BIOLOGICAL RESOURCE EVALUATION
FOR
CENTURY COMMUNITIES BUFFALO GROVE PROJECT,
CITY OF UPLAND,
SAN BERNARDINO COUNTY, CALIFORNIA

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CERTIFICATION STATEMENT

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

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SECTION 1. INTRODUCTION

HANA Resources, Inc. (HANA) was retained by Century Communities to prepare this Biological Resources Evaluation (BRE) report for the proposed Buffalo Grove Project. Following completion of the reconnaissance-level biological survey, HANA prepared this study report that: 1) summarized existing conditions; 2) assessed the potential presence of sensitive biological resources; 3) analyzed the potential impacts on those resources; 4) recommended, as appropriate, best management practices (BMPs), avoidance and protection measures, and mitigation measures to avoid, eliminate and/or reduce environmental impacts to less than significant levels; and 5) identified biological permits or approvals that the project may need. The study includes: 1) methods and results of the literature review and field surveys; 2) figures depicting the size and location of plant communities and other sensitive biological resources; 3) a complete flora and fauna compendium; and 4) site photographs. The survey area includes the proposed project site and a 500-foot zone out from the proposed project site. This survey area is referred to as the Biological Study Area (BSA). The proposed project will impact the entire BSA.

1.1. SITE LOCATION

The site covers 4.57 acres in the city of Upland, San Bernardino County, CA (**Exhibit I,** *Site Vicinity Map*) and is located east of the intersection of CA State Route 66 and Central Avenue and is on the APNs 1007-061-23 and 1007-061-08 (**Exhibit II,** *Project Area Map*). The site is located on the United States Geological Survey (USGS) Ontario Quadrangle, 7.5-Minute Topographic map. The surface elevation of the site ranges from approximately 1,324 to 1,368 feet above mean sea level (MSL). The site is located within Section 11 in Township 1 South-Range 8 West, San Bernardino Meridian.

1.2. PROJECT DESCRIPTION

The proposed project involves construction of a 72 detached unit residential subdivision in the city of Upland at 1814 W Foothill Blvd. This will require removal of the structures still standing from The Buffalo Inn, which occupied the lot previously. Further identified necessary improvements for the proposed project include removal of existing trees and vegetation, moderate grading operation, construction of retaining walls, wet/dry utilities, street work, landscaping, and flatwork.

Exhibit I: Site Vicinity Map

Exhibit II: Project Area Map

Century Communities - Buffalo Grove

Exhibit II: Project Area

1814 W. Foothill Blvd (4.57-Acres)

1 inch =102 feet

0 50 100 Feet

SECTION 2. REGULATORY OVERVIEW

2.1. Federal Statutes, Regulations and Executive Orders

Endangered Species Act (ESA)

The federal Endangered Species Act of 1973 (Title 16, United States Code [U.S.C.] §§ 1531-1543) (ESA), as amended, designates and provides for protection of listed threatened and endangered plant and animal species, and their critical habitat. The US Fish and Wildlife Service (USFWS), in the Department of the Interior, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), in the Department of Commerce, share responsibility for administration of the ESA. These responsibilities include listing and delisting species, designating critical habitat, and formulating recovery plans. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Section 9 (Prohibited Acts)

Once a species is listed, section 9 of the ESA makes it unlawful for any person, including private and public entities, to "take" species listed as endangered or without a permit issued pursuant to section 10 or an incidental take statement issued pursuant to section 7. Section 9 defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include substantial habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."

ESA section 9's take prohibitions apply to listed wildlife and fish species, but not to plants. Endangered plants are not protected from take, although it is unlawful to remove, possess, or maliciously damage or destroy them on federal lands. Removing or damaging listed plants on state and private lands in knowing violation of state law, or in the course of violating a state criminal trespass law, also is illegal under the ESA.

Section 10 (Incidental Take Permits and Habitat Conservation Plans)

An incidental take permit pursuant to section 10(a)(1)(B) is required when non-Federal, otherwise lawful activities, including lawful project development, will result in take of threatened or endangered wildlife. Under this provision, the USFWS and/or NMFS may, where appropriate, authorize the taking of federally listed wildlife or fish if such taking occurs incidentally during otherwise legal activities. Section 10(a)(2)(B) requires an application for an incidental take permit to include a Habitat Conservation Plan (HCP). The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate avoidance, minimization, and mitigation measures to address the effects of the authorized incidental take. Section 10 provides a clear regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests and non-Federal governmental agencies.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, U.S.C. sections 703 - 712), as amended, implements various treaties and conventions between the United States (U.S.) and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. The MBTA makes it unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined in regulations implementing

the MBTA as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to carry out these activities." The MBTA prohibits the collection and destruction of a migratory bird, its nest, and birds or eggs contained in the nest. The USFWS' Migratory Bird Permit Memorandum (MBPM-2) dated April 15, 2003, clarifies that destruction of most unoccupied bird nests is permissible under the MBTA; exceptions include nests of federally listed threatened or endangered migratory birds, bald eagles, and golden eagles. Take under the MBTA does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The USFWS has statutory authority and responsibility for enforcing the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. If compatible with the preservation of bald and golden eagles, the Secretary of the Interior may permit the taking, possession and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of wildlife, agricultural or other interests. The Secretary of the Interior may authorize the take of golden eagle nests, which interfere with resource development or recovery operations. Bald eagles may not be taken for any purpose unless the Secretary issues a permit prior to the taking.

Clean Water Act (CWA)

The federal Clean Water Act (33 U.S.C. §§ 1251-1376) (CWA) is the principal federal law governing pollution control and water quality of the nation's waterways. It establishes the basic structure for regulating discharges of pollutants into "Waters of the United States" (Waters of the U.S.) and for regulating water quality and establishing water quality standards for surface waters. Sections 401, 402, and 404 of the CWA are pertinent to surface and coastal, Waters of the U.S. For purposes of Section 404 permitting under the CWA, "Waters of the U.S.", are comprised of those wetland and non-wetland bodies of water that meet the criteria set forth in 33 Code of Federal Regulations (CFR) § 328.3, as interpreted by a number of court opinions and guidance, including Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (SWANCC), consolidated cases Rapanos v. United States (Rapanos), and Carabell v. United States (Carabell), 547 U.S. 715 (2006), and joint guidance issued by USACE and United States Environmental Protection Agency (EPA) in light of judicial decisions, including the joint guidance memorandum regarding Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States (December 12, 2008)(2008 Regulatory Guidance).

Section 404 – Discharge of Dredge and Fill Requirements

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into Waters of the U.S. The USACE implementing regulations define "dredged material" as material that is excavated or dredged from Waters of the U.S. The CWA implementing regulations define "fill material" as material placed in Waters of the U.S. where the material has the impact of either replacing any portion of Waters of the U.S. with dry land or changing the bottom elevation of any portion of a Waters of the U.S. Examples include discharges of rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure for development projects in Waters of the U.S.

Section 401 – Water Quality Certification

Although the CWA is a federal law, Section 401 of that law recognizes that states have the primary authority and responsibility for setting surface water quality standards and requires the U.S. Army Corps

of Engineers to obtain a state certification that their permits for discharge or dredge and fill material do not violate state water quality standards. Section 401 of the CWA requires every applicant for a Section 404 permit resulting in any discharge of dredge or fill material into Waters of the U.S. to provide a certification that any discharges will comply with the applicable state water quality standards set pursuant to the CWA and applicable state law.

2.2. State Statutes and Regulations

California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) (California Fish and Game Code § 2050 et seq.) was enacted in 1984 to parallel the federal ESA and allows the Fish and Game Commission to designate species, including plants, as "threatened" or "endangered." The CESA states that all native species of fishes, amphibians, reptiles, birds, mammals, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. Unlike the ESA, the CESA does not include listing provisions for invertebrate species.

CESA makes it illegal to import, export, take, possess, purchase, sell, or attempt to do any of those actions to species that are designated as threatened, endangered, or candidates for listing, unless permitted by CDFW. Section 2080 of the California Fish and Game Code prohibits take of any species that the Commission determines to be an endangered species or a threatened species. "Take" is defined in section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Under section 2081 of CESA, CDFW may permit take or possession of threatened, endangered, or candidate species for scientific, educational, or management purposes, and may also permit take of these species that is incidental to otherwise lawful activities if certain conditions are met. Some of the conditions for issuance of permits allowing incidental take are that the adverse effects of the take must be minimized and fully mitigated, adequate funding must be ensured for implementation of identified mitigation, and that the activity shall not jeopardize the continued existence of the listed species. CESA emphasizes early consultation to avoid potential impacts on candidate and listed endangered and threatened species, and to develop appropriate mitigation to offset project caused losses of listed species populations and their essential habitats.

California Fish and Game Code §§ 1600-1616

Pursuant to §§ 1600–1616 of the California Fish and Game Code, the CDFW regulates all substantial diversions, obstructions, or changes to the natural flow or the bed, channel, or bank of any river, stream, or lake, which provides habitat and supports fish or wildlife. CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation" (California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 1, § 1.72). "Bank" means the slope or elevation of land that bounds the bed of the stream in a permanent or longstanding way, and that confines the stream water up to its highest level. "Lake" includes "natural lakes or man-made reservoirs."

Rivers, streams, lakes, and riparian vegetation that provide habitat for fish and wildlife species are subject to jurisdiction by the CDFW under §§ 1600-1616 of the California Fish and Game Code. Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Section 2785(e) defines "riparian

habitat" as lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source. CDFW regulates the bed, bank to bank, as well as associated riparian vegetation, and fish and wildlife resources. CDFW has interpreted jurisdictional boundaries to be defined by the tops of stream banks (i.e., the limit of stream influence) and/or the limit of the canopy of riparian vegetation (outer drip line) that is hydrologically connected to river, stream, or lake, whichever is greatest. As a result, the area of CDFW jurisdiction is usually greater than the active channel and overlaps and extends beyond the USACE jurisdiction. Isolated wetlands not associated with a river, stream or lake are not protected under §§ 1600 et seq. of the California Fish and Game Code. In addition, CDFW does not have regulatory authority on Tribal Lands.

2.3. Regional and Local Ordinances, Plans and Policies

City of Upland General Plan

Implementation of the General Plan policies will assist in minimizing adverse conditions to biological resources for the City. A key objective of the overall General Plan, adopted in September 2015, is to emphasize “growing green” and ensure environmental sustainability in terms of Upland’s outdoor spaces and natural resources. The General Plan, in particular, in its Open Space-Conservation, Focus Areas, and Land Use Elements include policies designed to limit potential impacts on biological resources over the long term.

SECTION 3. METHODOLOGY

3.1. LITERATURE REVIEW

Prior to performing the field surveys, a desktop literature review was performed to review existing documentation relevant to the Biological Study Area (BSA). The BSA is defined as the site and a 500-foot buffer zone outside of but contiguous with the site. The most recent records of the Information for Planning and Consultation (IPaC) database, managed by the U.S. Fish and Wildlife Service (USFWS 2025); California Natural Diversity Database (CNDDB), managed by the California Department of Fish and Wildlife (CDFW 2025); and the Inventory of Rare and Endangered Plants of California, maintained by the California Native Plant Society (CNPS 2025b) were reviewed for the quadrangles containing (i.e., Ontario, California USGS 7.5 minute quadrangles) and surrounding the BSA (i.e., Glendora, Mount Baldy, Cucamonga Peak, San Dimas, Guasti, Yorba Linda, Prado Dam, Corona North; California USGS 7.5 minute quadrangles). Due to the large area searched by databases and close proximity to the San Gabriel Mountains, the CNPS database search was further filtered by elevation to exclude species that occur at elevations much greater than the BSA. These databases contain records of reported occurrences of federal- or state-listed as endangered or threatened species, proposed endangered or threatened species, former Federal Special of Concern (FSC), California Species of Special Concern (CSC), or otherwise special-status species or sensitive habitat that may occur within or in the immediate vicinity of the BSA.

3.2. SOILS

Soil maps for the site were referenced online to determine the types of soil found on the site from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025). Soils are determined in accordance with categories set forth by the U.S. Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025).

3.3. POTENTIAL FOR OCCURRENCE

3.3.1. Criteria

A vegetation community or special-status species is considered to potentially occur in a BSA if its known geographic range includes part of the BSA or an adjacent USGS 7.5-minute quadrangle and/or if the general habitat or environmental conditions (e.g., soil type, etc.) required for the species are present. The criteria for evaluating the potential for occurrence (PFO) on a site is presented in **Table 1**, *Criteria for Evaluating Special-Status Species Occurrences*. Additionally, databases such as iNaturalist, eBird, and CalFlora were utilized to determine if species have modern occurrences documented within or near the BSA (iNaturalist 2025, eBird 2025, CalFlora 2025).

