory Determination

5.1 Federal Endangered Species Act Consultation Summary

An unofficial IPaC species list was requested on July 13, 2017 (Appendix B). No NMFS species list was required because of the location of the project area (see Section 2.2). According to the IPaC list, there is no critical habitat within the project area. The IPaC list, in addition to the nine-quadrangle CNDDB and CNPS list, provided the federally threatened, endangered, or candidate species listed below, which were incorporated into the effect analysis for the proposed project.

Plant Species: San Diego ambrosia (*Ambrosia pumila*), Nevin's barberry (*Berberis nevinii*), thread-leaved brodiaea (*Brodiaea filifolia*), salt marsh bird's-beak (*Chloropyron maritimum* ssp. *Maritimum*), slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *Sanctorum*), Gambel's water cress (*Nasturtium gambelii*), and Brand's star phacelia (*Phacelia stellaris*).

Animal Species: Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*), Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Ana sucker (*Catostomus santaanae*), California red-legged frog (*Rana aurora draytonii*), southern mountain yellow-legged frog (*Rana muscosa*), western yellow-billed cuckoo (*Coccyzus americanas occidentalis*), southwestern willow flycatcher (*Empidonax traillii extimus*), California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*).

Because there is no potential for these listed species to occur within the project BSA, no listed species are anticipated to be affected, either directly or indirectly, and no critical habitat is present. A “no effect” determination under the federal Endangered Species Act is proposed for all of the above-listed species.

5.2 Wetlands and Other Waters Coordination Summary

No jurisdictional wetlands or waters were observed in the BSA, and no jurisdictional waters are anticipated to be affected by the proposed project. Therefore, coordination with USACE, CDFW, and the RWQCB is not required.

5.2.1 Invasive Species

In compliance with Executive Order 13112, weed control would be performed to minimize the importation of nonnative plant material during and after construction. Eradication strategies would be employed should an invasion occur. Measures to address issues related to the abatement and eradication of invasive species would be included in the project design and contract specifications. These measures include measures BIO-5 and BIO-6, below.

> **BIO-5:** Inspection and cleaning of construction equipment shall be performed to minimize the importation of nonnative plant material. Eradication strategies (i.e., weed control) shall be implemented should an invasion of nonnative plant species occur.

BIO-6: After construction, species that have been listed as having a high or moderate rating on the California Invasive Plant Council's California Invasive Plant Inventory shall not be planted in any revegetated areas (California Invasive Plant Council 2006).

5.2.2 Bird Protection

In accordance with the provisions of the Migratory Bird Treaty Act and California Fish and Game Code, the following measure, in addition to aforementioned measures, would be incorporated in the proposed project:

BIO-7: Within 7 days prior to the commencement of construction activities (if between January 15 and September 1), a qualified biologist shall perform a nesting bird survey that will consist of one site visit to determine whether there are active songbird nests within 200 feet of the project footprint and raptor nests within 500 feet of the project footprint. This survey shall also identify the species and, to the degree feasible, nesting stage (e.g., incubation of young, feeding of young, near fledging). Nests shall be mapped (not by using GPS because close encroachment may cause nest abandonment). If active nests are found, construction shall not occur within 200 feet of the songbird's nest or within 500 feet of a raptor's nest, or an appropriate buffer established by the qualified biologist, until the nesting attempt has been completed and/or abandoned because of non-project-related reasons.

6 – References

California Department of Fish and Wildlife. 2017. *California Natural Diversity Database.* RareFind 5. San Bernardino South, Devore, San Bernardino North, Harrison Mountain, Fontana, Redlands, Riverside West, Riverside East, and Sunnymead quadrangles. Available: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed: June 26 and July 13, 2017.

California Department of Transportation. 2006. Natural Environment Study (Minimal Impacts). Mount Vernon Avenue Bridge Project.

California Native Plant Society. 2017. *Inventory of Rare and Endangered Plants* (online edition). Sacramento, CA. Accessed: Accessed: June 26 and July 13, 2017. Available: http://www.rareplants.cnps.org/.

California Invasive Plant Council. 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council: Berkeley, CA. Accessed: July 13, 2017. Available: www.cal-ipc.org.

Google Earth 2017. 3D terrain data layer, Accessed: June 26, 2017. Available: https://www.google.com/earth/.

U.S. Army Corps of Engineers Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Waterways Experiment Station.

U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. Version 2.0. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Report dated September 2008.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2017. *Web Soil Survey*. Accessed: June 26 and July 13, 2017. Available: http://websoilsurvey.nrcs.usda.gov/app/. Accessed: June 26 and July 13, 2017.

U.S. Fish and Wildlife Service. 2017. *Information, Planning, and Conservation System.* Available: http://ecos.fws.gov/ipac/. Accessed: June 26 and July 13, 2017. Available: https://ecos.fws.gov/ipac/.

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Appendix A: Special-Status Species with Potential to Occur

