
4.3 - Biological Resources

4.3.1 - Introduction

This section describes the existing biological resources and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Biological Resources Survey (original dated November 27, 2005 and revised November 29, 2007) and a Wetlands/Jurisdictional Delineation (May 29, 2008) all prepared by Natural Resources Assessment, Inc., and included in this EIR as Appendix C.

As explained in Section 1, *Introduction*, where applicable, this project-level DEIR incorporates by reference information and analysis contained in the City of San Bernardino General Plan EIR and the Paradise Hills Specific Plan EIR, certified by the San Bernardino City Mayor and Common Council in 2005 and 1993, respectively. The General Plan EIR contemplated buildout of the General Plan at a programmatic level and concluded that all impacts on biological resources were less than significant after mitigation. The Paradise Hills EIR provided project-level analysis of the smaller Paradise Hills project and evaluated impacts to biological resources and found them to be significant even with mitigation in terms of loss of raptor habitat and impacts to the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR).

This DEIR accounts for modifications to the baseline conditions that have occurred since certification of the previous EIRs and changes that have increased the size and intensity of the Proposed Project. Accordingly, not all of the conclusions in the previous EIRs are applicable to the Proposed Project, and new analysis is provided for potential impacts not previously considered in those documents.

4.3.2 - Environmental Setting

Previous EIR Results

The Paradise Hills EIR concluded that two sensitive animal species would be potentially impacted by the project, the purple martin (*Progne subis*), which was observed onsite and is a California species of concern, and the California gnatcatcher (*Poliptila californica*) (CAGN), which was expected to occur onsite given the habitat present. The EIR concluded that impacts to biological resources, including modifications to Badger Creek and its canyons, would have a significant impact on biological resources.

Summary of Project Site Conditions

The project site encompasses 404 acres in the University District area of the City of San Bernardino. The property is on the foothills and alluvial fan area of the San Bernardino Mountains northeast of the CSUSB campus. A complete biological assessment was prepared for the former Paradise Hills project by Pacific Southwest Biological Services, Inc. (PSBS) in 1990. This was later updated with additional studies by Tierra Madre Consultants (TMC) in 1993 and 1994.

Since 1990, the SBKR has been listed and Critical Habitat designated, requiring a reevaluation of the project site. In addition, the property was extensively burned during the Old Fire in 2003, resulting in a change in plant cover and the extent of some plant communities since the previous surveys.

Natural Resources Assessment, Inc. (NRA) conducted a general biological survey of the site in 2005 and 2007 to update the original general biological assessments by PSBS and focused surveys by TMC. In response to the listing of the SBKR, NRA conducted a trapping study for this species, plus an assessment of habitat for the California gnatcatcher. NRA also evaluated the drainages onsite for jurisdictional status.

The project site encompasses approximately 404 acres and NRA evaluated the entire project site including two offsite reservoir tank sites. In 2003, the Old Fire burned the entire project site, resulting in the temporary loss of shrub cover and subsequent weedy growth of ground cover.

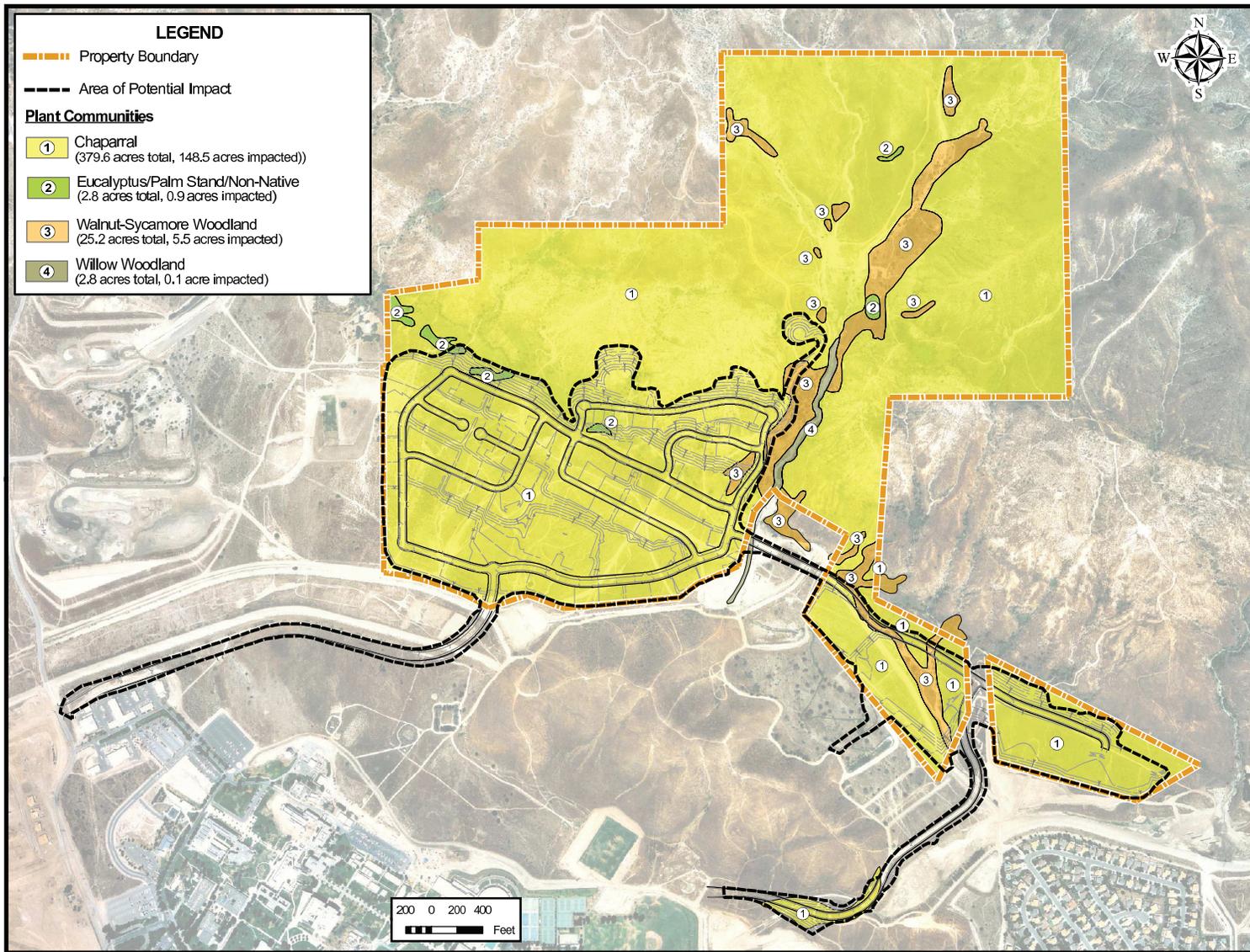
The SBKR was not found during the protocol trapping, but the Los Angeles pocket mouse was successfully trapped in several areas. Other sensitive resources previously identified in the FEIR and subsequent documents were reconfirmed or their potential presence was noted. Some of the drainages on site come under the jurisdiction of USACE and CDFG.

Plant Communities

Prior to the 2003 Old Fire, biological studies of the project site indicated it supported five plant communities—disturbed annual grasslands, Riversidian coastal sage scrub, chamise chaparral, walnut woodland, and drainage habitats. Since the fire, a general mosaic of chaparral plants has replaced the previous sage scrub and disturbed grassland vegetation. The site currently supports four discernable plant communities—chaparral; eucalyptus/palm stand (non-native); sycamore woodland, and willow woodland. There is a small area of walnut woodland along the lower west bank of Badger Creek which is within the larger sycamore woodland community. A map of the plant communities of the project site is provided in Exhibit 4.3-1. Four onsite plant associations are classified as sensitive natural communities by the CDFG—southern willow scrub, California walnut woodland, southern sycamore riparian woodland, and seeps along the San Andreas Fault zone. The current onsite plant communities are described in the following sections:

Chamise Chaparral

This association occupies 373.4 acres (92 percent) of the site and is found throughout the site except for the drainages, but is most prominent on the hillsides and steeper slopes. This association is dominated by chamise (*Adenostoma fasciculatum*) but other typical shrub species include white sage (*Salvia apiana*), black sage, saw-toothed goldenbush (*Hazardia squarrosa*), sugar bush (*Rhus ovata*), and hoary-leaved ceanothus (*Ceanothus crassifolius*). Herbaceous species include chaparral beard's tongue (*Penstemon spectabilis*), white snapdragon (*Antirrhinum coulterianum*), and branching phacelia (*Phacelia ramosissima*).