Table 1. Criteria for Evaluating Special-Status Species Occurrences

Potential for Occurrence	Criteria
Absent	Species was not observed during focused surveys conducted at an appropriate time for identification of the species, or species is restricted to habitats or environmental conditions that do not occur within the site.
Low	Historical records for this species do not exist within the immediate vicinity of the site (approximately 5-miles), and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate	Either a historical record exists of the species within the immediate vicinity of the site (approximately 5-miles) and marginal habitat exists on the site, or the habitat requirements or environmental conditions associated with the species occur within the site, but no historical records exist within 5-miles of the site.
High	Both a historical record exists of the species within the site or its immediate vicinity (approximately 5-miles), and the habitat requirements and environmental conditions associated with the species occur within the site.
Present	Species was detected within the site at the time of the survey.

3.3.2. Status Codes

A list of abbreviations used to help determine the significance of biological resources potentially occurring in the BSA is provided in **Table 2**, *Abbreviations for Federal- and State-listed Special-status Species*.

Table 2. Abbreviations for Federal- and State-listed Special-status Species

Designation	Abbreviation	Explanation
Federal	**FE**	Federally listed; Endangered
	FT	Federally listed; Threatened
	FC	Federal Candidate for listing
	BGEPA	Bald and Golden Eagle Protection Act
State	**SE**	State listed; Endangered
	ST	State listed; Threatened
	SC-T	State Candidate for Threatened listing
	SC-E	State Candidate for Endangered listing
	RARE	State listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
	SC-RARE	State Candidate for Rare listing
	SSC	State Species of Special Concern
	SNC	State Natural Communities rarity ranking: 1-3 are considered sensitive, R is Rare.
	BCC	Bird of Conservation Concern
CNPS CRPR	**List 1A**	Plants presumed to Extinct in California
	List 1B	Plants Rare and Endangered in California and throughout their range
	List 2	Plants Rare, Threatened or Endangered in California but more common elsewhere in their range
	List 3	Plants about which we need more information; a review list
	List 4	Plants of limited distribution; a watch list
CNPS CRPR Extensions	**0.1**	Seriously Endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)

Designation	Abbreviation	Explanation
	0.2	Fairly Endangered in California (20-80 percent of occurrences threatened)
	0.3	Not Very Endangered in California (less than 20 percent of occurrences threatened)

3.4. BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

The field survey was conducted in the BSA to identify any potential for occurrence of sensitive species, vegetation communities, or habitats to support sensitive wildlife species. The survey was conducted on foot between 0630 and 0915 hours on April 8, 2025. Photographs of the BSA were recorded to document existing conditions (**Appendix A,** *Site Photographs*). Weather conditions during the survey included temperatures ranging from approximately 54 to 62 degrees Fahrenheit, 0 percent cloud cover, no precipitation, and wind speeds between 1 to 2 mph. HANA Associate Biologist Mr. Jose Olvera and Staff Biologist Ms. Miranda Scolaro conducted the general reconnaissance survey. Data forms from this field survey can be found in **Appendix B**, *Biological Reconnaissance Survey Field Forms*.

3.4.1. Vegetation

Plant communities in the BSA were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Holland (1986) or Sawyer et al. (2009). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 2012, Jepson 2025). A comprehensive list of the plant species observed during the survey is presented in **Appendix C**, *Plant & Wildlife Species Observed/Detected Onsite*.

3.4.2. Wildlife

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (undisturbed native habitat, wildlife trails, etc.) or in habitats with the potential to support state- and/or federal-listed or proposed listed species. Notes were made on the general habitat types, species observed, and the conditions of the site. A list of the wildlife species observed during the site visit is included as **Appendix C.**

3.4.2.1. Burrowing Owl Phase I Habitat Assessment

Following a general reconnaissance survey, a Phase I habitat assessment and Phase II burrow survey for the BUOW was conducted on the project site and its 500-foot buffer. This assessment involved searching for suitable habitat and potential burrows according to survey guidelines outlined in the California Department of Fish and Wildlife's (CDFW) 2012 Staff Report on Burrowing Owl Mitigation. Descriptions of suitable habitat and recommendations from the California Burrowing Owl Consortium's (CBOC) 1997 Burrowing Owl Survey Protocol and Mitigation Guidelines were also consulted.

During the survey, the general condition and the presence and condition of any suitable habitat within the project area and buffer were recorded. Pedestrian surveys were conducted to achieve complete visual coverage, with transect lines walked 20 meters apart. This distance was reduced as needed to account for variations in vegetation and topography that limited visibility. Adhering to CDFW guidelines, a minimum distance of 50 meters was maintained from any observed BUOW or burrows occupied by owls. The

presence and location of observed BUOW, owl signs, occupied burrows, non-occupied potential burrows, and potential man-made surrogate shelters (e.g., culverts, pipes, debris piles) were documented. Buffer areas inaccessible by pedestrian survey were thoroughly scanned for BUOW presence and sign via binoculars. While not detailed in this report, subsequent focused BUOW surveys will be conducted to confirm the presence of owls and to establish their specific numbers, behaviors, and habitat use on the project site, if any. These follow-up surveys (Phase III: Burrowing Owl Surveys, Census, and Mapping) will adhere to the same guidelines.

3.4.3. USACE, SWRQCB, and CDFG Preliminary Jurisdictional Assessment

Prior to beginning the field preliminary delineation, a 50-foot-to-the-inch scaled topographic map, scaled aerial photograph, and the Ontario 7.5-minute USGS topographic quadrangle map were examined to determine the locations of potential areas of U.S. Army Corps of Engineers (USACE), California State Water Resources Quality Control Board (SWRQCB), and/or California Department of Fish and Game (CDFG) jurisdiction. HANA biologists examined the BSA to identify potential USACE jurisdiction pursuant to Section 404 and 401 of the Clean Water Act and CDFG jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. No jurisdictional drainages/areas were found onsite.

SECTION 4. RESULTS

4.1. LITERATURE REVIEW

4.1.1. Soils

After review of the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2025) (**Appendix D**, *USDA Natural Resources Conservation Service Web Soil Survey*), it was determined that the BSA is composed of the following soil type:

Soboba gravelly loamy sand 0 to 9 percent slopes
The Soboba gravelly loamy sand experiences a mean annual precipitation of 10 to 20 inches and a mean annual air temperature of 61 to 63 degrees Fahrenheit. These soils can be found at elevations of 720 to 2,650 feet. The soil is composed of gravelly loamy sand, very gravelly loamy sand, and very stony sand. The Soboba gravelly loamy sand parent material is alluvium derived from granite. The soil is excessively drained and has a low runoff potential. This soil is not hydric.

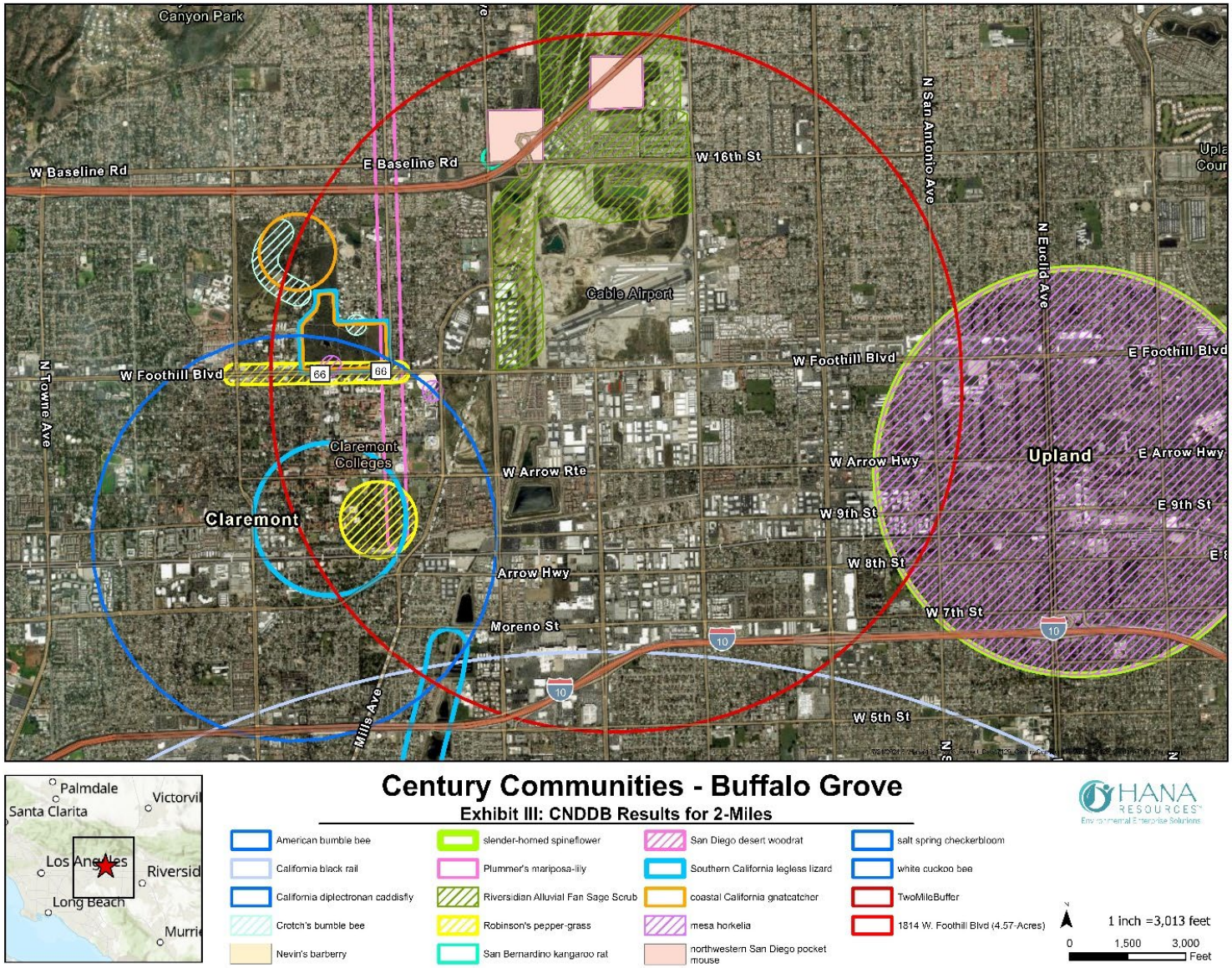
4.2. POTENTIAL FOR OCCURRENCE

A map of the CNDDB database occurrences is included in **Exhibit III**, *CNDDB Results for 2 Miles*. In one instance, multiple species were documented within the same geographic area resulting in a polygon (dark blue circle) that contains four (4) species. The species recorded here include the following:

- American bumble bee (*Bombus pensylvanicus*)
- California diplectronan caddisfly (*Diplectrona californica*)
- White cuckoo bee (*Neolarra alba*)
- Salt spring checkerbloom (*Sidalcea neomexicana*).

The CNDDB database search did not yield the BUOW as a species of potential occurrence within the BSA. In accordance with the 2012 burrowing owl staff report's recommendation to check a variety of databases for regional occurrence information, both modern (<20 years) and historical observations reported through eBird and iNaturalist were also reviewed (CDFW 2012). This species has been reported in the neighboring cities of Claremont, Ontario, and Rancho Cucamonga. Some verified sightings have been as recent as 2023 and are less than two (2) miles from the BSA. This, coupled with the presence of suitable grassland habitat, ample ground squirrel burrows and potential man-made refugia onsite, has led to the consideration of the BUOW as a species with a moderate potential for occurrence within the BSA.

Exhibit III: CNDDB Results for 2 Miles



4.2.1. Vegetation

Vegetation

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable. These communities may or may not contain special-status plants or their habitat.

The literature review resulted in findings of one (1) vegetation community that has been known to occur within the two-mile area, which is presented in **Table 3**, *Sensitive Vegetation Communities*. This sensitive vegetation community, Riversidean Alluvial Fan Sage Scrub, was not detected within the BSA. This community has no potential for occurrence within the BSA.

Table 3. Sensitive Vegetation Communities

Plant Community Name	PFO	Description	Site Factors
Riversidean Alluvial Fan Sage Scrub	No	Desert subshrub species with a mixture of scalebroom (*Lepidospartum squamatum*), white sage (*Salvia apiana*), buckwheat (*Eriogonum spp*.) and *Encelia* spp. In disturbed areas, *Opuntia* spp., chaparral yucca (*Yucca whipplei*), *Rhus* spp. may be present.	Alluvial fans and dry washes in interior areas of the Mojave Desert Section, found near developed areas and often have a history of ground disturbance. Mapped sparsely in the High Desert Plains and Hills Subsection on low-gradient slopes.