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COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
PLANTS				
Chaparral Sand-Verbena (*Abronia villosa* var. *aurita*)	-/-/1B.1	Annual herb. Sandy soils in chaparral, coastal scrub, and desert dunes; 75–1,600 meters (246–5,248 feet). Blooming period: January–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parish's Oxytheca (*Acanthoscyphus parishii* var. *parishii*)	-/-/4.2	Annual herb. Sandy or gravelly soils in chaparral and lower montane coniferous forest; 1,220–2,600 meters (4,000–8,500 feet). Blooming Period: June–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Mt. Pinos Onion (*Allium howellii* var. *clokeyi*)	-/-/1B.3	Perennial bulbiferous herb. Found in Great Basin scrub, pinyon and juniper woodland, meadows and seeps (edges). 1,385–1,800 meters (4,543–5,905 feet). Blooming period: April–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Singlewhorl Burrobrush (*Ambrosia monogyra*)	-/-/2B.2	Perennial shrub. Sandy soils in chaparral, coastal sage scrub, Sonoran desert scrub, and washes; 10–500 meters (328–1,640 feet). Blooming period: August–November.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Diego Ambrosia (*Ambrosia pumila*)	E/-/1B.1	Rhizomatous herb. Sandy loam or clay soils in chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; often in disturbed areas or sometimes alkaline areas. Can occur in creek beds, seasonally dry drainages, and floodplains; 20–415 meters (66–1,362 feet). Blooming period: April–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Marsh Sandwort (*Arenaria paludicola*)	E/E/1B.1	Perennial stoloniferous herb. Sandy soils and openings in marshes and swamps (freshwater or brackish); 3–170 meters (10–550 feet). Blooming Period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Diego Sagewort (*Artemisia palmeri*)	-/-/4.2	Perennial deciduous shrub. Sandy, mesic soils in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; 15–915 meters (50–3,000 feet). Blooming Period: February–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Western Spleenwort (*Asplenium vespertinum*)	-/-/4.2	Perennial rhizomatous herb. Rocky soils in chaparral, cismontane woodland, and coastal scrub; 180–1,000 meters (600–3,300 feet). Blooming Period: February–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Horn's Milk-vetch (*Astragalus hornii* var. *hornii*)	-/-/1B.1	Annual herb. Lake margins and alkaline soils in meadows, seeps, and playas; 60–850 meters (197–279 feet). Blooming period: May–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Nevin's Barberry (*Berberis nevinii*)	E/E/1B.1	Evergreen shrub. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub; 274–825 meters (898–2,707 feet). Blooming period: March–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Thread-leaved Brodiaea (*Brodiaea filifolia*)	T/E/1B.1	Perennial bulbiferous herb. Often found in clay soils in openings in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools; 25–1,120 meters (82–3,673 feet). Blooming period: March–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Round-leaved Filaree (*California macrophylla*)	-/-/1B.2	Annual herb. Clay soils in cismontane woodland and valley and foothill grassland; 15–1,200 meters (50–3,936 feet). Blooming period: March–May.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Catalina Mariposa Lily (*Calochortus catalinae*)	-/-/4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; 15–700 meters (50–2,300 feet). Blooming Period: February–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Palmer's Mariposa Lily (*Calochortus palmeri* var. *palmeri*)	-/-/1B.2	Perennial bulbiferous herb. Mesic soils in chaparral, lower montane coniferous forests, meadows and seeps; 1,000–2,390 meters (3,280–7,839 feet). Blooming period: April–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Plummer's Mariposa Lily (*Calochortus plummerae*)	-/-/4.2	Perennial bulbiferous herb. Granitic and rocky areas in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland; 100–1,700 meters (328–5,576 feet). Blooming period: May–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Bristly Sedge (*Carex comosa*)	-/-/2B.1	Perennial rhizomatous herb. Coastal prairie, marshes and swamps around lake margins, and valley and foothill grassland; 0–625 meters (0–2,000 feet). Blooming period: May–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Bernardino Mountains Owl's-clover (*Castilleja lasiorhyncha*)	-/-/1B.2	Hemiparasitic annual herb. Mesic areas in chaparral, upper montane coniferous forest, pavement pebble plain, riparian woodland, and meadows and seeps; 1,300–2,390 meters (4,269–7,839 feet). Blooming period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Payson's Jewel-flower (*Caulanthus simulans*)	-/-/4.2	Annual herb. Sandy and granitic soils in chaparral and coastal scrub; 90–2,200 meters (295–7,218 feet). Blooming period: February–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Smooth Tarplant (*Centromadia pungens* ssp. *Laevis*)	-/-/1B.1	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland; 0–640 meters (0–2,100 feet). Blooming period: April–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Salt Marsh Bird's-beak (*Chloropyron maritimum* ssp. *Maritimum*)	E/E/1B.1	Hemiparasitic annual herb. Coastal dunes and coastal salt marshes and swamps; 0–30 meters (0–90 feet). Blooming period: May–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Peninsular Spineflower (*Chorizanthe leptotheca*)	-/-/4.2	Annual herb. Alluvial fans or granitic areas in chaparral, coastal scrub, and lower montane coniferous forest; 300–1,900 meters (984–6,232 feet). Blooming period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)	-/-/1B.1	Annual herb. Sandy or rocky openings in in chaparral, coastal scrub, cismontane woodland, and valley and foothill grassland; 275–1,220 meters (902–4,001 feet). Blooming period: April–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