Source: Natural Resources Assessments, Inc. (2007) & PBS&J (2007).



Michael Brandman Associates

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Exhibit 4.3-1 Onsite Plant Communities

UNIVERSITY HILLS SPECIFIC PLAN EIR

In the flatter portions of the site, the association includes more species typically found in coastal sage scrub and chaparral scrub, plus many herbaceous species typical of disturbed areas, including fiddleneck (*Amsinckia menziesii*), ripgut brome (*Bromus diandrus*), California croton (*Croton californica*), cudweed aster (*Corethrogyne filaginifolia*), locoweed (*Astragalus pomonensis*), mare's tails (*Conyza canadensis*), and short-podded mustard (*Hirschfeldia incana*). On the lower sections of the alluvial fan, the species mix resembles annual grasslands, and typical species include cudweed aster, California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), deerweed (*Lotus scoparius*), and California buckwheat (*Eriogonum fasciculatum*).

Eucalyptus/Palm Stand

There are several isolated stands of non-native trees on the property, the largest of which is a remnant collection of plants associated with a former residence in the north-central portion of the site (i.e., Circle K nudist camp). These areas total 2.8 acres, of which 1.9 acres is in the Circle K area. This area is dominated by several Washington fan palms (*Washingtonia robusta*) as well as eucalyptus trees (*Eucalyptus spp.*).

Sycamore and Willow Woodlands

The previous surveys identified southern sycamore alder riparian woodland, southern willow scrub and freshwater seeps as the dominant riparian woodlands on the project site. The primary vegetation of these associations remain present onsite, but they were severely damaged by the 2003 Old Fire and only now are beginning to recover. Different drainages support different mixes of riparian plant species. In drainages with running water or a high water table, herbaceous species such as yellow monkey flower (*Mimulus guttatus*), scarlet monkey flower (*Mimulus cardinalis*), stinging lupine (*Lupinus hirsutissimus*), and silver wormwood (*Artemisia ludoviciana*) are common. In addition, some drainages with these herbaceous species also support arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), California walnut, and western sycamore (*Platanus racemosa*). In drier, relatively incised drainages, no herbaceous growth was found at the time of the survey; arroyo willow, mulefat, and western sycamore are less common and California walnut is absent. No riparian species were present in shallow, flat drainages on the alluvial fan. These woodland areas occupy 28 acres or 7 percent of the project site.

The original biological assessment identified walnut woodland on a terrace in Badger Canyon and the lower stem of Badger Creek, including a stand on a small bench on the lower alluvial fan. NRA found the same walnut woodland stands intact despite the ravages of the Old Fire. This association is represented by individual walnut trees scattered alongside several drainages onsite. Both California walnut (*Juglans californica*) and the cultivated walnut (*Juglans regia*) are found in these areas. This area now occupies less than 2 acres within the larger sycamore woodland area (see Exhibit 4.3-1).

Seeps

Freshwater seeps were noted at three places along the property and several more occur along the two fault branches. It is likely that several more were present but were not obvious due to a lack of

vegetative cover. According to the NRA survey, these areas do contain some hydrophytic vegetation but are isolated and do not provide significant water or plant resources for local wildlife (NRA 2007).

There are also several dozen eucalyptus and palm trees in a general line in the west-central portion of the site, most likely where water collects on the north side of the San Andreas Fault.

Old Fire of 2003

The project site was completely burned over during the Old Fire in the fall of 2003. The loss of vegetative cover made initial identification of plant communities' boundaries difficult; however, these communities have begun to recover much of their original context and diversity and NRA staff found that the areas previously found to contain sage scrub and disturbed grassland vegetation now contain a mixture or mosaic of plants more typically associated with chaparral, including chamise, white sage, black sage, and saw-toothed goldenbush.

Wildlife

The plant communities discussed above provide habitat for a number of local wildlife species including invertebrates, reptiles, birds, and mammals. The previous studies identified a listing of wildlife species observed, and the NRA survey incorporates that list by reference. A complete list of plant and wildlife species observed on the project site can be found in Appendix C. NRA also identified wildlife species independently of previous studies, including the small mammals trapped as part of the SBKR trapping study, as well as larger mammal species such as coyote (*Canis latrans*), Audubon's cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californica*), and Botta's pocket gopher (*Thomomys bottae*).

Some of the habitat within the project site provides potential foraging opportunities for raptors, and there are several potential perching locations onsite. No raptors were observed during the survey. In addition, there was no evidence of nesting raptors within the project site, and it is not likely that they would nest onsite because of the lack of trees and adjacent habitat.

The project site does not contain suitable habitat for amphibians or fish. Common bird species observed include mourning dove (*Zenaida macroura*) in the grasslands, California towhee (*Pipilo crissalis*) and wren-tit (*Chamaea fasciata*) in the sage scrub and chaparral, and Anna's hummingbird (*Calypte anna*) and other bird species throughout the site. Although no amphibian species were observed, previous surveys reported collecting the California treefrog (*Hyla cadaverina*) and western toad (*Bufo boreas*), as well as identifying western spadefoot (*Scaphiopus hammondi*) as present onsite within Badger Creek.

Reptile species observed are limited to side-blotched lizard (*Uta stansburiana*). Previous surveys found San Diego horned lizard (*Phrynosoma coronatum blainvillii*) and coastal whiptail (*Cnemidophorus tigris*) (TMC1992). The California whipsnake or striped racer (*Masticophis lateralis*) was also found onsite in previous surveys (PSBS 1990). Red diamond rattlesnake (*Crotalus*

ruber), western diamondback (*Crotalus atrox*), and common kingsnake (*Lampropeltis getula*) may also be present.

Common wildlife species observed on or near the site include California ground squirrel (*Spermophilus beecheyi*), Canadian goose (*Branta canadensis*), common raven (*Corvus corax*), morning dove (*Zenaida macroura*), and rock dove (*Columba livia*).

Special Status Species

Special status plant and wildlife species are those designated by federal, State, local, or scientific organizations as needing protection because of rarity or threats to their existence. Special status plant and wildlife species include those listed as threatened, endangered, or proposed for listing; candidates for listing; and species of concern to the USFWS and CDFG. The burrowing owl is the only special status species with moderate potential to occur onsite, while the Los Angeles pocket mouse, northwestern San Diego pocket mouse, white-tailed kite, and the Plummer’s mariposa lily are the only special status species with high potential to occur onsite. Special status characteristics are summarized in Table 4.3-1.

Table 4.3-1: Special Status Plant and Animal Species

Species	Habitat	Status	Occurrence in Project Area
Plummer’s mariposa lily (<i>Calochortus plummerae</i>)	Dry rocky areas in coastal sage scrub, chaparral, and yellow pine forests below 5,000 feet elevation.	<u>Federal</u> Candidate 2 <u>State</u> No <u>CNPS</u> 1B	High Potential to Occur: Found onsite during spring survey
White-tailed kite (<i>Elanus leucurus</i>)	Open country in South American and southern North America.	<u>Federal</u> MBTA <u>State</u> Species of Special Concern	High Potential to Occur: Not observed onsite. Suitable foraging habitat exists but no nesting habitat.
Burrowing owl (<i>Athene cucularia</i>)	Burrow sites - open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nests depending on burrowing mammals, most notably the California ground squirrel.	<u>Federal</u> No <u>State</u> Species of Special Concern	Moderate Potential to Occur: Not observed onsite, Marginally suitable habitat but highly disturbed. California ground squirrel burrows were observed on the site.

Table 4.3 1: Special Status Plant and Animal Species (Cont.)