4.2.2. Plants

The literature review resulted in a list of forty (40) special-status plant species that have been known to occur within the BSA and database search area (two-miles for IPAC and CNDDB, nine quads for CNPS RPI), presented in **Table 4**, *Special-Status Plant Species*. Of the forty (40) species found during the literature review, all forty (40) have no potential for occurrence in the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDB and Jepson eFlora occurrence records.

4.2.3. Wildlife

The literature review resulted in a list of fifteen (15) special-status wildlife species that have been known to occur within the BSA and surrounding two miles, which is presented in **Table 5**, *Special-Status Wildlife Species*. Of the fifteen (15) species, one (1) was considered to have *moderate* potential, three (3) were considered to have *low* potential, and eleven (11) were considered to have *no* potential to occur within the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDB, CalFlora, iNaturalist, and eBird occurrence records.

Table 4. Special-Status Plant Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
Listed Endangered, Threatened, Candidate and State Rare Plants: **Plants with official status under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and/or the Native Plant Protection Act (NPPA). A species may have other sensitive designations in addition to their federal or state listing.**								
Berberis nevinii	Nevin's barberry	FE, SE, CRPR: 1B.1	Nevin's barberry is a perennial evergreen shrub that grows in two habitat types. In the alluvial scrub community, it grows on sandy and gravelly substrates along the margins of dry washes. In the chaparral community, it grows on steep, north-facing slopes with coarse soils and rocky slopes. It has also been found in cismontane woodlands, riparian scrub, and coastal sage scrub. This listed plant flowers from March to June.	No	899 – 2,706	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable geographic and habitat conditions, such as rocky slopes and sandy substrates, for which this species is associated.
Brodiaea filifolia	thread-leaved brodiaea (=threadleaf clusterlily)	FT, SE, CRPR: 1B.1	Thread-leaved brodiaea is a perennial bulbiferous herb that typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grasslands, mixed native/non-native grasslands, and alkali grasslands plant communities in association with clay, loamy sand, or alkaline silty-clay soils. This plant grows on various substrates ranging from clay to fine sand. It occurs in open valley and foothill grasslands, at the edge of vernal pools, flood plains, playas and openings in chaparral, cismontane woodlands or coastal scrub. This listed plant flowers from March to June.	No	82 – 3,674	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks ideal soil and habitat conditions for which this species is associated. There are no modern (<20 years) occurrences of this species in the area.
Dodecahema leptoceras	slender-horned spineflower	FE, State CE, CRPR: 1B.1,	Slender-horned spineflower is an annual herb that grows on sandy soil of alluvium in flood plains and in washes. This spineflower is associated with the eastern-most occurrence of coastal sage scrub, known as alluvial fan sage scrub. Cryptogrammic crusts are frequently present in areas occupied by this plant. This listed plant flowers from April to June.	No	656 – 2,493	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA does not contain suitable habitat, such as flood plains and washes, and the modern (<20 years) distribution of the species in the area limits recruitment.
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	FE, CE CRPR: 1B.1	Santa Ana River woollystar is a perennial herb that is found only within open washes and early-successional alluvial fan scrub on open slopes above main watercourses on fluvial deposits where flooding and scouring occur at a frequency that allows the persistence of open shrublands. Suitable habitat is comprised of a patchy distribution of gravelly soils, sandy soils, rock mounds and boulder fields. Suitable habitat typically contains low amounts of clay, silt, and micro-organic materials. These areas typically maintain a perennial plant cover of less than 50%. This listed plant flowers from April to September.	No	298 – 2,001	Yes	Yes	**No Potential for occurrence in the BSA.** Although the BSA falls within this species' general distribute range, the BSA lacks suitable habitat such as open washes and scrub dominated slopes. Modern occurrences of this species (<20 years) in the area are limited to washes and areas adjacent to rivers.
Sensitive Plants: **These plants have no official status under the ESA, the CESA, and/or the NPPA; however, they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.**								
Abronia villosa var. aurita	chaparral sand-verbena	CRPR: 1B.1	Chaparral sand-verbena is an annual herb that is found in sandy soils of chaparral, coastal scrub, and desert dunes. This sensitive plant flowers from January to September.	No	262 – 5,248	Yes	No	**No Potential for occurrence in the BSA.** The BSA does not contain suitable habitat for this species. The only nearby occurrence is limited to the Prado Dam area.
Amaranthus watsonii	Watson's amaranth	CRPR: 4.3	Watson's amaranth is an annual herb that generally occurs in wetlands and riparian zones. It can also occur in creosote bush scrub or coastal dunes or sandy inland areas. This plant flowers from August to September.	No	0 – 328	No	No	**No Potential for occurrence in the BSA.** The BSA does not contain suitable habitat and is not within this species' elevation range. There are no nearby historical observations.
Androsace elongata ssp. acuta	California androsace	CRPR: 4.2	California androsace is an annual herb that occurs within northern coastal scrub, coastal sage scrub, foothill woodlands, and chaparral. It can often be found on dry, grassy slopes and flowers from February to April.	No	328—3,937	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species. Most occurrences within Southern California are documented further east within the San Bernardino mountains.
Asplenium vespertinum	western spleenwort	CRPR: 4.2	Western spleenwort is a rhizomatous fern that grows in moist, shady, rocky places, such as the shadows of overhanging boulders in chaparral, cismontane woodlands, and coastal sage scrub. This plant reproduces from February to June.	No	590—3,280	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable moist habitat. Historical data places the species nearby, however, there have been no recent

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
								(<20 years) sightings in the area.
Atriplex coulteri	Coulter's saltbush	CRPR: 1B.2	Coulter's saltbush occurs along ocean bluffs in coastal bluff scrub, on coastal dunes, and on ridge tops, clay soils and alkaline low places in coastal scrub and valley and foothill grasslands. This sensitive plant flowers from March to October.	No	10 – 1,508	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat and soil conditions for this species. There have been no modern (<20 years) or historical occurrences in the area.
Calochortus plummerae	Plummer's mariposa lily	CRPR: 4.2	Plummer's mariposa lily is a perennial bulbiferous herb that prefers openings in chaparral, cismontane woodlands, coastal scrub, valley and foothill grasslands, and lower montane coniferous forests. It is found on dry, rocky slopes and soils and brushy areas and can be very common after fire. This sensitive plant flowers from May to July.	No	328 – 5,576	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA does not contain suitable habitat for this species. Nearby occurrences are limited to undisturbed green spaces.
Calochortus weedii var. intermedius	intermediate mariposa lily (=Weeds mariposa lily)	CRPR: 1B.2	Intermediate mariposa lily is a perennial bulbiferous herb that occurs on dry, rocky open slopes and rock outcrops in coastal scrub and chaparral. Intermediate mariposa lily occurs in valley and foothill grasslands only after burns. Sandstone outcrops in chaparral habitats below 2,000 feet are preferred habitats in Orange County. This sensitive plant flowers from May to July.	No	344 – 2,804	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks adequate habitat for this species. Nearby occurrences are limited to mountainous areas within Chino Hills State park and the San Gabriel mountains.
Centromadia pungens ssp. laevis	smooth tarplant	CRPR: 1B.1	Smooth tarplants is an annual herb that occurs in a variety of alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley and foothill grasslands. It is also found in disturbed places. This sensitive plant flowers from April to September.	No	0 – 2,099	Yes	No	**No Potential for occurrence in the BSA.** The BSA, while containing disturbed habitat that can be utilized by this species, lacks the habitat for which this species is typically found. Additionally, the species lacks modern occurrences (<20 years) in the area.
Chorizanthe leptotheca	Peninsular spineflower	CRPR: 4.2	Peninsular spineflower is an annual herb that is typically found in alluvial fan and granitic substrates in chaparral; however, it is also found in coastal scrub and lower montane coniferous forests. This sensitive plant flowers from May to August.	No	984 – 6,232	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species. Few modern (<20 years) observations of this species have been recorded in San Bernardino County and none have occurred nearby.
Chorizanthe parryi var. parryi	Parry's spineflower	CRPR: 1B.1	Parry's spineflower is an annual herb that is found in sandy or rocky soils and openings in coastal scrub, chaparral, cismontane woodlands, and valley and foothill grasslands. Sometimes it is found at an interface of two vegetation types such as chaparral and oak woodlands. Often it is associated with alluvial conditions. This sensitive plant flowers from April to June.	No	902 – 4,002	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, as it is often associated with alluvial conditions which are not present on site.
Cladium californicum	California sawgrass	CRPR: 2B.2	California sawgrass is a perennial rhizomatous herb that is found in meadows and seeps and alkaline or freshwater marshes and swamps. This sensitive plant flowers from June to September.	No	197 – 2,837	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks the necessary riparian habitat for which is species is associated.
Convolvulus simulans	small-flowered morning-glory	CRPR: 4.2	Small-flowered morning-glory is an annual herb that grows on friable clay soils which are typically devoid of shrubs, in openings in chaparral, coastal sage scrub, and valley and foothill grasslands. This sensitive plant flowers from March to July.	No	98 – 2,296	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species and there are no modern (<20 years) observations documenting it within the area.
Deinandra paniculata	paniculate tarplant	CRPR: 4.2	Paniculate tarplant is an annual herb that is found in coastal scrub and valley and foothill grasslands often in clay or clay loam soils or vernally moist situations, and frequently in disturbed sites. It is usually found in vernally mesic sites. Sometimes found in vernal pools or on Mima mounds near them. Habitat is variously described as vernal pool margins, grasslands, open habitats such as roadsides and disturbed areas and inland from the coast within its range on mesas and dry foothills. This sensitive plant flowers from April to November.	Yes	82 – 3,083	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks the habitat for which this species is typically associated. While it can inhabit disturbed sites, nearby occurrences are limited to Mt. Rubidoux and Chino Hills State park.
Dudleya multicaulis	many-stemmed dudleya	CRPR: 1B.2	Many-stemmed dudleya is a perennial herb that is often associated with clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, valley and foothill grasslands, and coastal sage scrub in heavy soils, often clay. This sensitive plant flowers from April to July.	No	49 – 2,591	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks habitat for this species, as dudleya is associated with barren, rocky ridgelines, canyons, and clay soils.

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						Elevation Range	General Distribution	
Fimbristylis thermalis	hot springs fimbristylis	CRPR: 2B.2	Hot springs fimbristylis is a perennial rhizomatous herb that is found in alkaline meadows and seeps near hot springs. This sensitive plant flowers from July to September.	No	361 – 4,395	Yes	No	**No Potential for occurrence in BSA.** The BSA lacks suitable habitat; nearby occurrences limited to hot spring seeps and meadows in the San Gabriel mountains.
Horkelia cuneata var. puberula (=*Horkelia cuneata ssp. puperula*)	mesa horkelia	CRPR: 1B.1	Mesa horkelia is a perennial herb that is found in sandy or gravelly sites of maritime chaparral, coastal scrub, and cismontane woodlands. This sensitive plant flowers from February to September.	No	230 – 2,657	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species and there are no modern (<20 years) observations documenting it within the area.
Imperata brevifolia	California satintail	CRPR: 2B.1	California satintail is a perennial rhizomatous herb that occurs in mesic sites within chaparral, coastal scrub, Mojavean desert scrub, meadows, and seeps (often alkali), and riparian scrub. This sensitive plant flowers from September to May.	No	0 – 3,985	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, and historical data and modern (<20 years) occurrences for this species are limited to San Gabriel mountains and foothills.
Juglans californica var. californica	Southern California Black Walnut	CRPR: 4.2	This plant is a species of deciduous tree that occurs in woodlands and forests below 2,000 feet in elevation. In riparian corridors, this species prefers dryer slopes that are not prone to flooding, but they still require access to groundwater and seasonal surface water. This tree flowers from March through May.	No	0 - 2000	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat; this species is highly associated with woodlands and forested slopes. Modern (<20 years) occurrences limited to San Bernardino mountains and foothills.
Lepechinia fragrans	fragrant pitcher sage	CRPR: 4.2	Fragrant pitcher sage is a perennial shrub that is found within chaparral and woodlands. This sensitive plant flowers from March to October.	No	66 – 4,297	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, and historical data and modern (<20 years) occurrences are limited to the San Bernardino mountains.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	CRPR: 4.3	Robinson's pepper-grass is an annual herb that is found in dry soils on chaparral and coastal sage scrub often around rock outcrops. This sensitive plant flowers from January to July.	No	3 – 2,903	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, and historical data and modern (<20 years) nearby occurrences are limited to washes.
Lilium humboldtii ssp. *ocellatum* *(=Lilium fairchildii)*	Ocellated Humboldt lily	CRPR: 4.2,	Ocellated Humboldt lily is a perennial bulbiferous herb that grows along streamsides in lower montane coniferous forests, cismontane woodlands, riparian woodlands, coastal scrub, and chaparral. It can grow on relatively dry slopes beneath dense coniferous canopy. This sensitive plant flowers from March to August.	No.	98 – 5,904	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat; this species is highly associated with streamsides and coniferous canopy. Nearby occurrences limited to San Gabriel mountains and foothills.
Muhlenbergia californica	California muhly	CRPR: 4.3	California muhly is a perennial rhizomatous herb that occurs in chaparral, coastal scrub, lower montane coniferous forests, and meadows, usually near mesic seeps or along streambanks. This sensitive plant flowers from June to September.	No	328 – 6,560	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, as the site is highly disturbed. Nearby occurrences concentrated in mountainous regions.
Muhlenbergia utilis	aparejo grass	CRPR: 2B.2	Aparejo grass is a perennial rhizomatous herb that is found in coastal sage scrub, creosote bush scrub, wetland-riparian, wet sites along streams, and ponds. This sensitive plant flowers from October to March.	No	79—3,653	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable scrub or riparian habitat for this species. Nearby occurrences not within highly disturbed sites.
Navarretia prostrata	prostrate vernal pool navarretia	CRPR: 1B.2	Prostrate vernal pool navarretia is an annual herb that is found in coastal scrub, valley, and foothill grasslands (alkaline washes), meadows and seeps, and vernal pools. This sensitive plant flowers from April to July.	No	49 – 3,969	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species. Though several historical observations have occurred nearby, the species is likely locally extant.