White-bracted Spineflower (*Chorizanthe xanti* var. *leucotheca*)	-/-/1B.2	Annual herb. Sandy or gravelly soils in coastal scrub alluvial fans, Mojavean desert scrub, and pinyon and juniper woodland; 300–1,200 meters (984–3,936 feet). Blooming period: April–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Small-flowered Morning-glory (*Convolvulus simulans*)	-/-/4.2	Annual herb. Friable clay soils or serpentine seeps in chaparral openings, coastal scrub, and valley and foothill grassland; 30–700 meters (98–2,297 feet). Blooming period: March–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Peruvian Dodder (*Cuscuta obtusiflora* var. *glandulosa*)	-/-/2B.2	Annual parasitic vine. Freshwater marshes and swamps, 15–280 meters (49–918 feet). Blooming period: July–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Snake Cholla (*Cylindropuntia californica* var. *californica*)	-/-/1B.1	Perennial stem succulent. Chaparral and coastal scrub; 30–150 meters (100–500 feet). Blooming Period: April–May.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Paniculate Tarplant (*Deinandra paniculata*)	-/-/4.2	Annual herb. Usually found in vernally mesic soils in coastal scrub, valley and foothill grassland, and vernal pools; 25–940 meters (82–3,084 feet). Blooming period: April–November.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Slender-horned Spineflower (*Dodecahema leptoceras*)	E/E/1B.1	Annual herb. Sandy soils in chaparral, cismontane woodland, and alluvial fan coastal scrub; 200–760 meters (656–2,493 feet). Blooming period: April–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Santa Ana River Woollystar (*Eriastrum densifolium* ssp. *Sanctorum*)	E/E/1B.1	Perennial herb. Sandy to gravelly soil in chaparral and coastal scrub in alluvial fans; 91–610 meters (299–2,001 feet). Blooming period: April–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Southern Sierra Woolly Sunflower (*Eriophyllum lanatum* var. *obovatum*)	-/-/4.3	Perennial herb. Sandy loam soils in lower montane coniferous forest and upper montane coniferous forest; 1,114–2,500 meters (3,600–8,200 feet). Blooming Period: June–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Hot Springs Fimbristylis (*Fimbristylis thermalis*)	-/-/2B.2	Perennial rhizomatous herb. Meadows and seeps (alkaline, near hot springs); 110–1,340 meters (360–4,400 feet) Blooming Period: July–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Pine Green-gentian (*Frasera neglecta*)	-/-/4.3	Perennial herb. Lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest; 1,400–2,500 meters (4,500–8,200 feet). Blooming Period: May–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Alvin Meadow Bedstraw (*Galium californicum* ssp. *Primum*)	-/-/1B.2	Perennial herb. Granitic to sandy soil in chaparral and lower montane coniferous forests; 1,350–1,700 meters (4,428–5,576 feet). Blooming period: May–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Johnston's Bedstraw (*Galium johnstonii*)	-/-/4.3	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland; 1,220–2,300 meters (4,001–7,544 feet). Blooming period: June–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Los Angeles Sunflower (*Helianthus nuttallii* ssp. *Parishii*)	-/-/1A	Perennial rhizomatous herb. Marshes and swamps (coastal salt and freshwater); 10–1,675 meters (30–5,500 feet). Blooming Period: August–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Urn-flowered Alumroot (*Heuchera caespitosa*)	-/-/4.3	Perennial rhizomatous herb. Rocky soils in cismontane woodland, lower montane coniferous forest, riparian forest (montane), upper montane coniferous forest; 1,155–2,650 meters (3,800–8,700 feet). Blooming Period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parish's Alumroot (*Heuchera Parishii*)	-/-/1B.3	Perennial rhizomatous herb. Found in lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder and rock field. 1,340–3,505 meters (4,396–11,499 feet). Blooming period: June–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Mesa Horkelia (*Horkelia cuneata* var. *puberula*)	-/-/1B.1	Perennial herb. Sandy and gravelly soils within maritime chaparral, cismontane woodland, and coastal scrub; 70–810 meters (229–2,657 feet). Blooming period: February–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Silver-haired Ivesia (*Ivesia argyrocoma* var. *argyrocoma*)	-/-/1B.2	Perennial herb. Found in Meadows and seeps, pebble plains, upper montane coniferous forest in pebble plains and meadows with other rare plants. 1,490–2,960 meters (4,888–9,711 feet). Blooming period: June–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parry's Sunflower (*Hulsea vestita* ssp. *Parryi*)	-/-/4.3	Perennial herb. Granitic or carbonate, rocky, openings in lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest; 1,370–2,895 meters (4,500–9,500 feet). Blooming Period: April–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
California Satintail (*Imperata brevifolia*)	-/-/2B.1	Perennial rhizomatous herb. Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, meadows and seeps (often alkali); 0–1,215 meters (0–3,985 feet). Blooming period: September–May.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southern California Black Walnut (*Juglans californica*)	-/-/4.2	Deciduous tree. Alluvial areas in chaparral, cismontane woodland, and coastal scrub; 50–900 meters (164–2,952 feet). Blooming period: March–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Duran's Rush (*Juncus duranii*)	-/-/4.3	Perennial rhizomatous herb. Mesic soils in montane coniferous forest, meadows, and seeps; 1,768–2,804 meters (5,799–9,197 feet). Blooming period: July–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coulter's Goldfields (*Lasthenia glabrata* ssp. *Coulteri*)	-/-/1B.1	Annual herb. Coastal salt marsh, coastal salt swamps, playas, vernal pools; 1–1,220 meters (3–4,001 feet). Blooming period: February–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Robinson's Pepper-grass (*Lepidium virginicum* var. *robinsonii*)	-/-/4.3	Annual herb. Openings in chaparral and sage scrub; below 885 meters (2,900 feet). Blooming Period: January–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *Ocellatum*)	-/-/4.2	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland; 30–1,800 meters (98–5,904 feet). Blooming period: March–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Lemon Lily (*Lilium parryi*)	-/-/1B.2	Perennial bulbiferous herb. Mesic areas in upper and lower montane coniferous forest, meadows and seeps, and riparian forest; 1,220–2,745 meters (4,001–9,003 feet). Blooming period: July–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parish's Desert-thorn (*Lycium parishii*)	-/-/2B.3	Perennial shrub. Coastal scrub and Sonoran desert scrub; 135–1,000 meters (440–3,280 feet). Blooming Period: March–April.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Parish's Bush-mallow (*Malacothamnus parishii*)	-/-/1A	Deciduous shrub. Chaparral, coastal scrub; 305–455 meters (1,000–1,500 feet). Blooming period: June–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Hall's Monardella (*Monardella macrantha* ssp. *Hallii*)	-/-/1B.3	Perennial rhizomatous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; 730–2,195 meters (2,394–7,199 feet). Blooming period: June–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Pringle's Monardella (*Monardella pringlei*)	-/-/1A	Annual herb. Coastal scrub; 300–400 meters (984–1,312 feet). Blooming period: May–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Rock Monardella (*Monardella saxicola*)	-/-/4.2	Perennial rhizomatous herb Rocky, usually serpentinite soils in closed-cone coniferous forest, chaparral, lower montane coniferous forest; 500–1,800 meters (1,640–6,000 feet). Blooming Period: June–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