Species	Habitat	Status	Occurrence in Project Area
California gnatcatcher (<i>Polioptila californica</i>)	Coastal sage scrub, occurs only in cismontane Southern California and northwestern Baja California in low-lying foothills and valleys.	<u>Federal</u> Endangered <u>State</u> Endangered	No Potential to Occur: No suitable habitat found onsite as confirmed by several surveys. Until 2007, a portion of this site was classified as Critical Habitat for this species.
San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	Primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. The preferred substrate is sandy and sandy loam soils and very little herbaceous ground cover. Found in isolated populations along the Santa Ana and San Jacinto drainages.	<u>Federal</u> Endangered <u>State</u> No	No Potential to Occur: This species was not found onsite during a protocol trapping survey. The southwestern portion of the site is designated as Critical Habitat for this species.
northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	Found in sandy herbaceous areas, usually with rocks or in coarse gravel. Arid coastal areas in grassland, coastal scrub, and chaparral. San Diego, San Bernardino, Los Angeles, and Riverside Counties.	<u>Federal</u> No <u>State</u> Species of Special Concern	High Potential to Occur: This species was found onsite during a protocol trapping survey.
Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	Prefers sandy soil for burrowing, but has been found on gravel washes and stony soils. Found in coastal scrub in San Bernardino, Los Angeles, and Riverside Counties.	<u>Federal</u> No <u>State</u> Species of Special Concern	High Potential to Occur: Found onsite during protocol trapping survey.
CNPS – California Native Plant Society MBTA = Migratory Bird Treaty Act Source: Natural Resources Assessment, Inc. 2007.			

Plummer’s Mariposa Lily

Plummer’s mariposa (*Calochortus plummerae*) prefers dry, rocky areas in coastal sage scrub, chaparral, and yellow pine forest. It blooms from May through July, from elevations below 1,700 meters (5,000) feet. The historical distribution of Plummer’s mariposa lily is from the Santa Monica Mountains in Los Angeles County to San Jacinto Mountains in Riverside County. It is not currently listed by the USFWS or the CDFG but it is on list 1B of the California Native Plant Society’s inventory. This species has a high potential to occur onsite and has been observed during previous spring surveys (NRS 2007).

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a resident species in lowland areas of southern California. It prefers open areas for foraging and burrowing, and is found widely scattered in open desert scrub.

This species is scarce in coastal areas, being found mainly in agricultural and grassland habitats. The largest remaining numbers are in the Imperial Valley, where it is common in the agricultural fields. As a result of coastal development, the burrowing owl is declining in coastal habitats.

Typical habitat associated with burrowing owls includes short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-round resident. The primary requirement for suitable burrowing owl foraging habitat appears to be low vegetation cover that allows visibility and access to prey.

The CDFG has designated the burrowing owl as a California Species of Special Concern (CSC) because declining population levels, limited ranges and/or continuing threats have made them vulnerable to extinction. This species has not been observed onsite but it is considered likely to occur, especially in the less disturbed areas along the middle and upper stretches of Badger Creek (NRA 2007).

California Gnatcatcher

The CAGN is a small songbird that is a year round resident of sage scrub communities. Sage scrub communities preferred by this species are typically dominated by low growing, drought deciduous and succulent shrubs, as well as sub-shrub species, including California sage, California buckwheat, brittlebush, sage, and cacti. The original range for this species included much of southern California from Ventura County south to San Diego and on into Mexico. This species often occurs in extensive Riverside coastal sage scrub habitat in Riverside County. Fragmentation or removal of habitat (i.e., sage scrub) has reduced the known populations to scattered localities in Los Angeles, Orange, Riverside and San Diego counties.

On March 25, 1993, the CAGN was listed by the Service as a threatened species pursuant to the Federal Endangered Species Act (ESA). The ESA prohibits anyone from "taking" a listed species. Take includes, but is not limited to, harming, harassing or killing individuals of a listed species as well as destruction of habitat occupied by listed species. Critical Habitat (CH) for the gnatcatcher was designated by the USFWS in 2000, and San Bernardino Unit 11 includes 120-acres of the University Hills property. In January of 2007, the CH line was revised and the project property was excluded. The UHSP site has been surveyed for this species in 2006 and 2007 and it was not found onsite (NRA 2007).

Rodent Surveys

Natural Resources Assessment, Inc. (NRA, Inc.) conducted a San Bernardino kangaroo rat (SBKR) trapping study for the proposed project. The site was first assessed by a walking survey. Three sensitive mammal species were identified as potentially present in the vicinity of the project site, including the San Bernardino kangaroo rat, northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)(SDPM), and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)(LAPM). The northwestern San Diego pocket mouse was also captured (85 captures);

however, impacts to this species are not considered to be significant. No SBKR were trapped on site. The northwestern part of the site is also located within designated Critical Habitat for the SBKR, and impacts to this area will occur.

San Bernardino Kangaroo Rat

The SBKR is described as being confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs. In recent years, they have been found in highly disturbed habitats adjacent to otherwise suitable habitat.

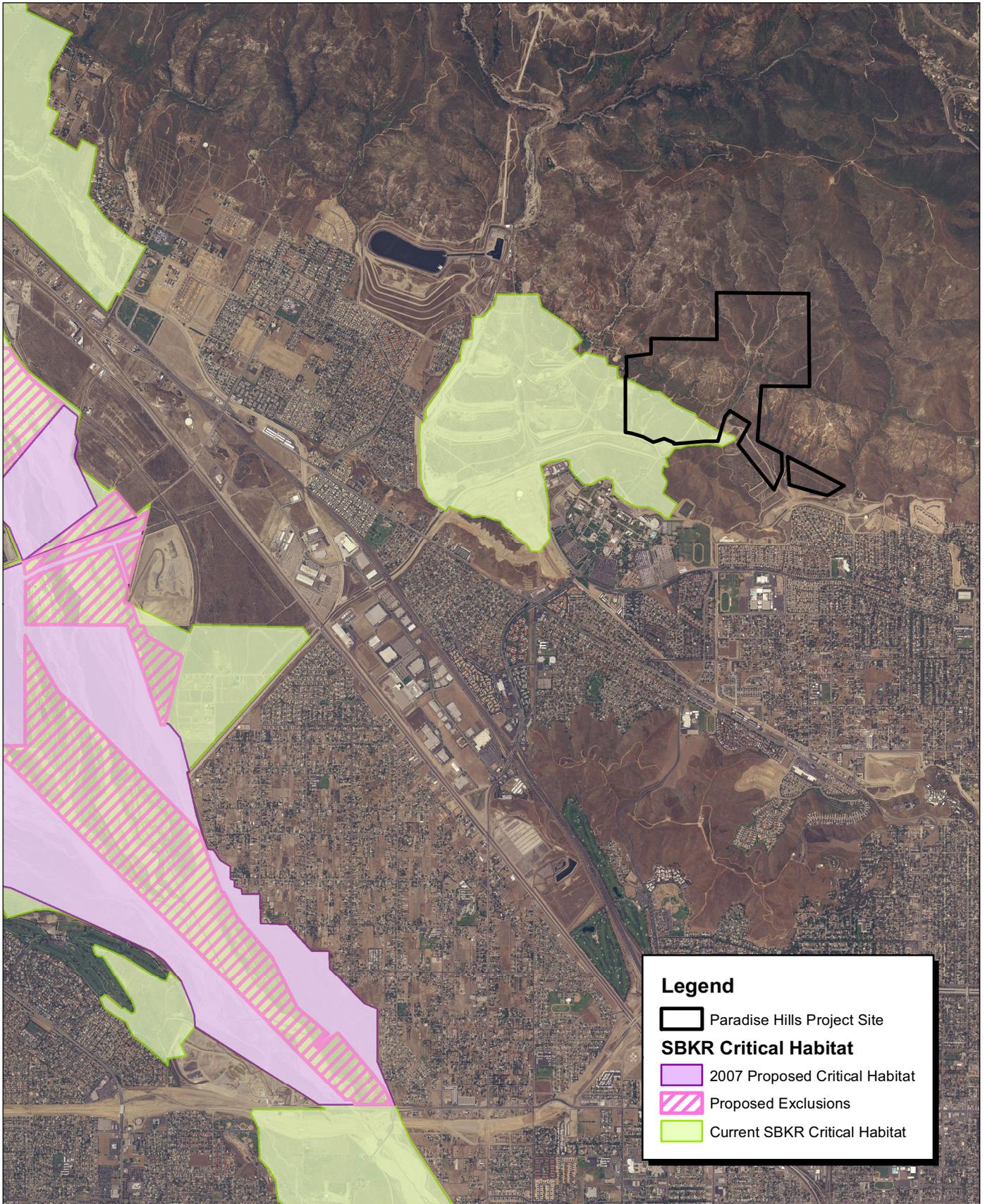
SBKR is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainages. Most of the original drainages used by this species have been historically altered as a result of flood control efforts, mining, off road vehicle use and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the SBKR. The past habitat losses and potential future losses prompted the emergency listing of the San Bernardino kangaroo rat in 2003 as an endangered species.