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						Elevation Range	General Distribution	
Pelazoneuron puberulum var. sonorense	Sonoran maiden fern	CRPR: 2B.2	Sonoran maiden fern is a perennial rhizomatous herb that is found in meadows and seeps along streams and seepage areas. This sensitive plant flowers from January to September.	No	164 – 2,001	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat, as this species requires seepage areas along streams. Nearby occurrences are limited to San Gabriel mountains and foothills.
Pseudognaphalium leucocephalum (=*Gnaphalium leucocephalum*)	white rabbit-tobacco	CRPR: 2B.2	White rabbit-tobacco is a perennial herb that occurs in chaparral, cismontane woodlands, coastal scrub, and riparian woodlands in sandy and gravelly sites. This sensitive plant flowers from (July) August to November (December). Months in parentheses are uncommon.	No	0 – 6,888	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA does not contain suitable habitat. There are no modern (<20 years) or historical occurrences in the area.
Quercus engelmannii	Engelmann oak	CRPR: 4.2,	Engelmann oak is a perennial deciduous tree that occurs in the foothills, slopes and in arroyos and dry fans, cismontane woodlands, chaparral, riparian woodlands, and valley and foothill grasslands. Oak woodlands and southern mixed chaparral are both utilized by this tree. Larger oaks sometimes occur in vast savannah grasslands. In the foothills it may also occur as a shrubby element within the chaparral. Typically, in such a situation the understory is relatively dense and the small oaks (even mature oaks in this habitat usually remain stunted) are concentrated on the periphery of watercourses or mesic slope aspects. Along larger creeks coast live oak usually predominates. This sensitive plant flowers from March to June.	No	164 – 4,264	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species, as it is highly disturbed. Nearby occurrences are limited to more mountainous regions.
Romneya coulteri	Coulter's matilija poppy	CRPR: 4.2	Coulter's matilija poppy is a perennial rhizomatous herb that is found in chaparral and coastal scrub. It is often a fire follower. This sensitive plant flowers from March to July.	No	66 – 3,936	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat for this species and its local historical distribution is limited to foothills and more mountainous regions.
Sagittaria sanfordii	Sanford's arrowhead	CRPR: 1B.2	Sanford's arrowhead is a perennial rhizomatous herb that is found in marshes and swamps (assorted shallow freshwater). It is also found growing in ditches, sloughs, ponds, or slow-moving streams with silty or muddy substrates. This sensitive plant flowers from May to November.	No	0 – 2,132	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable marsh habitat or muddy substrates this species relies on.
Senecio aphanactis	chaparral ragwort (=rayless ragwort)	CRPR: 2B.2	Chaparral ragwort is an annual herb that is found in chaparral, cismontane woodlands, coastal scrub (sometimes alkaline) and drying alkaline flats. This sensitive plant flowers from January to April.	No	49 – 2,624	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat and conditions for this species.
Senecio astephanus	San Gabriel ragwort	CRPR: 4.3	San Gabriel ragwort is a perennial herb that grows in rocky slopes within coastal bluff scrub and chaparral. This sensitive plant flowers from May to July.	No	1,312 – 4,921	Yes	No	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat and conditions for this species. Nearby occurrences observed at base of San Gabriel mountains.
Sidalcea neomexicana	salt spring checkerbloom	CRPR: 2B.2	Salt spring checkerbloom is a perennial herb that is found in alkaline, mesic sites in chaparral, coastal scrub, lower montane coniferous forests, Mojavean desert scrub, alkali playas, and brackish marshes. This sensitive plant flowers from March to June.	No	49 – 5,018	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks suitable habitat and conditions for this species.
Symphyotrichum defoliatum	San Bernardino aster	CRPR: 1B.2	San Bernardino aster is a perennial rhizomatous herb that is found in cismontane woodlands, coastal scrub, lower montane coniferous forests, meadows and seeps, marshes and swamps, and vernally mesic valley and foothill grasslands. While this species usually occurs in meadows, springs, and streams, it also occurs in upland habitats. Can be found near ditches, streams, springs or disturbed areas. Grows in seasonally moist fine alluvial soils. This sensitive plant flowers from July to November.	No	7 – 6,691	Yes	Yes	**No Potential for occurrence in the BSA.** The BSA lacks the moist soil conditions this species relies on, and thus the habitat is not suitable. Although this species can be found in disturbed areas, there are no reported occurrences within the area.
Symphyotrichum	Greata's aster	CRPR: 1B.3	Greata's aster is a perennial rhizomatous herb that is found in mesic canyons of	No	984 – 6,593	Yes	No	**No Potential for occurrence in the BSA.**

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						Elevation Range	General Distribution	
greatae (=*Aster greatae*)			broad-leafed upland forests, chaparral, cismontane woodlands, lower montane coniferous forests, and riparian woodlands. This sensitive plant flowers from June to October.					The BSA lacks suitable habitat for this species, nearby occurrences are contained to canyons and woodlands.
Thysanocarpus rigidus	rigid fringepod	CRPR: 1B.2	Rigid fringepod is an annual herb that is found in pinyon and juniper woodlands on dry rocky slopes and ridges of oak and pine woodlands in arid mountain ranges. This sensitive plant flowers from February to May.	No	1,968 – 7,216	No	No	**No Potential for occurrence in the BSA.** The BSA is not within the known elevation range of this species and therefore lacks suitable habitat.

Legend and Notes

Notes:

- The BSA contains approximate elevations of 1,324 to 1,368 feet above mean sea level (amsl).
- The BSA encompasses habitat with non-native grassland and includes a number of non-native tree, shrub, and herb species. Few native grassland and sage scrub species were present.
- **Yes** = the BSA is located within the plant species' known distribution, elevation range, and/or the BSA contains suitable habitats and/or soils to support the plant species. The plant species has a potential to occur within the BSA. Further evaluation is needed.
- **No** = the BSA is located outside the plant species' known distribution, elevation range, and/or the BSA lacks suitable habitats and/or soils to support the plant species. It is highly unlikely for the plant species to have a potential to occur within the BSA. No further evaluation is needed.
- A CNPS elevation range is provided for each taxon in feet. The stated range is for the California portion of a plant's range only (if the taxon also occurs outside the state). These CNPS elevation range data are accumulated from literature, herbarium specimens, and field survey information.

Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened plants is published in 50 CFR § 17.12.

- **FE = federally listed as endangered:** any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.
- **FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.
- **FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- **FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPD = federally proposed for delisting:** a species that has been proposed by USFWS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) and California Native Plant Protection Act (NPPA) Listing Codes: the CESA and NPPA are administered by CDFW. The official listing of *Plants of California Declared to Be Endangered, Threatened or Rare* is contained in the California Code of Regulations, Title 14, § 670.2. Species, subspecies, and varieties of California native plants are declared to be endangered, threatened as defined by § 2062 and § 2067 of the Fish and Game Code or rare as defined by § 1901 of the Fish and Game Code.

- **SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- **ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- **SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species to either list.
- **SR = state rare:** A species, subspecies, or variety of native plant is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Fish and Game Code § 1901).

California Rare Plant Ranks (Formerly known as CNPS Lists): the CNPS is a statewide, nonprofit organization that maintains, with CDFW, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CNPS and CDFW officially changed the name "CNPS List" or "CNPS Ranks" to "California Rare Plant Rank" (or CRPR). This was done to reduce confusion over the fact that CNPS and CDFW jointly manage the Rare Plant Status Review Groups, and the rank assignments are the product of a collaborative effort and not solely a CNPS assignment.

Legend and Notes

- **CRPR: 1A = California Rare Plant Rank 1A - plants presumed extirpated in California and either rare or extinct elsewhere:** the plants with a CRPR of 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct as well as those plants which are presumed extirpated in California. All of the plants constituting CRPR 1A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 1B = California Rare Plant Rank 1B - plants rare, threatened, or endangered in California and elsewhere:** plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. All of the plants constituting CRPR 1B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2A = California Rare Plant Rank 2A - plants presumed extirpated in California, but more common elsewhere:** the plant taxa of CRPR 2A are presumed extirpated because they have not been observed or documented in California for many years. This list includes only those plant taxa that are presumed extirpated in California, but more common elsewhere in their range. All of the plants on List 2A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2B = California Rare Plant Rank 2B - plants rare, threatened, or endangered in California, but more common elsewhere:** except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the ESA. All of the plants constituting CRPR 2B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 3 = California Rare Plant Rank 3 - plants about which more information is needed - a review list:** the plants that comprise CRPR 3 are united by one common theme – CNPS and CDFW lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Some of the plants constituting CRPR 3 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code and are eligible for state listing. CNPS strongly recommends that CRPR 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **CRPR 4 = California Rare Plant Rank 4 - plants of limited distribution - a watch list**: the plants in this category are of limited distribution or infrequent throughout a broader area in California. While CNPS and CDFW cannot call these plants "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, CNPS and CDFW will transfer it to a more appropriate rank. Some of the plants constituting CRPR 4 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **Considered But Rejected =** plants that have been considered for inclusion into the CNPS Inventory but were not included for various reasons.

California Native Plant Society (CNPS) Threat Ranks: The CNPS Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) (as a decimal code) and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. A Threat Rank is present for all CRPR 1B's, 2B's, 4's, and the majority of CRPR 3's. CRPR 4 plants are seldom assigned a Threat Rank of .1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a CRPR. In addition, all CRPR 1A and 2A (presumed extirpated in California), and some CRPR 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

- **.1** = seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- **.2** = moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- **.3** = not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Other:

- **Annual**: grows from seed and reproduce within a single year.
- **Perennial**: lives more than one year.
- **Deciduous**: plants shed their leaves for part of the year.
- **Evergreen:** plants retain their leaves for an entire year.
- **Mesic habitat:** a habitat with a moderate or well-balanced supply of moisture.
- **Hemiparasitic:** plants that are connected to host plants and derive energy, water, and minerals from them, but also maintain their own functional root systems or photosynthetic surfaces.
- **Parasitic:** plants that are connected to host plants and rely solely on them for energy, water, and nutritional requirements.
- **Carnivorous:** plants that trap insects and other small animals and derive nourishment from them.
- **Herbs**: plants that are herbaceous and lack above-ground woody tissue.
  - **Bulbiferous herb**: plants that have fleshy underground storage organs typically derived from scale leaves (this category includes cormiferous and other similar plants in which storage organs have other origins).
  - **Rhizomatous herb**: plants that have underground stems (rhizomes), typically bearing shoots which develop into new plants.
  - **Stoloniferous herb:** plants that have above-ground runners (stolons) which typically root and produce new plants.
- **Shrubs:** smaller woody perennials that retain most of their above-ground woody tissue and are typically many-stemmed.
  - **Leaf succulents:** succulents with thick, fleshy leaves.
  - **Stem succulents:** succulents with thick, fleshy stems and reduced or absent leaves.
- **Trees:** larger woody perennials that retain all of their above-ground wood tissue and are typically single-stemmed.
- **Vines:** twining woody perennials requiring external support for growth.
- **Mosses:** small green plants (one of three groups of bryophytes) with structures that resemble miniature leaves and stems. The leaves generally have a midrib called a costa. The sporophyte (the spore-bearing structure) is persistent for weeks.
- **Liverworts:** small green plants (one of three groups of bryophytes). There are both leafy and thalloid types - leafy liverworts lack a midrib on the leaves, while thalloid liverworts have no leaves. The sporophyte is short-lived.

