

**Biological Resources Assessment
City of Hesperia General Plan
Hesperia, San Bernardino County, California**

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February 25, 2010

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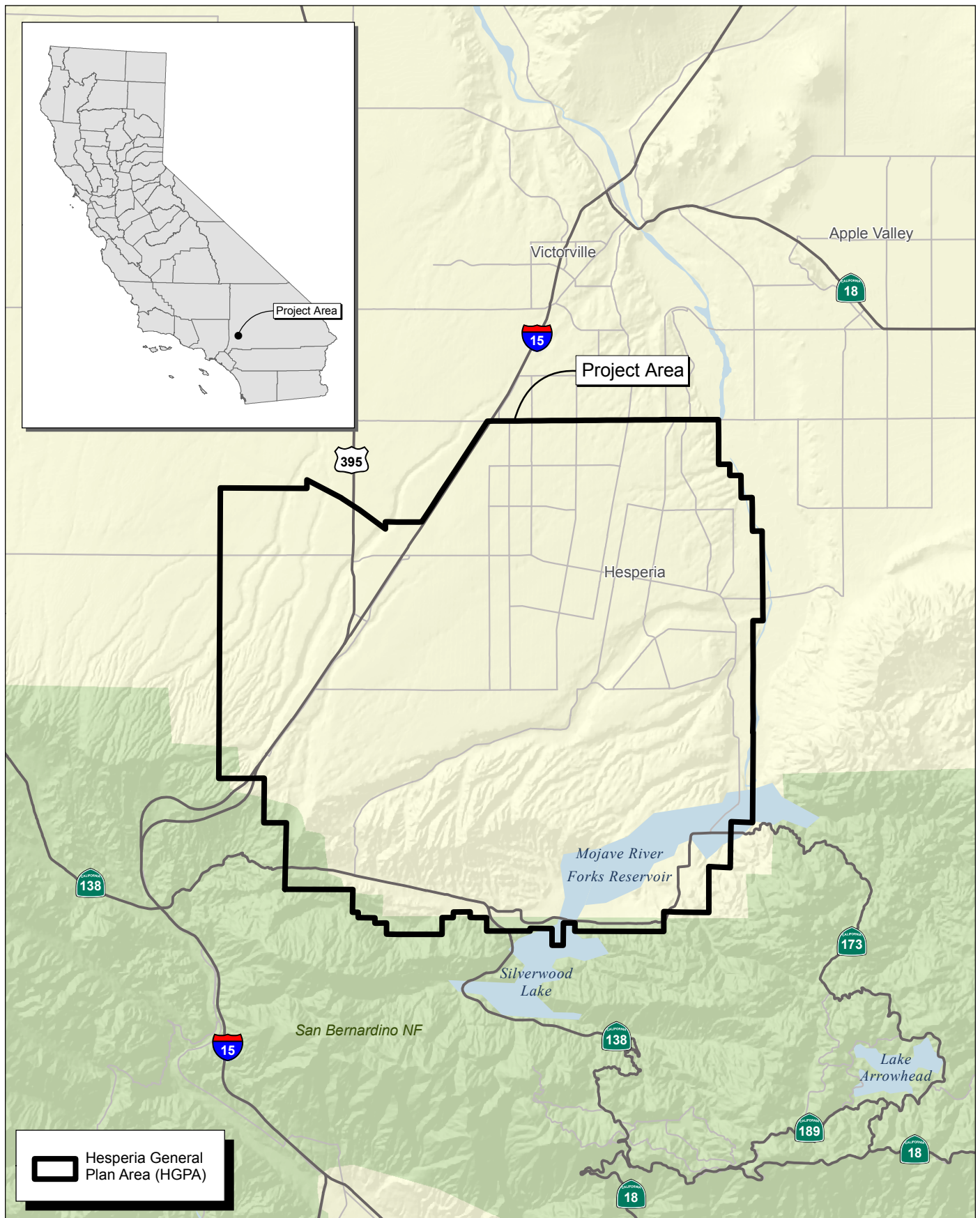
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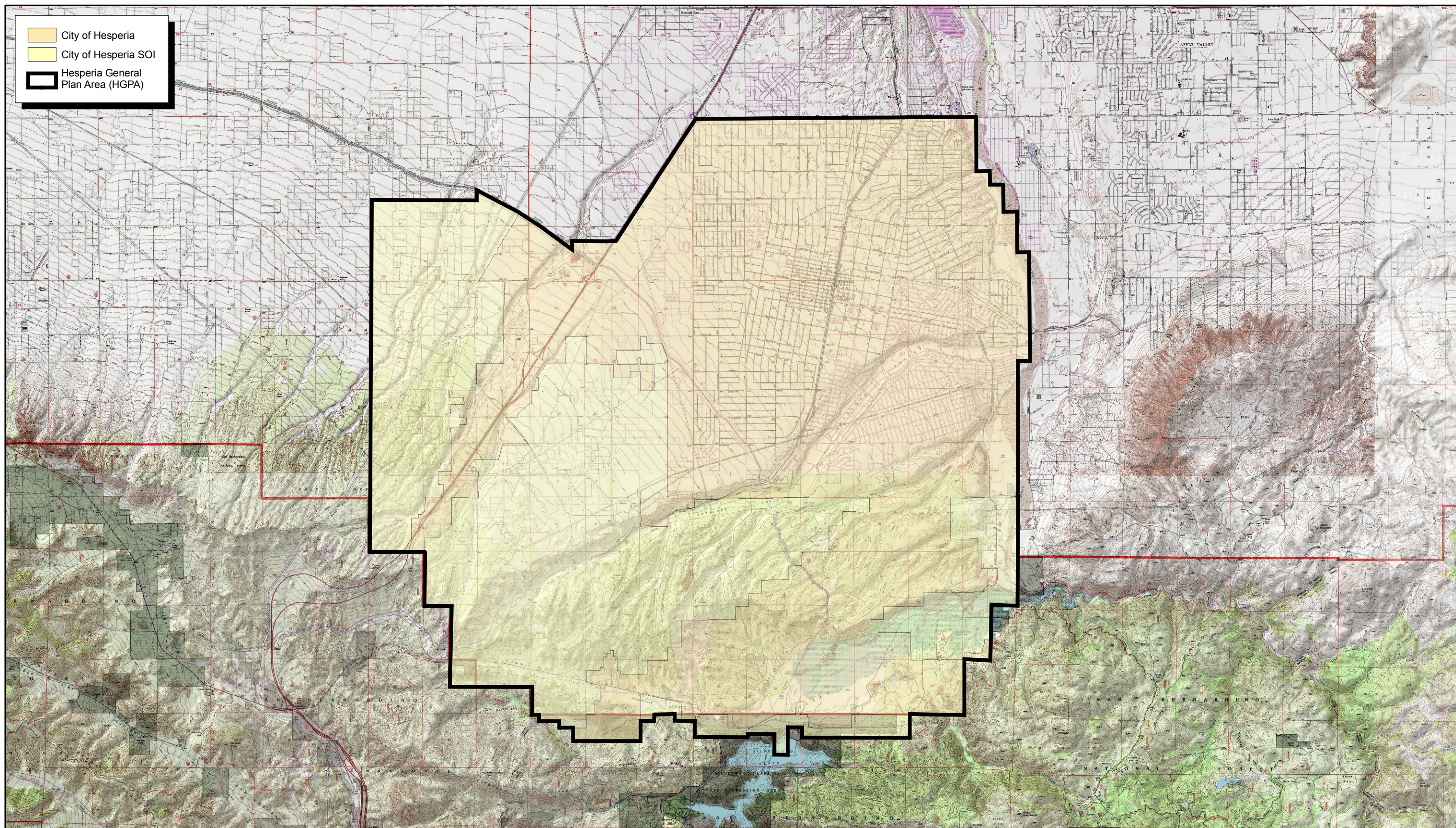
SECTION 1: INTRODUCTION

This report is an assessment of the sensitive biological resources that occur in the Hesperia General Plan Area (HGPA), which includes the City of Hesperia and its Sphere of Influence (SOI). Biological information is included in this report on the methods, the regulatory requirements, the vegetation and wildlife resources, and the presence or potential presence of special-status species and wildlife corridors. There is also a discussion of conservation opportunities.

Situated in southwest San Bernardino County, to the north of the Cajon Pass, the HGPA is located north of the San Bernardino Mountains and west of Interstate 15 (I-15) (Exhibit 1). The HGPA is found on portions of the Apple Valley South, Baldy Mesa, Cajon, Hesperia, Lake Arrowhead and Silverwood Lake, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Exhibit 2). Exhibit 3 shows the outline of the HGPA project area atop a modern aerial photograph. This area includes the City's corporate boundaries as well as its SOI. This area covers approximately 118 square miles.



Source: Census 2000 Data, The CaSIL, MBA GIS 2009, City of Hesperia 2009.



Source: USGS Baldy Mesa, Hesperia, Apple Valley South, Hesperia, Cajon, Silverwood Lake, Lake Arrowhead, Phelan, Telegraph Park, Fifteenmile Valley, and Butler Peak 7.5' DRG. City of Hesperia (2009).



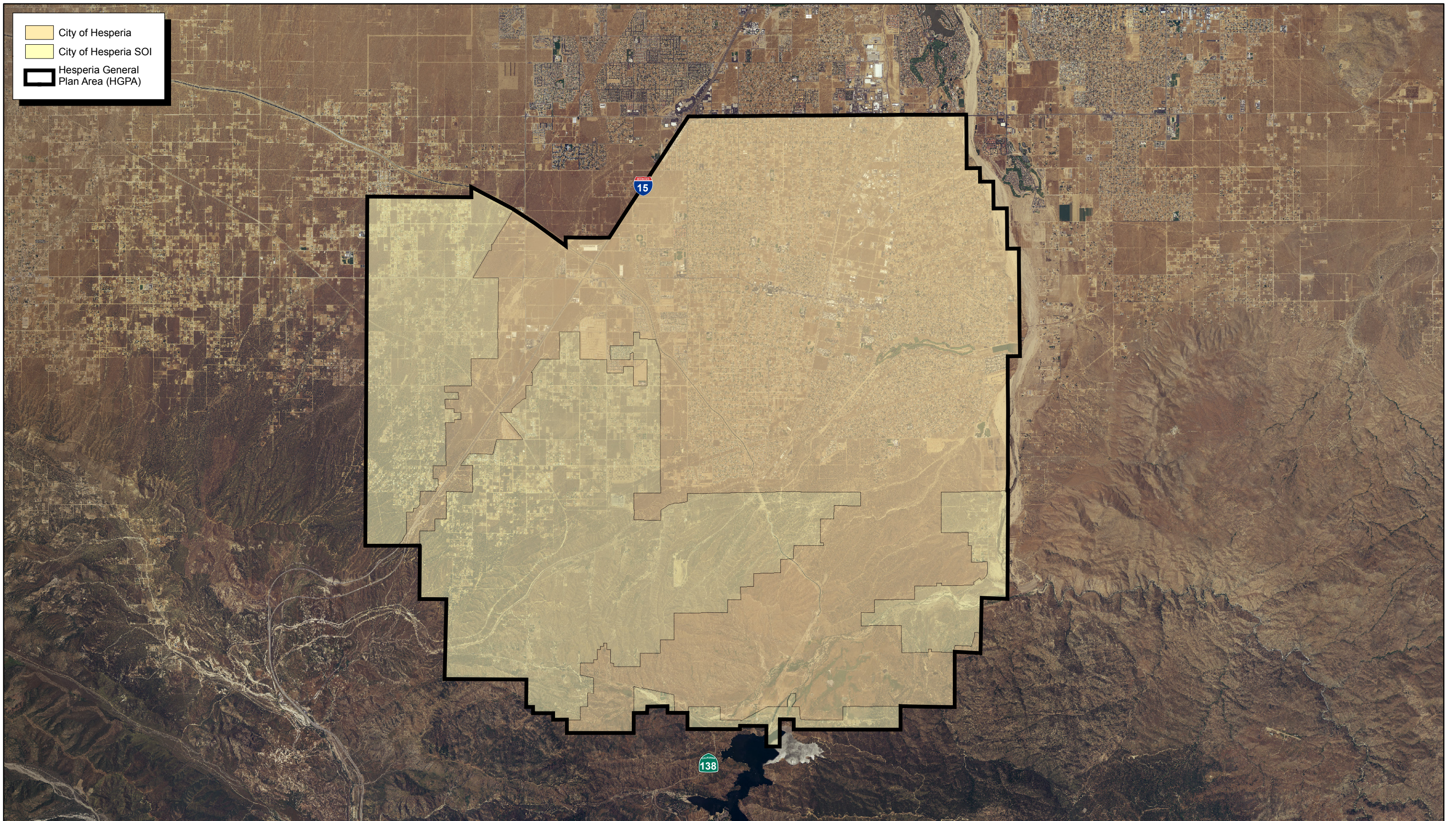
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Exhibit 2 Local Vicinity Map Topographic Base