Approximately 72 acres of the project site are within Unit 2 of designated SBKR critical habitat, as shown in Exhibit 4.3-2. Protocol surveys of the project site found no evidence of the species onsite in 2006 and 2007.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (NSDPM) (*Chaetodipus fallax fallax*) is one of five subspecies of the San Diego pocket mouse. The San Diego pocket mouse occurs mainly in arid coastal and desert border areas in San Diego, Riverside, and San Bernardino counties, but the NSDPM sub-species occurs in open scrub, chamise/redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland in the valleys and foothills of southwestern California. This species is reported in high numbers in rocky and gravelly areas. Burrows can be found in sandy or gravelly soils. Higher densities in rocky and gravelled areas are attributed to the greater availability of cover from predators.

The NSDPM appears to be sensitive to habitat fragmentation and degradation, and its historical range has been reduced by urban development and agriculture. As a result, the subspecies has been designated as a California Species of Special Concern by the CDFG. This species was found onsite during a protocol trapping survey.



Source: National Agriculture Imagery Program (2005) & USFWS Database, NRA 2007.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse (LAPM) (*Perognathus longimembris brevinasus*) is one of two pocket mice found in this area of San Bernardino County. Both the LAPM and the previously described NSDPM occupy similar habitats, but the NSDPM has a wider range extending south into San Diego County. The habitat of the LAPM is confined to lower elevation grasslands and coastal sage scrub habitats, in areas with soils composed of fine sands. This species prefers habitat similar to that of the Stephen's kangaroo rat (*Dipodomys stephensi*) (SKR) and SBKR. It occurs in open sandy areas in the valley and foothills of southwestern California.

The species is listed as a California Species of Special Concern. The present known distribution of this species in Riverside and San Bernardino counties extends from the San Gabriel and San Bernardino mountains south to the Temecula and Aguanga areas, and from the east side of the Santa Ana Mountains east to Cabazon. This species was found onsite during a protocol trapping survey in the spring of 2007.

Raptors

Previous surveys identified seven raptors present on the project site, but concluded that several other raptors may use the site as well (TMC 1993). The extensive woodlands along Badger Canyon was classified as providing high quality raptor nesting habitat. This habitat was severely affected by the 2003 Old Fire but is now recovering. NRA concluded that the alluvial fan provided marginal foraging habitat, particularly for buteos (soaring raptors that hunt over open ground). Suitable habitat for non-woodland migratory species is very limited, but the burned out grassland and scrub habitat may provide foraging habitat for some migratory species.

Most of the raptor species (eagles, hawks, falcons and owls) are experiencing population declines as a result of habitat loss. As a group, raptors are of concern to state and federal agencies. Raptors and all migratory bird species, whether listed or not, also receive protection under the Migratory Bird Treat Act (MBTA) of 1918, which prohibits individuals to kill, take, possess or sell any migratory bird, bird parts (including nests and eggs) except in accordance with federal regulations. Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended. State protection is extended to all birds of prey by the CDFG Code, Section 2503.5. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

Wildlife Movement Corridors

Wildlife movement and the fragmentation of wildlife habitat have come to be recognized as important wildlife issues that must be considered in assessing impacts to wildlife. In summary, habitat fragmentation is the division or breaking up of larger habitat areas into smaller areas that may or may not be capable of independently sustaining wildlife and plant populations. Wildlife movement (more properly recognized as species movement) is the temporal movement of species along various types of corridors. Wildlife corridors are important for connecting fragmented wildlife habitat areas.

Previous surveys did not identify any significant wildlife corridors onsite, and NRA concurred with this finding. Potential wildlife corridors on the site occur along the Badger Canyon, but this corridor is severely constricted at the southern end by both the flood control basins and the presence of the CSUSB campus and adjacent residential development. Off-road vehicle use has contributed to the decline of wildlife movement. However, the upper sections of Badger Canyon probably still function as a useful corridor for diurnal movement, confined mostly to local fauna from further up the mountainsides. NRA concluded that habitat fragmentation had already occurred in the area surrounding the project site, and that development of this site would contribute to the continuing trend of habitat fragmentation and the overall loss of habitat in this area of San Bernardino.

Jurisdictional Waters and Wetlands

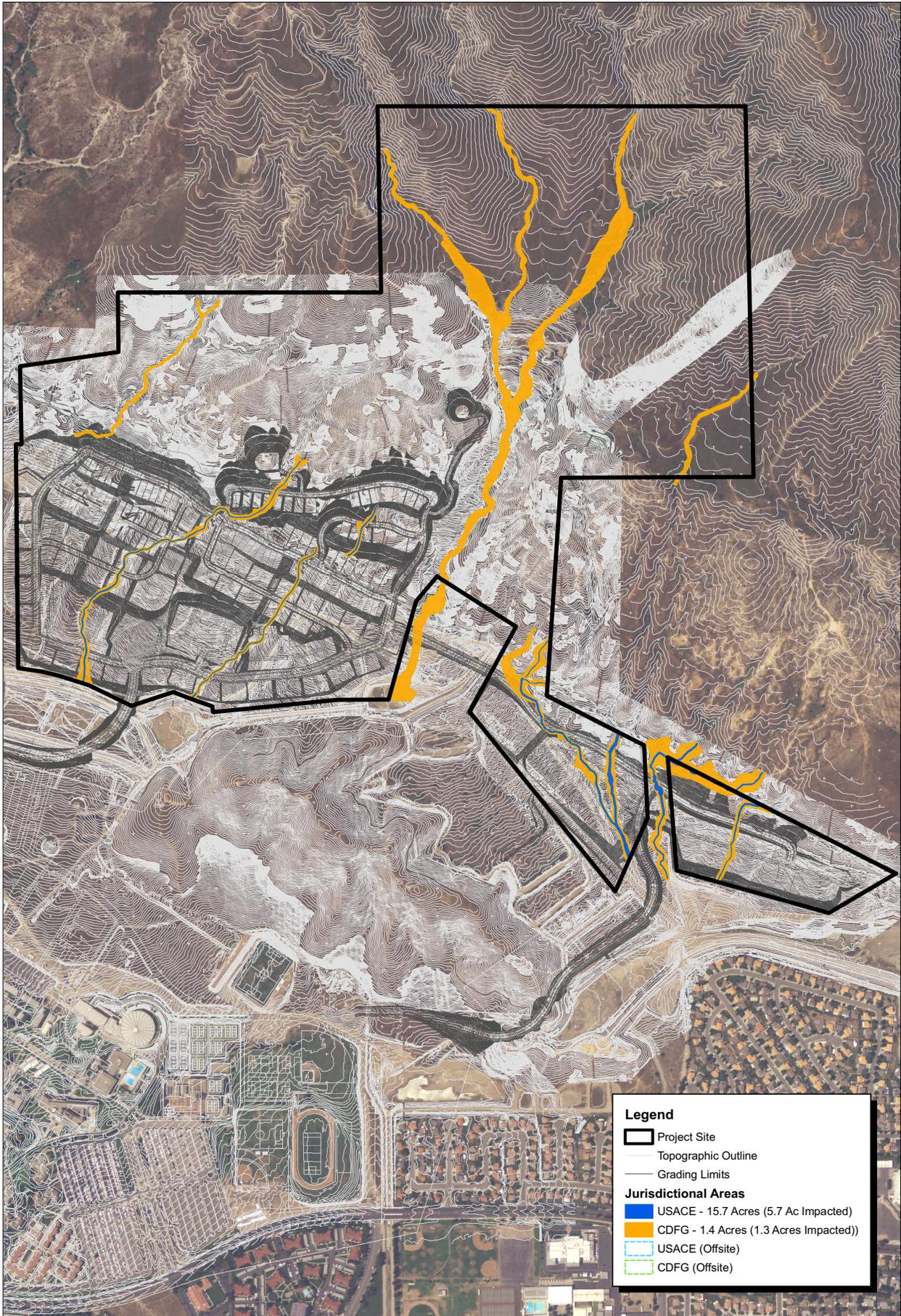
Badger Canyon and its tributaries form the main drainage onsite, as shown in Exhibit 4.3-3, *Onsite Drainages*. Numerous small drainage features cross the site, most of which start on the steeper hillsides and drop down to the alluvial fan. Badger Canyon and at least one other drainage support potential wetland habitat—at a minimum, riparian habitat exists in these areas. The freshwater seeps are not drainages and represent minimal value as water sources for wildlife. The overall value of the drainages onsite for wildlife is low to moderately good (NRA 2007). Most of the plant cover was burned over in 2003, but is slowly recovering. In addition to value for wildlife, the drainages provide some recharge to groundwater resources as water flows across the alluvial fan (see also Section 4.7, *Hydrology and Water Quality*).