Table 5. Special-Status Wildlife Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
Listed Endangered, Threatened, and Candidate Wildlife: Wildlife with official status under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA). A species may have other sensitive designations in addition to their federal or state listing.						
Listed Invertebrates						
Bombus crotchii	Crotch's bumble bee	FC, G2, S2, IUCN: EN	Inhabits a variety of scrub and open grassland habitats throughout Los Angeles/Southern California region. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA contains low quality habitat with some foraging opportunities. This species has been documented in the surrounding area recently (<20 years).
Danaus plexippus	Monarch butterfly	FPT, G4T1T2Q, S2 IUCN: EN USFS:S	Their roosts are located in wind-protected tree groves (eucalyptus [*Eucalyptus* sp.], Monterey pine [*Pinus radiata*], cypress), with nectar and water sources nearby. Monarch butterflies lay their eggs exclusively on milkweed, which the larva feed on.	Yes	Yes	**Low potential for occurrence within the BSA.** The BSA does not contain milkweed, a plant necessary as an egg-laying site and food source for larvae but adults will utilize a wide variety of flowering plants as a nectar source. The species can wander widely while foraging.
Listed Amphibians						
Spea hammondii	Western spadefoot	FPT, G2G3, S3S4	May be found in coastal sage scrub, open chaparral, pine-oak woodlands, and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas. Within these habitats, they require rain pools/vernal pools in which to reproduce, and that persist with more than three weeks of standing water in which to metamorphose successfully. They can also breed in slow-moving streams (e.g., areas flooded by intermittent streams). Water breeding sites must lack fish, bullfrogs, and crayfish in order to successfully reproduce and metamorphose. They estivate in sandy, gravelly soil in upland habitats adjacent to potential breeding sites in burrows approximating 1 meter in depth.	Yes	No	**No potential for occurrence within the BSA.** The BSA does not contain suitable breeding habitat. This species requires aquatic pools/riparian habitat, which are not present.
Listed Reptiles						
Actinemys pallida (=*Actinemys marmorata pallida*)	Southwestern pond turtle	FPT, SSC, G3G4, S3	Inhabits slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and sewage treatment lagoons. Pools are the preferred habitat within streams. Abundant logs, rocks, submerged vegetation, mud, undercut banks, and ledges are necessary habitat components for cover as well as a water depth greater than 2 m.	Yes	No	**No potential for occurrence within the BSA.** The BSA does not contain suitable aquatic habitats or basking sites to support this species.
Listed Birds						
Athene cunicularia	Burrowing owl	SCE, SSC, G4 S2	The burrowing owl (BUOW) is a small, ground-inhabiting owl. Typical BUOW habitat is open, dry, flat ground or low rolling hills with sparse vegetation and available burrows. BUOWs are generally found in open country, where tree or shrub canopies cover less than 30% of the habitat. Typical habitats include annual and perennial grasslands, shortgrass prairies open agricultural areas (particularly rangelands), deserts floors, and vacant lots in residential areas and university campuses. Other habitats include oak savannah; grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitat; sandy beaches and coastal dunes; and river bottom lands. BUOWs inhabiting urban landscaped areas may live in vacant fields/lots, pastures, airports, athletic fields, golf courses, cemeteries, city parks, road shoulders, drainage sumps, railroad beds, irrigation ditches, and road cuts. Nest and roost burrows of the BUOW in California are most commonly dug by California ground squirrels (*Spermophilus beecheyi*). BUOWs in Imperial County often use the small holes of round-tailed ground squirrels (*Citellus tereticaudus*) and Botta's pocket gophers (*Thomomys bottae*), but they also can dig their own burrows in the soft banks of irrigation canals and ditches. Where burrows are scarce, man-made structures, such as culverts, piles of concrete, rubble, or debris, pipes, asphalt, artificial nest	Yes	Yes	**Moderate potential for occurrence within the BSA.** The BSA contains suitable habitat for this species: ground squirrel burrows present on site reach minimum diameter requirements for burrowing owls (11-15 cm) and man-made refugia could act as suitable burrows. There are modern (<20 years) and historical observations of this species in the area.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
			boxes, and openings beneath cement or asphalt pavement also are used as nest sites.			
Laterallus jamaicensis coturniculus	California black rail	ST, G3T1, S2 FP IUCN: EN	Occurs in various habitats, from high coastal marshes to freshwater marshes along the lower Colorado River. Along the coast, they favor marshland with unrestricted tidal influence (estuarine, intertidal, emergent, and regularly flooded). The rails often make their homes in tidal salt marshes dominated by pickleweed, but they inhabit brackish and freshwater marshes as well. In coastal and estuarine saltmarshes, their favored areas are dominated by pickleweed, bulrushes, and matted salt grass (*Distichlis spicata*) and other marsh vegetation. Along the Colorado River, they use areas of shallow water with relatively stable water levels and flat shoreline supporting dense stands of three-square bulrush.	No	No	**No potential for occurrence within the BSA.** The BSA does not provide suitable aquatic habitat for this species. This species' range is generally limited to the coast and there have been no nearby observations.
Polioptila californica californica	Coastal California gnatcatcher	FT, G4G5T3Q, S2 SSC	The coastal California gnatcatcher (CAGN) is a small, non-migratory, permanent resident of coastal sage scrub habitat, which is a broad category of vegetation that includes the following plant communities; Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. In addition to coastal sage scrub, CAGNS use chaparral, grassland, and riparian habitats next to coastal sage scrub, but these habitats are used for dispersal and foraging, especially in the non-breeding season.	Yes	No	**No potential for occurrence in the BSA.** The BSA lacks suitable habitat to support the species. This species is heavily associated with sage scrub habitat and there are no modern occurrences (<20 years) nearby.
Vireo bellii pusillus	Least Bell's vireo	FE, SE Season of Concern: nesting	The least Bell's vireo (LBVI) is a migratory songbird restricted to willow dominated riparian woodlands. LBVIs primarily occupy willow-dominated riverine riparian habitats with well-developed overstories, understories, and low densities of aquatic and herbaceous cover. The understory frequently contains dense subshrub or shrub thickets 3-6 feet off the ground. LBVI are associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, but also inhabits thickets along dry, intermittent streams. On the desert slopes mesquite (*Prosopis* sp.) and sandbar willow in canyon locations may be occupied. From their wintering ground in southern Baja California, Mexico, LBVIs migrate between mid-March and early April to southern California, where they remain until July or August.	Yes	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging riparian and aquatic habitats to support this species. Least bell's vireo is highly associated with trees such as *Populus* spp. and *Salix* spp. which are not present onsite.
Listed Mammals						
Dipodomys merriami parvus	San Bernardino Merriam's kangaroo rat	FE, SE G5T1, S1, SSC	The San Bernardino kangaroo rat typically is found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans, river and stream terraces, flood plains, and along washes with nearby sage scrub. Sandy loam substrates allow for the digging of simple, shallow burrows. They require open, sparse shrub vegetation and they actively avoid rocky substrates and areas with dense vegetation.	Yes	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable habitat for this species, and distribution is highly unlikely considering the only nearby occurrences are much further east within San Bernardino County.
Sensitive Wildlife: **These animals have no official status under the ESA and/or the CESA; however, they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.**						
Sensitive Invertebrates						
Bombus pensylvanicus	American bumble bee	G3G4 S2	Inhabits farmlands, grasslands, and mixed open habitats typically found in the Eastern and Central U.S.	No	Yes	**No potential for occurrence within the BSA.** The BSA contains some adequate habitat, but this species is considered to be extirpated from the West.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
Diplectrona californica	California diplectronan caddisfly	G1G2 S1	No information has been published on the larvae of this species, but other larvae in the genus live in fast-flowing, cool streams. *Diplectrona* larvae live in fixed retreats made mostly from plant materials, and spin attached silken "capture nets" which filter food particles from the water.	No	No	**No potential for occurrence within the BSA.** The BSA lacks suitable habitat for this species; this species is often associated with water and has no modern occurrences (<20 years) documented in the area.
Neolarra alba	white cuckoo bee	GH SH	This bee likely nests in burrows of *Perdita*, a ground-nesting genus. This species inhabits old fields, suburban area/orchards, cropland/hedgerows, and urban habitats.	No	No	**No potential for occurrence within the BSA.** There have been no modern (<20 years) observations of this species within the area.
Sensitive Reptiles						
Anniella stebbinsi	Southern California legless lizard	G3 S3 SSC, USFS_S	Found in broadleaved upland forests, chaparral, coastal dunes, coastal scrub, sandy washes, alluvial fans. Variety of habitats; generally, in moist, loose soil. Occurs in sandy or loose loamy soils under sparse vegetation. They prefer soils with a high moisture content.	Yes	Yes	**Low potential for occurrence within the BSA.** The BSA contains minimal suitable habitat for this species, as it is highly disturbed and lacks moist soil. However, several modern (<20 years) observations have been recorded in close proximity to the BSA.
Sensitive Mammals						
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	G5T3T4, S3S4 SCC	A common resident of sandy herbaceous areas, usually in association with rocks or course gravel. It inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California. It generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates, and, to a lesser extent, shrubby areas. In western Riverside County, the San Diego pocket mouse also commonly is found in disturbed grassland and open sage scrub vegetation with sandy-loam to loam soils.	Yes	No	**No potential for occurrence in the BSA.** The BSA contains no suitable habitat for this species, and there are no modern (<20 years) or historical observations of this species within the area. Nearby occurrences are restricted to Riverside County and the edges of San Bernardino County.
Neotoma lepida intermedia	San Diego desert woodrat	G5T3T4, S3S4, SSC	The San Diego desert woodrat is found in a variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth. Desert woodrats commonly inhabit Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, coastal sage scrub, and desert habitats. Desert woodrats actively avoid open areas that do not provide adequate refuge sites. The desert woodrat is often associated with large cactus patches, rocky outcroppings, and boulder-covered hillsides. In rocky outcrops, desert woodrats are known to construct dens in the cracks between boulders. Cactus patches are also a favorite den site.	Yes	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable refuge sites, such as dense undergrowth cover, to support this species' nesting and foraging habits. There are no modern (<20 years) occurrences of this species nearby.

Legend and Notes

Notes

- **Yes** = the BSA is located within the wildlife species' known distribution, elevation range, and/or the BSA contains suitable habitats or conditions to support the species. The wildlife species has the potential to occur within the BSA. Further evaluation is needed.
- **No** = the BSA is located outside the wildlife species' known distribution, elevation range, and/or the BSA lacks suitable habitats or conditions to support the species. It is highly unlikely for the wildlife species to have a potential to occur within the BSA. No further evaluation is needed.
- **DPS = distinct population segment:** A DPS, or a distinct population segment, is a vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species. The ESA provides for listing species, subspecies, or distinct population segments of vertebrate species.
- **ESU = evolutionarily significant unit:** a population or group of populations that is substantially reproductively isolated from other conspecific populations and that represents an important component of the evolutionary legacy of the species.

Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened animals is published in 50 CFR § 17.11.

- **FE = federally listed as endangered:** any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.
- **FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

Legend and Notes

- **FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- **FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS or NMFS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS or NMFS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPD = federally proposed for delisting:** a species that has been proposed by USFWS or NMFS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) Listing Codes: the CESA is administered by CDFW. The official listing of *Animals of California Declared To Be Endangered or Threatened* is contained in the California Code of Regulations, Title 14, § 670.5. Species and subspecies of California native animals are declared to be endangered or threatened as defined by §§ 2062 and 2067 of the Fish and Game Code.

- **SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- **ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- **SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed by publication in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species to either list.

California Department of Fish and Wildlife (CDFW) Designations:

For some wildlife species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nesting colonies. For many species of birds, the primary emphasis is on the breeding population in California. For some species which do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering

- **SSC = species of special concern:** a species of special concern is a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally-, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- **Fully protected:** fully protected animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Lists were created for fish (Fish and Game Code § 5515), amphibians and reptiles (Fish and Game Code § 5050), birds (Fish and Game Code § 3511) and mammals (Fish and Game Code § 4700).
- **WL = watch list:** this list includes birds identified in the *California Bird Species of Special Concern* (Shuford and Gardali, 2008) report and are not on the current CDFW species of special concern list, but were on previous lists and they have not been state-listed under CESA; were previously state or federally listed and now are on neither list; or are on the list of fully protected species.
- **Special Animals List:** the CESA does not allow listing of insects, so despite the insect's precarious status, the insect has no protection under state legislation. CDFW includes this insect on its Special Animals List.
- **California Fish and Game Code §§ 4800 – 4810:** The mountain lion (genus Puma) is a specially protected mammal under the laws of California. It is unlawful to take, injure, possess, transport, import, or sell any mountain lion or any part or product thereof, except as specifically provided in California Fish and Game Code §§ 4800 - 4810.
- Protected by § 460 of the California Code of Regulations [CCR], Title 14

Global Ranking

The global rank (G-rank) is a reflection of the overall status of an element throughout its global range.