California Muhly (*Muhlenbergia californica*)	-/-/4.3	Perennial rhizomatous herb. Mesic soils and seeps and streambeds; 100–2,000 meters (328–6,560 feet). Blooming period: June–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Little Mousetail (*Myosurus minimus* ssp. *Apus*)	-/-/3.1	Annual herb. Valley and foothill grassland as well as alkaline vernal pools; 20–640 meters (65–2,100 feet). Blooming period: March–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Gambel's Water Cress (*Nasturtium gambelii*)	E/T/1B.1	Perennial rhizomatous herb. Freshwater to brackish marshes and swamps; 5–330 meters (15–1,200 feet). Blooming period: April–October.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*)	-/-/1B.2	Perennial stem succulent. Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; 425–1,800 meters (1,400–6,000 feet). Blooming Period: April–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parish's Yampah (*Perideridia parishii* ssp. *Parishii*)	-/-/2B.2	Perennial herb. Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest; 1,465–3,000 meters (4,800–9,800 feet). Blooming Period: June–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Mojave Phacelia (*Phacelia mohavensis*)	-/-/4.3	Annual herb. Sandy or gravelly soils in cismontane woodland, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland; 1,400–2,500 meters (4,500–8,200 feet). Blooming Period: April–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Brand's Star Phacelia (*Phacelia stellaris*)	C/-/1B.1	Annual herb. Coastal dunes, coastal scrub; 1–400 meters (3–1,312 feet). Blooming period: March–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Woolly Chaparral-pea (*Pickeringia montana* var. *tomentosa*)	-/-/4.3	Evergreen shrub. Gabbroic, granitic, or clay soils in chaparral; 0–1,700 meters (0–5,577 feet). Blooming period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Narrow-petaled Rein Orchid (*Piperia leptopetala*)	-/-/4.3	Perennial herb. Cismontane woodland, lower and upper montane coniferous forest; 380–2,225 meters (1,246–7,298 feet). Blooming period: May–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Parish's Gooseberry (*Ribes divaricatum* var. *parishii*)	-/-/1A	Perennial deciduous shrub. Riparian woodland; 65–300 meters (200–1,000 feet). Blooming Period: February–April.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coulter's Matilija Poppy (*Romneya coulteri*)	-/-/4.2	Perennial rhizomatous herb. Chaparral and coastal scrub; often in burned areas; 20–1,200 meters (65–3,936 feet). Blooming period: March–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Black Bog-rush (*Schoenus nigricans*)	-/-/2B.2	Perennial herb. Marshes and swamps (often alkaline); 150–2,000 meters (500–6,550 feet). Blooming Period: August–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Chaparral Ragwort (*Senecio aphanactis*)	-/-/2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, and alkaline flats; 15–800 meters (49–2,624 feet). Blooming period: January–April.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Gabriel Ragwort (*Senecio astephanus*)	-/-/4.3	Perennial herb. Rocky slopes in coastal bluff scrub and chaparral; 400-1,500 meters (1,300-5,000 feet). Blooming Period: May–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Bear Valley Checkerbloom (*Sidalcea malviflora* ssp. *Dolosa*)	-/-/1B.2	Perennial herb. Lower montane coniferous forest (meadows and seeps), meadows and seeps, riparian woodland, upper montane coniferous forest (meadows and seeps); 1,495-2,685 meters (6,300–8,800 feet). Blooming Period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Salt Spring Checkerbloom (*Sidalcea neomexicana*)	-/-/2B.2	Perennial herb. Alkaline and mesic soils within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas; 15–1,530 meters (49–5,020 feet). Blooming period: March–June.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Chickweed Oxytheca (*Sidotheca caryophylloides*)	-/-/4.3	Annual herb. Sandy soil in lower montane coniferous forest; 1,114–2,600 meters (3,654–8,528 feet). Blooming period: July–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Prairie Wedge Grass (*Sphenopholis obtusata*)	-/-/2B.2	Perennial herb. Mesic soils within cismontane woodland as well as meadows and seeps; 300–2,000 meters (984–6,562 feet). Blooming period: April–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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Laguna Mountains Jewel-flower (*Streptanthus bernardinus*)	-/-/4.3	Perennial herb. Chaparral and lower montane coniferous forest; 670–2,500 meters (2,198–8,202 feet). Blooming period: May–August.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southern Jewel-flower (*Streptanthus campestris*)	-/-/1B.3	Perennial herb. Rocky areas in chaparral, lower montane coniferous forest, pinyon and juniper woodland; 900–2,300 meters (2,953–7,546 feet). Blooming period: April–July.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Bernardino Aster (*Symphyotrichum defoliatum*)	-/-/1B.2	Perennial rhizomatous herb. Near ditches, streams, and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernally mesic valley and foothill grassland; 2–2,040 meters (7–6,693 feet). Blooming period: July–November.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Sonoran Maiden Fern (*Thelypteris puberula* var. *sonorensis*)	-/-/2B.2	Perennial rhizomatous herb. Meadows, seeps, and streams; 50–610 meters (164–2,001 feet). Blooming period: January–September.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
INVERTEBRATES				