All of the drainages within the project area flow southwest or southeast, ultimately connecting with the Santa Ana River through a series of drainages, culverts and pipes. The Santa Ana River is a water body that comes under the jurisdiction of USACE. Because of the connection with the Santa Ana River, USACE jurisdiction may extend to the drainages onsite. Any alteration to the drainages may result in the need for a 404 permit from the USACE, which would in turn require a 401 certification from the RWQCB (see *Regulatory Framework* below). Impacts to some, if not all the drainages, will also require Streambed Alteration Agreement from the CDFG. NRA determined that the project site drainages encompassed 15.7 acres of land under USACE jurisdiction and 1.4 acres of land under CDFG jurisdiction.

Other Resources

In their NOP comment letters, the U.S. Forest Service and Audubon Society expressed concern about the Proposed Project impacting a number of other plant or animal species, including spring snails (*Pyrgulopsis californiensis*). In general, they both requested the following: the project minimize noise and nighttime lighting next to forest land; replacement of any riparian habitat that was lost; no invasive plants be introduced next to forest land; and protect Badger Canyon and its tributaries.

The proposed UHSP project will preserve 234.8 acres of land or 58 percent of the site as permanent open space, almost all of which comprises the middle and upper reaches of Badger Canyon and its related drainages and uplands.



Source: National Agriculture Imagery Program for San Bernardino County (2005) & PBS&J.

This open space will provide a considerable buffer between the proposed developed uses of the USHP project and the forestland to the north. Preservation of Badger Canyon will also protect the riparian resources as well as the plants and animals that utilize that drainage area. The only portion of Badger Creek that will be modified is the lower reach that drains into the Devil Canyon Detention Basin, which has already been extensively disturbed by flood control and other human activities. Since the Proposed Project will preserve all of the important resources included in Badger Creek and its canyons, the project will have **less than significant impacts** to these other biological resources.

Regulatory Framework

Federal Endangered Species Act

The Endangered Species Act (ESA) of 1973 establishes a framework for protecting and facilitating the recovery of threatened and endangered populations of animal and plant species. Under the ESA, the Secretary of the Interior is required to list species of animals and plants that are both threatened and endangered, a task that is delegated to the USFWS and the National Marine Fisheries Service (NMFS). A species can become threatened or endangered as a result of the following factors:

- Present or threatened destruction;
- Modification or curtailment of its habitat range;
- Over-utilization for commercial recreation, scientific, or educational purposes;
- Disease or predation;
- Inadequacy of existing statutory mechanisms; and
- Other natural or man-made factors affecting its continued existence.

Section 3 of the ESA defines an endangered species as any species or subspecies of fish, wildlife, or plants “in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as any species or subspecies “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Designated endangered and threatened species, as listed through publication of a final rule in the Federal Register, are fully protected from a “take” without an incidental take permit administered by the USFWS under Section 10 of the ESA. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap capture, or collect, or to attempt to engage in any such conduct (50 CFR 17.3). The term “harm” in the definition of “Take in the Act” means an action that actually kills or injures wildlife. Such action may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). The term “harass” in the definition of take means an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Proposed endangered or threatened species are those for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Section 7 of the ESA requires that federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its critical habitat. This obligation requires federal agencies to consult with the USFWS or the NMFS on any actions (issuing permits including Section 404 permits, issuing licenses, providing federal funding) that may affect listed species to ensure that reasonable and prudent measures will be undertaken to mitigate impacts on listed species. Consultation with USFWS or NMFS can be either formal or informal, depending on the likelihood of the action to adversely affect listed species or critical habitat.

Once a formal consultation is initiated, USFWS or NMFS will issue a Biological Opinion (either a “jeopardy” or a “no jeopardy” opinion) indicating whether the proposed agency action will or will not jeopardize the continued existence of a listed species or result in the destruction or modification of its critical habitat. A permit cannot be issued for a project with a “jeopardy” opinion unless the project is redesigned to lessen impacts.

In the absence of any federal involvement, as in a privately funded project on private land with no federal permit, only Section 10(a) of the ESA can empower the USFWS or NMFS to authorize incidental take of a listed species provided a habitat conservation plan (HCP) is developed. To qualify for a formal Section 10(a) permit, strict conditions must be met, including a lengthy procedure involving discussions with USFWS, NMFS, and local agencies, preparation of an HCP, and a detailed Section 10(a) permit application.

Federal Migratory Bird Treaty Act

The MBTA makes it unlawful to “take” (kill, harm, harass, etc.) any migratory bird listed in 50 CFR 10, including their nests, eggs, or products. The MBTA protects over 800 species, including geese, ducks, shorebirds, raptors, songbirds, and many relatively common species, and it was originally drafted to put an end to the commercial trade in birds and their feathers that, by the early years of the 20th century, had wreaked havoc on the populations of many native bird species. The MBTA implements the United States’ commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each of the conventions protect selected species of birds that are common to both countries (i.e., they occur in both countries at some point during their annual life cycle). The MBTA requires that the removal of any trees, shrubs, or any other potential nesting habitat be conducted outside the avian nesting season, which is generally between early February and late August.

California Endangered Species Act

Signed into law in 1984, the California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. The CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, the California Fish and Game Commission may formally designate plant and animal species rare, threatened, or endangered by official listing. Listed species

are generally given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

CESA prohibits the “take” of any species that the California Fish and Game Commission has determined to be an endangered species or a threatened species. CESA defines a “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CDFG enforces CESA, which authorizes that take of a plant or wildlife species listed as endangered or threatened under ESA and CESA, may occur pursuant to a federal incidental take permit issued in accordance with Section 10 of the ESA, provided CDFG is notified and certifies that the incidental take statement or incidental take permit is consistent with CESA (Fish & Game Code Section 2080.1(a)).

CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

California Environmental Quality Act - Treatment of Listed Plant and Animal Species

Both the federal and State ESAs protect only those species formally listed as threatened or endangered (or rare, in the case of the State list). CEQA Guidelines Section 15380, however, independently defines “endangered” species of plants, fish or wildlife as those whose survival and reproduction in the wild are in immediate jeopardy, and “rare” species as those which are in such low numbers that they could become endangered if their environment worsens. Therefore, a project will normally have a significant effect on the environment if it will substantially affect a rare or endangered species or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

California Fish and Game Code

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the “take, possession, or destruction of birds, their nests or eggs.” Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a “take.”

Local - City of San Bernardino General Plan

The Natural Resources and Conservation Element of the City’s General Plan establishes the following applicable policies related to biological resources:

Goal 12.1: “Conserve and enhance San Bernardino’s biological resources.”