- **GX**: Presumed Extinct – Not located despite intensive searches and virtually no likelihood of rediscovery.
- **GH**: Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery. Examples of evidence include (1) that a species has not been documented in approximately 20-40 years despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species has been searched for unsuccessfully, but not thoroughly enough to presume that it is extinct throughout its range.
- **G1**: Critically Imperiled – At very high risk of extinction due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
- **G2**: Imperiled – At high risk of extinction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- **G3**: Vulnerable – At moderate risk of extinction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- **G4**: Apparently Secure – At fairly low risk of extinction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- **G5**: Secure – At very low risk of extinction due to a very extensive range, abundant populations, or occurrences, and little to no concern from declines or threats.
- **GNR**: Unranked – Global rank not yet assessed.

State Ranking:

The state rank (S-rank) is assigned in much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

- **SX**: Presumed Extirpated – Species is believed to be extirpated from the state; not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered
- **SH**: Possibly Extirpated – Known from only historical records but still some hope of rediscovery. There is evidence that the species may no longer be present in the state, but not enough to state this with certainty. Examples of such evidence include (1) that a species has not been documented in approximately 20-40 years despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction.

Legend and Notes
• **S1**: Critically Imperiled – At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors. • **S2**: Imperiled – At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. • **S3**: Vulnerable – At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. • **S4**: Apparently Secure – At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of recent declines, threats, or other factors. • **S5**: Secure – At very low or no risk of extirpation in the state due to a very extensive range, abundant populations, or occurrences, and little to no concern from declines or threats. • **SNR**: Unranked – State rank not yet assessed. ***United States Fish and Wildlife Service (USFWS) Designations:*** • **FSC = federal species of concern:** federal species of concern is an informal term. It is not defined in the ESA. The term commonly refers to species that are declining or appear to be in need of conservation. • **BCC = bird of conservation concern:** a bird of conservation concern is listed in the USFWS' 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

4.3. BIOLOGICAL RECONNAISSANCE SURVEY

4.3.1. Vegetation

4.3.1.1. Vegetation Communities Descriptions

Three (3) plant communities occur within the BSA. Descriptions of each community found within the Study Area are discussed below. A map that illustrates all onsite plant communities is included in **Exhibit IV,** *Vegetation Communities.*

Disturbed/Developed
Disturbed areas are those areas that are either devoid of vegetation (cleared or graded), such as dirt roads, or those areas that have a high percentage of non-native weedy species (i.e., greater than 25 percent of the species cover). A large portion of the BSA is paved, and species such as crimson fountain grass (*Pennisetum setaceum*), Bermuda buttercup (*Oxalis pes-caprae)*, and red brome (*Bromus madritensis)* border the asphalt. Smilo grass (*Stipa miliacea var. miliacea)* and various other Poaceae spp. dominate the areas adjacent to structures. A majority of the northeastern end of the BSA includes structures and debris.

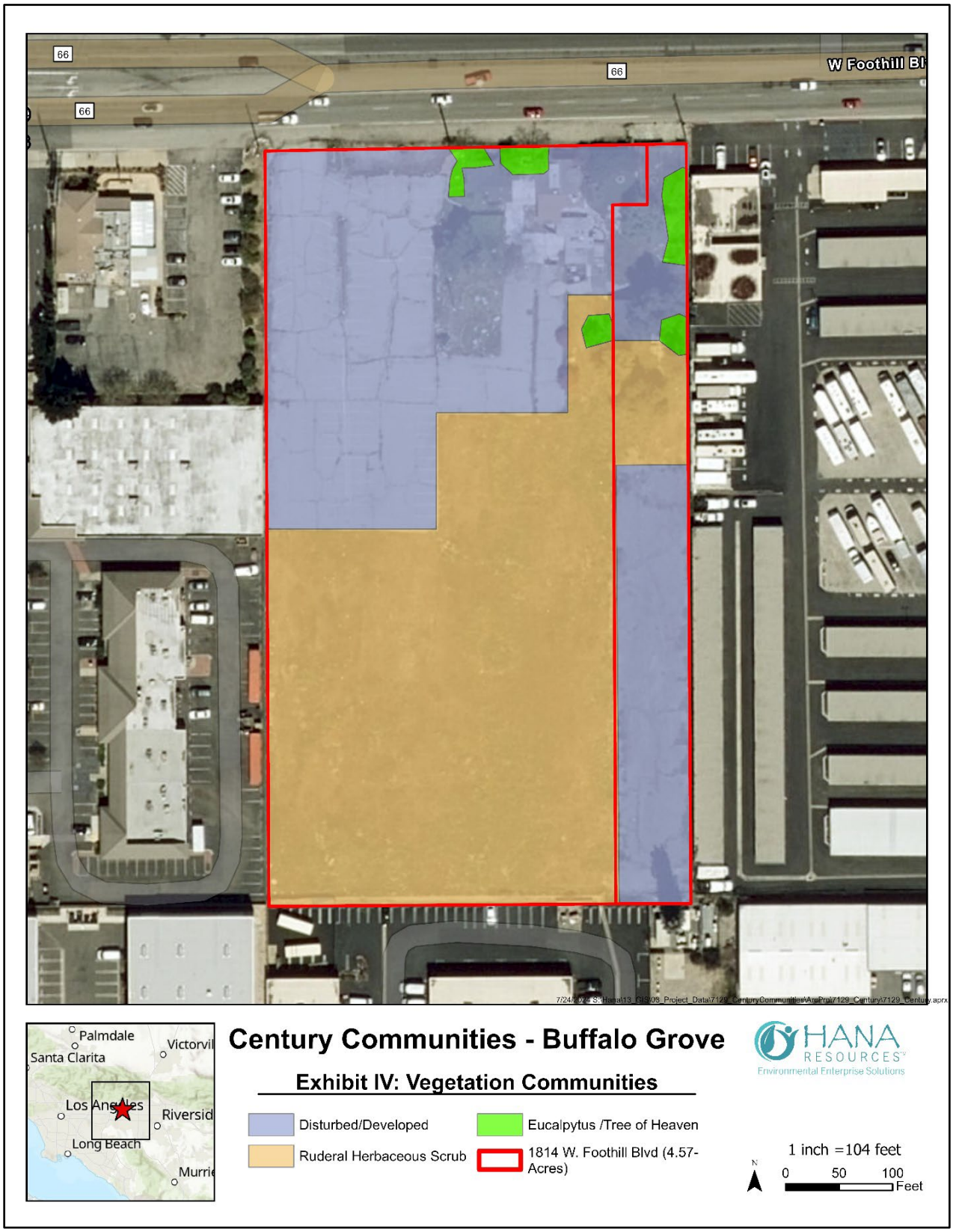
Eucalyptus/Tree of Heaven
Tree of heaven (*Ailanthus altissima*) and Eucalyptus (*Eucalyptus* spp.) are dominant in the tree canopy. These non-native species are often planted for their ornamental and shade-producing features. These species are congregated around the abandoned structures within the BSA. Other tree species such as the native blue elderberry (*Sambucus cerulea*) and exotic blue jacaranda (*Jacaranda mimosifolia*) are also present within this layer, though to a much lesser extent.

Ruderal Herbaceous Scrub
This area contains disturbed, dry grasslands and shrublands dominated by non-native species or ruderal native species and extends across the southern portion of the BSA. Vegetation can be a monoculture of graminoid species or a mix of forbs and graminoids. These are dry grasslands, forb-dominated meadows or shrublands that occur in cool semi-arid climates. Within the BSA, this community displays as dominated by non-native species including various mustard species (*Brassica* spp.), California burclover (*Medicago polymorpha*), goldentop grass (*Lamarckia aurea*), common horehound (*Marrubium vulgare*), cheeseweed (*Malva neglecta*), and red-stem stork's bill *(Erodium cicutarium*). Native species such as common fiddleneck (*Amsinckia menziesii*), branching phacelia (*Phacelia ramosissima*), and telegraphweed (*Heterotheca grandiflora*) were also present.

4.3.1.2. Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable. These communities may or may not contain special-status plants or their habitat. The literature review resulted in one (1) sensitive vegetation community that has been known to occur within the two-mile area, which is presented in **Exhibit IV**, *Vegetation Communities*. This vegetation community type was not located onsite and has no potential for occurrence.

Exhibit IV: Vegetation Communities



4.3.2. Plant Species

4.3.2.1. General

Plant species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the plant species detected within the Survey Area is included in **Appendix C**.

4.3.2.2. Special-Status Plant Species

No special status plant species were observed during the biological reconnaissance survey, and of the forty (40) special status plant species found in the literature review, none had the potential to occur within the BSA. The BSA was found to either be outside of the ranges of the special status species or did not contain suitable habitat to support the species. The BSA contains heavily disturbed habitat and is surrounded by urban development, making it unsuitable for many sensitive species.

4.3.3. Wildlife

4.3.3.1. General

Wildlife species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the wildlife species detected within the BSA is included in **Appendix C.**

Birds

Fourteen (14) bird species were observed/detected in the BSA during the reconnaissance level survey. Species included: California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), bushtit (*Psaltriparus minimus*), lesser goldfinch (*Spinus psaltria*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), song sparrow (*Melospiza melodia*), Say's Phoebe (*Sayornis saya*), black phoebe (*Sayornis nigricans*), barn swallow (*Hirundo rustica*), Lawrence's goldfinch (*Spinus lawrencei*), California scrub jay (*Aphelocoma californica*), and European starling (*Sturnus vulgaris*).

Reptiles

One (1) reptile species was observed during the field survey, the Great Basin fence lizard (*Sceloporus occidentalis longipes*).

Mammals

Through the field survey, two (2) mammal species were observed to occur within the BSA. California ground squirrels (*Otospermophilus beecheyi*) were detected visually and aurally, with at least a dozen active burrows observed. A desert cottontail (***Sylvilagus audubonii***) was detected visually.

4.3.3.2. Sensitive Wildlife Species

One (1) candidate state listed bird species, the BUOW, was considered to have moderate potential to occur within the BSA. Three (3) special status wildlife species were considered to have low occurrence potential in the BSA: Two (2) listed invertebrate species, Crotch's bumble bee (*Bombus crotchi*) and the monarch butterfly (*Danaus Plexippus*), and one (1) sensitive reptile, the Southern California legless lizard (*Anniella stebbinsi*).

4.3.3.3. Burrowing Owl Phase I Habitat Assessment and Phase II Burrow Survey

The Phase I habitat assessment, conducted concurrently with the general habitat reconnaissance survey, detected suitable BUOW habitat within the BSA. Suitable habitat, as described by CBOC, includes annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation, where tree and shrub canopy covers less than 30% of the ground surface. The presence of burrows is an essential component of BUOW habitat, with both fossorial mammal burrows and man-made structures, such as culverts, pipes, debris piles, and openings beneath cement or asphalt pavement, considered as appropriate shelter. The southern portion of the BSA, devoid of tree canopy and characterized by loose soil, grasses and low-growing vegetation, was determined to consist of suitable BUOW habitat. This area has a high concentration of ground squirrel burrows, with several reaching the minimum diameter (>11 cm) and depth (>150 cm) for BUOW occupancy. Occurrence of BUOW habitat within the BSA necessitated deployment of Phase II burrow surveys.

In accordance with Phase II burrow survey protocol, pedestrian survey transects were conducted to assess presence of BUOW and potential BUOW burrows. This search yielded several potential burrows: abandoned ground squirrel burrows in the southern, grassy portion of the BSA and man-made structures such as debris piles and openings within the northeastern portion of the BSA. BUOW occupancy of burrows is verified by observation of at least one BUOW, or its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance. Neither the presence nor sign of BUOW was detected during Phase II Burrow surveys. However, presence of suitable BUOW burrows necessitates further Phase III BUOW surveys and census to accurately assess BUOW presence.

SECTION 5. CONCLUSIONS AND RECOMMENDATIONS

5.1. SENSITIVE SPECIES

5.1.1. Sensitive Plants

Of the forty (40) plant species identified in the literature review, zero (0) were present within the BSA and zero (0) have potential for occurrence within the BSA. Focused surveys are required for any federal and/or state listed endangered species with high to moderate potential to occur on site when the species is in bloom to ensure it is both evident and identifiable during the survey. Because the BSA consists of disturbed habitat, is dominated by non-native vegetation and is located next to commercial development, there is no potential for occurrence in the BSA for the sensitive species identified in the literature review. In conclusion, no focused surveys are required for these species.