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BIOLOGICAL RESOURCES ASSESSMENT



Source: NAIP for San Bernardino County (2005) & City of Hesperia (2009).



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Exhibit 3
Local Vicinity Map
Aerial Base

1.1 - METHODS

The California Natural Diversity Data Base (CNDDDB) and California Native Plant Society Data Base (CNPS) were consulted to identify sensitive habitats and special-status plant and animal species known to occur in the HGPA area prior, and within a 2 mile buffer area adjacent to the HGPA, to conducting a reconnaissance-level biological assessment survey. In addition, biologists reviewed the current City of Hesperia General Plan (1991) and the West Mojave Plan (2005). Data sources used for mapping plant communities included the California Gap Analysis Project (1998), which uses the Holland Plant Community Classification System (1986). A wildlife biologist conducted a one-day reconnaissance level survey of the HGPA on October 3, 2006, to assess biological resources. The survey focused on identifying sensitive habitats and evaluating the potential for special-status species to occur.

For the purpose of this biological resource section, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the Federal Endangered Species Act;
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act;
- Plant species on List 1B and List 2 in the CNPS Inventory of Rare and Endangered Vascular Plants of California; and
- Wildlife species listed by the California Department of Fish and Game (CDFG) as species of special concern, or as fully protected species. Species of concern are not protected under the federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA), however are covered under California Environmental Quality Act (CEQA) Guidelines.

The status, habitat requirements and potential for occurrence of these species was gathered through review of the CNDDDB, CNPS, Electronic Inventory, and the biologists' knowledge of special-status species in the western Mojave Desert.

SECTION 2: REGULATORY BACKGROUND

2.1 - FEDERAL ENDANGERED SPECIES ACT

The U.S. Fish and Wildlife Service (USFWS) administers the FESA that provides a process for listing species as either threatened or endangered, and the methods of protecting listed species. The FESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is a species that is likely to become endangered in the foreseeable future. A “proposed” species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits “take” of threatened or endangered species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

2.2 - CALIFORNIA ENDANGERED SPECIES ACT

The CDFG administers the CESA. The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

2.3 - SECTION 3503 AND 3511 OF CALIFORNIA FISH AND GAME CODE

The CDFG administers the California Fish and Game Code. There are particular sections of the Code that are applicable to natural resource management. For example, Section 3503 of the Code state it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully-protected bird species, where the CDFG is unable to authorize the issuance of permits or licenses to take these species.

2.4 - MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

2.5 - SECTION 404 OF THE FEDERAL CLEAN WATER ACT

Section 404 of the federal Clean Water Act (CWA), which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States (U.S.). USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S., provided that a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the U.S. Projects that result in impacts to less than 0.3 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impact to endangered species.

2.6 - SECTION 1600 OF THE CALIFORNIA FISH AND GAME CODE

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife, and has jurisdiction over dry washes that carry water ephemerally during storm events.

2.7 - SECTION 401 OF THE CLEAN WATER ACT

Section 401 of the CWA requires that “any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal CWA.” Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB).

2.8 - PORTER COLOGNE ACT

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the state” (water code 13260(a)), pursuant to provisions of the State Porter-Cologne Water Quality Act. “Waters of the State” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (water code 13050 (e)).

2.9 - CITY OF HESPERIA MUNICIPAL CODE CHAPTER 16.24-PROTECTED PLANTS

The City of Hesperia requires (Municipal Code 16.24) that prior to the issuance of a native tree removal permit the project shows that it has been designed in such a manner as to save as many healthy native trees as reasonably practicable in conjunction with the proposed improvements. Prior to the issuance of a native tree or plant removal permit, a plot plan or grading plan shall be approved by the appropriate city review authority for each site indicating exactly which trees or plants are authorized to be removed. The following desert native plants shall not be harvested or removed except under a permit issued by the agricultural commissioner or other applicable reviewing authority:

1. The following desert native plants with stems two inches or greater in diameter or six feet or greater in height include: a. *Psoralea arguta* (smoketree); b. All species of the family Agavaceae (century plants, nolin, yuccas); c. All species of the genus *Prosopis* (mesquites).
2. Creosote Trees, ten feet or greater in diameter.
3. All Joshua trees (mature and immature).

All plants protected or regulated by the State Desert Native Plants Act (i.e., Food and Agricultural Code 80001 et seq.) shall be required to comply with the provisions of those statutes prior to the issuance of any county development permit or land use application approval. The county agricultural commissioner is the responsible agency for the issuance of any required wood tags, seals or permits. Joshua trees that are removed must be transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling, the permittee must post a bond to insure such Joshua trees are transplanted appropriately.

SECTION 3: EXISTING CONDITIONS

The existing conditions of the H GPA and vicinity are described below for four categories of biological resources: 1) vegetation; 2) sensitive plant communities; 3) special-status species; and 4) landscape level wildlife movement.

3.1 - VEGETATION

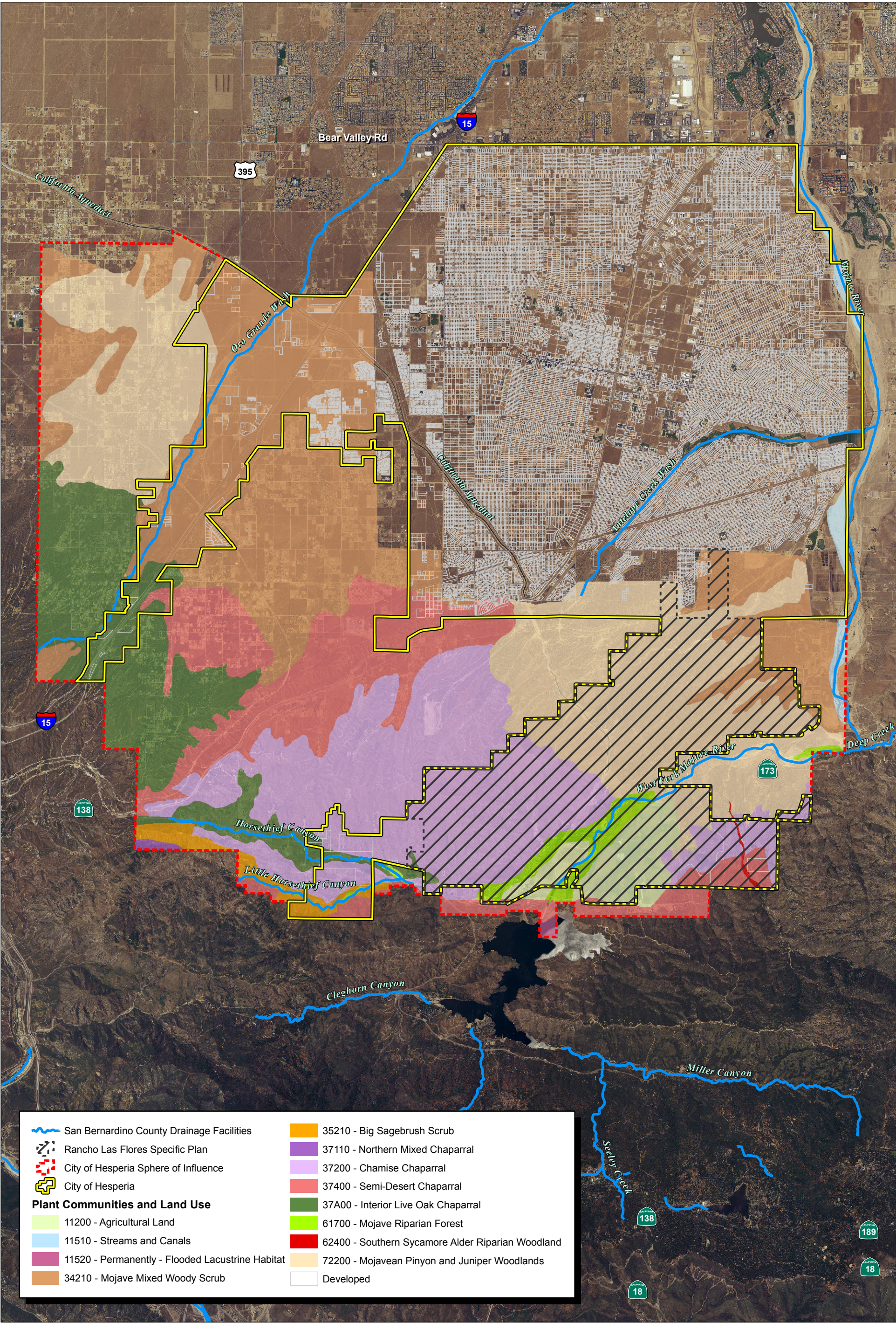
Exhibit 1 presents the vegetation that occurs in the H GPA. Vegetation data from the California Gap Analysis Project (1998) was utilized, along with data collected during the field visit. The Holland Classification System code is noted first, with the Manual of California Vegetation (Sawyer and Keeler-Wolf 1995) noted second in brackets, if one exists. This classification system is consistent with CDFG's (2003) Vegetation Classification and Mapping Program.

3.1.1 - Mojave Creosote Bush Scrub-34100 (33.140.06)

Mojave creosote bush scrub consists of shrubs 0.5-3 meter tall that are widely spaced, usually with bare ground between them. Growth occurs during spring (or rarely in summer or fall) if rainfall is sufficient. Growth is prevented by cold in winter and limited by drought in other seasons. The dominant shrub species include creosote bush (*Larrea tridentate*) and white bursage (*Ambrosia dumosa*). Many species of ephemeral herbs may flower in late March and April if the winter rains are sufficient. Other, less numerous species of annuals appear following summer thundershowers. It occurs on well-drained secondary soils with very low available water holding capacity, on slopes, fans, and valleys rather than upland sites with thin residual soils or sites with high soil salinity. It intergrades at higher elevations with Shadscale Scrub (36140), or Joshua Tree Woodland (73000); at lower elevations or more osmotic sites with Desert Chenopod Scrub (36100).

3.1.2 - Mojave Mixed Woody Scrub-34210 (33.211.00)

Mojave mixed woody scrub is a complex scrub, open enough to be passable, and usually characterized by Joshua tree (*Yucca brevifolia*), Eastern Mojave buckwheat (*Eriogonum fasciculatum polifolium*), and bladderpod (*Isomeris arborea*). Soils are very shallow, overly-drained, often rolling to steep and usually derived from granitic parent materials. Mojave mixed woody scrub generally has extremely low water holding capacity, mild alkalinity, and are not especially saline. This plant community mixes on deeper soils (with higher water holding capacity) or at cooler elevations with Great Basin Scrubs (35000), Blackbush Scrub (34300), or Pinyon Woodlands (72000); at warmer elevations with Creosote Bush Scrub (33100, 34100).



Source: NAIP for San Bernardino County (2005), San Bernardino County (2008), California GAP Data (1996), City of Hesperia (2009), LSA (2006) & MBA GIS (2009).



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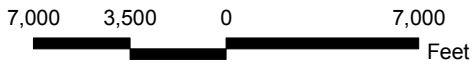


Exhibit 4 Plant Communities map

3.1.3 - Chamise Chaparral-37200 (37.101.00)

Chamise chaparral is a 1-3 meter tall chaparral overwhelmingly dominated by chamise (*Adenostoma fasciculatum*). Associated species contribute little to cover. This community is adapted to repeated fires by crown sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This plant community is similar to Upper Sonoran Mixed Chaparrals (37100), but occurs on shallower, drier soils or at somewhat lower elevations.

3.1.4 - Northern Mixed Chaparral-37110 (37.000.01)

Northern mixed chaparral includes broad-leaved sclerophyll shrubs, 2-4 meters tall, forming dense, often nearly impenetrable stands dominated by scrub oak (*Quercus berberidifolia*), chamise, and any one of several taxa in *Arctostaphylos* and *Ceanothus*. Plants are typically deep-rooted. There is usually little or no understory vegetation, but often leaf litter accumulates. Flowering season extends from late winter to early summer. This plant community is adapted to repeated fires, to which many species respond by crown sprouting. A dense cover of annual herbs may appear during the first growing season after a fire, followed in subsequent years by perennial herbs, short-lived shrubs and re-establishment of dominance by the original shrub species. Slopes where this community occurs are usually dry, rocky, and often steep with little soil. Slopes are typically north-facing. Often adjacent to, but on rockier soils than Oak Woodland (71100) or Valley and Foothill Grassland (42000).

3.1.5 - Semi-Desert Chaparral-37400 (37.000.04)

Semi-desert chaparral is very similar to Northern Mixed Chaparral (37110), but is more open and not as tall (1.5-3 meters). Several of the dominant taxa (*Juniperus*, *Eriogonum*, *Opuntia*, etc.) are not broad-leaved sclerophyllous shrubs. This plant community is dormant in winter (from colder temperatures) and in late summer and fall (from drought). It is also similar to Red Shank Chaparral (37300), but drier and hotter in the summer. Semi-desert chaparral intergrades with Mojavean Pinyon-Juniper Woodlands (72200), but occurs on rockier soils or recently burned sites. It is less fire-prone than other chaparrals due to lower fuel loads.

3.1.6 - Interior Live Oak Chaparral-37A00 (37.401.00)

Interior live oak chaparral is dense and tall (to 20 feet) dominated by interior live oak (*Quercus wislizenii*) and inland scrub oak (*Quercus berberidifolia*) with several other sclerophyllous shrubs also in the canopy. Interior live oak stump sprouts readily following fire. The persistent leaf litter and dense canopies preclude much understory in this community. This is a fairly mesic chaparral of valleys and foothills away from the immediate coast, especially in Lower Montane Coniferous Forests (84000) where it frequently is a fire-climax.

3.1.7 - Mojavean Pinyon and Juniper Woodlands-72200 (87.040.001)

Mojavean pinyon and juniper woodlands are an open woodland dominated either by single-leaf pinyon pine (*Pinus monophylla*) with an open shrubby understory of species commonly found in adjacent non-forested stands, or by California juniper (*Juniperus californicus*), with understory of typical Mojave Mixed Scrub and Steppe species (34200). Understory's are more diverse than in most Pinyon-Juniper types, and many actually exceed tree cover. Dominant shrubs include big sagebrush (*Artemisia tridentata*) and curleaf mountain-mahogany (*Cercocarpus ledifolius*). Mojavean pinyon and juniper woodlands is composed of Mojavean Pinyon Woodland (72210) and Mojavean Juniper Woodland and Scrub (72220), and occurs in desert mountain ranges, usually between about 4,000 and 8,000 feet. The pinyon type is better developed on steeper, very dry slopes, while the juniper type is better developed on gentle slopes or alluvium, and usually at slightly lower elevations. The plant community also intergrades with Joshua Tree Woodland (73000) or Mojave Creosote Bush Scrub (34100) on drier soils at lower elevations.

3.1.8 - Big Sagebrush Scrub-35210 (35.110.00)

Big sagebrush scrub includes mostly soft-woody shrubs, 0.5 meter tall, usually with bare ground underneath and between shrubs. Big sagebrush is the dominant plant species. Growth occurs mostly in late spring and early summer and this community is dormant in winter. Some species in this plant community flower in late spring (*Coleogyne*, *Purshia*), and others in early fall (*Artemisia*, *Chrysothamnus*). This community occurs on a wide variety of soils and terrain, from rocky, well-drained slopes to fine-textured valley soils with a high water table and may be colder (from cold air drainage), drier, or with less well-drained more alkaline soil than Pinyon-Juniper Woodland (72000), a frequent associate.

3.1.9 - Permanently - Flooded Lacustrine Habitat-11520

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water, including both the near-shore (*limnetic*) and deepwater habitat (*littoral*). Using this classification incorporates both the lakes and reservoir classes that exceed 40 acres and are deeper than 6.6 feet. This includes Silverwood Lake.

3.2 - SENSITIVE PLANT COMMUNITIES

The plant communities described below occur within riparian corridors. While the plant community may not contain rare plants, the CDFG may consider these areas as sensitive because there is a higher potential for threatened or endangered animals to utilize the plant community.

3.2.1 - Southern Sycamore Alder Riparian Woodland-62400 (61.312.00)

This community consists of a tall, open, broad-leaved, winter-deciduous streamside woodland dominated by sycamore (*Platanus racemosa*) and white alder (*Alnus rhombifolia*). Stands seldom form closed canopy forests. This community occurs along rocky streambeds subject to occasional high intensity flooding. Alders increase in abundance on more perennial streams, while sycamores favor more intermittent streams. In the HGPA, this community is only known as occurring in Grass Valley Creek, which drains the northern foothills of the San Bernardino Mountains. In this area, there is evidence that several of the other blue-line streams also contain this plant community. In the area of Grass Valley Creek, the interstitial vegetation between the sycamore trees appears as an alluvial fan, with scattered sage scrub species such as Eastern Mojave buckwheat, thick-leaved yerba santa (*Eriodictyon crassifolium*), Mohave yucca (*Yucca schidigera*), and California juniper (See Appendix A-Photograph 1 and 2). It would also occur sporadically in other unnamed blue-line streams that drain from the San Bernardino Mountains. Some of these areas may be classified as Sycamore Alluvial Woodland.

3.2.2 - Mojave Riparian Forest-61700 (61.940.00)

Mojave riparian forest is a relatively open, broad-leaved, winter-deciduous streamside forest dominated by Fremont cottonwood (*Populus fremontii*), Goodding's black willow (*Salix gooddingii*), and red willow (*Salix laevigata*). The open canopy allows a dense shrubby understory of Torrey's saltbush (*Atriplex lentiformis* ssp. *torreyi*), common rabbitbrush (*Chrysothamnus nauseosus*), interior rose (*Rosa woodsii*), and sandbar willow (*Salix exigua*). Soils are flat, fine-grained, subirrigated alluvium along perennial desert rivers. In HGPA, this plant community occurs in association with the West Fork of the Mojave River below the spillway for Silverwood Lake (See Appendix A -Photograph 3).

3.3 - SPECIAL-STATUS SPECIES

Exhibit 2a presents the general locations of federal and state threatened and endangered species within the HGPA area as mapped from the CNDDB (2009). Exhibit 2b presents the general locations of species that are classified as California Species of Concern and CNPS list plants as mapped from the CNDDB (2009). CNPS plants are not protected under the Endangered Species act however impacts must be analyzed under CEQA. Please note some locations that are unknown are mapped generically by the CNDDB as occurring in the middle of the City of Hesperia and some locations are historic records that were observed prior to development. A summary table of potential sensitive species is located in Appendix B.

3.3.1 - Special-Status Plants

Threatened and Endangered

Mojave Tarplant (*Deinandra mohavensis*); State Endangered

The Mojave tarplant is a tall annual sunflower of open moist sites in arid regions near the margins of the desert. It blooms July to October and occurs between 640 and 1600 meters. The Mojave tarplant occurs mostly in clay or silty soils that are saturated with water in winter and spring. Plants are found along grassy swales, intermittent creeks, and at seeps. Occasional dwarfed plants are found in drier sites near occupied wet areas. This species seems to prefer areas where fairly substantial water supply is available at depth through the summer, but which are dry at the surface. The combination of early saturation and later desiccation may serve to reduce competition from other species. The most suitable habitat patches are found on gentle slopes and low gradient stretches of streams in generally mountainous terrain. Shrubs and trees are few and not dominant in the sites actually occupied.

Mojave tarplant was known from the confluence of the Mojave River and Deep Creek from two collections made in 1933. It is likely extirpated since several extensive searches have been made in this location within suitable habitat. These searches have extended over a period of several years and have involved several investigators. Therefore, it is unlikely that Mojave tarplant occurs within the HGPA.

Sensitive

Booth's Evening Primrose (*Camissonia boothii* ssp. *boothii*) 2.3

Booth's evening primrose is listed by the CNPS as 2.3 (2=Rare, threatened, or endangered in California, but more common elsewhere; 0.3=Not very endangered in California). It occurs in Joshua tree woodland and pinyon juniper woodland at elevations from 900 to 2400 meters. It blooms from April to September. There are two non-specific locations of Booth's evening primrose in the HGPA (CNDDB 2009). The morphology of the plants observed suggest introgression with hairy evening-primrose (*Camissonia boothii* ssp. *intermedia*), which needs additional fieldwork. This species may occur in HGPA where suitable habitat is present.

Plummer's Mariposa Lily (*Calochortus plummerae*) 1B.2

Plummer's mariposa lily is listed by the CNPS as 1B.2. This species occurs on rocky and sandy sites, typical of alluvial or granitic material, in coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest and valley and foothill grasslands at elevations from 90 to 1,610 meters. It is less common at higher elevations. This species flowers from May through July. Populations of Plummer's mariposa lily have been significantly reduced by development, and they continue to decline. This species has been recorded on the southern edge of the HGPA (CNDDB 2009) and may occur near the area where suitable habitat exists.

Sagebrush Loeblingia (*Loeblingia squarrosa* var. *artemisiarum*) 2.2

Sagebrush loeblingia is listed by the CNPS as 2.2. It occurs on sandy dunes and flats in Great Basin sagebrush scrub and Mojave Desert scrub between 700 and 1615 meters. Specifically, sagebrush loeblingia is a plant of sandy or gravelly open areas, often occupying flats between shrubs and sandy roadsides. The species never occurs in shade under shrubs but always in exposed areas with full sun. It blooms in April through May. The species has been recorded approximately 2 miles north of the northern limits of the HGPA (CNDDB 2009), and may occur elsewhere in the HGPA where suitable habitat exists.

San Bernardino aster (*Symphotrichum defoliatum*) (1B.2)

San Bernardino aster is listed by the CNPS as 1B.2. It grows in grasslands, wetlands, coastal sage scrub and oak woodlands between 0 and 4921 ft. In the HGPA areas, it would most likely be observed within wetland areas. San Bernardino aster generally blooms between June and November. It has been recorded in Mojave Narrows Park, but not within the HGPA.

San Bernardino Mountains owl's-clover (*Castilleja lasiorhyncha*) (2.2)

San Bernardino Mountains owl's-clover is listed by the CNPS as 2.2. It occurs in meadows and pebble plain within yellow pine forest in the San Bernardino Mountains. San Bernardino Mountains owl's clover has been observed in Miller Canyon which is approximately 2 miles south of the HGPA above Silverwood Lake. It is unlikely that it would be found within the HGPA.

Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) 1B.2

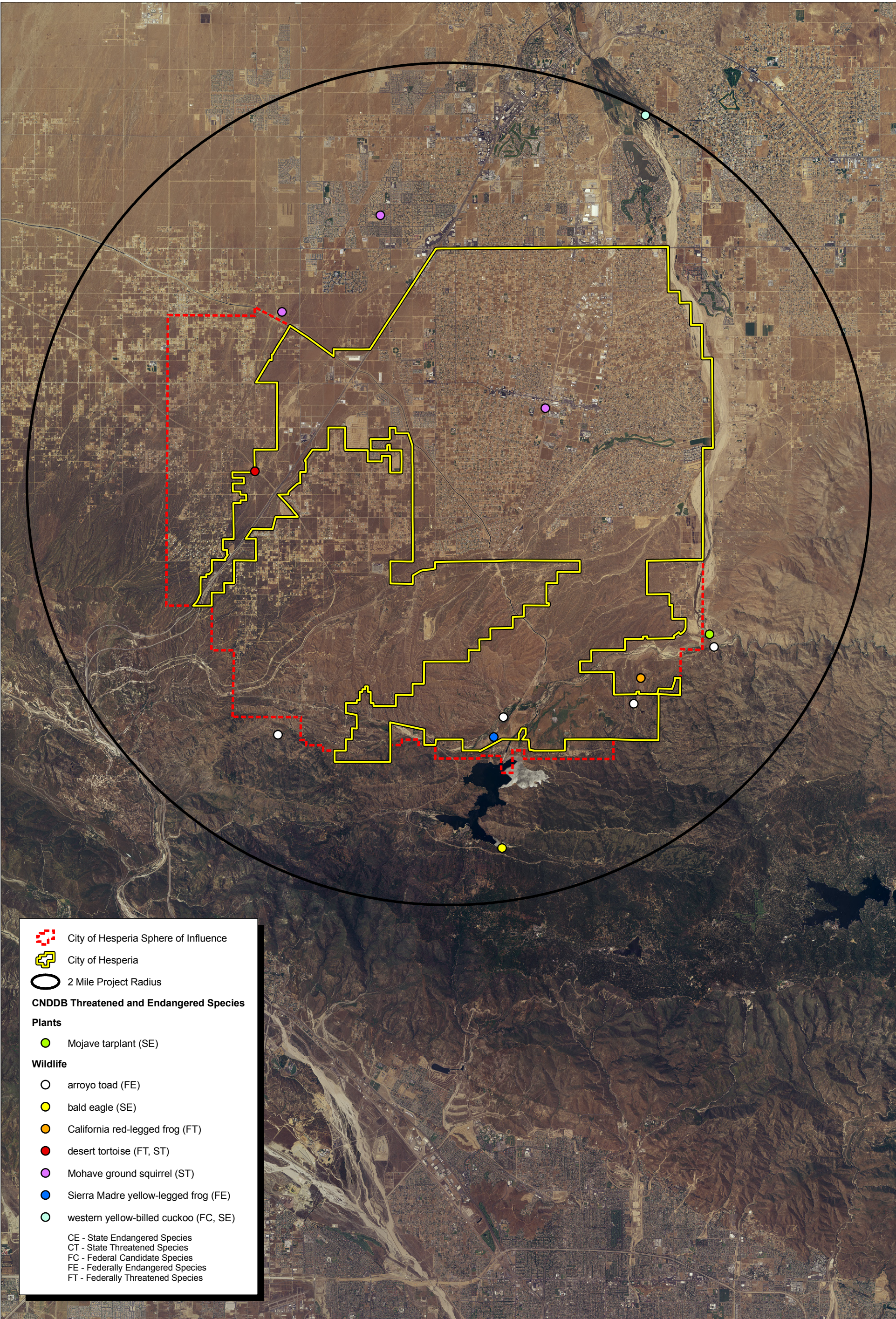
Short-joint beavertail is listed by the CNPS as 1B.2. It is known to occur in chaparral, Joshua tree woodland, Mojave Desert scrub, and pinyon-juniper woodland communities at elevations of 425-2000 meters. Short-joint beavertail is mostly associated with Joshua tree, California juniper, scrub oak, ceanothus (*Ceanothus greggii*), Eastern Mojave buckwheat, pinyon pine, purple sage (*Salvia leucophylla*), and linear-leaved goldenbush (*Ericameria linearifolia*). It has been reported occurring in a wide variety of soils, from sandy to rocky, in open stream beds and on rocky slopes. The species blooms in April through June. Within the HGPA, several populations have been found in the Oak Hills and Baldy Mesa areas, as well as Las Flores Ranch Horse Thief Canyon, and Grass Valley Creek (CNDDB 2009).

Small-flowered androstephium (*Androstephium breviflorum*) (2.2)

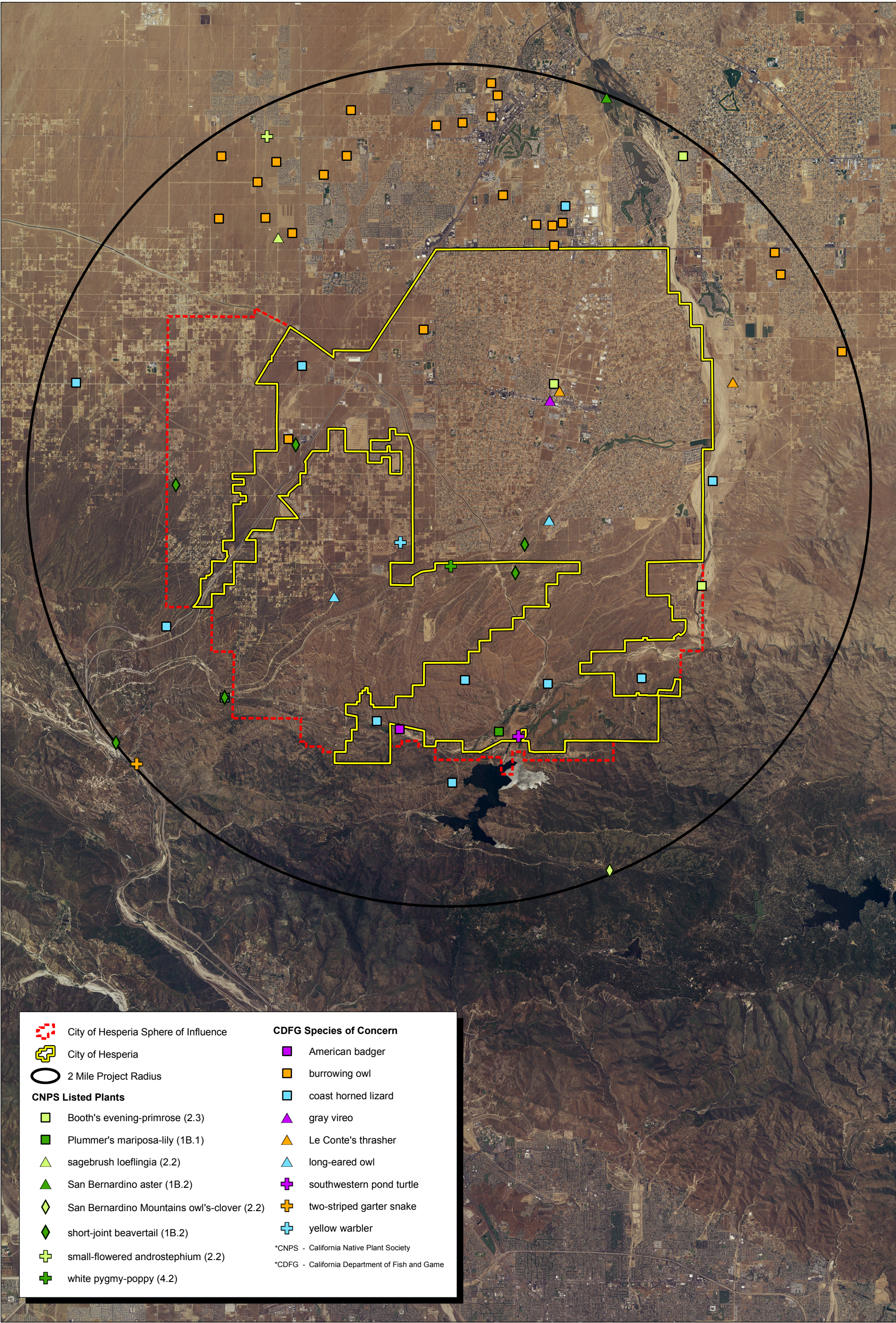
small-flowered androstephium is listed by the CNPS as 2.2. It is a member of the lily family and is also called the pink funnel lily and is found within creosote bush scrub. It has been observed northwest of the HGPA.

White pygmy-poppy (*Canbya candida*) (4.2)

White pygmy-poppy is listed by the CNPS as 4.2. It is found within creosote bush scrub and Joshua tree woodland. It has been observed northwest of the HGPA. White pygmy-poppy is a small white flowered annual and generally blooms from March-June. It has been observed in Antelope Canyon near the edge of the HGPA.



Source: NAIP for San Bernardino County (2005), City of Hesperia (2009), USFWS CNDDDB Data (September, 2009).



Source: NAIP for San Bernardino County (2005), City of Hesperia (2009), USFWS CNDDDB Data (September, 2009).

3.3.2 - Special-Status Animals

Sierra Madre yellow-legged frog, California red-legged frog, and western yellow-billed cuckoo are included on the CNDDDB map but are not included here. These sightings are historical and these three species have not been observed in the HPGA in at least the last 20 years. They are considered extirpated within the HPGA area.

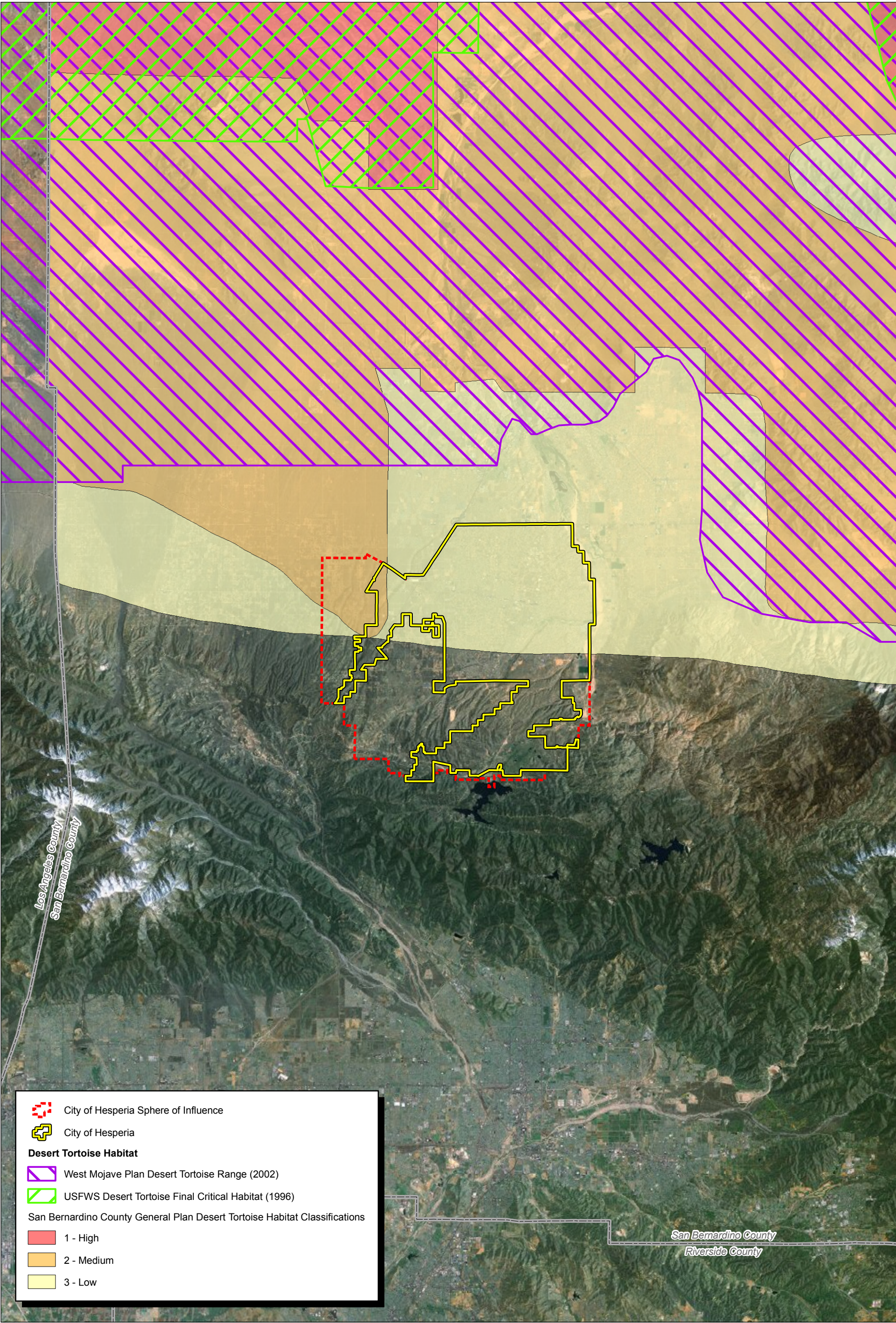
Threatened and Endangered

Desert Tortoise (*Gopherus agassizii*); Federally Threatened

The desert tortoise is a large, herbivorous reptile found in portions of the California, Arizona, Nevada, and Utah deserts. In California, the desert tortoise occurs primarily within the creosote bush scrub, saltbush, and Joshua tree plant communities. Optimal habitat has been characterized as creosote bush scrub in which precipitation ranges from 2 to 8 inches, diversity of perennial plants is relatively high, and containing ephemeral drainages is high. Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse.

Adult tortoises are most active in California during the spring and early summer when annual plants are most common. Additional adult activity occurs during warmer fall months and occasionally after summer rainstorms. Adult desert tortoises spend most of the remainder of the year in burrows, escaping the extreme conditions of the desert.

The HPGA does not overlap the 2002 desert tortoise range map and is included in the “no desert tortoise survey area.” as mapped in the West Mojave Plan. The HPGA does overlap the desert tortoise habitat area mapped in the San Bernardino County General Plan but is not within any Critical Habitat as designated by the U.S. Fish and Wildlife Service (Exhibit 3). Desert tortoise is not likely to occur in the HPGA, which has been confirmed by over 70 negative project-related surveys that have been completed for the City of Hesperia. None of these surveys resulted in the observation of desert tortoise or desert tortoise sign. It is unlikely that desert tortoise exist in the HPGA.



Source: ESRI World Imagery, City of Hesperia (2009), West Mojave Plan (2002), USFWS Critical Habitat (2007), San Bernardino County General Plan Update (2007).

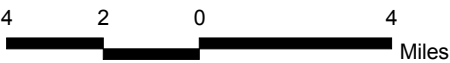


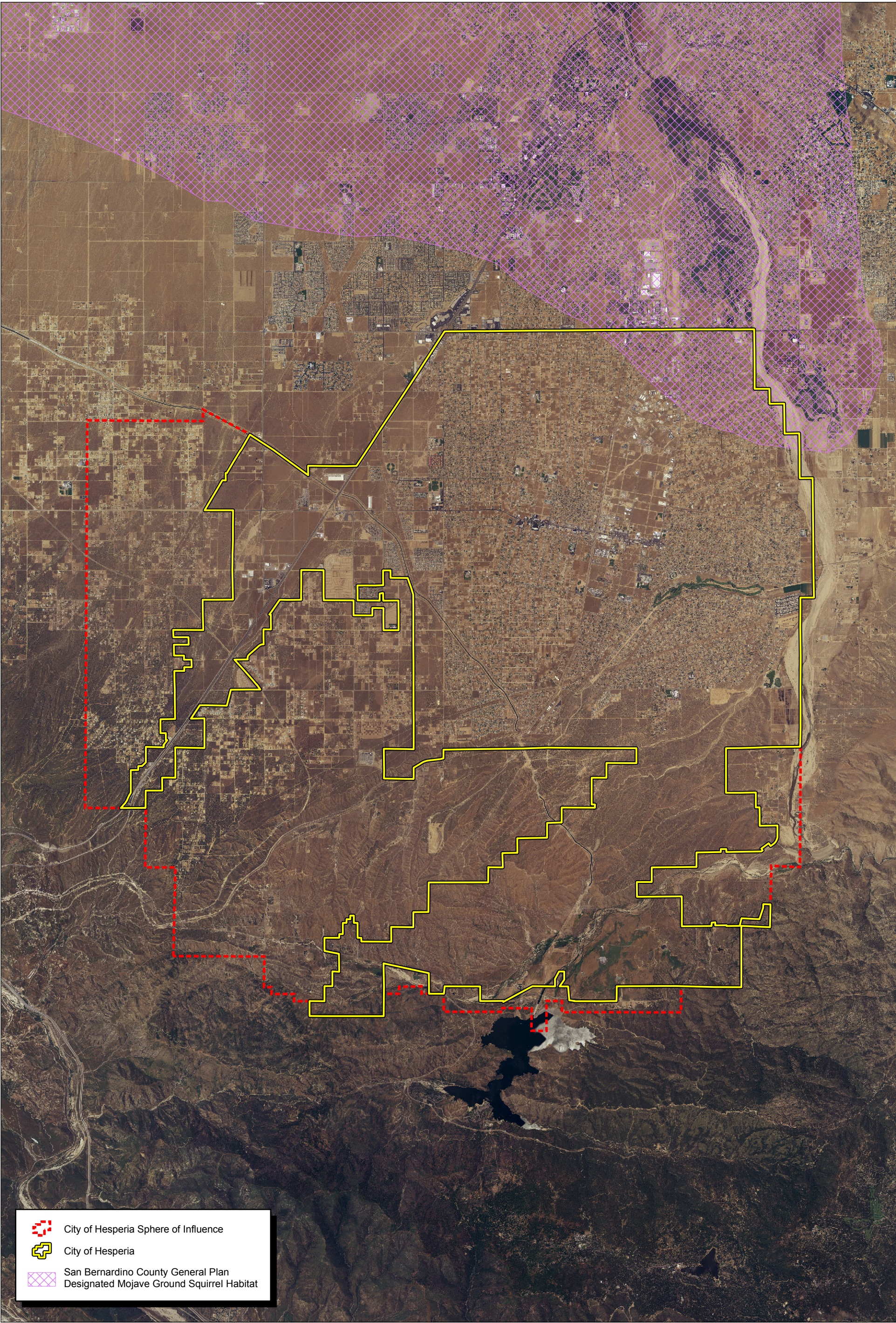
Exhibit 6
Desert Tortoise Distribution Map

Mohave Ground Squirrel (*Spermophilus mohavensis*); State Threatened

The Mohave ground squirrel (MGS) generally occurs in flat to moderate terrain and is not found in steep terrain. Substrates in occupied habitats have ranged from being very sandy to very rocky. The MGS is considered to be absent, or nearly so, on dry lakebeds, lava flows, and steep, rocky slopes. The MGS occupies all major desert scrub habitats in the western Mojave Desert. It has been observed in habitats described by Holland (1986) as Mojave Creosote Scrub, dominated by creosote bush and burro bush, Desert Saltbush Scrub, dominated by various species of saltbush (*Atriplex*), Desert Sink Scrub, which is similar in composition to saltbush scrub, but is sparser and grows on poorly drained soils with high alkalinity, Desert Greasewood Scrub, with very sparse vegetation generally located on valley bottoms and dry lake beds, Shadscale Scrub, which is dominated by *Atriplex confertifolia* and/or *A. spinescens*, and Joshua tree woodland, which includes Joshua trees (*Yucca brevifolia*) widely scattered over a variety of shrub species. These habitat types are distributed throughout the range of the Mojave ground squirrel.

The MGS exhibits a strongly seasonal activity cycle of aestivation (a form of hibernation), emerging from dormancy as early as January, but more typically in mid-February or March. Aestivation generally begins sometime between July and September, but may begin as early as April or May during drought conditions.

The San Bernardino County General Plan MGS layer overlaps the northern portion of the HGPA (Exhibit 4). This information is part of the Biotic Resources Overlay Map. This information is updated periodically by the resource agencies. The General Plan map layers are provided to give planning guidance for areas that may potentially contain sensitive biological resources. An area within the MGS layer does not necessarily determine that a protocol survey must be performed. The potential for MGS within a particular project site should be made by a qualified biologist on a project basis. MGS was confirmed in 2005 in the "Oak Hills" wash just north of the HGPA (see Appendix A-Photograph 4). There is an additional unnamed wash (also a blue-line stream) to the west that may be suitable to MGS (see Appendix A-Photograph 5).



Source: NAIP for San Bernardino County (2005), City of Hesperia (2009), San Bernardino County General Plan Update (2007).



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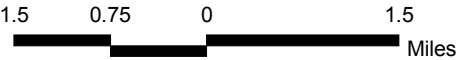


Exhibit 7
Mohave Ground Squirrel Distribution Map

Least Bell's Vireo (*Vireo bellii pusillus*); Federally and State Endangered

The Least Bell's Vireo (LBV) typically breeds in willow riparian forest supporting a dense, shrubby understory of mulefat (*Baccharis salicifolius*) and other mesic species. Oak woodland with a willow riparian understory is also used by the species in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage. This species is known to occur along the Mojave River in Victorville, outside of the HGPA. Suitable habitat for LBV was observed inside the HGPA during the field visit in willow scrub areas of the West Fork of the Mojave River. The riparian stands observed are supported by the Silverwood Lake spillway. The southern willow scrub in this area would benefit from restoration and enhancement efforts. Vertical habitat complexity could be improved with plantings of native willows and cottonwoods, and removal of non-native species, such as Tamarisk to provide more resources to native plant species.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Federally and State Endangered

The southwestern willow flycatcher (SWF) breeds only in riparian woodland, typically adjacent to or over water. Surface water or saturated soil is usually present in or adjacent to nesting sites during at least the initial portion of the nesting period. Riparian woodland used by willow flycatchers typically has a canopy and an understory of shrubs or saplings. They are also known to breed in nearly pure stands of mature nonnative tamarisk. The SWF has been historically present along the Mojave River in Victorville, outside of the HGPA. Potentially suitable habitat for SWF that overlaps the HGPA occurs at the West Fork of the Mojave River. As mentioned in the above in the LBV description, this area could be enhanced and restored to provide greater habitat potential for SWF. One of the habitat components largely absent along the West Fork of the Mojave River is the presence of an overstory, which would create required vertical complexity.

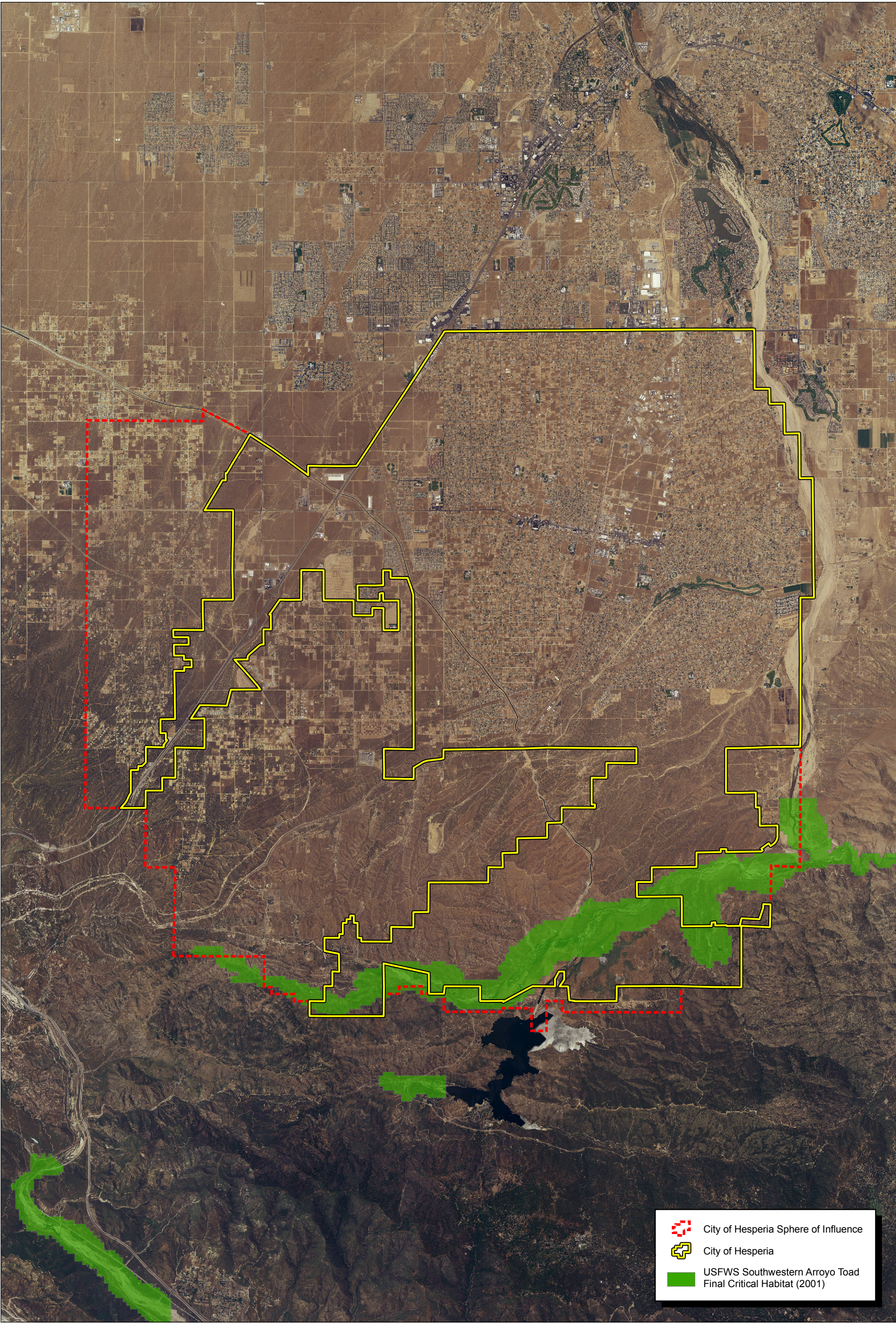
Bald Eagle (*Haliaeetus leucocephalus*); Federally Delisted and State Endangered

Bald eagles are most often recorded at large deep inland bodies of water. In winter, bald eagles often congregate at specific wintering sites that are generally close to open water and that offer good perch trees and night roosts. The bald eagle may roost communally in winter in dense, sheltered, remote conifer stands. The winter habitat suitability is defined by the food availability, the presence of roost sites that provide protection from inclement weather and absence of human disturbance although bald eagles will tolerate some human activity in areas of high prey availability. The perching habitat during the wintering season is characterized by the presence of tall trees located adjacent to foraging areas similar to those found at other times of the year. Bald eagles have been documented near the southern boundary of the HGPA. Specifically, they have been recorded breeding at the southeast end of Silverwood Lake (CNDDDB 2009) which is approximately 1.7 miles south of the sphere of influence and 2.4 miles south of the city limit.

Bald eagles have also been observed foraging along the West Fork of the Mojave River (LSA2005).

Arroyo Toad (*Anaxyrus californicus* = *Bufo californicus*) Federally Endangered

The arroyo toad measures between two and three inches in length and has dark-spotted, warty skin. Its call is a soft, high, whistled trill. Arroyo toads can be found in semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, along rivers with sandy banks, willows, cottonwoods, and sycamores, specifically in loose, gravelly areas of streams in drier parts of its range. Within the HGPA, Critical Habitat for Arroyo toads has been designated within Little Horsethief Creek, the West Fork of the Mojave River as well as the Mojave River below the Mojave Forks Dam (Exhibit 5).



Source: NAIP for San Bernardino County (2005), City of Hesperia (2009), USFWS Critical Habitat (2001).

3.3.3 - State Sensitive Species

Burrowing Owl (*Athene cunicularia*); California Species of Concern

Burrowing owl (BUOW) were once very abundant in California but have seen a steady decline over the past 100 years, especially in the last 20 years, mainly due to urban development. As a California Species of Concern, BUOW is not protected under the Endangered Species Act or the CESA, but impacts must be analyzed under CEQA requirements. BUOW are also covered under the MBTA and CDFG code 3503.5. The BUOW does not usually excavate their own nest burrows; therefore, the presence of recently-excavated burrows is the primary habitat requirement for nesting. Based on Michael Brandman Associates (MBA) experience in the Hesperia area, abandoned kit fox complexes appear to be the most commonly used burrows. Closer to the urban edge are California ground squirrels (*Spermophilous beechyii*) burrows, which are also used. One of the main limiting factors for burrowing owl in the Hesperia area is the availability of burrows.

BUOWs nest as solitary pairs like most other raptors, but they also nest in loose colonies or aggregations. Improved predator detection is a benefit of colonization, especially given that BUOWs are particularly susceptible to predation on the ground. During the incubation period, the female typically remains below ground for long stretches of time while the male remains close by, but rarely enters the burrow. The adult male BUOW often lines the entrance of the nest burrow and the nesting cavity itself with shredded dried cow or horse manure. During the brooding period, the male does most of the hunting and provides prey items to the female.

The primary requirement for suitable BUOW foraging habitat appears to be low vegetation cover that allows visibility and access to prey. However, there is some evidence that BUOWs prefer a vegetation mosaic with nesting habitat interspersed within taller vegetation for hunting. Tall vegetation may provide the cover necessary to host large populations of rodents, which are then susceptible to predation as they traverse open areas in the mosaic. Very low vegetation and sites with exposed soils are important oviposition (egg-laying) sites for grasshoppers, another vital prey for BUOW that may be supported in a vegetation mosaic.

BUOWs have been confirmed to occur in undeveloped desert areas in the HGPA. Two recorded locations occur in the north-central portion of the HGPA (CNDDB 2009). There are several other recorded sightings within two miles, north of the HGPA. Appendix A, Photograph 6 presents an example of suitable habitat known to be occupied by BUOWs in this area. The undeveloped areas surrounding these BUOW locations would provide suitable opportunities for conservation of this species.

While BUOW may occur sporadically within existing burrows, they may also occur in any natural or man-made excavation. The City requires that surveys be conducted on a project-by-

project basis and includes this information in the environmental analysis. The City also requires preconstruction surveys within 30 days of ground disturbing activity. Should owls be found, they may be relocated, removed or avoided in accordance with established CDFG protocols.

Gray Vireo (*Vireo vicinior*); California Species of Concern

Gray vireos may occur in chamise dominated chaparral without any conifers on the northern slopes of the San Bernardino Mountains. It prefers habitats on arid slopes dominated by short, densely branched, stiff-twigged shrubs. In the drier, eastern portions of the Transverse Ranges, a group of mountain ranges in southern California that lie in an East-West orientation, where the species generally occur in areas of mixed shrubs, e.g. big sagebrush, antelope-brush, buckwheat, box thorn (*Lycium*), silk tassel (*Garrya*), scrub oak, manzanita (*Arctostaphylos* spp.), Ceanothus, Ephedra, etc. Such shrubs are typically mixed with scattered singleleaf pinyon, California juniper, and/or Joshua-tree. Some habitats occupied on the desert ranges and most arid slopes of the Transverse Ranges are considerably more open in general structure than the chamise chaparral used in other areas.

Gray vireos have been confirmed at the southern edge of the HGPA (CNBBD 2009), and suitable habitat in this area may be occupied. Focused surveys should be conducted for this species, as the southern edge of the HGPA may be important to their conservation.

Long-eared owl (*Asio otus*); California Species of Concern

Long-eared owls typically occur in bottomlands where tall willows and cottonwoods are present; but also occur along belts of live oaks, especially as paralleling stream courses. Adjacent open land with available prey is required, as is the presence of old nests of crows, hawks or magpies for breeding purposes. In xeric areas, the species is often reported roosting and/or nesting in willows, cottonwoods, junipers, oaks, and in dense plantings of tamarisk, elms (*Ulmus* spp.), and conifers. Historical nests locations have been confirmed in the HGPA (CNDDB 2009). This species is likely very rare in the HGPA.

Le Conte's thrasher (*Toxostoma lecontei*); California Species of Concern

The Le Conte's thrasher inhabits desert flats, washes and alluvial fans with sandy and/or alkaline soil and scattered shrubs. They are not found in urban or dense residential areas but may be found near scattered rural residences that abut suitable habitat. Where it occurs, silver cholla (*Opuntia echinocarpa*) is the preferred nesting plant. The nest typically is placed in a cactus, thorny shrub, or small tree, chosen to offer protection from predators and sun; it is not always the tallest or largest plant that is used, but one with the proper branching structure that provides the best protection from sun and predation. Species of saltbush found in the Le Conte's Thrasher range, such as allscale (*Atriplex polycarpa*), shadscale (*A. confertifolia*), quailbush (*A. lentiformis*), desert holly (*A. hymenolytra*) and fourwinged saltbush (*A. canescens*) may be used

for nesting. Other plants used are pencil cholla (*Opuntia ramosissima*), smoke tree, and Mojave yucca (*Yucca schidigera*). To a lesser degree jojoba (*Simmondsia chinensis*) and California juniper have been found used as nesting plants. The Le Conte's Thrasher usually does not occur in areas of monotypic creosote bush scrub, as it provides little cover or nesting sites. Historical breeding locations exist within the HGPA (CNDDDB 2009). Areas along the south portion of the HGPA likely provide suitable habitat for this species.

Loggerhead Shrike (*Lanius ludovicianus*); California Species of Concern

The habitat features that are preferred by loggerhead shrike include open terrain with well spaced lookout posts, at least two feet high, from which prey items may be seen below on the bare ground or in short or sparse grass. Often only very limited taller vegetation is required. The same habitat types are occupied all year. This species is common in the creosote scrub plant community in the northern portion of the HGPA, where they use Joshua trees as hunting perches. To aid in conservation, measures should assure that active nests are not destroyed or disturbed.

Summer Tanager (*Piranga rubra*); California Species of Concern

Summer tanager requires lush riparian woodland or forest dominated by cottonwoods and willows, usually in a climax stage. They require pre-existing cavities for nesting; therefore, the presence of woodpeckers or other cavity excavating species is important. Summer tanagers occur along the Mojave River in Victorville, outside of the HGPA. They have not been confirmed within the HGPA, but may occur in riparian areas present along the West Fork of the Mojave River. The main limiting factor in this area would be the lack of large willows and cottonwoods.

Yellow warbler (*Dendroica petechia brewsteri*); California Species of Concern

In the California desert, yellow warblers occur in riparian woodland or forest dominated by cottonwoods and willows. Nesting habitat must contain dense understory vegetation. Fremont cottonwoods and larger willows typically form the canopy at breeding sites such as the Mojave River in Victorville. Yellow warblers have not been confirmed within the HGPA, but may occur in riparian areas present along the West Fork of the Mojave River.

Yellow-breasted chat (*Icteria virens*); California Species of Concern

Yellow-breasted chats occur in riparian woodland, forest, and scrub dominated by cottonwoods, willows, arrow weed (*Pluchea sericea*), tamarisk, and mulefat. Breeding sites occur in riparian habitats dominated by cottonwoods and willows. Nesting habitat must have dense understory vegetation and larger trees that are used for singing perches. Yellow-breasted chats occur along the Mojave River in Victorville, outside of the HGPA. They have not been confirmed within the HGPA, but may occur in riparian areas present along the West Fork of the Mojave River.

Brown-crested flycatcher (*Myiarchus tyrannulus*); CDFG – Watch List

Brown-crested flycatchers occur in riparian woodland or forest dominated by cottonwoods and willows, usually in a climax stage. They require pre-existing cavities for nesting. At nesting localities in the California deserts, Fremont cottonwoods and various willows are probably the most common trees used for nest sites. Brown-crested flycatchers have also been known to nest in utility poles and fence posts. The presence of woodpeckers or other cavity excavating species is important. Brown-crested flycatchers occur along the Mojave River in Victorville, outside of the HGPA. They have not been confirmed within the HGPA, but may occur in riparian areas present along the West Fork of the Mojave River. The main limiting factor in this area would be the lack of large willows and cottonwoods.

Two-striped garter snake (*Thamnophis hammondi*); California Species of Concern

Highly aquatic, two-striped garter snakes forage primarily in and along streams taking fishes, especially trout and sculpins and their eggs, and amphibians and amphibian larvae. Small mammals and invertebrates such as leeches and earthworms are also taken. The preferred nocturnal retreats of this active diurnal snake are thought to be holes, especially mammal burrows, crevices, and surface objects. During the day this garter snake often basks on streamside rocks or on densely vegetated stream banks. When disturbed it usually retreats rapidly to water. In milder areas mammal burrows and surface objects such as rocks and rotting logs serve as winter refuges. This species has not been confirmed to occur in the HGPA, but suitable habitat is present along the West Fork of the Mojave River.

Coast horned lizard (*Phrynosoma coronatum*); California Species of Concern

San Diego horned lizards are found in a wide variety of habitats including coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of the higher elevation desert where it is restricted to the juniper-desert chaparral. Within each of these habitats, this species prefers areas with loose, fine soils, an abundance of open areas for basking, and plenty of native ants and other insects. San Diego horned lizard has been confirmed at several locations within the HGPA, particularly along the southern portion. They have been confirmed to be present in the alluvial sage scrub habitat present on Horsethief Canyon and Grass Valley Creek. To aid in conservation of coast horned lizard in the HGPA, suitable habitat should be preserved to avoid direct mortality.

Southwestern pond turtle (*Actinemys marmorata pallida*); California Species of Concern

The southwestern pond turtle occupies a wide variety of wetland habitats including rivers and streams (both permanent and intermittent), lakes, ponds, reservoirs, permanent and ephemeral shallow wetlands, abandoned gravel pits, stock ponds, and sewage treatment lagoons. In streams, pools are the preferred habitat. Brattstrom and Messer (1988) have speculated that some turtles remain in Deep Creek and previous records show the species exists from the Mojave Narrows

near Victorville and Afton Canyon. Beaver (*Castor canadensis*) dams and ponds along the Mojave River may be an important habitat feature for turtles. This species has not been confirmed to occur in the HGPA, but pooled areas associated with the West Fork of the Mojave River provides suitable habitat. A beaver dam was observed in this area during the habitat assessment.

American badger (*Taxidea taxus*); California Species of Concern

Badgers are generally associated with dry, open, treeless regions, prairies, parklands, and cold desert areas. For example, badger dens have been located in open, grassy areas of coastal sage scrub. Adult badgers primarily are nocturnal. American badger has been confirmed to occur along the southern portion of the HGPA. To aid in conservation of the species in the HGPA, suitable and occupied habitat should be preserved and direct mortality avoided.

Mojave River vole (*Microtus californicus mohavensis*); California Species of Concern

The Mojave River vole is found in moist habitats including meadows, freshwater marshes and irrigated pastures in the vicinity of the Mojave River. Suitable habitat is associated with ponds and irrigation canals along with the Mojave River proper. Marshy areas that are subjected to annual flooding as well as riparian-associated habitats that can provide refuge during annual flooding are also considered suitable habitat for the species. They also utilize adjoining upland habitat during unusually high water levels. The Mojave River vole occurs in marshy areas of the Mojave River in Victorville, outside of the HGPA. This species has not been confirmed to occur in the HGPA, but marshy areas associated with the West Fork of the Mojave River provides suitable habitat.

3.4 - WILDLIFE MOVEMENT

Wildlife movement includes day-to-day movements of individuals seeking food, shelter, or mates, dispersal of offspring to new home areas, or migration to avoid seasonally unfavorable conditions. These movements make possible recolonization of unoccupied habitat after environmental disturbances, the mixing of genes among populations, and allow organisms the capacity to respond or adapt to environmental stressors. Wildlife movement leads to intricate ecological and genetic interactions at various spatial and temporal scales.

In environments fragmented by human development, disruption of movement patterns can alter ecosystem functions, such as gene flow, and natural patterns and mechanisms of pollination and seed-dispersal. Without the ability to move among and within natural habitats, species become more susceptible to fire, flood, disease and other environmental disturbances and show greater rates of local extinction.

In the HGPA, species with the greatest acreage requirements for home range, dispersal, and movement include the American badger, Mohave ground squirrel, burrowing owl, coyote, and kit fox. By establishing wildlife movement corridors that are suitable for these species, the HGPA area would likely be suitable for all other species. Areas that have been shown to be occupied for these species should have the highest priority for conservation. These areas should be connected to other large suitable habitat via wide corridors. Washes, power line, and aqueduct easements may provide good initial starting points in providing movement corridors. It is important to establish buffers around these features to insure the corridor is wide enough to support movement opportunities for the sensitive species discussed in this report.

SECTION 4: POTENTIAL THREATS

4.1 - FRAGMENTATION

The greatest threat to sensitive biological resources is the removal of the plant communities, vegetation, and land features upon which they require. As natural communities are removed, the existing areas become smaller, with more edge effects and with greater human-related disturbances. This effect is described as fragmentation. Fragmentation can be reduced by strategically planning for development.

In addition to species protected under the federal and state endangered species acts, the City's Development Code (Chapter 16.24) protects several native plants, including Joshua Trees. The City requires biological surveys and an enumeration of any protected plants on the site. These plants may be left in place, relocated or transplanted off-site, subject to the biologist's recommendation. Human-Related Disturbance

4.1.1 - Off-Road Vehicles

As the population of Hesperia continues to increase, additional people will be utilizing the surrounding open space for recreational purposes. A significant threat to sensitive biological resources is off-road vehicle use. The City adopted an off-road vehicle Ordinance, prohibiting off-road use without a property owner's permission in 2004. The City Police Department enforces the Ordinance. The City also approved an off-road motorcycle park in the Oro Grande wash in 2005.

4.1.2 - Trash Dumping

Trash and debris dumping in natural areas is an activity that can degrade areas of sensitive biological resources. Trash dumping may introduce toxins to the environment, increase raven populations, and directly impacts the vegetation or soils where the trash is placed. Increases in raven population can cause increased predation of sensitive species including nesting birds and desert tortoise. Illegal trash dumping should be discouraged, along with increased enforcement of existing City and County ordinances.

SECTION 5: CONSERVATION OPPORTUNITIES

5.1 - WASHES WEST OF ORO GRANDE

There are several unnamed washes that occur in the northwestern portion of the HGPA, located west of the Oro Grande Wash. The first wash, northeast of Smoke Tree Road and Bellflower Street and west of the L.A. Bureau of Power and Light easement, contains suitable habitat for MGS. In this area, suitable habitat also occurs for sagebrush loeflingia, BUOW, Le Conte's thrasher, coast horned lizard, and loggerhead shrike. Sections of these washes that are outside of the City Limits, but within the City's Sphere of Influence are subject to the land use regulations of the County of San Bernardino.

5.2 - UNDEVELOPED LAND ALONG INTERSTATE 15

There is a large amount of undeveloped land along Interstate 15 that is dominated by the Mojave creosote bush scrub plant community. There are several recent records for BUOW in this area. The City is including preservation areas within the Oro Grande Wash and the unnamed wash on the draft Open Space map. The establishment of a BUOW conservation area would be beneficial to future development projects because it would establish an area to which BUOWs could be relocated. The establishment of artificial burrows in the HGPA for this species is important, since they rely on burrows of other species. These areas could also support short-joint beavertail, Le Conte's thrasher, coast horned lizard, and loggerhead shrike. The City has purchased 15 acres within this area for conservation easement.

5.3 - WEST FORK OF THE MOJAVE RIVER

The West Fork of the Mojave River supports a Mojave Riparian Forest plant community, which is considered sensitive by the CDFG. The plant community is supported by water released from Silverwood Lake. This plant community could support a number of CSC species, including LBV, SWF, yellow-breasted chat, summer tanager, brown-crested flycatcher, Cooper's hawk, and the Mojave River vole. The last known location of the Mojave tarplant occurred near the confluence of the West Fork Mojave River and Deep Creek. The current condition of this riparian habitat appears to be degraded generally due to the prevalence of non-native species such as Mediterranean tamarisk, and it would not be expected to provide suitable habitat for all the above species. This area would benefit from restoration and enhancement efforts, which could include planting native willow and cottonwood species, and removal of non-native plant species. A management program for the release of water from Silverwood Lake could maintain year-round flow to prevent desiccation of this plant community, and to mimic storm events where appropriate to maintain natural sandbars and new areas for colonization of native riparian plant species. The State of California regulates discharge from Silverwood Lake. Any suggestions

pertaining to discharges by the City would be done in consultation with the State and the Mojave Water Agency.

5.4 - RANCHO LAS FLORES AND SUMMIT VALLEY RANCH SPECIFIC PLANS

There is a large amount of quality habitat present in Summit Valley, which occurs in the southern portion of the HGPS. This includes the West Fork of the Mojave River (discussed above) Horsethief Canyon, Little Horsethief Canyon, and Grass Valley Creek. These areas support riparian woodland, sycamore alder riparian forest, and many plant community transition zones (ecotones), which are known to be biologically diverse. The habitat in Summit Valley supports sensitive species such as Plummer's mariposa lily, gray vireo, coast horned lizard, and American badger. This area is also connected to the San Bernardino National Forest to the south.

Rancho Las Flores is a master plan community in the southeast area of the HGPS that incorporates portions of the West Fork of the Mojave River, Grass Valley Creek, and Summit Valley (Exhibit 1). The project consists of the construction of a 9,867-acre planned community consisting of eight villages, 16,980 dwelling units, commercial uses, business/office uses, recreational developments, and supporting infrastructure. The residential population of the completed project would total approximately 51,000 residents (LSA 2006). The Specific Plan indicates that 3,953 acres of open space shall be preserved. This includes the West Fork of the Mojave River within Rancho Las Flores as well as adjacent lands. In addition, the Historic Las Flores Ranch, located on an additional 490 acres, will also be preserved. The project will be phased over 15 years. The project includes 1600, 401 and 404 permits as well as a Habitat Conservation Plan (HCP) prepared for the Arroyo Toad, South West Willow Fly Catcher, and the LBV. The preservation of the riparian areas will provide habitat for sensitive species and other common species as well as provide wildlife movement corridors. The City, in conjunction with Caltrans, Summit Valley Ranch and Rancho Las Flores, is preparing a Habitat Conservation Plan (HCP) to address impacts to the Arroyo Toad, SWF and the LBV. The HCP will include a conservation strategy for the riparian areas as well as the surrounding open space. When completed, the HCP will be submitted for approval by the USFWS and concurrence by CDFG.

The Summit Valley Ranch Specific Plan consists of 788 acres located just west of the Rancho Las Flores Specific Plan. 1,668 units are planned but 165 acres will be set aside as natural open space. This includes portions of Little Horse thief Canyon, which is habitat for the Arroyo Toad. As mentioned above, the project is also part of the HCP, which is being prepared for Summit Valley.

SECTION 6: CONCLUSION

The HGPB supports a wide variety of plant communities that provide wildlife habitat. In particular, existing desert washes may be important as live-in habitat and for species dispersal opportunities. Movement corridors that may be important include powerline and aqueduct easements. Opportunities to manage these areas as wildlife habitat in a manner that is compatible with their intended purposes should be considered in conjunction with development. The West Fork of the Mojave River may provide suitable habitat to a number of sensitive species, including LBV, yellow-breasted chat, and Mojave River vole. Summit Valley, located on the southern portion of the HGPB is important because there are a number of ecotones present where plant communities transition from one form to another. These ecotones are known to be biologically diverse. Much of Summit Valley is part of the Rancho Las Flores master plan community. The Rancho Las Flores Specific Plan indicates that 4,628 acres of open space shall be preserved which will preserve sensitive riparian areas and preserve wildlife corridors. While there are some potential for habitat for sensitive species, there have been very few observations of threatened or endangered species in the recent past within the HGPB. Planning policies within the existing state and federal regulations will continue to provide protection to sensitive biological resources within the HGPB.

SECTION 7: REFERENCES

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Appendix A Site Photos



Photograph 1. An example of the sycamore woodland present along Grass Valley Creek.



Photograph 2. The sycamore woodland and the intermittent alluvial fan scrub present at Grass Valley Creek.



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Appendix A Site Photographs

**Hesperia General Plan
Biological Resources Assessment**



Photograph 3. Mojave riparian forest present along the East Fork Mojave River.



Photograph 4. The “Oak Hills” wash that may support Mojave ground squirrel habitat.



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Appendix A Site Photographs

Hesperia General Plan
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Photograph 5. A wash in the northwestern portion of the HGPA that may support Mojave ground squirrel habitat.



Photograph 6. Habitat occupied by burrowing owl in the northern portion of the HGPA.



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Appendix A Site Photographs

**Hesperia General Plan
Biological Resources Assessment**

Appendix B Sensitive Species Table

Table 1: Sensitive Species - Mammals

Scientific name	Common Name	Habitat	Federal	State	Other Status
Mohave river vole	<i>Microtus californicus mohavensis</i>	Occurs only in weedy herbaceous growth in wet areas along the Mojave River. May be found in some irrigated pastures. Burrows into soft soil. Feeds on leafy parts of grasses, sedges and herbs. Clips grasses to form runways from burrow.	None	None	DFG-SSC
Mohave ground squirrel	<i>Spermophilus mohavensis</i>	Restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties. This species is rare throughout its range. Populations in southwestern San Bernardino County appear to be extirpated. Optimal habitats are open desert scrub, alkali desert scrub, and Joshua tree. Also feeds in annual grasslands. Has been found from 1,800-5,000 ft in elevation.	None	Threatened	

Table 2: Sensitive Species - Birds

Scientific name	Common Name	Habitat	Federal	State	Other Status
western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	This species is typically a riparian forest nester, along the broad, lower flood-bottoms of larger river systems. It nests in riparian jungles of willow, often mixed with cottonwoods, with an understory of blackberry, nettles, or wild grape. A statewide survey of Yellow-billed Cuckoos in California conducted during 1986 and 1987 found 1 unmated male at the Mojave River near Hodge (Laymon and Halterman, 1989). There have been no confirmed nesting areas within the western Mojave River.	Candidate	Endangered	
Southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	Dense, expansive, riparian woodlands in southern California.	Endangered	Endangered	
Prairie falcon	<i>Falco mexicanus</i>	Prairie falcon inhabits dry, open terrain, that is either level or hilly. Breeding sites are located on cliffs. Forages far afield from roosting and nesting locations.	None	None	DFG-SSC
yellow-breasted chat	<i>Icteria virens</i>	Summer resident; nesting habitat of riparian thickets of willow & other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest within 10 feet of ground.	None	None	DFG-SSC

Table 2 (cont.): Sensitive Species – Birds

Scientific name	Common Name	Habitat	Federal	State	Other Status
Gray-headed junco	<i>Junco hyemalis caniceps</i>	Summer resident of Clark mountain (in eastern San Bernardino County) & grapevine mountains (in Inyo County). Inhabits white fir association at 7,300 ft (Clark mountain); also, from dense pinyons above 6,700 ft (Grapevine mountains)	None	None	DFG-WL
summer tanager	<i>Piranga rubra</i>	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts. Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	None	None	DFG-SSC
vermillion flycatcher	<i>Pyrocephalus rubinus</i>	During nesting, this species inhabits desert riparian habitats adjacent to irrigated fields, irrigation ditches, pastures and other open sites, with mesic conditions. Nests in cottonwood, willow, mesquite, and other large desert riparian trees.	None	None	DFG-SSC
Le Conte's thrasher	<i>Toxostoma lecontei</i>	A desert resident, this species is primarily found in open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	None	None	DFG-SSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Least Bell's vireo is a summer	Endangered	Endangered	

Table 2 (cont.): Sensitive Species – Birds

Scientific name	Common Name	Habitat	Federal	State	Other Status
		resident of Southern California inhabiting low riparian habitats in the vicinity of water or in dry river bottoms below 2,000 feet. It's nests are placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis and/or mesquite.			
Gray Vireo	<i>Vireo vicinior</i>	May occur in chamise dominated chaparral without any conifers on the northern slopes of the San Bernardino Mountains. It prefers habitats on arid slopes dominated by short, densely branched, stiff-twigged shrubs.	None	None	DFG-SSC

Table 3: Sensitive Species – Reptiles and Amphibians

Scientific name	Common Name	Habitat	Federal	State	Other Status
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	The southwestern pond turtle inhabits permanent or nearly permanent bodies of water in many habitat types below 6,000 feet. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks. Needs suitable nesting sites.	None	None	DFG-SSC
Arroyo toad	<i>Bufo californicus</i>	This species can be found in semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, along rivers with sandy banks, willows, cottonwoods, and sycamores, specifically in loose, gravelly areas of streams in drier parts of its range.	Endangered	None	
Desert tortoise	<i>Gopherus agassizii</i>	Desert tortoise is commonly found in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Requires friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Threatened	Threatened	
California red-legged frog	<i>Rana aurora draytonii</i>	This species can be found in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. It requires 11-20 weeks of permanent water	Threatened	None	

Table 3 (cont.): Sensitive Species - Reptiles and Amphibians

Scientific name	Common Name	Habitat	Federal	State	Other Status
		for larval development, and must have access to aestivation habitat.			
Mojave fringe-toed lizard	<i>Uma scoparia</i>	This lizard inhabits fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub and desert scrub. Shrubs or annual plants may be necessary for arthropods found in the diet.	None	None	DFG-SSC

Table 4: Sensitive Species - Plants

Scientific name	Common Name	Habitat	Federal	State	Other Status
Booth's evening-primrose	<i>Camissonia boothii</i> ssp. <i>Boothii</i>	Occurs in Joshua tree woodlands, and pinyon-juniper woodlands. Known Elevation Limits: 2,970 – 7,920 ft.	None	None	2.3
Mojave tarplant	<i>Deinandra mohavensis</i>	Occurs in riparian scrub, and chaparral. Generally on low sand bars in river beds; mostly in riparian areas or in ephemeral grassy areas. Known Elevation Limits: 2,805 – 5,280 ft.	Endangered	None	1B.3
Parish's popcorn-flower	<i>Plagiobothrys parishii</i>	Occurs on alkaline soils and mesic sites in Great Basin scrub, and Joshua tree woodlands. Known Elevation Limits: 2,475 – 4,620 ft.	None	None	1B.1

Table 4 (cont.): Sensitive Species - Plants

Scientific name	Common Name	Habitat	Federal	State	Other Status
Southern mountains skullcap	<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	This species is known to occur within chaparral, cismontane woodland, and lower montane coniferous forests, in gravelly soils on streambanks or in mesic sites in oak or pine woodlands. Known Elevation Limits: 1,395 – 6,560 ft.	None	None	1B.2