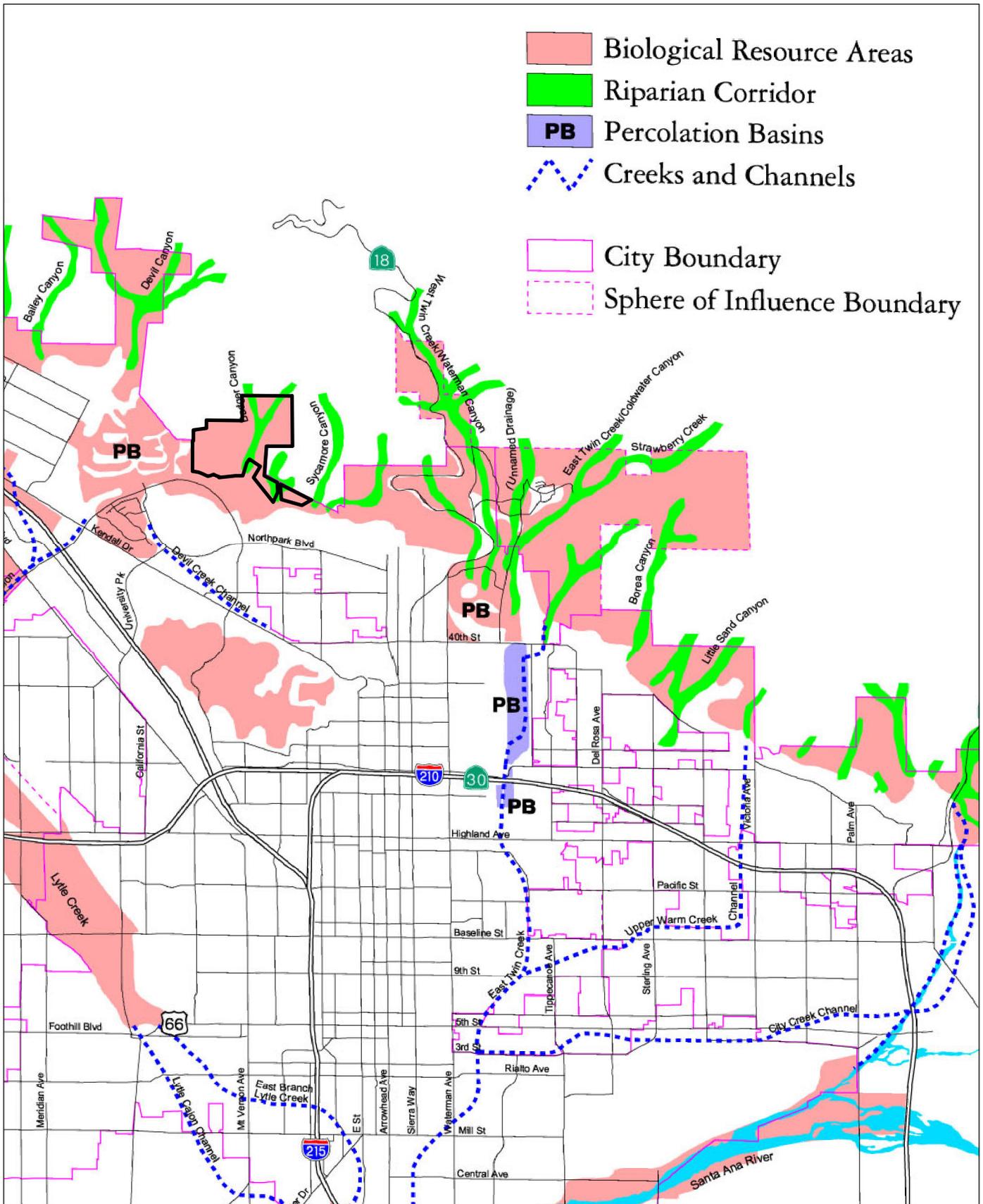
- **Policy 12.1.1** Acquire and maintain current information regarding the status and location of sensitive biological elements (species and natural communities) within the planning area, as shown on Figure NRC-1 (NR-3).

- **Policy 12.1.2** Site and develop land uses in a manner that is sensitive to the unique characteristics of and that minimizes the impacts upon sensitive biological resources (LU-1).
- **Policy 12.1.3** Require that all proposed land uses in the “Biological Resource Management Area” (BRMA), Figure NRC-2, be subject to review by the Environmental Review Committee (ERC).
- **Policy 12.1.4** Require that development in the BRMA:
 - a. Submit a report prepared by a qualified professional(s) that addresses the Proposed Project’s impact on sensitive species and habitat, especially those that are identified in State and Federal conservation programs;
 - b. Identify mitigation measures necessary to eliminate significant adverse impacts to sensitive biological resources;
 - c. Define a program for monitoring, evaluating the effectiveness of, and ensuring the adequacy of the specified mitigation measures; and
 - d. Discuss restoration of significant habitats.

Analysis: Badger Canyon is classified as a BRMA (see Exhibit 4.3-4) by the City and the entire drainage and surrounding uplands within the central and upper canyon will be preserved as permanent open space that will become a “land laboratory” for CSUSB. Therefore, the Proposed Project is consistent with this goal and its policies.

Goal 12.2: “Protect riparian corridors to provide habitat for fish and wildlife.”

- **Policy 12.2.1** Prohibit development and grading within fifty (50) feet of riparian corridors, as identified by a qualified biologist, unless no feasible alternative exists (LU-1).



Source: City of San Bernardino General Plan.

- **Policy 12.2.2** Generally permit the following uses within riparian corridors:
 - a. Education and research, excluding buildings and other structures;
 - b. Passive (non mechanized) recreation;
 - c. Trails and scenic overlooks on public land(s);
 - d. Fish and wildlife management activities;
 - e. Necessary water supply projects;
 - f. Resource consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code;
 - g. Flood control projects where no other methods are available to protect the public safety; and
 - h. Bridges and pipelines when supports are not in significant conflict with corridor resources (LU-1).
- **Policy 12.2.3** Pursue voluntary open space or conservation easements to protect sensitive species or their habitats (NR-1).
- **Policy 12.2.4** Development adjacent to riparian corridors shall:
 - a. Minimize removal of vegetation;
 - b. Minimize erosion, sedimentation, and runoff by appropriate protection or vegetation and landscape;
 - c. Provide for sufficient passage of native and anadromous fish as specified by the CDFG;
 - d. Minimize wastewater discharges and entrapment; and
 - e. Prevent groundwater depletion or substantial interference with surface and subsurface flows; and provide for natural vegetation buffers.
- **Policy 12.2.5** Permit modification of the boundaries of the designated riparian corridors based on field research and aerial interpretation data as part of biological surveys.

Analysis: The only significant riparian corridor on the project site is along Badger Creek and the attendant canyon areas, and all of these resources will be preserved as permanent open space that will be managed by CSUSB as a land laboratory in the future. Therefore, the Proposed Project is consistent with this goal and its policies.

Goal 12.3: *“Establish open space corridors between and to protected wildlands.”*

- **Policy 12.3.1** Identify areas and formulate recommendations for the acquisition of property, including funding, to establish a permanent corridor contiguous to the National Forest via Cable Creek and/or Devil Canyon. The City shall consult with various federal, state and local agencies and City departments prior to the adoption of any open space corridor plan.
- **Policy 12.3.2** Seek to acquire real property rights of open space corridor parcels identified as being suitable for acquisition (NR-1).
- **Policy 12.3.3** Establish the following habitat types as high-priority for acquisition as funds are available:
 - a. Habitat of endangered species;
 - b. Alluvial scrub vegetation;
 - c. Riparian vegetation dominated by willow, alder, sycamore, or native oaks; and
 - d. Native walnut woodlands.
- **Policy 12.3.4** Preserve and enhance the natural characteristics of the Santa Ana River, City Creek, and Cajon Creek as habitat areas.
- **Policy 12.3.5** Prevent further loss of existing stands of Santa Ana River Woolly-star (*Eriastrum densifolium sanctorum*) and Slender-horned Centrostegia (*Centrostegia leptoceras*).

Analysis: The Proposed Project is preserving the middle and upper reaches of Badger Creek and the attendant canyon areas, and all of these resources will be preserved as permanent open space that will be managed by CSUSB as a land laboratory in the future. In addition, the walnut woodland along the west bank of the middle reach of Badger Creek will be preserved in a public park. Therefore, the Proposed Project is consistent with this goal and its policies.

Note: The remainder of the goals and policies in this General Plan Element do not address biological resources.

NOP Comments

During the NOP period, several letters were received that commented on potential impacts to biological resources, including various CSUSB faculty, the U.S. Forest Service, and the Audubon Society. No comments were made during the scoping meeting relative to biological resources.

Methodology

NRA prepared the Biological Resource Survey for the Proposed Project. The assessment consisted of a literature review and a reconnaissance-level field survey.