Crotch bumble bee (*Bombus crotchii)*	–/SA/–	Nests underground. Coastal California east to the Sierra–Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Morrison bumble bee (*Bombus morrisoni*)	–/SA/–	From the Sierra–Cascade Ranges into Southern California and eastward across the intermountain west. Food plant genera include Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Busck's Gallmoth (*Carolella busckana)*	–/SA/–	Stem boring moth known to occur in southern California. May be a stem borer of native weed and scrub species.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Desert Cuckoo Wasp (*Ceratochrysis longimala*)	–/SA/–	California endemic species known to occur in southern California in Los Angeles and Riverside counties in chaparral and scrub habitats. Hosts unknown.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Greenest Tiger Beetle (*Cicindela tranquebarica viridissima*)	-/SA/-	Riparian woodlands. Inhabits the woodlands adjacent to the Santa Ana River basin. Usually found in open spots between trees.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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Andrew's Marble Butterfly *(Euchloe hyantis andrewsi*)	–/SA/–	Lower montane coniferous forest. Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake in the San Bernardino Mountains, San Bernardino County, at elevations of 5,000 to 6,000 ft. Host plants are *Streptanthus bernardinus* and *Arabis holboellii* var *pinetorum*; larval foodplant is *Descurainia richardsonii*.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Delhi Sands Flower–loving Fly (*Rhaphiomidas terminatus abdominalis*)	E/–/–	Found within 12 distinct locations within the cities of Colton, Rialto, and Fontana. Only found in areas with Delhi sands and is typically associated with the following native plants: California Buckwheat (*Eriogonum fasciculatum*), Telegraph Plant *(Heterotheca grandiflora*), and California Croton (*Croton californica*). Low tolerance to disturbances.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Riverside Fairy Shrimp (*Streptocephalus woottoni*)	E/-/-	Restricted to deep seasonal vernal pools, vernal pool–like ephemeral ponds, and stock ponds as well as other human-modified depressions. Species prefers warm water pools that have low to moderate dissolved solids, are less predictable, and remain filled for extended periods of time. Basins that support Riverside fairy shrimp are typically dry a portion of the year but usually filled by late fall, winter, or the spring rains. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation. In Riverside County, found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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FISH				
Santa Ana Sucker (*Catostomus santaanae*)	T/CSC/-	Previously found in the Los Angeles, San Gabriel, and Santa Ana river systems of Southern California. Most streams are fairly small and shallow, with currents ranging from swift to sluggish. Streams are subject to periodic severe flooding. Species is abundant where waters are cool and unpolluted, though it can occur where waters are fairly turbid. Often occurs where boulders, rubble, and sand are the main bottom materials. Associated with growths of filamentous algae and chara. The species feeds mostly on algae, especially diatoms, and detritus; small numbers of aquatic insect larvae are also taken, mostly by the larger individuals (Greenfield et al. 1970). Spawning takes place from early April to early July. The combination of early maturity, a protracted spawning period, and high fecundity allows Santa Ana Suckers to quickly repopulate streams following periodic severe floods, which can decimate the populations. Small tributaries of the Santa Ana River are potentially important spawning habitat.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Arroyo Chub (*Gila orcuttii*)	-/CSC/-	Occurs within warm, fluctuating streams and slow-moving sections of streams containing sandy or muddy bottoms. In Riverside County, occurs within Santa Ana and Santa Margarita River tributaries.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Santa Ana Speckled Dace (*Rhinichthys osculus* ssp. 3)	-/CSC/-	Formerly widespread in mountain portions of the Santa Ana, San Gabriel, and Los Angeles watersheds. Populations were scattered in foothill areas and rare in lowlands. This subspecies of speckled dace is assumed extirpated from most of the Santa Ana River (CDFG 1995; Moyle 2002). They were last seen in the Santa Ana River near Rialto in 2001 (Abbas, pers. comm.).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
AMPHIBIANS				
San Gabriel Slender Salamander (*Batrachoseps gabrieli*)	-/CSC/-	Only known to occur in the San Gabriel Mountains. Can be found hiding in moist places under rocks and in wood, fern fronds, and soils at the base of talus slopes. Occurs on talus slopes surrounded by conifer and montane hardwood species. It is found at elevations of 1,200–5,085 feet	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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California Red-legged Frog (*Rana aurora draytonii*)	T/CSC/-	This large frog inhabits the quiet pools of streams, marshes, and ponds up to about 4,920 feet in elevation. Adults feed on aquatic and terrestrial insects, snails, and a wide variety of other aquatic prey. Will also move up to 1 mile through riparian communities under wet conditions, such as rainfall. It prefers shorelines with extensive vegetation, and is probably very vulnerable to the introduction of exotic competitors such as bullfrogs (*Rana catesbeiana*), crayfish, and a variety of nonnative fish.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southern Mountain Yellow-legged Frog (*Rana muscosa*)	E/E/-	Southern California population persists as remnants in small streams in the San Gabriel, San Bernardino, and San Jacinto Mountains. Species' historical elevation range was about 1,200–7,500 feet, with remaining populations only toward the upper end of that range. Inhabits varied lakes and streams but avoids the smallest streams. Shows a tendency toward open stream and lakeshores that slope gently for the first 2 to 3 inches of depth. Rarely found far from water, though data on movement and ability to recolonize sites are lacking.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Western Spadefoot (*Spea hammondii)*	-/CSC/-	Found primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. It is found at sea level to 4,500 feet in elevation.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
REPTILES				