5.1.2. Sensitive Wildlife

Of the fifteen (15) sensitive wildlife species identified through the literature review, three (3) have low potential to occur, one (1) has moderate potential for occurrence, and the remainder were found to have no potential to occur within the BSA. None of these sensitive species were observed during the biological reconnaissance survey. To minimize impacts, vegetation clearing, or ground disturbing activities should be conducted during the non-breeding season (September 1 to February 14) in order to limit impacts to nesting birds. If vegetation clearing or ground disturbing activities need to take place during breeding season (February 15 through August 31), in order to remain in compliance with the Migratory Bird Treaty Act, a pre-construction nesting bird survey(s) will be required. The last survey day should be conducted a minimum of three days prior to the start of work. Mitigation impacts specific to the BUOW are outlined below.

5.1.3. Burrowing Owl Follow-up Protocol Surveys and Recommendations

As a result of a comprehensive Phase I habitat assessment and Phase II burrow protocol survey, HANA biologists did not detect presence, occupied burrows, or sign of BUOW. However, suitable habitat conditions and presence of both fossorial mammal burrows and potential man-made burrows were recorded within the BSA, necessitating implementation of Phase III breeding season surveys and census to determine owl presence onsite and follow-up reporting requirements in the form of a summary resource report (Phase IV). This phase involves implementing focused breeding season surveys and a census to conclusively determine if BUOWs utilize the site for foraging or nesting, thereby informing a final summary resource report.

It should be noted that CDFW is currently conducting a comprehensive status review of the western BUOW, a process expected to take 12 to 18 months. During this period, the species will continue to receive full CESA protections. The Commission will then decide whether to formally list the species as threatened or endangered based on the review's findings (CDFW 2024).

CHANGES IN WESTERN BURROWING OWL LEGAL PROTECTIONS

Prohibition of "Take": With its designation as a candidate species under CESA, the western burrowing owl is now legally protected from "take," which includes actions such as hunting, pursuing, catching, capturing, or killing. This immediate extension of protections ensures that any direct harm to the species is

prohibited without proper authorization, emphasizing the importance of compliance with state conservation laws. The take of western burrowing owl without a permit is prohibited by CDFW in Sections 3503, 3503.5 and 3513 of California Fish and Game Code (Jeffers 2024).

Incidental Take Permits (ITP): Activities or projects that may incidentally harm or disturb the western burrowing owl now require an ITP from CDFW. No ITP will be issued if CDFW determines that a project would "jeopardize the continued existence" of the listed species covered by the permit. This regulatory measure ensures that potential impacts on the species are carefully evaluated, with mitigation measures implemented to minimize harm and support population sustainability.

Review of Mitigation Practices: Traditional mitigation measures, such as relocating burrowing owls from development sites, are being reexamined due to their limited success in supporting population recovery. Under CESA, such practices may no longer be deemed adequate, prompting a shift toward more effective conservation strategies to address the species' decline. The designation of the western burrowing owl as a candidate species under the CESA has strengthened its legal protections, underscoring the need for thorough planning and permitting for activities that may impact the species. The following recommendations have been identified to address changes in the regulatory framework and ensure that future project activities comply with the updated requirements.

Preconstruction Surveys:
Surveys must adhere to requirements under CESA (within 14 days and 24 hours prior to ground disturbance). If the BUOW is observed within the disturbance area, immediate consultation with the CDFW is required to obtain appropriate permits and implement mitigation measures. The CDFW's 2012 Staff Report on Burrowing Owl Mitigation provides standardized guidelines for conducting surveys to assess BUOW occupancy, evaluating project impacts, and determining appropriate mitigation measures. These guidelines outline avoidance, minimization, and mitigation strategies, including pre-construction surveys, standardized buffer setbacks, take avoidance measures, translocation efforts (active relocation offsite), and the construction of artificial burrows, to effectively address potential impacts on the species.

Prohibition of Take and Mitigation Measures:
The designation of the western BUOW as a candidate species prohibits any "take" without proper authorization. Construction activities near occupied burrows during the nesting season (February 1–August 31) must not occur within 500 feet of active burrows until a qualified biologist confirms nesting completion. Outside of the nesting season, passive relocation of BUOW using one-way doors and burrow collapse remains permissible but must be conducted in consultation with CDFW and consistent with current CESA guidelines.

The recent legal changes necessitate obtaining an ITP from CDFW for any activities that could harm western burrowing owls. This ensures that all potential impacts are evaluated, and effective mitigation measures are implemented. Traditional mitigation practices, such as passive relocation, may no longer be deemed sufficient under CESA, as relocation has the potential to result in take. Therefore, alternative conservation strategies should be developed in coordination with CDFW to promote population recovery.

It is recommended that any ITPs issued during the BUOW candidacy period explicitly state that the permit, along with its associated obligations for the permittee, will expire prior to the stated termination date if the BUOW is no longer a candidate species and is not listed for protection under CESA. ITPs solely covering take of the BUOW would consequently be terminated, while ITPs encompassing both the BUOW and other CESA-listed species could be amended by CDFW in accordance with applicable regulations (Jeffers 2024).

SECTION 6. REFERENCES

Calflora

2025. The Calflora Online Database. Berkeley, California. Available URL: https://www.calflora.org [accessed 22 April 2025].

California Burrowing Owl Consortium (CBOC)

1997. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. Pages 171-177 in Lincer, J. L. and K. Steenhof (editors). The burrowing owl, its biology and management. Raptor Research Report Number 9.

California Department of Fish and Wildlife (CDFW)

2012. *Staff Report on Burrowing Owl Mitigation*. State of California, Natural Resources Agency, Department of Fish and Wildlife.

2024. CDFW Seeks Public Comment Related to Western Burrowing Owl. Available URL: https://wildlife.ca.gov/News/Archive/cdfw-seeks-public-comment-related-to-western-burrowing-owl [accessed 15 April 2025].

2025. California Natural Diversity Database (CNDDB). RareFind Version 5. Database Query for the *Ontario, Glendale, Mount Baldy, Cucamunga Peak, San Dimas,* Guasti, Yorba Linda, Prado Dam, Corona North, California, USGS 7.5- minute quadrangles. Wildlife and Habitat Data Analysis Branch. Available URL: https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx [accessed 15 April 2025].

California Native Plant Society (CNPS)

2025a. A Manual of California Vegetation, Online Edition. California Native Plant Society, Sacramento, CA. Available URL: https://vegetation.cnps.org [accessed 15 April 2025].

2025b. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Rare Plant Scientific Advisory Committee, California Native Plant Society, Sacramento, California. Available URL: http://www.rareplants.cnps.org [accessed 15 April 2025].

City of Upland

2015. City of Upland General Plan. Upland, CA.
Available URL: https://www.uplandca.gov/general-plan-map [accessed 15 April 2025]

eBird

2025. eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available URL: http://www.ebird.org [accessed 15 April 2025

Hickman, J.C. (ed.)

2012. *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley, California.

Holland, R.F.

1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Unpublished

report available from the California Department of Fish and Game, Sacramento, California.

iNaturalist.
2025. Available URL: https://www.inaturalist.org [accessed 16 April 2025].

Jeffers, J.
2024. Commission Grants Burrowing Owls Candidate Species Protections Under California ESA. *The National Law Review*, vol. 14, no. 337, 19 Oct. 2024, Available URL: https://natlawreview-com.cdn.ampproject.org/c/s/natlawreview.com/article/commission-grants-burrowing-owls-candidate-species-protections-under-california?amp [accessed 3 December 2024].

Jepson Herbarium (Jepson)
Jepson Flora Project (eds.) 2025. Jepson eFlora, Available URL: http://ucjeps.berkeley.edu/eflora/ [accessed 15 April 2025].

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. (Sawyer et al.)
2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA.

U.S. Department of Agriculture (USDA)
2025. Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions. Available URL: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx [accessed 16 April 2025].

U.S. Fish and Wildlife Service (USFWS)
2025. Information for Planning and Consultation (IPAC) database. U.S. Fish and Wildlife Service, Atlanta GA. Available URL: https://ecos.fws.gov/ipac/location/index [accessed 16 April 2025].

APPENDIX A

SITE PHOTOGRAPHS

Photo 1: Site overview. View of the site from the northwest corner of the parcel, facing south towards West 11th Street.

Photo 2: Site overview. View of the site from the northeastern section of the parcel, facing south towards West 11th Street.

Photo 3: Site overview. View of the site from the southeastern corner of the parcel, facing north towards West Foothill Blvd.

Photo 4: Site overview. View of the site from the southwestern corner of the parcel, facing north towards West Foothill Blvd.

Photo 5: Site overview. View of the site from the eastern edge of the parcel, facing west towards North Central Avenue.

Photo 6: Site overview. View of the site from the western edge of the parcel, facing east towards North Benson Avenue.

Photo 7: **Site overview.** View of the paved lot in the northwestern corner of the parcel, facing east towards North Benson Avenue

Photo 8: Site overview. View of the site, facing north. Abandoned structures and ornamental trees pictures here.

Photo 9: Site overview. View of the abandoned structures and refuse onsite, facing north.

Photo 10: Site overview. View of abandoned structures and ornamental trees onsite, facing south.

Photo 11: Site overview. View of abandoned structures and various non-native *Poaceae* spp. growing in adjacent disturbed area, facing west.

Photo 12: Site overview. View of sparse native vegetation including California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*).

<u>Photo 13:</u> Site overview. View of ruderal herbaceous scrub, facing the southeastern corner of the parcel. Native common fiddleneck (*Amsinckia menziesii*) and various *Brassica* spp. shown here.

<u>Photo 14</u>: Site overview. View of paved area on eastern edge of parcel, facing the northwestern corner.

Photo 15: Site overview. Example of ruderal herbaceous scrub layer and cobble, facing southeast corner of parcel.

Photo 16: Active ground squirrel burrow.

Photo 17: Example of one of the larger mammal burrows seen on site.

Photo 18: Example of a mammal burrow utilizing man-made materials.

APPENDIX B

BIOLOGICAL RECONNAISSANCE SURVEY FIELD FORMS

HANA RESOURCES

Biological Reconnaissance Survey Field Form

Date: 4/8/25 Project Name: Century Communities / Buffalo Grove

Job #: 7129 Client: Century Communities

Surveyor(s): Jose Olvera, Miranda Solaro

LOCATION DESCRIPTION

Site Address: 1811 W Foothill Blvd City, State: Upland, CA

Habitat Types Present: Ruderal species

Current Land Uses: Ruderal / Disturbed lot, abandoned inn buildings / housing

Start (time) 0630	End (time) 9:15
Temp (ºF) 54	Temp (ºF) 62
Cloud Cover (%) 0%	Cloud Cover (%) 0
Precipitation 0%	Precipitation 0
Wind (mph) 1 mph	Wind (mph) 2

NOTES: (Nest locations and species behavioral notes, disturbances, habitat conditions, etc.)

- disturbed, urban location by busy road
- high amount of invasive, successionary species → notable fountain grass pop.
- notable abandoned parking lot space with dilapidated buildings/housing
- high level of site visitation characterized by abandoned items, trash, holes in fencing, etc.
- tree layer among buildings mostly comprised of tree-of-heaven, Peruvian pepper tree
- Spotted CA ground squirrel on site; desert cottontail, western fence lizard
- various ground squirrel burrows located; limited perch spots for BUOW; limited to short boulders
- highly disturbed building area and developed lots

PLANT SPECIES OBSERVATIONS

PLANT SPECIES PRESENT Specify plant layer as herb (h), shrub (s), or tree (t)	
Species	**Layer**
Fountain grass	s
Redstem filaree	h
lesser bougainvillea	t
Red brome	h
dwarf nettle	h
Common lantana	h
common guava	t
telegraphweed	h
bur clover	h
bermuda buttercup	h
prickly sowthistle	h
Shortpod mustard	h
common purslane	h
tree of heaven	t
Sacred datura	h
Italian thistle	h
Common chickweed	h
California wild grape	h
blue elder	t
London rocket	h
great brome	h
Prickly lettuce	h
Cape honeysuckle	s
Sand spurgeweed	h
western ponderosa pine	t
~~[illegible]~~	
Common fiddleneck	h
Feijoa	t
white horehound	h
Catchweed bedstraw	h
belladonna lily	s
Cheeseweed	h

PLANT SPECIES PRESENT Specify plant layer as herb (h), shrub (s), or tree (t)	
Species	**Layer**
Naples garlic	h
eastern rocket	h
peruvian peppertree	t
ivy wat	t
blue jacaranda	t
Stinknet	h
California sagebrush	s
Sleeping combseed	h
Maltese star thistle	h
Small melilot	h
California broomsage	s
branching phacelia	h
desert broom	s
four wing saltbrush	h
deerweed	s
tree tobacco	t
California buckwheat	s
bristly fiddleneck	h
Common Mediterranean grass	h
redberry buckthorn	s
laurel sumac	s
wild cucumber	h
American sycamore	t
golden top grass	h
Strigose lotus	h
Eves needle cactus	s
elephant bush	s
Venezuelan apple cactus	t
Swan-neck Agave	s
Houseleeks	h
Spanish needles	h