The literature review provides a baseline from which to evaluate the biological resources potentially occurring on the project site as well as in the surrounding area. A compilation of sensitive plant and wildlife species recorded in the vicinity of the site was derived from the CDFG California Natural Diversity Database (CNDDDB), a sensitive species and plant community account database. Additional recorded occurrences of plant species found on or near the site were obtained in the California Native Plant Society’s (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California database. The CNDDDB and CNPS searches were based on the Diablo, California and surrounding USGS 7.5-minute topographic quadrangles. Federal register listings, protocols, and species data provided by the USFWS and CDFG were reviewed in conjunction with anticipated federal and State listed species potentially occurring in the vicinity.

An NRA staff biologist conducted reconnaissance-level field surveys on several occasions during 2007. The reconnaissance-level survey was conducted on foot during daylight hours. The object of the surveys was not to extensively search for every species occurring within the project site, but to ascertain general site conditions and identify potentially suitable habitat areas for various sensitive plant and wildlife species.

Plant communities were mapped using 7.5-minute USGS topographic base maps and recent aerial photography (from 2000 to present). Plant communities within the project site were classified at a general level of detail using the widely accepted descriptions provided in Holland’s *Preliminary Descriptions of the Terrestrial Natural Communities of California*, and modifications were made by NRA biologists where appropriate. Table 4.3-2 summarizes the impacts of the project on the site’s biological resources.

Table 4.3-2: Impacts to Onsite Biological Resources

Plant Association	Total Acres	Acres to be Disturbed	Acres to be Preserved
Chaparral	373.1	162.9	210.2
Eucalyptus/Palm Stand/Non-Native	2.8	0.9	1.9
Sycamore Woodland	25.5	5.5	20.0
Willow Woodland	2.8	0.1	2.7
Tank Site Roads – disturbed grassland	20.2	20.2	0.0
Total (onsite)	424.4 (404.2)	189.6 (169.4)	234.8 (234.8)
Waters of the U.S.	15.7	5.7	10.0
Waters of the State	1.4	1.3	0.1
Wetlands	1.3	0.0	1.3
Source: NRA 2008			

4.3.3 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G, Environmental Checklist, to determine whether impacts to biological resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- a.) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?
- b.) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS?
- c.) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d.) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?
- e.) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f.) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (Refer to Section 7, *Effects Found Not To Be Significant*.)

4.3.4 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special Status Species

Impact BIO-1: **Special status wildlife species may be adversely affected by project construction activities.**

Impact Analysis

Portions of the project site contain habitat that supports the Plummer's Mariposa Lily, and it was found onsite before the 2003 Old Fire. The site contains critical habitat for SBKR, the LAPM has been found onsite, and the site contains suitable habitat for burrowing owl, nesting birds, and raptor foraging. Each special status species is discussed below.

Plummer's Mariposa Lily

This species has been observed onsite. To preclude potential impacts to this species, a spring survey will need to be conducted prior to grading to determine the specific location and extent at that time. Individuals that are present in areas to be disturbed will need to be relocated to suitable land in the permanent open space area. This is considered a **potentially significant impact** and requires mitigation.

White-tailed Kite

This species was not observed onsite but could occur at infrequent times. The project proposes to develop the sloping alluvial bench, which could provide foraging habitat for this species. However, the project will preserve 238 acres as permanent open space, including the middle and upper reaches of Badger Creek and its associated canyons as permanent open space. These preserved lands will help maintain resources for this species. Therefore, impacts to this species are considered to be **less than significant** and no mitigation is proposed other than those measures identified for nesting birds.

Burrowing Owl

The project site contains undeveloped land suitable for the burrowing owl, a California Species of Special Concern. Project construction activities would include vegetation removal, grading, and building activities that could result in adverse effects on burrowing owl nests if such features are present. Although the species has not been observed or recorded on the project site, it can move into a suitable area in a short amount of time. Since the site contains suitable habitat, it should be considered potentially present and a pre-grading survey must be completed to assure the species is not present prior to and would not be harmed by grading. This represents a **potentially significant impact** and requires mitigation.

Nesting Birds

Most of the site planned for development is devoid of trees or large shrubs suitable for nesting birds protected by the MBTA. Most of the trees onsite are along Badger Creek and its associated canyons and uplands - these areas will be preserved as permanent open space so impacts will be minimal. In addition, the specific plan proposes extensive landscaping in the developed areas, including trees of various species and sizes. These trees will eventually provide additional habitat for those species of small mammals, reptiles, and songbirds that are tolerant of human activity. This impact is considered **potentially significant**. To preclude impacts to nesting birds, a pre-construction nesting bird survey will need to be performed prior to any tree or large shrub (over 4 feet in height) if vegetation is removed during the nesting season, generally the period between February 1 and August 31. The implementation of this measure would reduce potential impacts to nesting birds to a less than significant level. Vegetation removal that does not involve large shrubs and that occurs outside of the nesting season would not require mitigation.

California Gnatcatcher

Until January of 2007, the site contained 120 acres of designated critical habitat for this species; however, this designation was removed from the project site. In addition, the species has not been found onsite during repeated focused surveys (NRA 2007). Therefore, development of the proposed UHSP project will have a less than significant impact on this species, and no mitigation is required.

San Bernardino Kangaroo Rat

This species has not been found on the project site, but 72 acres of the site (in the southwest and central portions of the site) are designated as critical habitat for this species. The Proposed Project will remove 64 acres of critical habitat and preserve 8 acres as permanent open space, including the middle and upper reaches of Badger Creek and its associated canyons. These preserved lands will help maintain resources for this species, and it was not found onsite during repeated surveys, therefore, the loss of unoccupied critical habitat onsite represents a **less than significant impact** and no mitigation is required.

Northwestern San Diego Pocket Mouse

The project site is not included in critical habitat for this species, but it was found onsite during a trapping survey. The Proposed Project will preserve 234.8 acres as permanent open space, including the middle and upper reaches of Badger Creek and its associated canyons as permanent open space. These preserved lands will help maintain resources for this species of concern, so the loss of sage scrub habitat will result in a **less than significant impact** and no mitigation is required.

Los Angeles Pocket Mouse

This species was trapped onsite but the site is not included in critical habitat for this species. The Proposed Project will preserve 234.8 acres as permanent open space, including the middle and upper reaches of Badger Creek and its associated canyons as permanent open space. These preserved lands will help maintain resources for this species, therefore, impacts to this species are considered to be **less than significant** and no mitigation is required.

Raptors

Many raptors and nesting birds that may occasionally utilize the project site for roosting, foraging, or nesting are protected by the federal MBTA or California fish and game regulations and so impacts to these species are addressed in this section. Development of the project site will remove approximately 90 acres of coastal sage scrub and annual grassland vegetation that provides foraging opportunities for raptors and other bird species. This loss will incrementally contribute to the ongoing cumulative or regional loss of raptor foraging habitat. However, the preservation of 234.8 acres of permanent open space on the project site, including Badger Creek and its associated canyons and uplands, will help preserve foraging habitat for raptors. This design of the UHSP project will help keep potential impacts to raptors at **less than significant levels**.

Level of Significance Before Mitigation

Development of the Proposed Project will have potentially significant impacts related to Plummer's mariposa lily, burrowing owl, and nesting birds.

Mitigation Measures

- MM BIO-1a Plummer's Marisposa Lily.** During the spring prior to grading, the developer shall retain a qualified biologist to conduct a focused survey of the proposed development areas to determine if this species is present onsite. The survey shall be conducted according to the standard protocol established by CDFG. If the species is present, the developer shall fund relocation of the plants to a suitable location within the permanent open space area.
- MM BIO-1b Burrowing Owl.** Within 30 days of grading or any ground disturbance activities on the project site, a qualified biologist shall conduct a focused survey to determine if burrowing owls are present onsite. The survey shall be conducted according to the standard protocol established by CDFG. If burrowing owls are determined to be present on the site, mitigation shall follow the CDFG guidelines including passive relocation. If vegetation removal or ground disturbance begins within 30 days of the focused survey, no pre-construction survey would be required. If vegetation removal or ground disturbance activities begin after 30 days of the focused survey, a subsequent pre-construction survey would be required.
- MM BIO-1c Nesting Birds.** If trees or large shrubs (over 4 feet in height) will be removed during the nesting season (February 1 through August 31), a qualified biologist shall conduct a nesting bird survey no more than 30 days prior to any disturbance to identify any potential nesting activity. If passerine birds are found to be nesting, or there is evidence of nesting behavior within 250 feet of the impact area, the biologist shall determine an appropriate buffer that shall be required around the nests. No vegetation removal or ground disturbance would occur within this buffer. For raptor species—birds of prey (e.g., hawks and owls)—this buffer would generally be 500 feet. A qualified biologist shall monitor the nests closely until it is determined that the nests are no longer active, at which time construction activities may commence within the buffer area. Construction activity may encroach into the buffer area at the discretion of the biological monitor.

Level of Significance After Mitigation

Less than significant impact.

Riparian Habitat and Sensitive Natural Communities

Impact BIO-2: **The Proposed Project would not adversely affect riparian habitat or sensitive natural communities.**

Impact Analysis

No riparian habitat or sensitive natural communities are present on the alluvial fan portion of the project site except for the walnut woodland along the west bank of the middle reach of Badger Creek. The Specific Plan describes how this resource will be preserved within the “Walnut Grove” Park. The riparian resources onsite are associated with the upper reach of Badger Creek and its associated canyons. This area will be preserved as permanent open space that will be managed as a “land laboratory” for the CSUSB. Based on the design of the Specific Plan, impacts to riparian habitat or sensitive natural communities would be less than significant. Potential impacts to trees that support nesting birds are discussed in BIO-1 and addressed in Mitigation Measure BIO-1c.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Jurisdictional Features

Impact BIO-3: **The Proposed Project would not adversely affect jurisdictional waters or wetlands.**

Impact Analysis

The major jurisdictional feature of the site is Badger Creek – it exits the south end of Badger Canyon and flows across the alluvial terrace to the Devil Canyon Detention Basin. The middle and upper reach of this channel will be maintained in its existing natural condition, and preserved as permanent open space with the CSUSB “land laboratory.” The lower reach of the creek has been incorporated into the land plan of the project as a natural bottom channel with planted banks and landscaped terraces on both sides of the channel.

A number of smaller drainage features come down off the foothills to the north and flow south in channels that vary widely in their definition, from smaller upland erosional features to more defined channels with measurable beds and banks. NRA conducted a detailed jurisdictional delineation in 2006 and again in 2008 and determined that the site contained 16.6 acres of land under the jurisdiction of the USACE (“waters of the U.S.”) and 28.2 acres under the jurisdiction of the CDFG (“waters of the State”). Although these many drainages are small and have uncertain connectivity to downstream jurisdictional drainages, NRA recommends these drainages be considered jurisdictional as outlined and their loss be mitigated according to resource agency standards. Development of the UHSP site will remove 4.5 acres of land under USACE jurisdiction and 5.3 acres of land under

CDFG jurisdiction. Accordingly, loss of these acreages must either be mitigated by preserving land onsite or providing offsite mitigation at a minimum 1:1 ratio (i.e., “no net loss”).

The UHSP project has chosen to mitigate as much of this loss onsite as practical. The Specific Plan preserves essentially all of the significant drainages onsite (i.e., Badger Creek), including most of the sycamore, willow, and walnut woodlands along the creek. The UHSP proposes to create 2.6 acres of bio-swales with grass and/or other vegetation along selected natural drainage lines within the project site to convey runoff across the site in much the same manner in which it is conveyed at present. Exhibit 4.3-4 shows the proposed layout of onsite drainage improvements including the bio-swales. If the Specific Plan drainage master plan is implemented as proposed, no additional measures are likely to be needed to mitigate the loss of onsite jurisdictional land. However, the final determination of the level of mitigation needed for these impacts will be determined during the permitting processes of the USACE and CDFG. Therefore, this is considered to be a **potentially significant impact** and mitigation is required.

There are also several seeps located along the uphill side of the San Andreas Fault and in the northwest portion of the site. These are not considered jurisdictional, do not meet the regulatory definitions of wetlands, and do not constitute important water resources for local wildlife (NRA 2007). Therefore, their loss is considered a **less than significant impact** and no mitigation is required.

The jurisdictional delineations by NRA in 2006 and 2008 found 1.4 acres of wetlands onsite, but none were within the portion of the site planned for development. Therefore, the project will have **less than significant** impact on wetland resources.

Level of Significance Before Mitigation

Potentially significant impacts to jurisdictional land.

Mitigation Measures

MM-BIO-3a **Jurisdictional Land.** Prior to grading, the developer shall obtain a Clean Water Act Section 404 Permit from USACE, a Clean Water Act Section 401 Certification from the RWQCB (Santa Ana Region), and a Streambed Alteration Agreement from CDFG if jurisdictional land will be impacted. Offsite mitigation, if necessary, shall be provided at a minimum 1:1 ratio depending on location and importance of the jurisdictional land removed. If the project provides onsite mitigation equal or in excess of its identified impact (i.e., removal of jurisdictional land), no permits may be necessary. This determination shall be made by qualified biologists in consultation with City Planning, USACE, and CDFG staff based on the final land plan and value assigned to the proposed bio-swales and other drainage improvements onsite.

Level of Significance After Mitigation

Less than significant impact.

Wildlife Movement

Impact BIO-4: Development of the Proposed Project would not result in adverse impacts to wildlife movement.

Impact Analysis

The project site is within the Biological Resource Management Area (BRMA) established by the City of San Bernardino to protect biological resources along the foothills of the San Bernardino Mountains. The BRMA seeks to protect Badger Canyon and its attendant creek because it provides water and vegetation necessary to support a host of local wildlife. Figure NRC-2 of the General Plan shows the BRMA contains Badger Creek and the related upland foothills east and west of the San Andreas Fault as a wildlife movement area (see previous Exhibit 4.3-3). The areas east and west of the canyon are intended to allow for continued movement of wildlife along the lower slopes of the foothills of the San Bernardino Mountains.

The proposed Specific Plan preserves the middle and upper reaches of Badger Creek and its associated canyons, as outlined in the BRMA. This area will be preserved as permanent open space that will be managed as a “land laboratory” for the California State University San Bernardino. Based on the design of the Specific Plan, impacts to wildlife movement will be **less than significant**.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary with implementation of the Specific Plan.

Level of Significance After Mitigation

Less than significant impact.

Local Biological Policies or Ordinances

Impact BIO-5: The Proposed Project would not conflict with local policies or ordinances related to the protection of biological resources.

Impact Analysis

The City’s General Plan designates the middle and upper reaches of Badger Creek and the foothills east and west of Badger Canyon as a BRMA. For a related discussion, see BIO-4 above. The proposed Specific Plan preserves the middle and upper reaches of Badger Creek and its associated canyons, as outlined in the BRMA. This area will be preserved as permanent open space that will be managed as a “land laboratory” for the CSUSB.

In addition, the Natural Resources and Conservation Element of the City’s General Plan contain three goals (12.1 – 12.3) and 14 attendant policies that address biological resources. The previous section entitled “Regulatory Framework – City of San Bernardino General Plan” analyzed the project against these goals and policies. Goal 12.1 states to “Conserve and enhance San Bernardino’s biological resources”, which is consistent with the General Plan Badger Canyon is classified as a BRMA (see

Exhibit 4.3-4) by the City and the entire drainage and surrounding uplands within the central and upper canyon will be preserved as permanent open space that will become a “land laboratory” for CSUSB. In addition, Goal 12.2 state to “Protect riparian corridors to provide habitat for fish and wildlife”, and is consistent with the Proposed Project because the only significant riparian corridor on the project site is along Badger Creek and the attendant canyon areas, and all of these resources will be preserved as permanent open space that will be managed by CSUSB as a land laboratory in the future. Furthermore, Goal 12.3 states to “Establish open space corridors between and to protected wildlands”, which is consistent because the Proposed Project is preserving the middle and upper reaches of Badger Creek and the attendant canyon areas, and all of these resources will be preserved as permanent open space that will be managed by CSUSB as a land laboratory in the future. In addition, the walnut woodland along the west bank of the middle reach of Badger Creek will be preserved in a public park.

The General Plan policies 12.1 through 12.3 promote protection of the BRMA and riparian resources along Badger Creek and its canyons. The analysis in the preceeding section entitled *Regulatory Framework – City of San Bernardino General Plan* indicates that the Proposed Project is consistent with the General Plan Goals and policies 12.1 through 12.3 Goals, therefore, impacts to local policies related to biological resources will be **less than significant**.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

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