Silvery Legless Lizard (*Anniella pulchra pulchra*)	-/CSC/-	Habitat is primarily areas with sandy or loose, loamy soils, under the sparse vegetation of beaches, chaparral, or pine-oak woodland or open, well-shaded terraces in mature riparian natural communities. Leaf litter is commonly present. Soil disturbances (e.g., from agriculture or mining) as well as requirements for soil moisture and relatively cool microclimates limit distribution and account, in part, for local decline and extirpation (Jennings and Hayes 1994).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southern California Legless Lizard (*Anniella stebbinsi*)	-/CSC/-	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation in broadleaved upland forest, chaparral, coastal dunes, and coastal scrub. Distinct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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California Glossy Snake (*Arizona elegans occidentalis*)	-/CSC/-	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Orange-throated Whiptail *(Aspidoscelis hyperythra)*	-/CSC/-	Most California populations occur on or adjacent to floodplains or the terraces of streams that are in or by open sage scrub and chaparral communities. The presence of perennial shrubs appears to be important, with the most strongly associated species being California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), and black sage (*S. mellifera*). Termites are reported to constitute 57%–95% of the diet, and foraging microsites are primarily under shrubs in leaf litter (Brattstrom 2000).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coastal Whiptail *(Aspidoscelis tigris stejnegeri)*	-/-/-	Habitats include a disturbed coastal sage scrub-chaparral mix and cleared areas of chaparral with a sandy/rocky substrate.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southern Rubber Boa *(Charina umbratica*)	-/T/-	Limited to San Bernardino and San Jacinto Mountains. Occurs in a variety of montane forest habitats and montane chaparral and wet meadow habitats. Typically found near streams or wet meadows. Species requires moist, loose soil for burrowing. Has also been known to find cover in rotting logs.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Diego Banded Gecko (*Coleonyx variegatus abbotti*)	-/CSC/-	Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Red-diamond Rattlesnake *(Crotalus ruber*)	-/CSC/-	Occurs as far north as Puente Hills in Yorba Linda and as far south as Loreto in Baja California, Mexico. Occurs within chaparral, woodland, grassland, and desert areas. Prefers boulders and rock outcrops in areas of heavy brush, such as chamise chaparral.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Bernardino ringneck snake (*Diadophis punctatus modestus*)	-/SA/-	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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Western Pond Turtle (*Emys marmorata*)	-/CSC/-	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet. Needs basking sites and suitable (e.g., sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg laying.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coast Horned Lizard (*Phrynosoma blainvillii*)	-/CSC/-	Found in arid and semi-arid climates in chaparral and coastal sage scrub, primarily below 2,000 feet in elevation. Critical factors are loose soils with a high percentage of sand; an abundance of native ants or other insects, especially harvester ants (*Pogonomyrmex* spp.); and the availability of both sunny basking spots and dense cover for refuge.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coast Patch-nosed Snake (*Salvadora hexalepis virgultea*)	-/CSC/-	Brushy or shrubby vegetation in coastal Southern California scrub. Requires small mammal burrows for refuge and overwintering sites.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Two-striped Garter Snake (*Thamnophis hammondii*)	-/CSC/-	It is often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. It will also inhabit large riverbeds if riparian vegetation is available and even occur in artificial impoundments if both aquatic vegetation and suitable prey (small amphibians and fish) are present (Jennings and Hayes 1994).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
BIRDS				
Cooper's Hawk (*Accipiter cooperii*)	-/WL/-	This medium-sized hawk specializes in hunting small birds in closed quarters. The species is now a locally common breeder throughout the Los Angeles Basin in residential and even urban habitats if tall trees are present.	Breeding: HP Migrants/ Foraging: HP	Potential breeding habitat is present in the ornamental trees; potential foraging habitat is present throughout the BSA.
Tricolored Blackbird (*Agelaius tricolor*)	-/CSC/-	Range is restricted to the Central Valley and surrounding foothills throughout coastal and some inland localities in Southern California; also scattered sites in Oregon, western Nevada, central Washington, and western coastal Baja California. Breeds in dense colonies and may travel several kilometers to secure food for nestlings; males defend small territories within colonies and mate with one to four females. They are itinerant breeders, nesting more than once at different locations during the breeding season.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)	-/WL/-	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Bell's Sage Sparrow (*Artemisiospiza belli belli*)	-/WL/-	Typically found in chaparral, sagebrush, and other open habitat with shrubs. A casual transient along the coast of Southern California.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Burrowing Owl (*Athene cunicularia*)	-/CSC/-	Inhabits open, dry, and nearly or quite level grassland. Prairie, the desert floor, and shrubland should be considered potential habitat if shrub cover is below 30% (CBOC 1997). In coastal Southern California, a substantial fraction of the birds are found in microhabitats that have been highly altered by man, including flood control and irrigation basins, dikes, and banks; abandoned fields surrounded by agriculture; and road cuts and margins. Strong association between burrowing owls and burrowing mammals, especially ground squirrels (*Spermophilus* spp.); however, they also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures (Haug et al. 1993).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Oak Titmouse (*Baeolophus inornatus*)	-/SA/-	Cavity nester found in oak woodlands.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Ferruginous Hawk (*Buteo regalis*)	-/WL/-	This large relative of the common red-tailed hawk is primarily a winter visitor to California, with the bulk of its breeding range in the Great Basin to the east. Small numbers breed in the northeast corner of the state. Ferruginous hawks feed on a variety of prey but mostly small mammals, hunting in open country from low perches.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Swainson's Hawk (*Buteo swainsoni*)	-/T/-	This slim relative of the common red-tailed hawk nests today primarily in low-intensity agricultural areas of the western United States, migrating through Central America to Argentina and Brazil each fall and spring.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

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Western Yellow-billed Cuckoo (*Coccyzus americanas occidentalis*)	FC/E/-	Only a handful of tiny populations remain in all of California today. Losses are tied to the obvious loss of nearly all suitable habitat, but other factors may also be involved. Relatively broad, well-shaded riparian forests are utilized, although it tolerates some disturbance. A specialist to some degree on tent caterpillars, with a remarkably fast development of young covering only 18 to 21 days from incubation to fledging.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E/E/-	Highly restricted distribution in Southern California as a breeder. It occupies extensive riparian forests, wet meadows, and lower montane riparian habitats, primarily below 4,000 feet. Occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows (*Salix* spp.), *Baccharis* spp., Arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.) Russian olive (*Eleagnus* spp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* spp.).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
California Horned Lark (*Eremophila alpestris actia*)	-/WL/-	Breeds throughout coastal California and the San Joaquin Valley. This small bird breeds in bare and short-grass areas in open grassland, desert washes, wetland edges, areas above the tree line in mountains, along dirt roads and other disturbed areas, and even in recently burned areas. It is well adapted to certain types of human disturbance, such as agriculture and cattle grazing, though it cannot tolerate intensive activity at the nest site, which is located directly on the ground.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Merlin (*Falco columbarius*)	-/WL/-	Clumps of trees or windbreaks are required for roosting in open country. Found within estuaries, Great Basin grassland, valley and foothill grassland, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, and farms and ranches.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Bald Eagle (*Haliaeetus leucocephalus*)	D/E,CFP/-	Primarily in or near sea coasts, rivers, swamps, and large lakes. Eats mainly fish and carrion. Formerly nested locally along the coast of Southern California. This species is a localized winter resident and rare migrant, with only very rare breeding efforts in coastal Southern California (e.g., Lake Skinner, Riverside County).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Yellow-breasted Chat (*Icteria virens*)	-/CSC /-	Nests in low thickets in dense riparian habitats. It eats a variety of invertebrates. It is a local and uncommon breeder and rare migrant across Southern California.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Loggerhead Shrike (*Lanius ludovicianus*)	-/ CSC /-	Found as a common resident and winter visitor throughout California in lowland and foothill habitats where it frequents open areas with sparse shrubs and trees.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Coastal California Gnatcatcher (*Polioptila californica californica*)	T/CSC/-	Generally prefers open sage scrub with California sagebrush (*Artemisia californica*) as a dominant or co-dominant species. Nest placement typically in areas with less than 40% slope gradient. Monogamous pairs tend to stay in the same locale. Both parents build the nest, incubate, and care for young.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Yellow Warbler (*Setophaga petechia*)	-/CSC/-	Nests in the upper story of riparian habitats in Southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of habitats at that time.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Lawrence's Goldfinch (*Spinus lawrencei*)	-/WL/-	Nests in open oak or other arid woodland and chaparral near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Least Bell's Vireo (V*ireo bellii pusillus*)	E/E/-	Found as a summer resident of Southern California where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet. Species selects dense vegetation low in riparian zones for nesting, most frequently in riparian stands between 5 and 10 years old. When mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows as well as other plant species (Goldwasser 1981).	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
MAMMALS				
Pallid Bat (*Antrozous pallidus*)	-/CSC/-	Throughout Southern California, from coast to mixed conifer forest, grassland, shrubland, woodland, and forest habitats. Most common in open, dry habitats with rocky areas for roosting; year-long resident in most of range. The species is not thought to migrate; therefore, maternity colonies and winter roosts are expected to occur in the vicinity of each other. Roost sites are rock crevices, old buildings, bridges, caves, mines, and hollow trees.	HP	Potentially suitable habitat is present within bridge crevices and openings in the BSA.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)	-/CSC/-	Sandy herbaceous areas, usually in association with rocks and course gravel in southwest California, including coastal and desert border areas in San Bernardino, Riverside, and San Diego Counties. Elevation ranges from sea level to 6,000 feet. Vegetation community preferences include sage scrub, chamise-redshank chaparral, mixed chaparral, sage brush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, annual grassland.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*)	-/CSC/-	Found on the margins of the Mojave Desert, the slopes of the San Bernardino Mountains, and the edge of the Colorado Desert, ranging south to Mexico. Species prefers chaparral but will occur in open sandy areas.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*)	E/CSC/-	Prefers soils of sandy loam, occasionally sandy gravel, in open to moderately shrubby habitats, especially intermediate seral stages of alluvial fan sage scrub up to 1,970 feet from active channels.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Stephens' Kangaroo Rat (*Dipodomys stephensi*)	E/T/-	Stephens' kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50% during the summer. Species avoids dense grasses (e.g., nonnative bromes [*Bromus* spp.]) and is more likely to inhabit areas where annual forbs disarticulate in the summer and leave more open areas. Soil type also is an important habitat factor. As a fossorial (burrowing) animal, the species typically is found in sandy and sandy loam soils with a low clay-to-gravel content, although there are exceptions where it can utilize the burrows of Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*). Tends to avoid rocky soils. Slope is a factor in occupation; tends to use flatter slopes (i.e., < 30%) but may be found on steeper slopes in trace densities (i.e., < 1 individual per hectare). Furthermore, the species may use steeper slopes for foraging but not for burrows. In general, the highest abundances of species occur on gentle slopes of less than 15%.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Western Mastiff Bat (*Eumops perotis californicus*)	-/CSC/-	Found throughout the coastal lowlands up to drier mid-elevation mountains; avoids the Mohave and Colorado Deserts. Habitats include dry woodlands, shrublands, grasslands, and occasionally even developed areas. This big bat forages in flight, primarily taking insects of the order Hymenoptera (bees, wasps, and ants). Most prey species are relatively small, low to the ground, and weak-flying. For roosting, appears to favor rocky, rugged areas in lowlands where abundant suitable crevices are available for day roosts. There appears to be little use of night roosts. Roost sites may be in natural rock, tall buildings, large trees, or elsewhere but must be at least 2 inches wide and 12 inches deep, narrowing to, at most, 1 inch at the upper end. Nursery roosts must be deeper yet. All roosts open well up on a cliff or other steep face, at least 10 feet vertically above the substrate, to allow flight from the roost. Roosts may be communal (with up to 100 individuals) or solitary but commonly include other species of bats. This species appears to not migrate but performs seasonal movements.	HP	Potentially suitable habitat is present within bridge crevices and openings in the BSA.
San Bernardino Flying Squirrel (*Glaucomys sabrinus californicus*)	-/CSC/-	Known from black oak– or white fir–dominated woodlands between 5,200–8,500 feet in the San Bernardino and San Jacinto Mountains. May be extirpated from San Jacinto Mountains. Need cavities in trees/snags for nests and cover. Needs nearby water.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Western Yellow Bat (*Lasiurus xanthinus*)	-/CSC/-	Some populations may be migratory, although some individuals appear to be present year-round. Species probably does not hibernate. Associated with water features in open grassy areas and scrub as well as canyon and riparian situations. Thought to be noncolonial. Individuals usually roost in trees, hanging from the underside of a leaf, and are commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and nonnative palm trees.	HP	Potentially suitable habitat is present within palm trees and other trees in the BSA.
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)	-/CSC/-	Common throughout state, except at high elevations in herbaceous and desert shrub areas, sage scrub, grasslands, open chaparral, and woodland/forest areas; relatively disturbance tolerant.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
San Diego Desert Woodrat (*Neotoma lepida intermedia*)	-/CSC/-	Dry and/or sunny shrublands, especially areas with cacti and abundant rocks and crevices (but not required). Does not require a source of drinking water. Sage scrub communities are frequently occupied.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)	-/CSC/-	Rarely found in southwestern California. Found in southeastern deserts of California, with portions of western Riverside County apparently on the periphery of its range. Species roosts in high rock crevices and on bridges, roofs, buildings, and cliffs. Forages primarily on large moths, especially over water. Habitats are arid.	HP	Potentially suitable habitat is present within bridge crevices and openings in the BSA.
Southern Grasshopper Mouse (*Onychomys torridus ramona*)	-/CSC/-	Wide variety of dry to moderately dry scrub, grassland, and woodland habitats across Southern California, exclusive of the more mesic coastal areas from Ventura County north.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
White-eared Pocket Mouse (*Perognathus alticolus alticolus*)	-/CSC/-	Known only to occur in the western portion of the San Bernardino Mountains, at high altitudes from approximately 3,400–6,000 feet. It is found in sage brush and other shrubs in open yellow-pine forest where bracken fern grows and pinyon-juniper woodland habitat; also chaparral and sage scrub areas. Most common on northern slopes of San Bernardino and San Gabriel Mountains. Habitat consists of north-facing slopes within chaparral and sage scrub habitats.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)	-/CSC/-	Habitat requirements for this subspecies are poorly known. It inhabits areas of open ground but prefers fine sandy soils (for burrowing). Is also found commonly on gravel washes and stony soils, within brush and woodland habitats. It is rarely found on sites with a high cover of rocks.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
American Badger (*Taxidea taxus*)	-/CSC/-	Associated with large grassland and sparse sage scrub habitats. Occupies large dens/burrows and forages on small mammals (e.g., ground squirrels, rabbits), snakes, birds, and insects.	HA	No suitable habitat is present within the BSA. This species is not expected to occur. No further constraint is present.
Habitats of Concern (Depleted Natural Communities)				
Southern Coast Live Oak Riparian Forest	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern Cottonwood Willow Riparian Forest	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern Mixed Riparian Forest	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern Riparian Forest	CNDDB	n/a	HA	Habitat not observed in the BSA.

COMMON/ SCIENTIFIC NAME	STATUS[a] FED/STATE/ CNPS	SPECIES REQUIREMENTS	SPECIFIC HABITAT[b] PRESENT/ ABSENT	RATIONALE
Southern Riparian Scrub	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern Sycamore Alder Riparian Woodland	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern Willow Scrub	CNDDB	n/a	HA	Habitat not observed in the BSA.
Southern California Arroyo Chub/Santa Ana Sucker Stream	CNDDB	n/a	HA	Habitat not observed in the BSA.
Riversidian Alluvial Fan Sage Scrub	CNDDB	n/a	HA	Habitat not observed in the BSA.

[a] Status Codes

Federal

E = Federally listed; Endangered
PE = Proposed Endangered
T = Federally listed; Threatened
FC = Federal Candidate for Listing
FSC = Federal Species of Concern
D = Delisted

State

T = State listed; Endangered
E = State listed; Threatened
SC = State Candidate for Listing
R = Rare (Native Plant Protection Act)
CSC = California Species of Special Concern
SA = California Special Animal
CFP = California Fully Protected Species
WL = Watch List

CNPS

1A = Plants that are presumed extinct in California
1B = Plants that are rare, threatened, or endangered in California and elsewhere
2 = Plants that are rare, threatened, or endangered in California but more common elsewhere
3 = Plants about which we need more information
4 = Limited distribution (Watch List)
0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California

CNDDB = Vegetation communities classified as depleted

[b] Habitat Presence/Absence Codes

P = The species is present
HP = Habitat is or may be present. The species may be present
HA = No habitat present, and no further work needed
A = This species is absent

APPENDIX B: USFWS IPaC Species List

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IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

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

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

Location

San Bernardino County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

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

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

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

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

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

5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

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

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat Dipodomys merriami parvus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat Dipodomys stephensi (incl. D. cascus) No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher Polioptila californica californica There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker Catostomus santaanae There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly Rhaphiomidas terminatus abdominalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Gambel's Watercress Rorippa gambellii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4201	Endangered
San Diego Ambrosia Ambrosia pumila There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered

Santa Ana River Woolly-star Eriastrum densifolium ssp. sanctorum No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6575	Endangered
Slender-horned Spineflower Dodecahema leptoceras No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4007	Endangered

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird Selasphorus sasin https://ecos.fws.gov/ecp/species/9637	Migrating
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	Wintering
Bell's Vireo Vireo bellii https://ecos.fws.gov/ecp/species/9507	Breeding
Black-chinned Sparrow Spizella atrogularis https://ecos.fws.gov/ecp/species/9447	Breeding
Brewer's Sparrow Spizella breweri https://ecos.fws.gov/ecp/species/9291	Year-round
Burrowing Owl Athene cunicularia https://ecos.fws.gov/ecp/species/9737	Year-round

Cactus Wren Campylorhynchus brunneicapillus https://ecos.fws.gov/ecp/species/8834	Year-round
California Spotted Owl Strix occidentalis occidentalis https://ecos.fws.gov/ecp/species/7266	Year-round
Calliope Hummingbird Stellula calliope https://ecos.fws.gov/ecp/species/9526	Breeding, Migrating
Costa's Hummingbird Calypte costae https://ecos.fws.gov/ecp/species/9470	Year-round
Flammulated Owl Otus flammeolus https://ecos.fws.gov/ecp/species/7728	Breeding
Fox Sparrow Passerella iliaca	Year-round
Lawrence's Goldfinch Carduelis lawrencei https://ecos.fws.gov/ecp/species/9464	Year-round
Le Conte's Thrasher toxostoma lecontei https://ecos.fws.gov/ecp/species/8969	Year-round
Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175	Year-round
Lesser Yellowlegs Tringa flavipes https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike Lanius ludovicianus https://ecos.fws.gov/ecp/species/8833	Year-round
Long-billed Curlew Numenius americanus https://ecos.fws.gov/ecp/species/5511	Wintering
Mountain Plover Charadrius montanus https://ecos.fws.gov/ecp/species/3638	Wintering
Nuttall's Woodpecker Picoides nuttallii https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse Baeolophus inornatus https://ecos.fws.gov/ecp/species/9656	Year-round
Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Wintering
Rufous Hummingbird selasphorus rufus https://ecos.fws.gov/ecp/species/8002	Migrating
Rufous-crowned Sparrow Aimophila ruficeps https://ecos.fws.gov/ecp/species/9718	Year-round
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Wintering

Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Wintering
Williamson's Sapsucker Sphyrapicus thyroideus https://ecos.fws.gov/ecp/species/8832	Wintering

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

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

Facilities

Wildlife refuges

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

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

APPENDIX C: Photo Log

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Appendix C

Mount Vernon Avenue Bridge Project Supplemental NESMI Photo Log

	**Photo Number**: 1 **Date**: June 26, 2017 **Description**: Empty lot located near Kingman St. and Mount Vernon Ave. Photo facing southwest.
	**Photo Number**: 2 **Date**: June 26, 2017 **Description**: Empty lot located near Kingman St. and Mount Vernon Ave. Photo facing southeast.

	**Photo Number**: 3 **Date**: June 26, 2017 **Description**: Fourth Street just west of Mount Vernon Ave. Photo facing east.
	**Photo Number**: 4 **Date**: June 26, 2017 **Description**: Fourth Street just west of Mount Vernon Ave. Photo facing west.

	**Photo Number**: 5 **Date**: June 26, 2017 **Description**: Mount Vernon Ave. at Rialto Ave. Photo facing east.
	**Photo Number**: 6 **Date:** June 26, 2017 **Description**: Metrolink station on 2nd St. at Mount Vernon Ave. Photo facing north.

	**Photo Number**: 7 **Date**: June 26, 2017 **Description**: Rail yard adjacent to and underneath Mount Vernon Ave. Bridge. Photo facing east.
	**Photo Number**: 8 **Date**: June 26, 2017 **Description**: Rail yard adjacent to and underneath Mount Vernon Ave. Bridge. Photo facing west.