Biologist Signature: MSCahill **Date:** 4/8/2025

WILDLIFE SPECIES OBSERVATIONS

WILDLIFE SPECIES PRESENT Specify observation type as aural (a), sign (s), or visual (v)	
Species	**Observation**
CALT - California Towhee	A, V
HOFI - House Finch	A
BUSH - Bushtit	A
LEGO - Lesser Goldfinch	A
AMCR - American Crow	A, V
MODO - Morning Dove	A, V
NOMO - Northern Mockingbird	A
SOSP - Song Sparrow	A
SAPH - Sayf phoebe	A
BLPH - Black phoebe	A, V
BASW - Barn Swallow	V
LAGO (Lawrence's Goldfinch)	V, A
CASJ - CA Scrub Jay	V, A
EUST - European Starling	V, A

WILDLIFE SPECIES PRESENT Specify observation type as aural (a), sign (s), or visual (v)	
Species	**Observation**

Biologist Signature: [signature] **Date:** 4/8/25

HANA RESOURCES

Pre-Con Bird/BUOW Survey Field Form

NOTES

- Potential (ie, above 4x4 inch size ~~[illegible]~~ burrows) for BUOW located at: (+34.105499, -117.688358), (+34.105370, -117.688404), (+34.105156, -117.688331), (+34.105351, -117.687838),

→ Potential man-made refuse for BUOW: ~~[illegible]~~ under housing/"cellar" entrance at (+34.106202, -117.687634), old wooden stase (+34.106378, -117.687490)

Biologist Signature: [signature] Date: 4/8/25

APPENDIX C

PLANT & WILDLIFE SPECIES OBSERVED/DETECTED ONSITE

Plants		
Scientific Name	**Common Name**	**Special Status**
EUDICOTS		
Amaranthaceae - Amaranth Family		
Atriplex canescens	Fourwing saltbush	
Amaryllidaceae - Amaryllis Family		
**Allium neapolitanum*	Naples garlic	
**Amaryllis belladonna*	Belladonna lily	
Anacardiaceae - Sumac or Cashew family		
Malosma laurina	Laurel sumac	
**Schinus molle*	Peruvian peppertree	
Asteraceae - Sunflower Family		
**Bidens bipinnata*	Spanish needles	
**Carduus pycnocephalus*	Italian thistle	
**Centaurea melitensis*	Maltese star-thistle	
**Lactuca serriola*	Prickly lettuce	
**Oncosiphon pilulifer*	Stinknet	
**Sonchus oleraceus*	Common sowthistle	
Artemisia californica	California sagebrush	
Baccharis sarothroides	Desert broom	
Heterotheca grandiflora	Telegraphweed	
Lepidospartum squamatum	California broomsage	
Bignoniaceae – Bignonoa Family		
**Jacaranda mimosifolia*	Blue jacaranda	
**Tecoma capensis*	Cape honeysuckle	
Boraginaceae - Borage Family		
Amsinckia menziesii	Common fiddleneck	
Amsinckia tessellata	Bristly fiddleneck	
Pectocarya penicillata	Sleeping combseed	
Phacelia ramosissima	Branching phacelia	
Brassicaceae - Mustard Family		
**Brassica nigra*	Black mustard	
**Hirschdeldia incana*	Shortpod mustard	
**Sisymbrium irio*	London rocket	
**Sisymbrium orientale*	Eastern rocket	
Cactaceae - Cactus Family		
**Austrocylindropuntia subulata*	Eve's needle cactus	
**Cereus peruvianus*	Peruvian apple cactus	
Caryophyllaceae - Pink Family		
**Stellaria media*	Common chickweed	
Crassulaceae - Stonecrop Family		
Crassula connata	Sand pygmyweed	
**Sempervivum spp.*	houseleek	
Cucurbitaceae - Gourd Family		
Marah macrocarpa	Wild cucumber	
Fabaceae - Legume Family		
Acmispon glaber	Deerweed	
Acmispon strigosus	Stiff-haired lotus	
**Medicago polymorpha*	California burclover	

Plants		
Scientific Name	**Common Name**	**Special Status**
**Melilotus albus*	White sweetclover	
**Melilotus indicus*	Small melilot	
Geraniaceae - Geranium Family		
**Erodium cicutarium*	Red-stem stork's bill	
Lamiaceae - Mint Family		
**Marrubium vulgare*	Common horehound	
Malvaceae - Mallow Family		
**Malva neglecta*	Cheeseweed	
Myrtaceae – Myrtle Family		
*Feijoa sellowiana	Pineapple guava	
**Psidium guajava*	Common guava	
Nyctaginaceae - Four O'Clock Family		
**Bougainvillea glabra*	Lesser bougainvillea	
Oxalidaceae - Oxalis Family		
**Oxalis pes-caprae*	Bermuda buttercup	
Platanaceae - Sycamore Family		
**Platanus occidentalis*	American sycamore	
Polygonaceae - Buckwheat Family		
Eriogonum fasciculatum	California buckwheat	
Portulacaceae - Purslane Family		
**Portulaca oleracea*	Common purslane	
**Portulacaria afra*	Elephant bush	
Rhamnaceae - Buckthorn Family		
Rhamnus crocea	Redberry buckthorn	
Rubiaceae - Madder Family		
Galium aparine	Catchweed bedstraw	
Rosaceae - Rose Family		
**Eriobotrya japonica*	Loquat	
Simaroubaceae – Quassia Family		
**Ailanthus altissima*	Tree of heaven	
Solanaceae - Nighshade Family		
Datura wrightii	Sacred datura	
**Nicotiana glauca*	Tree tobacco	
Urticaceae - Nettle Family		
**Urtica urens*	Dwarf nettle	
Verbenaceae - Verbena Family		
**Lantana camara*	Common Lantana	
Viburnaceae - Muskroot Family		
Sambucus cerulea	Blue elderberry	
Vitaceae - Grape Family		
Vitis californica	California wild grape	
MONOCOTS		
Agavaceae - Agave Family		
**Agave attenuata*	Swan's neck agave	
Poaceae - Grass Family		
**Bromus diandrus*	Great brome	

Plants		
Scientific Name	**Common Name**	**Special Status**
**Bromus madritensis*	Red brome	
**Lamarckia aurea*	Goldentop grass	
**Pennisetum setaceum*	Crimson fountain grass	
**Schismus barbatus*	Common Mediterranean grass	
**Stipa miliacea var. miliacea*	Smilo grass	
GYMNOSPERMS		
Pinaceae - Pine Family		
Pinus ponderosa	Ponderosa pine	
Legend		
*= Non-native/ invasive species	CRPR – California Rare Plant Rank	
	1A. Presumed extinct in California	
Special Status:	1B. Rare or Endangered in California and elsewhere	
Federal:	2. Rare or Endangered in California, more common elsewhere	
FE = Endangered	3. Plants for which we need more information - Review list	
FT = Threatened	4. Plants of limited distribution - Watch list	
State:	Threat Ranks	
SE = Endangered	.1 - Seriously endangered in California	
ST =Threatened	.2 - Fairly endangered in California	

Wildlife		
Scientific Name	**Common Name**	**Special Status**
BIRDS		
Corvus brachyrhynchos	American Crow	
Hirundo rustica	Barn Swallow	
Sayornis nigricans	Black Phoebe	
Psaltriparus minimus	Bushtit	
Aphelocoma californica	California Scrub-Jay	
Melozone crissalis	California Towhee	
Sturnus vulgaris	*European Starling	
Haemorhous mexicanus	House Finch	
Spinus lawrencei	Lawrence's Goldfinch	
Spinus psaltria	Lesser Goldfinch	
Zenaida macroura	Mourning Dove	
Mimus polyglottos	Northern Mockingbird	
Sayornis saya	Say's Phoebe	
Melospiza melodia	Song Sparrow	
MAMMALS		
Otospermophilus beecheyi	California Ground Squirrel	
Sylvilagus audubonii	Desert Cottontail	
REPTILES		
Sceloporus occidentalis longipes	Great Basin Fence Lizard	
Legend:		

Wildlife		
Scientific Name	**Common Name**	**Special Status**
*=Non-native or invasive species		
Federal:		
FE = Endangered		
FT = Threatened		
State:		
SE = Endangered		
ST =Threatened		
CSC = California Species of Special Concern		
CFP = California Fully Protected Species		

APPENDIX D

USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY

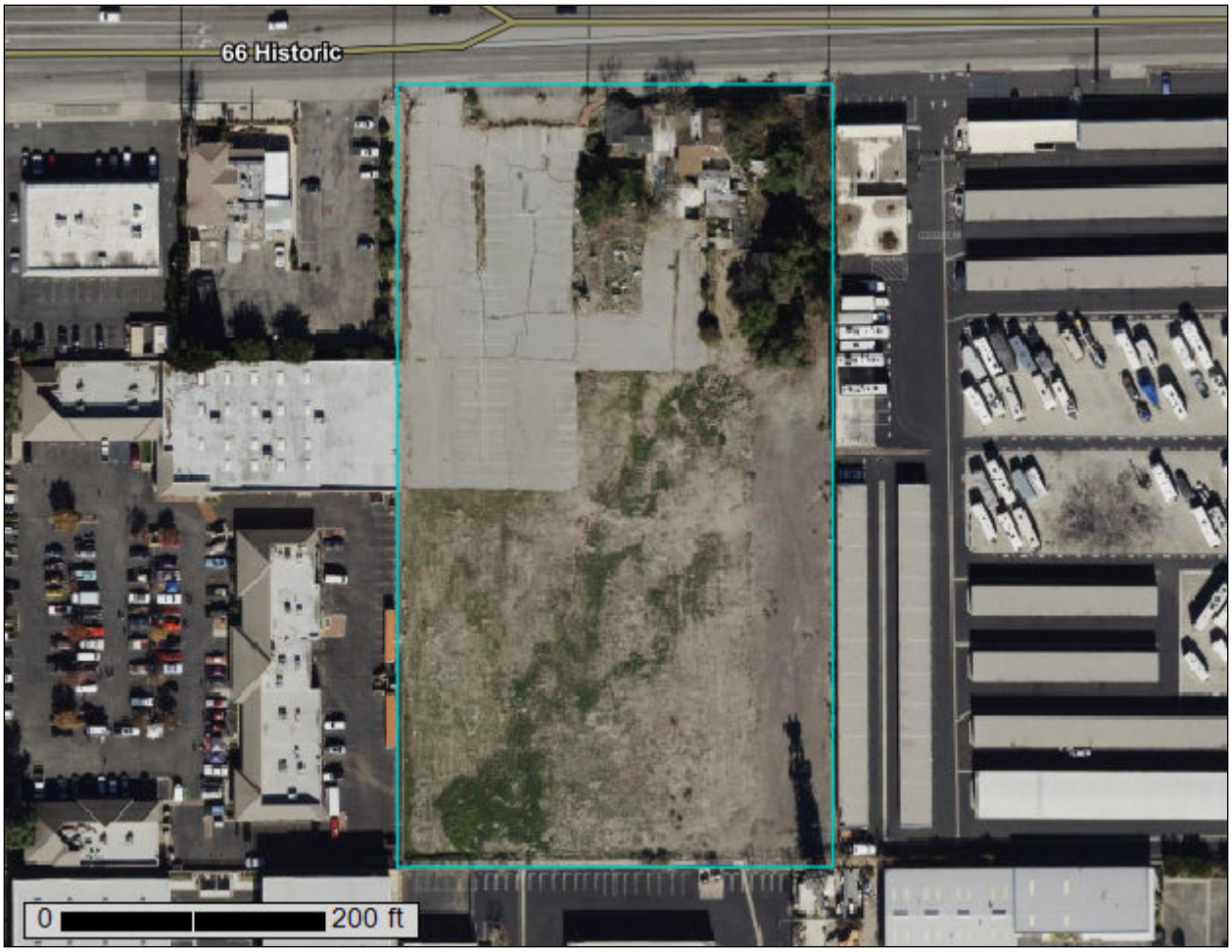
United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for San Bernardino County Southwestern Part, California

Buffalo Grove



April 16, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 16, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 20, 2022—Nov 25, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SoC	Soboba gravelly loamy sand, 0 to 9 percent slopes	4.5	100.0%
Totals for Area of Interest		**4.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

San Bernardino County Southwestern Part, California

SoC—Soboba gravelly loamy sand, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: hckt
Elevation: 30 to 4,200 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 175 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Soboba and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Soboba

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 12 inches: gravelly loamy sand
H2 - 12 to 36 inches: very gravelly loamy sand
H3 - 36 to 60 inches: very stony sand

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: R019XG912CA - Sandy Fan
Hydric soil rating: No

Minor Components

Delhi, fine sand

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent
Hydric soil rating: No

Tujunga, gravelly loam

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 2 percent
Landform: Drainageways
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf