APPLE VALLEY 84 PROJECT

October 2025

General Biological Resources Assessment

Apple Valley North United States Geological Survey
7.5-MinuteTopographic Quadrangle Map

Prepared By

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

NOREAS Inc. (NOREAS) prepared this General Biological Resources Assessment for the Apple Valley 84 Project (Project), which covers approximately 102.66 acres of vacant land in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The PS and surrounding area support a Mojave Desert scrub community that shows signs of past human disturbance. The ground surface includes braided swales, rills, and other erosional signatures that carry water only during or immediately after infrequent storm events. These ephemeral features trend southwest across the PS and dissipate within Project boundaries under normal hydrologic conditions. For this assessment, the "study area" encompasses the PS and a 500-foot buffer.

No species listed under the federal or California Endangered Species Acts, nor any United States Fish and Wildlife Service (USFWS)-designated critical habitat, were observed on the PS. Focused surveys documented several special-status Western Joshua Trees (WJT; *Yucca brevifolia*) within the PS. But surveys and assessment in 2025 for Burrowing Owl, Desert Tortoise, Mohave Ground Squirrel (MGS), Desert Kit Fox, and Crotch's Bumble Bee (CBB) were all negative (no individuals detected). With implementation of the project-specific biological measures in Section 6.0 — including compliance with the WJTCA and local native plant protection ordinances, nesting-bird avoidance, and other construction Best Management Practices — potential impacts to biological resources would not be substantial. All of the 2025 baseline surveys consistently found that the PS supports no federally or state-listed species. Overall, the PS's biodiversity is dominated by common, disturbance-tolerant fauna and flora.

Key results are summarized below.

- Rare Plants.
    - Focused botanical surveys found no occurrences of federally or state-listed plant species on the PS or in the immediate vicinity, and no critical habitat for any such plants is present.
    - WJTs were documented in the PS – a total of 11 individuals (2 live and 9 dead) was recorded. WJT is now protected under the 2023 Western Joshua Tree Conservation Act (WJTCA) as well as under local City/County native plant ordinances.

- Burrowing Owl (BUOW, *Athene cunicularia* – California Species of Special Concern; a CESA candidate species).
    - No BUOW detected within the PS.
    - A single BUOW was observed just outside the PS (within the 500-foot buffer) during the winter of 2024–2025; no owls or active nest sites were observed during the 2025 breeding season. These results indicate that portions of the study area (outside the PS) were used by one transient, non-resident BUOW during the winter, while the species was absent as a breeder in spring and summer 2025.
    - The lack of any nesting activity in 2025 suggests the PS does not currently support a resident breeding pair, despite providing suitable foraging and roosting habitat in winter. The distinction between overwintering presence, and breeding absence is important to understand.

- Desert Tortoise (*Gopherus agassizii* – Federally and State Threatened).
    - Not observed. No desert tortoises or diagnostic sign (burrows, scat, tracks, shell fragments, etc.) were found anywhere on the PS, or within the 500-foot buffer.
    - This negative result confirms that desert tortoise is absent from the PS and vicinity. Therefore, the Project will have no impact on desert tortoise.

- Mohave Ground Squirrel (*Xerospermophilus mohavensis* [MGS] – State Threatened).
    - It was determined that the PS is not suitable habitat for MGS, and they were not detected during field assessments.
    - There are no known MGS populations in the immediate vicinity (e.g., no recent records in the area) that could naturally recolonize the PS. The conclusion from the field-based habitat analysis is that MGS is absent from the PS and is not expected to establish there under current conditions.

- Desert Kit Fox (*Vulpes macrotis*)
    - The survey results suggest that the desert kit fox is absent as a resident species on the PS. No active or inactive dens were found, and no sign (scat, tracks) of kit fox was observed.
    - The lack of kit fox sign, combined with evidence of coyotes dominating the niche, leads to a conclusion that kit foxes do not utilize the site for denning - or foraging, on any regular basis. Therefore, the proposed development is not expected to adversely affect desert kit fox.

- Crotch's Bumble Bee (CBB, *Bombus crotchii* – CESA candidate species).
    - CBB is absent from the PS. The PS is not a favorable environment for the species.
    - The thorough survey effort indicates that the habitat conditions within the PS (floral composition, structure, and disturbance levels) are such that future occupancy by CBB is unlikely unless substantial habitat improvements occur.
    - The PS provides less-than-optimal conditions for CBB due to the lack of reliable nectar sources most of the year. Consequently, the Project is not expected to have any impact on CBB, as this species does not occur on or adjacent to the PS.

- Other Wildlife and Plants.
    - The PS supports a community of common wildlife and plants adapted to open desert scrub and grassland habitats. Only common reptiles and birds (e.g., side-blotched lizard, common raven) were observed during surveys.
    - There is some potential habitat on site for certain special-status species – for example, White pygmy-poppy (*Canbya candida*), Mojave monkeyflower (*Diplacus mohavensis*) or Booth's evening-primrose *(Eremothera boothii ssp. boothii)* – but none of these were encountered. Any occurrence of such species would likely be in very low numbers given the habitat quality.
    - No raptor nests, bat roosts, or other significant wildlife resources were found. In summary, the biological community of the PS is relatively depauperate, and its ecological value for sensitive species is low.

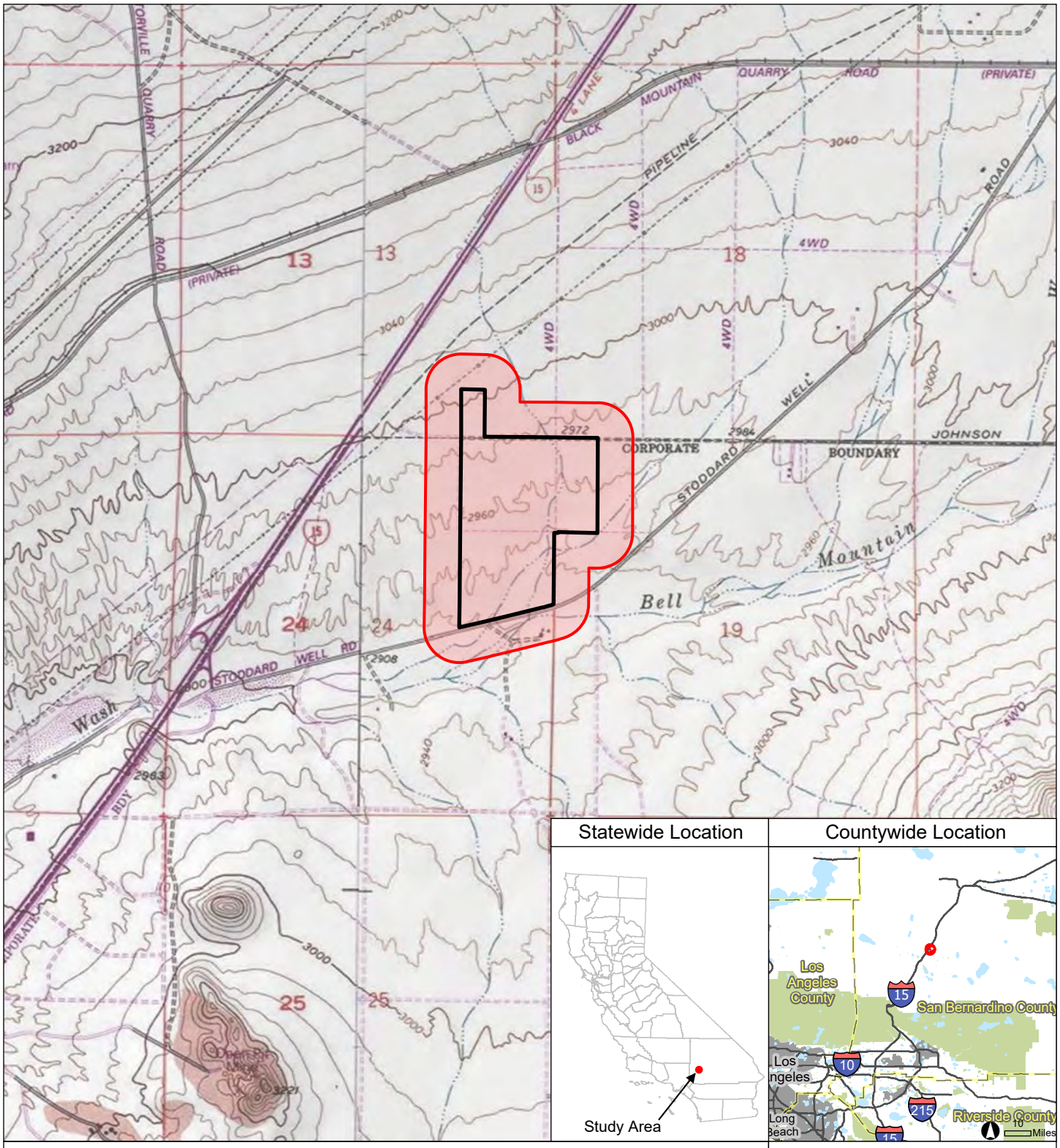
- Wetlands and Waterways.
    - No jurisdictional wetlands occur within the PS, and no features meet the criteria for Waters of the U.S (WOTUS) within the study area (Appendix J).
    - Six (6) ephemeral swales (Features 1 through 6) within a combined 2.17-acre area were mapped within the PS (Appendix K). These features convey surface water only during infrequent, high-intensity storm events. These signatures qualify solely as Waters of the State (WOTS) subject to limited regulation under the California Fish and Game Code §1600 and the Porter-Cologne Water Quality Control Act.

Collectively, the survey results underscore that the PS is biologically impoverished in terms of s federally or state-listed species. Nonetheless, a suite of proactive measures is recommended to avoid or minimize potential effects on common wildlife and any special-status species that could occur on the PS, or adjacent lands.

2.0 PROPERTY DESCRIPTION & LOCATION

The PS lies at approximately 2,500–3,000 feet above mean sea level, within the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle. Its legal location corresponds to Sections 13 and 24 of Township 6 North, Range 4 West, and Section 19 of Township 6 North, Range 3 West (San Bernardino Meridian). The PS and surrounding area support a desert scrub community that shows signs of past human disturbance. Major roads (Stoddard Wells Road and the Interstate 15 freeway corridor) border the Project, creating edge effects and acting as barriers to local wildlife movement. Within the PS, visible human impacts include off-highway vehicle tracks, scattered trash from illegal dumping, an old concrete foundation, and abandoned well casings. These features suggest past attempts at development or agriculture on the property.

The dominant plant community is creosote bush scrub on sandy loam soils, characterized by open shrub cover. Spring 2025 surveys observed a low to moderate density of perennial shrubs, including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and Nevada ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to the arid conditions. Only minimal cover of annual grasses (e.g., *Schismus* spp.) and forbs was present in 2025.



The Study Area is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13, 24, Township 6N, Range 3W, in Sections 18,19;

Center coordinates (WGS 1984): 117.341°W 34.397°N

Figure 1. Regional Location

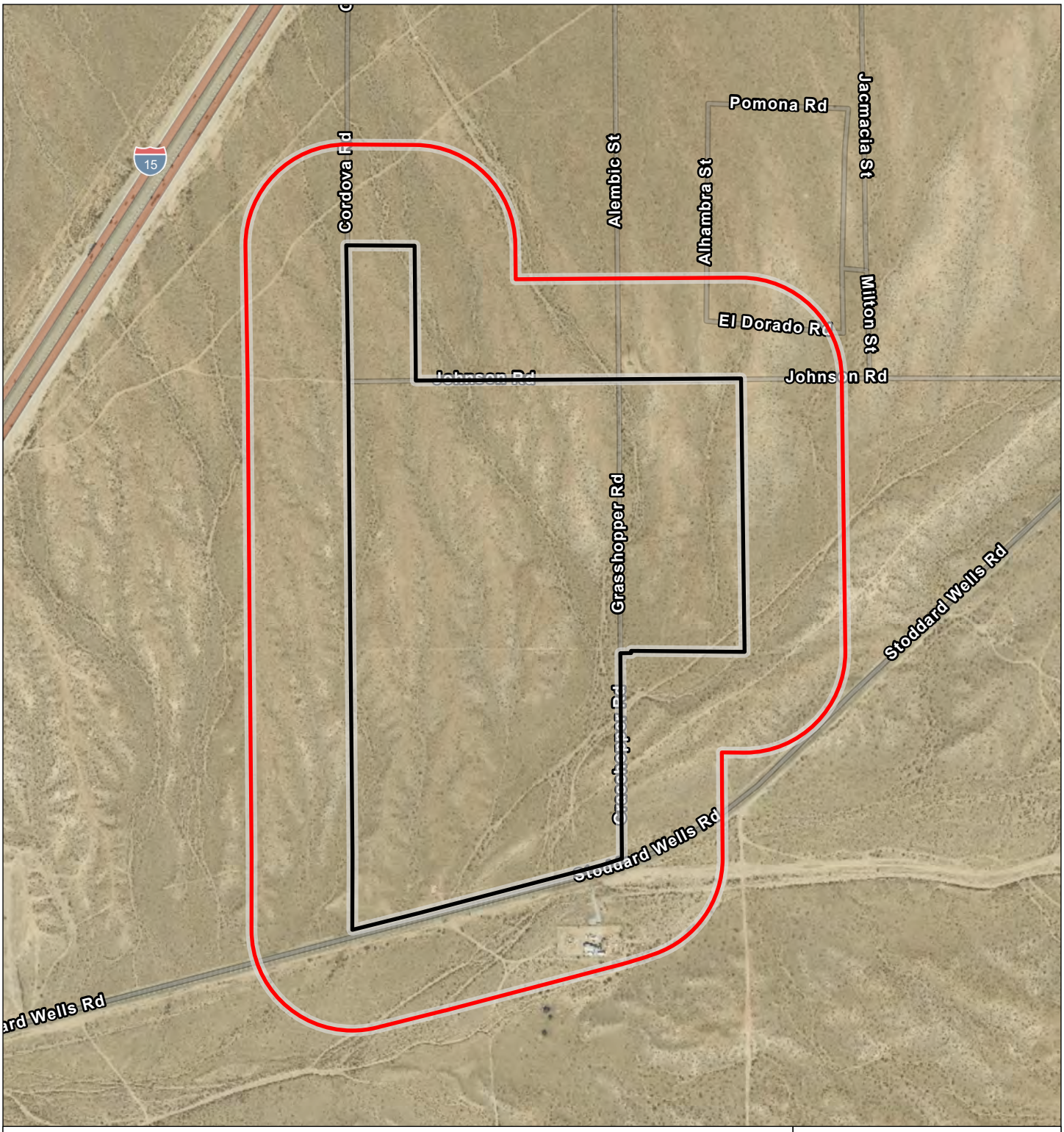


Figure 2. Site Vicinity

3.0 FOCUSED STUDY/SPECIES OF CONCERN

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans, databases and relevant documents were reviewed to determine the locations and types of biological resources[1] that have the potential to exist within - and adjacent to, the study area. Biological resources were evaluated within several miles of the PS.

The materials reviewed included - but were not limited to, the following:

- ✓ USFWS Critical Habitat Mapper and File Data (USFWS 2025a);
- ✓ USFWS San Bernadino County Field Office Species List (USFWS 2025b);
- ✓ Regional South Coast Missing Linkages Project Report (South Coast Wildlands 2008);
- ✓ California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW) (CDFW 2025);
- ✓ California Native Plant Society (CNPS) Electronic Inventory (CNPS 2025);
- ✓ Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a;
- ✓ National Wetlands Inventory database maintained by the US Fish and Wildlife Service (USFWS 2025);
- ✓ Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2025b);
- ✓ Federal Emergency Management Agency (FEMA 2025);
- ✓ U.S. Environmental Protection Agency (USEPA) (2025b) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer);
- ✓ Aerial Photographs (Microsoft Corporation 2025).

The outcome of this desktop review guided the targeted field assessment and survey approach described in Section 4.0.

[1] For the purposes of this analysis, “biological resources” refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the study area.

4.0 METHODS

To support the analysis detailed within Section 3.0 above, pedestrian-based field surveys were performed to assess land cover, general and dominant vegetation communities, habitat types, and species present within communities. Community descriptions were based on observed dominant vegetation composition, and derived from the criteria and definitions of widely accepted vegetation classification systems (Holland 1986 and Sawyer et al. 2009).

- ✓ Plants were identified to the lowest taxonomic level sufficient to determine whether the species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded according to The Jepson Manual (Baldwin et al. 2012).

- ✓ The presence of a wildlife species was based on direct observation or detection of wildlife sign (e.g., tracks, burrows, nests, scat, skeletal remains or vocalization). Field data compiled for wildlife species included scientific name, and common name. Wildlife of uncertain identity were documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider 1980; Halfpenny 2000; Sibley 2000; Elbroch 2003 and Stebbins 2003).

Additionally, the PS was assessed for its potential to support special-status species based on habitat[2] suitability comparisons with reported occupied habitats and the following potential for occurrence definitions were utilized within Appendix A.

- **Absent [A]** – Focused surveys for the species were negative, or the species distribution is restricted by substantive habitat requirements which do not occur – or are negligible within the PS. No further survey or study is necessary to determine likely presence or absence of this species.
- **Habitat Present [HP]** – Species distribution is restricted by substantive habitat requirements which occur within the PS. Further assessment may be necessary to determine likely presence or absence of species.
- **Present [P]** – Species or species sign were observed within the PS, or historically has been documented within Project limits.
- **Critical Habitat [CH]** – The PS is located within a USFWS-designated critical habitat unit.

4.1 Focused Assessment

Surveys and assessments within the PS, and on adjacent lands, specifically targeted certain species of nesting birds like raptors (e.g., BUOW), herpetofauna (such as Desert Tortoise), small mammals (i.e., MGS and Desert Kit Fox), CBB (insect), rare plants, wetlands and waterways. It is important to recognize that many native species share the same habitats and seasonal patterns. Therefore, although our field efforts were focused on particular sensitive species, the comprehensive 2025 surveys inherently covered a broader range of co-occurring wildlife and plants. In practice, any species present in the study area's habitat (even if not specifically targeted) would likely have been detected during these surveys. A summary for each targeted species' methods is also provided in the subsequent subsections.

4.1.1 Special Status Plant Species

Floristic survey methods were derived from the USFWS botanical inventory guidance, CDFG rare-plant/sensitive natural community protocol, and CNPS survey guidelines (USFWS 2000, CDFG 2009, NS CNPS 2001). Nomenclature follows The Jepson Manual (Baldwin et al. 2012). Field surveys were

[2] A "habitat" is defined as the place - or type of locale, where a plant or animal, naturally or normally lives and grows.

specifically conducted to determine the presence or absence of special status plant and native desert species – including WJT, but the surveys were floristic[3] in nature. Surveys were conducted during the appropriate blooming period to maximize the potential for detection of common and special status plants. Plant survey methods, results, and assumptions are presented within Appendix E and F.

4.1.2 Burrowing Owl

Survey methods for the 2024–2025 non-breeding (overwintering) season and the 2025 breeding season surveys for BUOW were derived from generally accepted professional standards, including – but not limited to, the 1993 California Burrowing Owl Consortium Survey Protocol and Mitigation Guidelines (CBOC 1993), the 1995 and 2012 California Department of Fish and Game Staff Reports on Burrowing Owl Mitigation (CDFG 1995 and 2012). Detailed BUOW survey methods, results, and assumptions are presented within Appendix G.

4.1.3 Desert Tortoise

Desert Tortoise survey methods were derived from the published USFWS regional guidelines (Desert Tortoise Council 1994, revised 1999, USFWS 1992, and USFWS 2010 protocol for Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise). Desert Tortoise survey methods, results, and assumptions are presented within Appendix H.

4.1.4 Mohave Ground Squirrel

Field surveys and habitat assessments for MGS were led by Philippe Vergne MS in the spring of 2025. Mr. Vergne was the primary investigator, holding a USFWS permit and a California Department of Fish and Game (CDFG) Memorandum of Understanding for MGS. Detailed survey methods, results, and analysis for MGS are presented in Appendix I.

4.1.5 Desert Kit Fox

Surveys and assessments for the Desert Kit Fox were conducted in April 2025. The survey method was tailored to detect both direct observations and sign of kit fox presence. During daytime walking transects of the PS, biologist carefully searched for any kit fox dens, tracks, scat, or other sign. Because kit foxes are primarily nocturnal, emphasis was placed on finding indirect evidence of their activity. All observed burrow openings of suitable size (i.e., roughly 20 cm diameter) were examined for kit fox sign (e.g., tracks, scat, prey remains) and to distinguish them from coyote or other burrows. The numerous ephemeral swales within the PS received special attention, as kit foxes often place dens in gently sloping, well-drained areas like banks. The survey timing (early morning) also allowed detection of fresh tracks in soft substrates before they were obliterated by wind or human activity. Binoculars were used to scan the distance for any moving animals during early light hours, as kit foxes typically retire to dens by dawn. No night spotlighting was conducted. Instead, the survey relied on daytime sign searches. This approach is consistent with CDFW recommendations for baseline kit fox assessments on sites of this size (i.e. intensive daytime coverage for den sites and sign). Any canid scat or tracks encountered were identified to species (kit fox vs. coyote, or domestic dog) based on size, shape, and associated evidence, using tracking guide references as needed. In summary, the kit fox survey employed a comprehensive ground search of the entire PS for dens or sign.

4.1.6 Crotch's Bumblebee

A habitat assessment was first undertaken to evaluate the PS's potential for CBB. This evaluation considered the presence of suitable nesting opportunities (e.g. burrowing rodents), the diversity and abundance of nectar plants within the PS (and in the vicinity), and the site's landscape context (degree

[3] Focused on the distribution, number, types, and relationships of plant species in an area, or region.

of isolation from larger natural areas). Because the PS was found to have marginal – albeit low quality, but not entirely prohibitive conditions for CBB, a focused survey program was initiated. The survey methods were developed in alignment with recently published protocols for bumble bees and CDFW's 2023 survey guidance for candidate bumble bee species (CDFW 2023; Hatfield et al. 2018). All surveys were led by a qualified biologist. The lead biologist has been authorized by the CDFW to work with CESA candidate bumble bee species. This ensured that the survey techniques and any potential handling of bees (if required for identification) are done in compliance with state regulations.

Three (3) focused CBB survey visits were conducted - May 6, May 22, and June 8, 2025, covering the adult active season of the species. Surveys were spaced weeks apart to coincide with the progression of seasonal bloom and CBB colony cycles (early spring through mid-summer). Surveys occurred during daytime hours and under suitable weather conditions, with mild to hot temperatures (approximately 72°F to 94°F), low winds (<10 mph), partial cloud cover, and no precipitation - or strong winds that would impede bee activity. These conditions meet or exceed guidance for bumble bee surveys (e.g. >60°F, sunny, low wind; CDFW 2023). Each survey involved systematically walking transects to cover the entire PS at a slow pace (<3 acres/hour) while observing flowering areas for foraging bees etc. This intensive survey effort ensured comprehensive visual coverage of all habitat areas and potential CBB refugia (e.g. shrubs, ground burrows, and other microhabitats).

The survey approach combined targeted floral inspections with general transect searches, ensuring comprehensive coverage of the PS. The biologists walked throughout all accessible habitat within the PS, focusing on areas with blooming nectar sources (e.g. wildflowers, shrubs) that could attract foraging bumble bees. Transect routes were spaced closely enough to safeguard thorough coverage. The surveyors moved slowly and periodically paused to watch for any bumble bee activity. When a bumble bee was observed, the biologist would follow the individual with binoculars or approach carefully to confirm identification characteristics (i.e., noting size, coloration patterns, and behavior). Photographs were taken of any CBB observed - when possible, to document the sighting. Identification was accomplished visually and through photography, consistent with CDFW's 2023 CESA candidate bumble bee survey protocols emphasizing non-lethal detection methods.

In addition to searching for adult bees, the surveyors also watched for any evidence of bumble bee nesting on the ground. This included looking for active burrows or holes in the soil with bee traffic, listening for buzzing coming from underground cavities, and checking around the bases of shrubs or rodent burrow complexes for signs of colonization. CBB typically nest underground in abandoned rodent burrows, so extra attention was given to areas with abundant ground squirrel or rodent holes. If any suspicious burrows or bee concentrations are found, they were inspected more closely (without disturbing the burrow structure) to determine if a colony was present, as appropriate. Upon completing each survey, the biologists recorded observations, including date, location, species (or best identification), and the plant species on which the bee was observed (if applicable).

4.2 Evaluation of Wetlands and Waterways

A delineation was performed in accordance with the latest definitions and guidance regarding waterways and wetlands potentially regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), streambeds and associated riparian habitat as regulated by the CDFW. This assessment employed a combination of desktop analysis, field surveys, and regulatory tools to evaluate the PS for jurisdictional features. Detailed delineation methods, results, and assumptions are presented within Appendix J and K.

5.0 GENERAL BIOLOGICAL SURVEY RESULTS

Weather conditions during the April, May, June, July, August and September 2025 surveys included clear to cloudy skies, temperatures ranging from 49–98°F, with winds fluctuating from 0 to 20 miles per hour (mph). Representative photos of the study area are provided in Appendix B.

5.1 Vegetation Communities and Land Cover Types

The study area supports upland vegetation communities typical of the Mojave Desert ecotone, as depicted in the vegetation map (Figure 3). The approximately 102.66-acre PS is dominated by arid-land communities. These plant assemblages reflect the dry, well-drained conditions of the PS. No wetlands or riparian plant communities are present within the PS, and the dominant observed species are characteristic of upland habitats.

The following paragraphs describe the overriding vegetation communities and land cover types observed across the PS.

- Creosote Bush Scrub. The PS supports a disturbed Creosote Bush Scrub Plant Community dominated by creosote bush (*Larrea tridentata)* and white bursage (*Ambrosia Dumosa*). Although undeveloped, the PS has been influenced by surrounding infrastructure, including on-site disturbances such as OHV tracks, illegal dumping, and ruderal weeds. Scattered littleleaf ratany (*Krameria erecta*) occur in low density. The herbaceous layer contains a mix of native and non-native annuals, including redstem stork's bill (*Erodium cicutarium*) red brome (*Bromus madritensis subsp. rubens*), reflecting prior surface disturbance. Overall, the PS represents a common, regionally widespread desert scrub community with low ecological sensitivity.

- Developed/Disturbed. The developed and disturbed portions of the PS represent areas of long-term and ongoing alteration associated major roads (Stoddard Wells Road and the Interstate 15 freeway corridor), edge effects, dirt trails, an old concrete foundation, and abandoned well casings. These past attempts at development or agriculture by compacted soils, with vegetation cover that is minimal. Primarily consists of ruderal and non-native species such as Russian thistle (*Salsola tragus)* and various non-native mustards occurring along disturbed margins. These portions of the PS are considered to have low biological value and represent the most heavily impacted areas.

5.2 Wildlife

Wildlife species observed within the study area consisted of commonly-occurring species - including, but not limited to, house finch (*Haemorhous mexicanus*), western meadowlark (*Sturnella neglecta*), common raven (*Corvus corax*), Turkey Vulture (*Cathartes aura*), cottontail (*Sylvilagus audubonii*) and Coyote (*Canis latrans*). Wildlife detected during the surveys are identified in Appendix D.

5.3 Special-Status Plants

No USFWS designated critical habitat for any federally listed plant species occurs within the PS (Figure 5). Furthermore, no plant species listed as threatened or endangered under federal or state law were observed on the PS. Similarly, the surveys did not detect any plants with a California Rare Plant Rank (such as CNPS Rank 1B or 2). For example, regionally sensitive species known from undisturbed habitats – such as Lane Mountain milk-vetch and short-joint beavertail cactus – were not found within the PS. Several special-status plants have been identified within five miles of the PS (Figure 4, and Appendix A). Overall, none of the special-status plant species considered likely to occur in the region were observed on the PS. However, the 2025 surveys did document one desert cactus species - silver cholla

(*Cylindropuntia echinocarpa*), observed as scattered individuals within the PS (Appendix E). The surveys also identified a total of 11 Western Joshua Trees (WJTs). Of these, only 2 trees were alive and 9 were dead at the time of survey (Appendix F).

5.4 Special-Status Wildlife

No Federally listed wildlife species were observed within the PS during the 2025 field surveys. The PS includes no USFWS-designated critical habitat for wildlife (Figure 5). Special-status species known to occur within five miles of the Project and their potential for occurrence within the PS are detailed within Appendix A, and Figure 4. Based on the results of the targeted surveys and assessments, BUOW, Desert Tortoise, MGS, Desert Kit Fox and CBB are not present within the PS. Wildlife species detected during the surveys are listed in Appendix D. Summarized results for the BUOW, Desert Tortoise, CBB, MGS, Desert Kit Fox, and waterway delineations are included below.

Burrowing Owl

BUOW presence was confirmed within the northwestern portions of the study area – not within the PS, during the overwintering period. A single adult BUOW was observed perched and moving between multiple distinct ground squirrel burrows along the northwestern boundary of the study area (just outside the PS) during two early-morning winter surveys. The owl was seen briefly foraging low over the ground and moving between multiple ground squirrel burrows over several weeks. No mate or juvenile owls were observed, and no auditory calls (such as breeding season mating calls or alarm calls) were heard during the winter surveys (Appendix G).

The observation of a solitary owl during winter is indicative of non-breeding season occupancy. It is possible this individual was a winter migrant or dispersing juvenile using the study area for foraging and shelter (CDFG 2012). BUOWs in California often remain closely associated with burrows during the winter months for roosting and protection, even when not breeding (LaFever et al. 2008; CDFG 2012). The owl's presence in winter, combined with the lack of breeding activity later, suggests it was a transient individual rather than a resident breeder. No other raptors or predators were observed disturbing the owl during the survey period, and the bird appeared to utilize multiple nearby ground squirrel burrows as refuge (moving between observed burrow sites over several weeks). This non-breeding season use of the study area by a BUOW confirms that the habitat (open creosote bush scrub) provides suitable winter foraging and roosting opportunities.

In sharp contrast, focused breeding season surveys conducted in spring 2025 resulted in no detections of BUOWs on the PS or within the 500-ft buffer. During the survey visits (March, April, May, June and July, 2025), no BUOW was seen or heard (Appendix G). Observers inspected all burrows that had shown owl sign in winter. By the spring, those burrow entrances showed little to no fresh sign of owl use (e.g., no new pellets or tracks, and vegetation had begun to grow around the openings). No evidence of nesting behavior was observed anywhere within the study area – there were no concentrations of pellets, no decoration of burrow entrances with dung or debris, and no defensive posturing or alarm calls that would indicate an active nest. Other wildlife (desert cottontails and ground squirrels) was observed using the burrows in the PS during spring, suggesting that the owl observed in winter had vacated the study area.

Within the PS, no nesting territories were established by BUOWs in 2025. The absence of any breeding pairs is consistent with the notion that the study area was utilized only as winter habitat. It is also consistent with regional patterns. Many BUOWs in southern California's interior valleys and deserts are year-round residents, but others migrate or shift seasonally – an influx of migratory owls in winter can temporarily increase local numbers, while some breeding individuals may leave or reduce activity in

winter (James and Ethier 1989; Rosenberg and Haley 2004). In this case, the individual owl present over winter did not remain to attempt breeding on the PS. The detection probability for BUOWs during our breeding surveys was high given the protocol followed, and we are confident that no active burrows or owls went undetected (Conway et al. 2008). Therefore, the 2025 breeding season surveys indicate an absence of BUOW nesting activity on the PS (Appendix G).

Desert Tortoise

No Desert Tortoises or tortoise sign were detected anywhere within the PS, or the 500-foot buffer during focused surveys in 2025. Surveyors did not observe any burrows attributable to tortoise, nor any scat, tracks, shells, or other indicators of this species. Numerous animal burrows were noted (e.g., rodent burrows), but all were identified as belonging to other wildlife (via size, shape, or sign) and showed no evidence of tortoise use. The complete absence of tortoise sign was consistent across all transects and survey dates.

The PS lies at the periphery of the range of the Desert Tortoise. Moreover, the busy Interstate-15 corridor - adjacent to the PS. has been a known mortality hazard and barrier for tortoises in this region, making it unlikely for any to migrate into the area (Peaden, et al. 2017). Also, very few burrow-like structures of any kind were present in the hard, compacted ground (aside from shallow small mammal burrows). This reinforces that the substrate is largely unsuitable for tortoise burrowing. Overall, no evidence of Desert Tortoise was found in the PS or buffer. Given the intensive survey effort and favorable conditions, this result provides definitive confirmation that the PS is unoccupied by Desert Tortoise (Appendix H).

Mohave Ground Squirrel

Survey results were conclusive. No MGS or diagnostic sign (e.g. scat, tracks, vocalizations) were detected on the PS. The habitat is low-quality for MGS and shows no indication of current or historical occupancy. The PS is isolated by adjacent development and infrastructure, and it lacks the vegetative components critical to MGS persistence. Key forage and cover shrubs such as winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), allscale saltbush (*Atriplex polycarpa*), and creosote bush (*Larrea tridentata*) were absent or extremely sparse within the PS. Past and ongoing disturbances (e.g. off-road vehicle trails, old foundations/wells, illegal dumping, etc.) have further degraded habitat quality and connectivity on and around the PS. Given the absence of required forage plants, cover, and any recent regional MGS records – the nearest known occurrence is miles from the Project – the PS is determined not to support MGS. The Project is not expected to impact this species, and no MGS-specific mitigation measures are necessary (Appendix I).

Desert Kit Fox

No definitive evidence of desert kit fox presence was found on the PS. No kit fox individuals were observed during the diurnal surveys (this is not unexpected given the species' nocturnal habits). More importantly, no kit fox dens – either active or inactive – were discovered. The survey did not encounter any burrow or den entrance that exhibited the characteristic shape and size of kit fox dens (typically oval entrances about 7–10 inches in diameter). Several coyote-sized burrows and smaller rodent burrows were noted, but none matched the intermediate size or cleanliness usually associated with kit fox. Likewise, no kit fox scat was identified. Kit fox scat is generally small (≤0.5-inch diameter), tubular, and often containing rodent hair or insect parts.

The only canid scats found were much larger and attributable to coyote (and a few to domestic dogs, likely from pets). These coyote scats were common along dirt roads and trails, indicating that coyotes actively use the area. The presence of a resident coyote population can itself deter kit fox use, as

coyotes are known to prey upon or outcompete kit foxes. Other observations support the conclusion of kit fox absence. No footprints consistent with kit fox (small, narrow prints approximately 1.5 inches with claws) were seen in any of the soft sandy swales, despite excellent tracking conditions on the mornings of April 4 and 5, 2025. Human activity within the PS (some evidence of occasional camping and dog-walking was found), and the general disturbance (off-road vehicles, etc.) may reduce the study areas attractiveness to kit fox for denning. The lack of confirmed sign suggests that no kit fox family units are resident on the PS. The survey found no evidence of regular or past kit fox use such as old dens, prey middens, or territorial markings. In summary, the desert kit fox was not detected on the PS. The soils and topography are suitable for kit fox denning (sandy substrates, gentle washes), but ongoing coyote presence and human disturbances likely make the Project suboptimal habitat. The findings indicate that kit foxes do not currently occupy or breed on the PS.

Crotch's Bumblebee

CBB was not detected during any of the survey events. The focused surveys yielded no observations of CBB individuals or colonies on the PS. Furthermore, no bumble bees of any species were observed in the course of the surveys. Despite the absence of the target species, the site demonstrated abundant insect activity and diverse pollinator presence, indicating that survey conditions were favorable for detecting bumble bees. Numerous native bee taxa (solitary bees and other non-*Bombus* genera) were observed actively foraging within the PS, along with the widespread European honey bee (*Apis mellifera*). Numerous other pollinating insects were also documented, with the overall pollinator diversity corresponding to the variety of flowering plants available. The presence of many other bee species – including visibly conspicuous large bees – during the surveys demonstrates that the survey methods were effective and that if CBB were present, it would have been detected alongside the other bees.

Key observations from each survey include multiple native bees (e.g., *Anthophoridae*, *Halictidae*, and *Megachilidae* families) visiting blooming shrubs and wildflowers on the PS. Honey bees were especially prevalent on the creosote bush blossoms and other available floral resources. However, at no point was any bumble bee (genus *Bombus*) sighted. The lack of any bumble bee detections suggests that bumble bees were generally absent or at extremely low densities on the PS. Given the intensive level of effort and repeated visits, the non-detection of CBB is considered a credible result (i.e. not an artifact of poor timing or low effort). The concurrent detection of many other bees supports this conclusion – it indicates that surveyors would have detected CBB if present.

It is also noteworthy that the only recent CBB record in the general region (outside the PS) was approximately 5 miles away in 2025. No CBB observations have been documented closer to the PS in over 80 years. This rarity in the surrounding landscape aligns with the survey's negative finding. In summary, despite thorough surveys under appropriate conditions, Crotch's bumble bee was not found on the PS, whereas a variety of other pollinators were readily observed. These results indicate that CBB is currently absent from the site.

The PS is a landscape with patchy floral resources. The on-site plant community is often native in composition and generally resembles desert scrub. However, in portion of the PS (for example, near Stoddard Wells Road) show signs of anthropogenic disturbance, including increased non-native invasive plants and scattered trash/debris. Windblown litter and weed incursions along the street edge suggests edge effects from the adjacent roadway, etc. These disturbances degrade the habitat quality, introducing competition for native flora and altering the vegetation structure in those areas. Crucially, while the PS does offer some nectar and pollen sources for generalist pollinators, it lacks the key floral hosts that CBB relies on. CBB is a generalist forager but is most commonly associated with certain showy native forbs in desert ecosystems (e.g., milkweeds Asclepias, lupines Lupinus, milkvetch Astragalus,

California poppy, pincushion flower, phacelias, sages, among others). In a general sense, these high-value plant genera were not observed on the PS. The blooming plants present were primarily creosote (a lower-quality resource for bumble bees) and a mix of other wildflowers and shrubs that are also of low value to CBB (e.g., buckwheat, pincushion, fiddleneck, etc.). The absence of milkweed, lupine, poppy, and other preferred forage plants greatly reduces the PS's attractiveness to foraging CBB. In other words, the available floral resources, while supporting a diversity of smaller native bees, are not optimal for sustaining CBB. This conclusion is reinforced by CDFW's habitat guidance, which emphasizes that the quality and abundance of blooming floral resources are critical for supporting resident bumble bee colonies (CDFW 2023).

5.5 Wetlands and Waterways

No areas meeting the definition of WOTUS were identified within the PS. With deference to the Clean Water Act (CWA), the ephemeral swales, erosional signatures and rills observed within the PS are non-jurisdictional upland features (Appendix J). They lack a notable hydrophytic plant community, hydric soil development, and any persistent flow. Critically, these signatures do not connect to any downstream WOTUS through continuous surface flow. They begin and end within the PS under normal hydrologic conditions, with runoff infiltrating before it can reach the nearest waterway (the off-site Bell Mountain Wash, which itself is an ephemeral tributary to the intermittent Mojave River). Under the Sackett-standard rule, such ephemeral, isolated signatures are not regulated by Section 404 of the CWA. Likewise, no wetlands of any kind are present on the PS. In summary, the PS is properly characterized as entirely upland, containing no WOTUS.

But in sharp contrast, the PS encompasses 2.17-acres of ephemeral drainage signatures (identified as Features 1 through 6). These six (6) features occur entirely within the PS. No wetlands were identified within the PS. To that end, Features 1 through 6 qualify as WOTS subject to regulation under CFGC Section 1600 and CWC Section 13260 (Appendix K).

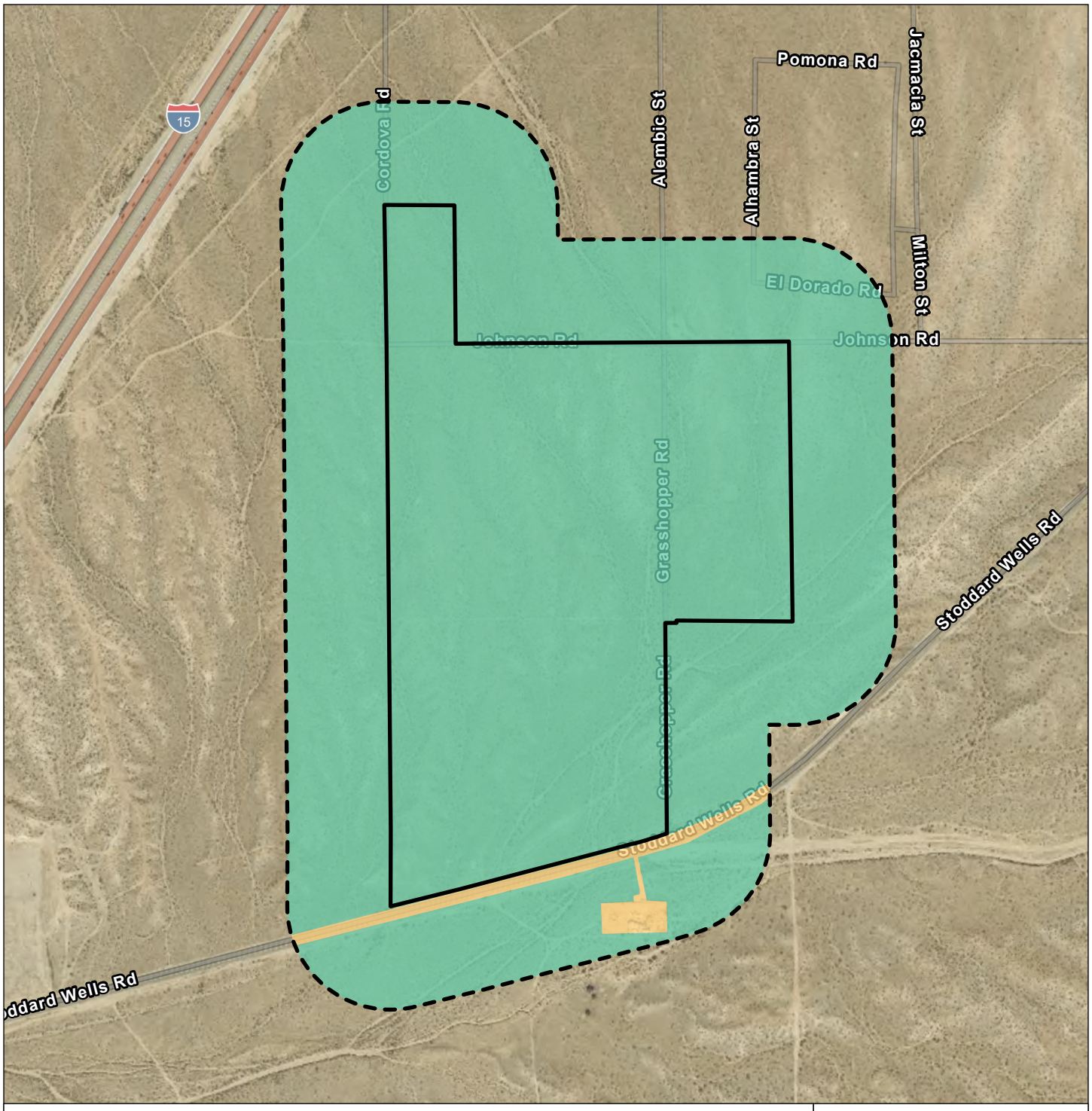


Figure 3. Vegetation Communities and Land Cover Types

Special-Status Species Occurrences

Map Code	Common Name *(Scientific Name)*
	Plants
P1	Beaver Dam breadroot *Pediomelum castoreum*
P2	Booth's evening-primrose *Eremothera boothii ssp. boothii*
P3	desert cymopterus *Cymopterus deserticola*
P4	Mojave monkeyflower *Diplacus mohavensis*
P5	southern mountains skullcap *Scutellaria bolanderi ssp. austromontana*
P6	white pygmy-poppy *Canbya candida*
	Invertebrates
I1	Crotch's bumble bee *Bombus crotchii*
I2	San Emigdio blue butterfly *Plebulina emigdionis*
I3	Victorville shoulderband *Helminthoglypta mohaveana*
	Mammals
M1	hoary bat *Lasiurus cinereus*
M2	Mohave ground squirrel *Xerospermophilus mohavensis*
M3	Mohave river vole *Microtus californicus mohavensis*
M4	pallid San Diego pocket mouse *Chaetodipus fallax pallidus*
M5	Townsend's big-eared bat *Corynorhinus townsendii*
	Birds
B1	burrowing owl *Athene cunicularia*
B2	Cooper's hawk *Accipiter cooperii*
B3	golden eagle *Aquila chrysaetos*
B4	Le Conte's thrasher *Toxostoma lecontei*
B5	least Bell's vireo *Vireo bellii pusillus*
B6	loggerhead shrike *Lanius ludovicianus*
B7	prairie falcon *Falco mexicanus*
B8	southwestern willow flycatcher *Empidonax traillii extimus*
B9	summer tanager *Piranga rubra*
B10	Swainson's hawk *Buteo swainsoni*
B11	tricolored blackbird *Agelaius tricolor*
B12	western yellow-billed cuckoo *Coccyzus americanus occidentalis*
B13	yellow-breasted chat *Icteria virens*
B14	yellow warbler *Setophaga petechia*
	Reptiles
R1	desert tortoise *Gopherus agassizii*
	Amphibians
A1	arroyo toad *Anaxyrus californicus*
A2	California red-legged frog *Rana draytonii*
	Fish
F1	Mohave tui chub *Siphateles bicolor mohavensis*

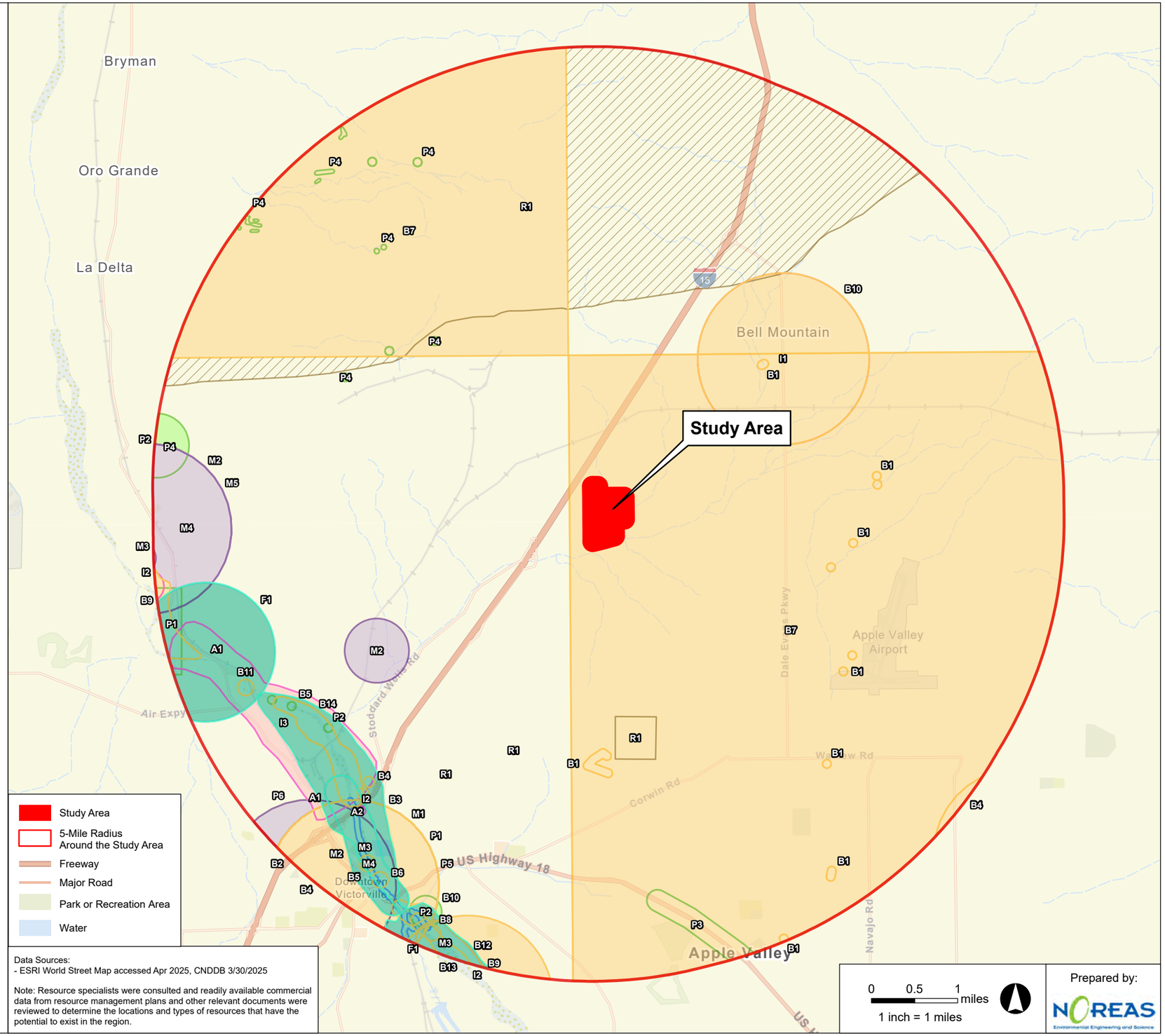


Figure 4. CNDDB Literature Review

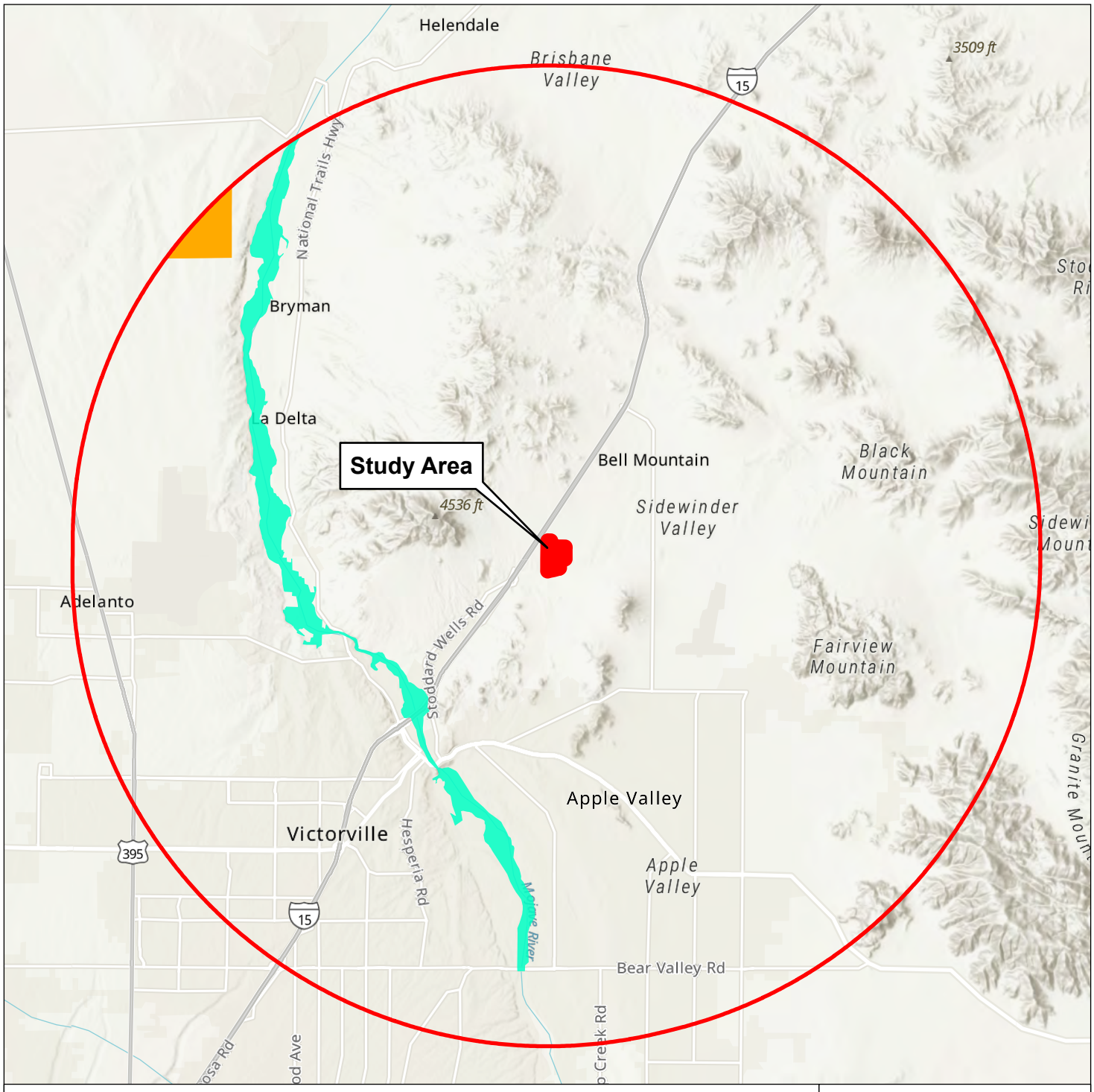


Figure 5. USFWS Critical Habitat

6.0 CONCLUSION AND RECOMMENDATIONS

The PS consists of a disturbed desert scrub landscape. Comprehensive baseline biological surveys conducted in 2025—including general habitat assessments, focused protocol surveys for special-status species, and general wildlife inventories—confirmed the absence of any species listed under federal or state endangered species acts. The PS's biological community is dominated by common, disturbance-tolerant desert flora and fauna. The PS is also located outside of, and not adjacent to, any U.S. Fish and Wildlife Service (USFWS)-designated Critical Habitat. No active bird nests, raptor nest sites, bat roosts, or guano deposits were detected during surveys.

However, the 2025 surveys did document native plant resources within the PS: silver cholla (*Cylindropuntia echinocarpa*, a native cactus species), and a total of 11 Western Joshua Trees (*Yucca brevifolia*; 2 live individuals and 9 dead). All of these plants are protected under local desert native plant regulations (with WJT additionally safeguarded by the State's WJTCA).

Accordingly, implementation of the following avoidance and minimization measures is recommended to prevent - or reduce potential adverse effects, on common species and any special-status biological resources that could occur on or near the PS.

- Western Joshua Tree (WJT) Protection. Prioritize on-site avoidance and preservation of WJTs to the greatest extent practicable. For any WJTs that cannot be avoided, obtain authorization from CDFW under the WJTCA and any required Town of Apple Valley native plant permits. Transplant impacted trees where feasible (with priority given to smaller individuals), and provide compensatory mitigation as required (e.g., payment of WJTCA in-lieu fees into the state WJT Conservation Fund and/or purchase of conservation bank credits) at agency-approved ratios.

- Native Cacti. Avoid impacting clusters of cacti (e.g., silver cholla) where practicable by flagging/fencing them for avoidance. Where avoidance is not feasible, salvage whole cactus plants and/or pads prior to grading, and transplant them into protected open-space areas on the PS or to an agency-approved off-site receiver location.

- No Take of Protected Wildlife. Project personnel shall not "take" (i.e., hunt, capture, or kill) any protected wildlife species, nor destroy active nests or eggs of any birds protected under federal or state law. In practice, this means no Project worker may collect, handle, or intentionally destroy any native wildlife, or disturb any active bird nest. This prohibition covers species protected by the federal Endangered Species Act, the California Endangered Species Act, the California Fish and Game Code, and the Migratory Bird Treaty Act.

- Nesting Bird Avoidance. To the extent practicable, schedule any necessary vegetation clearing or grubbing outside of the peak bird nesting season (February 1 through August 31). If work must occur during the nesting season, a qualified biologist shall conduct a pre-construction nesting bird survey of the work area (and a suitable buffer around it, e.g. 500 ft) no more than 3 days prior to initial disturbance. If any active nests are found, the biologist will establish an appropriate no-work buffer around the nest (typically 50–100 ft for songbird nests and 100–300 ft for raptor or BUOW nests, adjusted based on species and observed behavior). Construction within the buffer will be deferred until the nest is no longer active (fledged or failed), as confirmed by the biologist.

- Worker Training (WEAP). Conduct a Worker Environmental Awareness Program (WEAP) training for all construction personnel before ground disturbance begins. The training will educate

workers on sensitive wildlife and native plants that could occur on site, clarify that collection or harm of such resources is strictly prohibited, review all relevant permit conditions (including any issued under the WJTCA), and outline stop-work and notification procedures in the event any protected species (or other unanticipated biological resource) is encountered during work.

- Limit of Work Area. Clearly delineate the limits of grading and construction activity with temporary staking, flagging, fencing, or similar markers before work starts. All workers and equipment shall confine activities within these defined limits to avoid inadvertent disturbance outside the approved impact area.

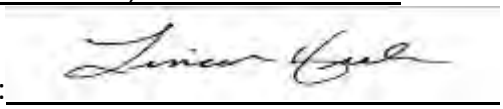
- Housekeeping and Invasive Weed Control. Keep the construction site free of debris, trash, and food waste that could attract wildlife. Trash shall be secured in containers and removed from the site regularly. To prevent the introduction or spread of invasive weeds, ensure all construction equipment arrives clean (free of mud or plant debris) and, where feasible, use only weed-free materials (e.g. mulch, fill). Promptly stabilize or re-vegetate any temporarily disturbed soils with native seed or plants per agency-approved plans.

With implementation of these measures, the Project would avoid the loss of any special-status species individuals and would not adversely affect local populations of such species

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me and under my direct supervision. The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report.

DATE: October 28, 2025

SIGNED: 

Lincoln Hulse

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APPENDIX A
SPECIAL-STATUS SPECIES POTENTIAL FOROCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 5 miles	Year(s) sighted
HP	Prairie falcon *(Falco mexicanus)*	None	None	-	3	1980
A	Crotch's bumble bee *(Bombus crotchii)*	None	Candidate Endangered	-	1	1944
A	Swainson's hawk *(Buteo swainsoni)*	None	Threatened	-	2	1920-1932
A	Desert tortoise *(Gopherus agassizii)*	Threatened	Threatened	-	4	1990-2005
A	Burrowing owl *(Athene cunicularia)*	None	Candidate Endangered	-	9	2005-2017
A	Mohave ground squirrel *(Xerospermophilus mohavensis)*	None	Threatened	-	3	1919-1977
A	Victorville shoulderband *(Helminthoglypta mohaveana)*	None	None	-	1	1939
A	California red-legged frog *(Rana draytonii)*	Threatened	None	-	1	1978
A	Least Bell's vireo *(Vireo bellii pusillus)*	Endangered	Endangered	-	3	2009-2013
A	Yellow warbler *(Setophaga petechia)*	None	None	-	1	2016
A	Le Conte's thrasher *(Toxostoma lecontei)*	None	None	-	3	1921-2017
A	Arroyo toad *(Anaxyrus californicus)*	Endangered	None	-	2	1956-1979
A	Mohave tui chub *(Siphateles bicolor mohavensis)*	Endangered	Endangered	-	3	1939-2011
A	Cooper's hawk *(Accipiter cooperii)*	None	None	-	1	1921
A	Golden eagle *(Aquila chrysaetos)*	None	None	-	1	1927
A	Hoary bat *(Lasiurus cinereus)*	None	None	-	1	1984
A	Pallid San Diego pocket mouse *(Chaetodipus fallax pallidus)*	None	None	-	2	1920-1921
A	Mohave river vole *(Microtus californicus mohavensis)*	None	None	-	3	1930-2010
A	San Emigdio blue butterfly *(Plebulina emigdionis)*	None	None	-	3	1975-2016
A	Townsend's big-eared bat *(Corynorhinus townsendii)*	None	None	-	1	1930
A	Tricolored blackbird *(Agelaius tricolor)*	None	Threatened	-	1	2014

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 5 miles	Year(s) sighted
A	Western yellow-billed cuckoo *(Coccyzus americanus occidentalis)*	Threatened	Endangered	-	1	2012
A	Loggerhead shrike *(Lanius ludovicianus)*	None	None	-	1	2006
A	Summer tanager *(Piranga rubra)*	None	None	-	2	1986-1990
A	Yellow-breasted chat *(Icteria virens)*	None	None	-	1	1990
A	Southwestern willow flycatcher *(Empidonax traillii extimus)*	Endangered	Endangered	-	1	1990
HP	White pygmy-poppy *(Canbya candida)*	None	None	1B.1	15	2003 - 2017
A	Beaver Dam breadroot *(Pediomelum castoreum)*	None	None	2B.1	1	1891
HP	Mojave monkeyflower *(Diplacus mohavensis)*	None	None	1B.1	2	2009 - 2014
A	Southern mountains skullcap *(Scutellaria bolanderi ssp. austromontana)*	Endangered	None	1B.2	1	1904
HP	Desert cymopterus *(Cymopterus deserticola)*	None	None	-	1	1985
A	Booth's evening-primrose *(Eremothera boothii ssp. boothii)*	None	None	1B.2	1	2013

CNPS List Definitions
List 1A: Plants presumed extinct in California
List 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
List 1B.2: Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California
List 1B.3: Plants rare, threatened, or endangered in California and elsewhere, not very threatened in California
List 2.1: Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
List 2.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

Potential for Occurrence Definitions
Absent [A].
Habitat Present [HP].
Present [P].
Critical Habitat [CH].

APPENDIX B
PHOTOGRAPH LOG

	**Photograph 1.**
	**Photograph 2.**

	**Photograph 3.**
	**Photograph 4.**

APPENDIX C
PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

Scientific Name	Common Name
Yucca brevifolia	Joshua tree
Adenophyllum cooperi	Cooper's dogweed
Ambrosia dumosa	White bursage
Ambrosia salsola	Burrobrush
Malacothrix glabrata	Smooth desertdandelion
Pectis papposa var. papposa	Manybristle chinchweed
Stephanomeria parryi	Parry's wirelettuce
Stephanomeria pauciflora	Wire-lettuce
Amsinckia intermedia	Common fiddleneck
Phacelia tanacetifolia	Lacy phacelia
Caulanthus lasiophyllus	California mustard
Descurainia pinnata	Western tansymustard
*Sisymbrium altissimum**	Tall tumblemustard
*Sisymbrium irio**	London rocket
Streptanthella longirostris	Longbeak streptanthella
Cylindropuntia echinocarpa	Silver cholla
Atriplex canescens	Fourwing saltbush
*Salsola tragus**	Russian thistle
Cucurbita palmata	Coyote gourd
Ephedra nevadensis	Nevada jointfir
Chamaesyce albomarginata	Whitemargin sandmat
Acmispon brachycarpus	Foothill deervetch
Lupinus concinnus	Bajada lupine
*Erodium cicutarium**	Redstem stork's bill
Salvia columbariae	Chia
Scutellaria mexicana	Mexican bladdersage
Petalonyx thurberi	Thurber's sandpaper plant
Sphaeralcea ambigua	Desert globemallow
Mirabilis laevis	Desert wishbone-bush
Eremothera boothii	Booth's evening primrose
Eschscholzia minutiflora	Pygmy golden poppy
*Bromus madritensis subsp. rubens**	Red brome
*Bromus tectorum**	Cheatgrass
*Schismus arabicus**	Arabian schismus
*Schismus barbatus**	Common Mediterranean grass
Stipa hymenoides	Indian ricegrass
Stipa speciosa	Desert needlegrass
Linanthus dichotomus	Eveningsnow
Eriastrum	Woollystar
Gilia	Gilia
Eriogonum gracillimum	Rose and white buckwheat
Eriogonum pusillum	Yellowturbans
Thamnosma montana	Turpentinebroom
Lycium andersonii	Anderson's box thorn
Lycium cooperi	Peach thorn
Larrea tridentata	Creosote bush

Nomenclature follows the Jepson Manual, Second Edition (Baldwin et al 2011). * = naturalized, non- native plant species

APPENDIX D
WILDLIFE SPECIES OBSERVED WITHIN THE STUDY AREA

Common Name	Scientific Name
Birds	
Burrowing Owl	*Athene cunicularia*
Anna's Hummingbird	*Calypte anna*
California Quail	*Callipepla californica*
Turkey Vulture	*Cathartes aura*
Lesser Nighthawk	*Chordeiles acutipennis*
Common Raven	*Corvus corax*
Horned Lark	*Eremophila alpestris*
House Finch	*Haemorhous mexicanus*
Hooded Oriole	*Icterus cucullatus*
Northern Mockingbird	*Mimus polyglottos*
Bushtit	*Psaltriparus minimus*
Lesser Goldfinch	*Spinus psaltria*
Black-chinned Sparrow	*Spizella atrogularis*
Western Meadowlark	*Sturnella neglecta*
Eurasian Collared Dove	*Streptopelia decaocto*
Bewick's Wren	*Thryomanes bewickii*
California Thrasher	*Toxostoma redivivum*
Western Kingbird	*Tyrannus verticalis*
Mourning Dove	*Zenaida macroura*
White-crowned Sparrow	*Zonotrichia leucophrys*
Mammals	
Coyote	*Canis latrans*
California ground squirrel	*Otospermophilus beecheyi*
Cottontail	*Sylvilagus audubonii*
Reptiles	
Western whiptail lizard	*Aspidoscelis tigris*
Zebra-tailed Lizard	*Callisaurus draconoides*
Horned lizard	*Phrynosoma platyrhinos*
Western fence lizard	*Sceloporus occidentalis*
Common Side-blotched Lizard	*Uta stansburiana*

APPENDIX E
NATIVE PLANT INSPECTION REPORT

APPLE VALLEY 84 PROJECT

October 2025

NATIVE PLANT INSPECTION

Apple Valley North United States Geological Survey
7.5-Minute Topographic Quadrangle Map

Prepared By

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Irvine, CA 92618
(949) 467-9100

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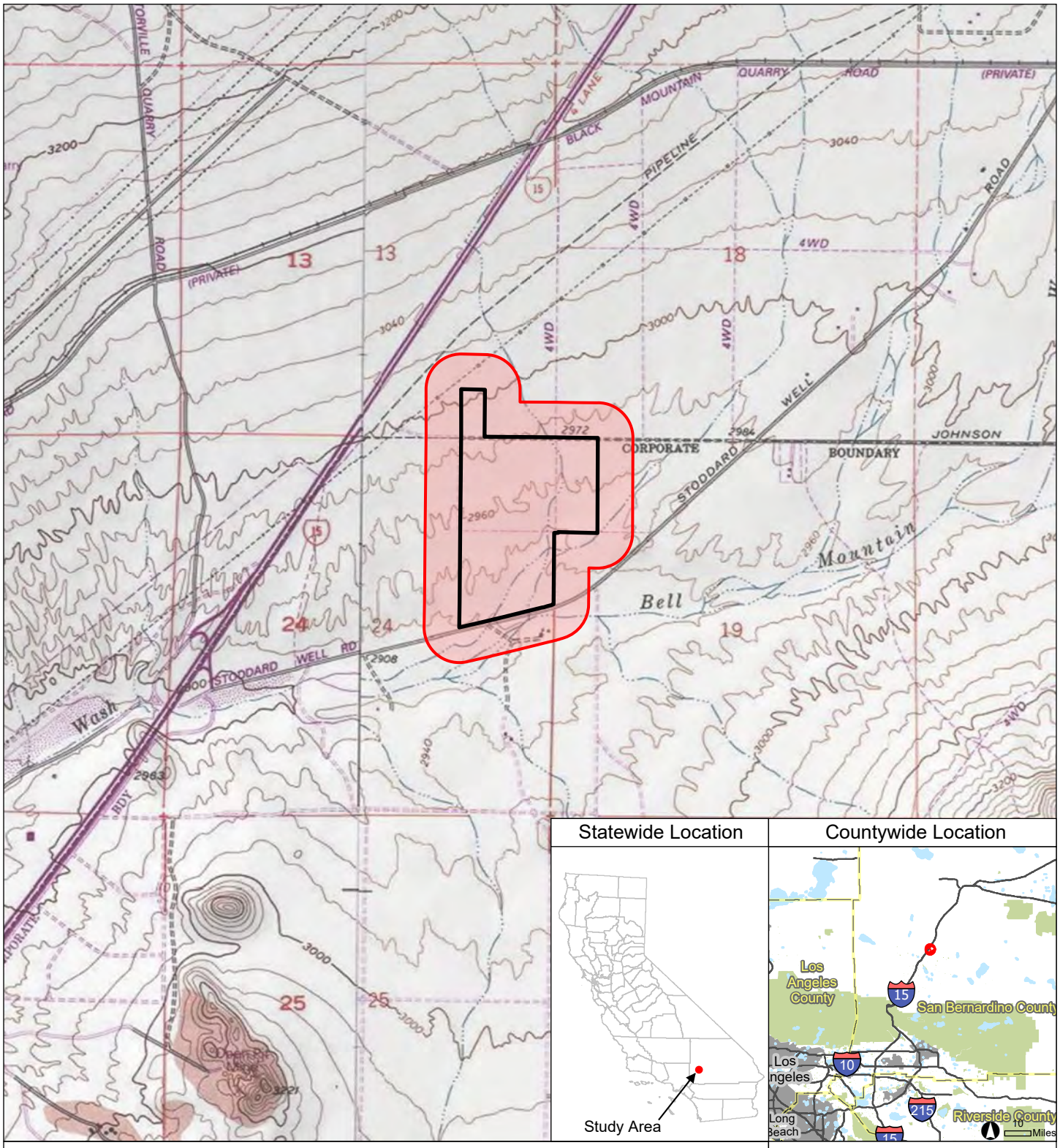
FIGURES

APPENDICES

1.0 EXCUTIVE SUMMARY

Covington Development Partners, LLC proposes to develop the Apple Valley 84 Project (Project) on approximately 102.66 acres of vacant land in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The Project Site (PS) lies roughly 2,500–3,000 feet above mean sea level and consists of undeveloped Mojave Desert scrub habitat. However, surrounding infrastructure (e.g., Stoddard Wells Road and Interstate 15) and on-site disturbances such as off-highway vehicle (OHV) tracks and illegal dumping have altered the natural landscape.

No plant species listed as endangered or threatened under federal or state law were detected on the PS. Likewise, no plant considered rare or sensitive (i.e., no species with a California Rare Plant Rank) was present. This result is consistent with the PS's disturbed habitat conditions. Western Joshua tree (*Yucca brevifolia*)—a protected native desert plant in California—was observed on the PS, but this species is being addressed separately due to its unique protected status and was outside the scope of the current survey. The Project will comply with all applicable native plant protection regulations, including the Town of Apple Valley's Plant Protection and Management Policy (Chapter 9.76), the San Bernardino County Development Code (native plant provisions), and the California Desert Native Plants Act (Food & Agric. Code § 80001 et seq.).



The Study Area is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13, 24, Township 6N, Range 3W, in Sections 18,19;

Center coordinates (WGS 1984): 117.341°W 34.397°N

Figure 1. Regional Location

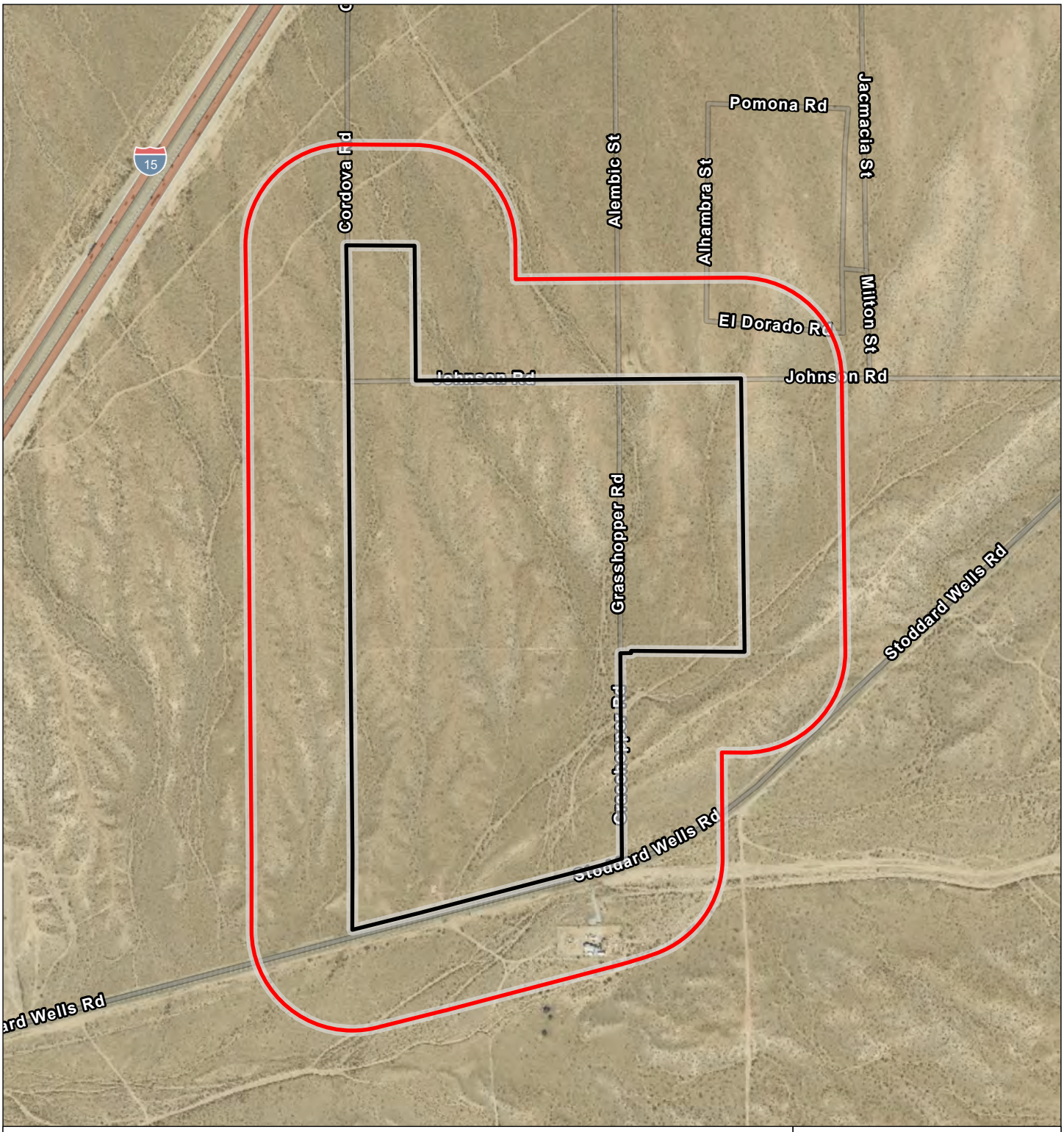


Figure 2. Site Vicinity

2.0 PROPERTY DESCRIPTION

The PS lies at approximately 2,500–3,000 feet above mean sea level, within the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle. Its legal location corresponds to Sections 13 and 24 of Township 6 North, Range 4 West, and Section 19 of Township 6 North, Range 3 West (San Bernardino Meridian). The PS and surrounding area support a Mojave Desert scrub community that shows signs of past human disturbance. Major roads (Stoddard Wells Road and the Interstate 15 freeway corridor) border the Project, creating edge effects and acting as barriers to local wildlife movement. Within the PS, visible human impacts include off-highway vehicle tracks, scattered trash from illegal dumping, an old concrete foundation, and abandoned well casings. These features suggest past attempts at development or agriculture on the property.

The dominant plant community is creosote bush scrub on sandy loam soils, characterized by open shrub cover with scattered Joshua trees. Spring 2025 surveys observed a low to moderate density of perennial shrubs, including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and Nevada ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to the arid conditions. Only minimal cover of annual grasses (e.g., *Schismus* spp.) and forbs was present in 2025, reflecting low germination from limited rainfall.

3.0 FOCUSED STUDY/SPECIES OF CONCERN

For the purposes of this report, the Project's proposed ground disturbance footprint (Project Site - PS) was assessed (Figure 2). Primary data sources included (but were not limited to) the California Natural Diversity Database (CDFW 2025a), the California Native Plant Society's Online Inventory of Rare and Endangered Plants (CNPS 2025), and recent aerial imagery of the site (Microsoft 2025).

Furthermore, the following local and state provisions were reviewed:

- ✓ San Bernardino County Development Code, Section 88.01.060 Desert Native Plant Protection (San Bernardino County 2025;
- ✓ California Food and Agriculture Code 80001 et seq (California Food and Agriculture Department 2025a);
- ✓ California Desert Native Plants Act, Division 23 of the California Food and Agriculture Code (California Food and Agriculture Department 2025b);
- ✓ Town of Apple Valley Plant Protection and Management Policy (Chapter 9.76); and
- ✓ California Fish and Game Code Section 1925 and 1926 (CDFW 2025b).

These laws and ordinances are intended to ensure the preservation and wise use of desert native plant resources by regulating their removal. Accordingly, all desert native plants defined as protected under the City and County ordinances or the Desert Native Plants Act were considered. These include large desert shrubs/trees (e.g., smoketree, mesquite, catclaw acacia), clonal rings (creosote bush ≥10 feet across), and other specified taxa such as desert ironwood, piñon pine, California juniper, desert willow, desert holly, and all members of the family *Cactaceae*[1].

[1] Except for sahuaro cactus (*Carnegiea gigantea*) and barrel cactus (*Ferocactus acanthodes*).

4.0 METHODS

Field surveys were carried out by qualified botanical staff over the entire PS using pedestrian transects. Surveyors walked parallel transects spaced to achieve 100% visual coverage, recording the location of individual native plants with a hand-held Global Positioning System (GPS) for precise mapping. All plants encountered were identified to the lowest taxonomic[2] level necessary to determine if they were native, non-native, or of special status[3]. Any uncertain specimens were keyed out using taxonomic references (e.g., The Jepson Manual, Baldwin et al. 2012), and plant nomenclature followed The Jepson Manual conventions to safeguard scientific rigor and consistency.

Focused botanical surveys took place in April 2025 and again in May 2025, timing that captured both spring and early summer flowering periods. The survey method was derived from established rare-plant survey guidelines (USFWS 2000; CDFW 2009; CNPS 2001) to ensure thorough coverage and timing aligned with peak blooming periods. Survey dates were specifically selected per these guidelines to maximize detectability of target species. The surveys specifically targeted special-status plant species and protected native desert plants, but were floristic in nature – meaning the team documented all plant species observed (a complete list of flora within the PS is provided in Appendix A). Conducting multiple surveys in different seasons, combined with the floristic approach, ensured that ephemeral annuals and any later-blooming species were not overlooked.

Prior to the field surveys, an evaluation of reference populations of target species in the region was conducted in early March 2025 to verify that the timing of the upcoming surveys was appropriate and to gauge local plant phenology[4] (Figure 3). Observations of these reference populations confirmed that target species were emerging or in bloom, validating the survey schedule. During the surveys, botanists proceeded methodically on foot across the PS in a grid-like fashion. Transect spacing was adjusted as needed in the field (narrowed in dense or topographically complex areas, and widened in open, homogeneous areas) to maintain complete visual coverage. This adaptive approach accounted for terrain variation, vegetation density, and safety considerations while ensuring that no pocket of habitat was missed. In practice, the entire PS was thoroughly surveyed for any occurrence of special-status or protected native plants. In addition to state- and federally listed species and CNPS-ranked rare plants, the surveys explicitly targeted desert native plants protected by local and state law. Under these regulations (Town of Apple Valley Plant Protection and Management Policy, Chapter 9.76, County Development Code §88.01.060; California Food & Agric. Code §80001 et seq.), certain native trees and shrubs must be documented and managed - or salvaged, if impacted.

Consistent with these requirements, the survey cataloged any of the following target taxa found within the PS (if meeting the regulatory size criteria of ≥2 inches stem diameter, or ≥6 feet in height, where applicable, or any size if protected by name):

- Smoketree (*Dalea spinosa*) – a large desert shrub/tree of wash habitats.
- Mesquites (*Prosopis* spp.) – all species of mesquite.

[2] Botanical taxonomy is the practice and science of categorization or classification. A taxonomy (or taxonomical classification) is a scheme of classification, especially a hierarchical classification, in which plants are organized into groups or types.

[3] For the purposes of this analysis, "special-status species" refers to any species that have been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service [USFWS], California Department of Fish and Wildlife [CDFW] and California Native Plant Society (CNPS)).

[4] Phenology is the study of periodic events in biological life cycles and how these are influenced by seasonal and interannual variations in climate, as well as habitat factors.

- All yucca, nolina, and century plant species (Family *Agavaceae*) – e.g. Mojave yucca (*Yucca schidigera*), soapweed (*Hesperoyucca whipplei)*, etc. (Western Joshua Tree excluded).

- Creosote bush rings (*Larrea tridentata*) ≥10 feet in diameter – clonal rings of creosote bush reaching this size.

- Desert ironwood (*Olneya tesota*) – any individuals of this species (a protected hardwood).

- Palo verdes (*Cercidium* spp., also known as *Parkinsonia* spp.) – all species of palo verde trees.

- Catclaw acacia (*Acacia greggii*, also known as *Senegalia greggii)* – a protected desert riparian shrub/tree.

- Single-leaf piñon pine (*Pinus monophylla*) – desert pinyon pine.

- Manzanitas (*Arctostaphylos* spp.) – any manzanita species (chaparral shrub).

- California juniper (*Juniperus californica*) – native juniper trees.

- Desert willow (*Chilopsis linearis*) – riparian desert tree.

- Desert holly (*Atriplex hymenelytra*) – halophytic shrub.

- All members of the cactus family (Family Cactaceae) – except saguaro (*Carnegiea gigantea*) and barrel cactus (*Ferocactus acanthodes*) which are not locally present. This includes native chollas, prickly-pears, and other cacti in the Project vicinity.

- Ocotillo and related species (Family *Fouquieriaceae*, e.g. ocotillo *Fouquieria splendens*, candlewood) – all individuals of these species.

By adhering to the above methods and regulatory guidelines, this survey satisfies the Town of Apple Valley, County and State native plant protection requirements. This thorough method provided a complete inventory of the PS's sensitive botanical resources and clearly identifies any regulated or significant plant species present. The use of seasonally timed, guideline-driven surveys and comprehensive coverage of the PS adds confidence that no protected native plant was overlooked.

Figure 3. Reference Population Map

5.0 RESULTS

No U.S. Fish and Wildlife Service (USFWS) designated critical habitat for any federally listed plant species occurs within the PS (Figure 4). Furthermore, no plant species listed as threatened or endangered under federal or state law were observed on the PS. Similarly, the surveys did not detect any plants with a California Rare Plant Rank (such as CNPS Rank 1B or 2). For example, regionally sensitive species known from undisturbed habitats – such as Lane Mountain milk-vetch and short-joint beavertail cactus – were not found within the PS. Overall, none of the special-status plant species considered likely to occur in the region were observed on the PS.

However, the 2025 surveys did document one desert cactus species - silver cholla (*Cylindropuntia echinocarpa*), observed as scattered individuals within the PS. Based on the survey observations, Project activities are not expected to harm any special-status plants or to significantly affect native plant populations, either locally or regionally. Therefore, the Project is not anticipated to result in the "take" of any special-status plant, nor to pose a threat to surrounding native plant communities.

To ensure native plant resources are protected, the following measures are recommended.

- Native Cacti. Avoid impacting clusters of cacti (such as silver cholla) wherever feasible by clearly flagging or fencing those plants prior to construction. If avoidance is not possible, salvage entire cactus plants (and/or their viable pads) before grading. Transplant the salvaged cacti either into protected open space on-site or to an agency-approved off-site receptor location.

- Protected Native Plants. Avoid adverse impacts to desert native plants protected under local and state law (Town of Apple Valley Municipal Code Chapter 9.76, San Bernardino County desert native plant regulations, and the California Desert Native Plants Act) to the greatest extent practicable. If such plants cannot be completely avoided, obtain a native plant removal permit from the Town of Apple Valley before removing any protected plant, in compliance with the California Desert Native Plants Act and the Town's requirements.

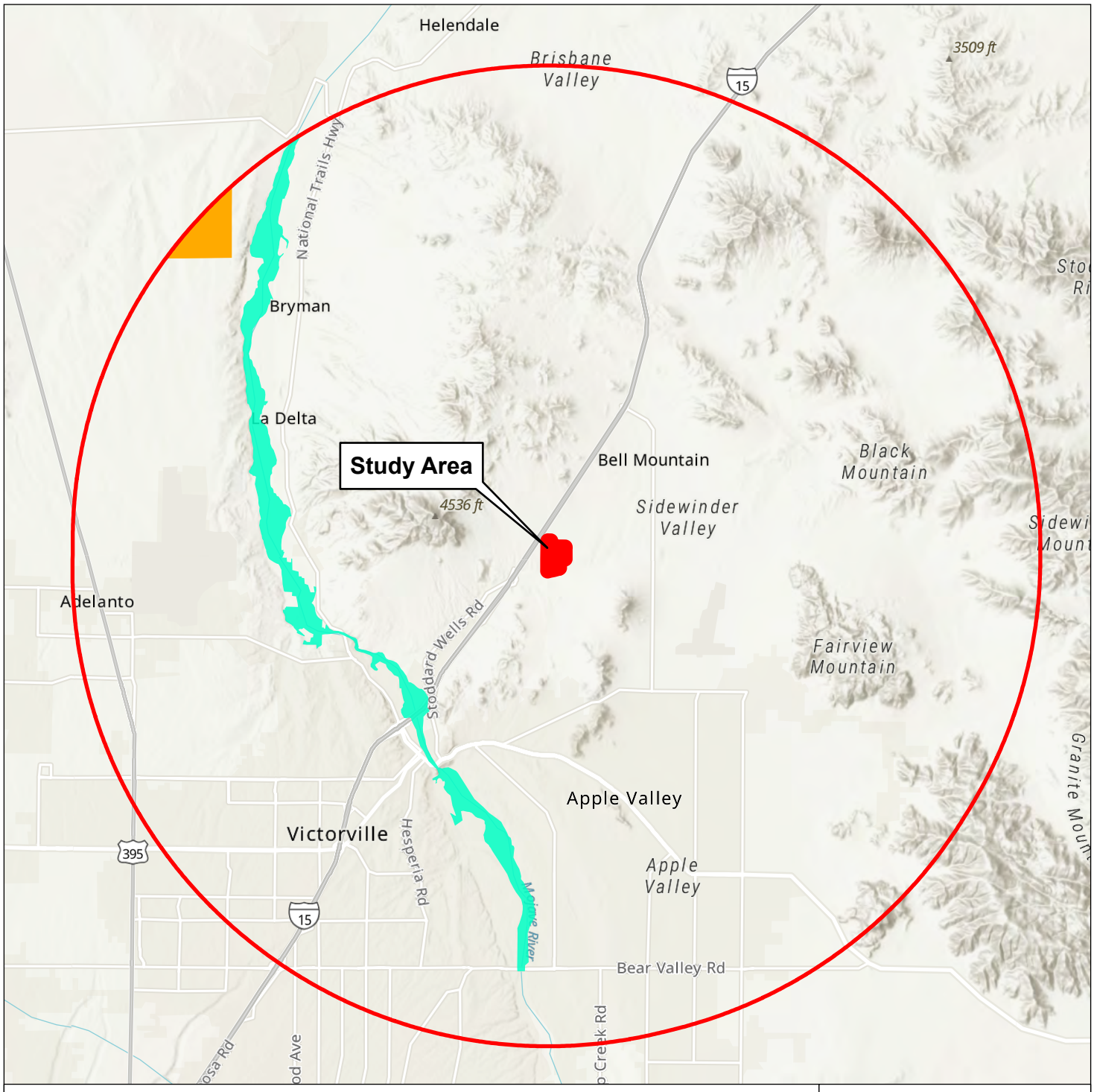


Figure 4. USFWS Critical Habitat

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the any Project representative, and that I have no financial interest in the Project.

DATE: October 28, 2025 SIGNED: 

Report Author

7.0 REFERENCES

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APPENDIX A
Plant Species List

Scientific Name	Common Name
Yucca brevifolia	Joshua tree
Adenophyllum cooperi	Cooper's dogweed
Ambrosia dumosa	White bursage
Ambrosia salsola	Burrobrush
Malacothrix glabrata	Smooth desertdandelion
Pectis papposa var. papposa	Manybristle chinchweed
Stephanomeria parryi	Parry's wirelettuce
Stephanomeria pauciflora	Wire-lettuce
Amsinckia intermedia	Common fiddleneck
Phacelia tanacetifolia	Lacy phacelia
Caulanthus lasiophyllus	California mustard
Descurainia pinnata	Western tansymustard
*Sisymbrium altissimum**	Tall tumblemustard
*Sisymbrium irio**	London rocket
Streptanthella longirostris	Longbeak streptanthella
Cylindropuntia echinocarpa	Silver cholla
Atriplex canescens	Fourwing saltbush
*Salsola tragus**	Russian thistle
Cucurbita palmata	Coyote gourd
Ephedra nevadensis	Nevada jointfir
Chamaesyce albomarginata	Whitemargin sandmat
Acmispon brachycarpus	Foothill deervetch
Lupinus concinnus	Bajada lupine
*Erodium cicutarium**	Redstem stork's bill
Salvia columbariae	Chia
Scutellaria mexicana	Mexican bladdersage
Petalonyx thurberi	Thurber's sandpaper plant
Sphaeralcea ambigua	Desert globemallow
Mirabilis laevis	Desert wishbone-bush
Eremothera boothii	Booth's evening primrose
Eschscholzia minutiflora	Pygmy golden poppy
*Bromus madritensis subsp. rubens**	Red brome
*Bromus tectorum**	Cheatgrass
*Schismus arabicus**	Arabian schismus
*Schismus barbatus**	Common Mediterranean grass
Stipa hymenoides	Indian ricegrass
Stipa speciosa	Desert needlegrass
Linanthus dichotomus	Eveningsnow
Eriastrum	Woollystar
Gilia	Gilia
Eriogonum gracillimum	Rose and white buckwheat
Eriogonum pusillum	Yellowturbans
Thamnosma montana	Turpentinebroom
Lycium andersonii	Anderson's box thorn
Lycium cooperi	Peach thorn
Larrea tridentata	Creosote bush

Nomenclature follows the Jepson Manual, Second Edition (Baldwin et al 2011).
* = naturalized, non- native plant species

APPENDIX B
Photographic Log

	**Photograph 1.**
	**Photograph 2.**

Photograph 3.

Photograph 4.

APPENDIX F
JOSHUA TREE CENSUS REPORT

APPLE VALLEY 84 PROJECT

October 2025

WESTERN JOSHUA TREE SURVEY REPORT

Apple Valley North United States Geological Survey
7.5-Minute Topographic Quadrangle Map

Prepared By

16361 Scientific Way
Irvine, CA 92618
(949) 467-9100

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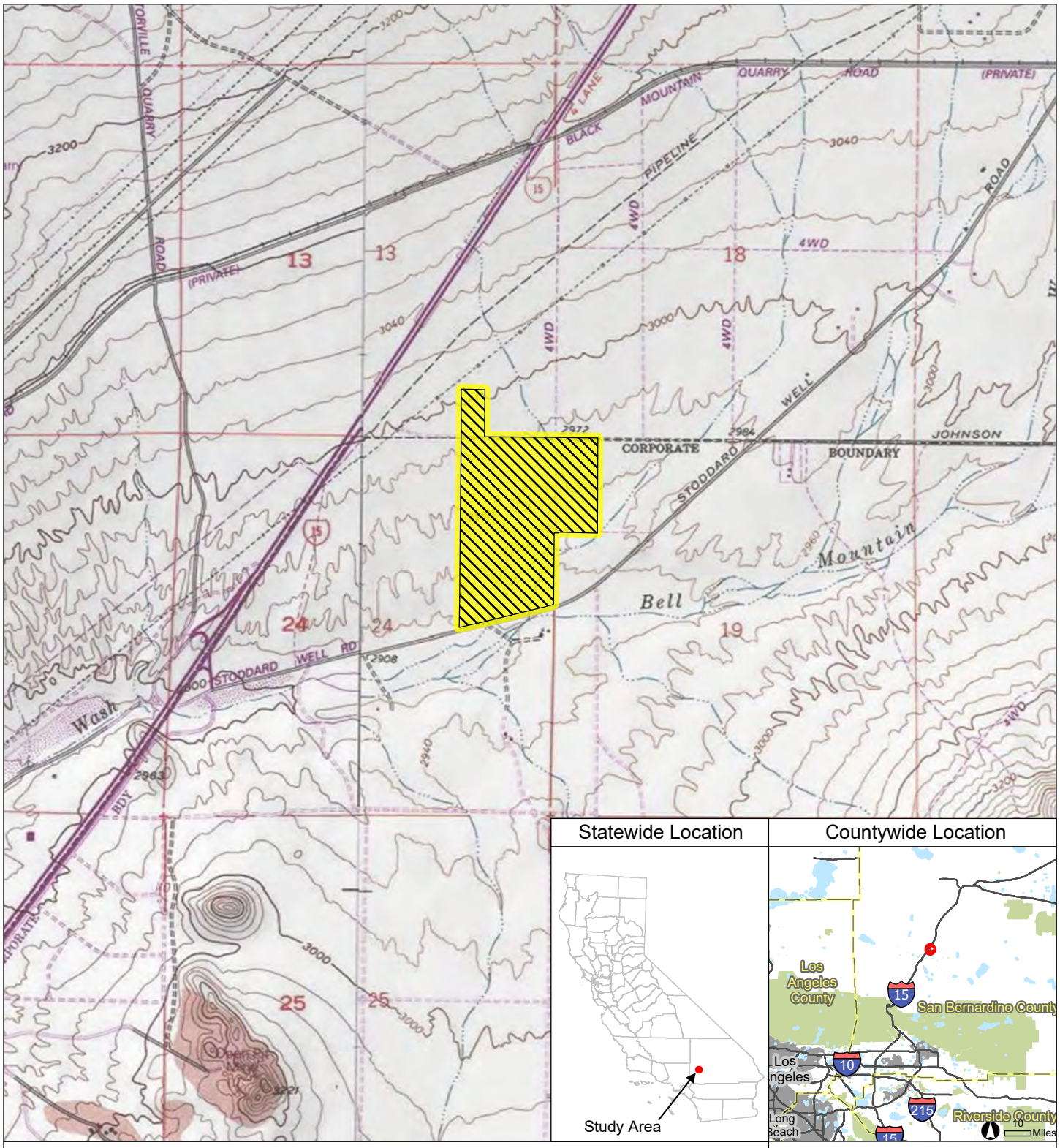
FIGURES

APPENDICES

1.0 INTRODUCTION & EXCUTIVE SUMMARY

Covington Development Partners, LLC proposes to develop the Apple Valley 84 Project (Project) on approximately 102.66 acres of vacant land in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The Project Site (PS) lies roughly 2,500–3,000 feet above mean sea level and consists of undeveloped Mojave Desert scrub habitat. However, surrounding infrastructure (e.g., Stoddard Wells Road and Interstate 15) and on-site disturbances such as off-highway vehicle (OHV) tracks and illegal dumping have altered the natural landscape. This report presents the findings of a Western Joshua Tree (*Yucca brevifolia*) survey conducted in 2025 for the Project. For the purposes of this report, the "study area" includes the Project's proposed ground disturbance footprint (PS), plus a 50-foot buffer.

The survey identified a total of 11 Western Joshua Trees (WJTs). Of these, only 2 trees were alive and 9 were dead at the time of survey (Appendix A). This report provides baseline data on the Project's WJTs, including their locations, size classes, health status, and evaluates potential impacts. Conclusions from this survey indicate that Project development would require removal or transplantation of WJTs, triggering compliance with the California Fish and Game Code and local requirements. Given the protected status of the WJT under state and local regulations, any impact to these trees is considered an environmental concern under the California Environmental Quality Act (CEQA) unless properly mitigated.



Project Site

Study Area

The Study Area is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13, 24, Township 6N, Range 3W, in Sections 18,19;

Center coordinates (WGS 1984): 117.341°W 34.397°N

Interstate or State Highway (inset)

County Boundary (inset)

Urban Area (inset)

Park or National Forest (inset)

Water Body (inset)

0 1,000 2,000 Feet

1 inch = 2,000 feet

Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Oct 2025

Map Prepared: 10-21-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location

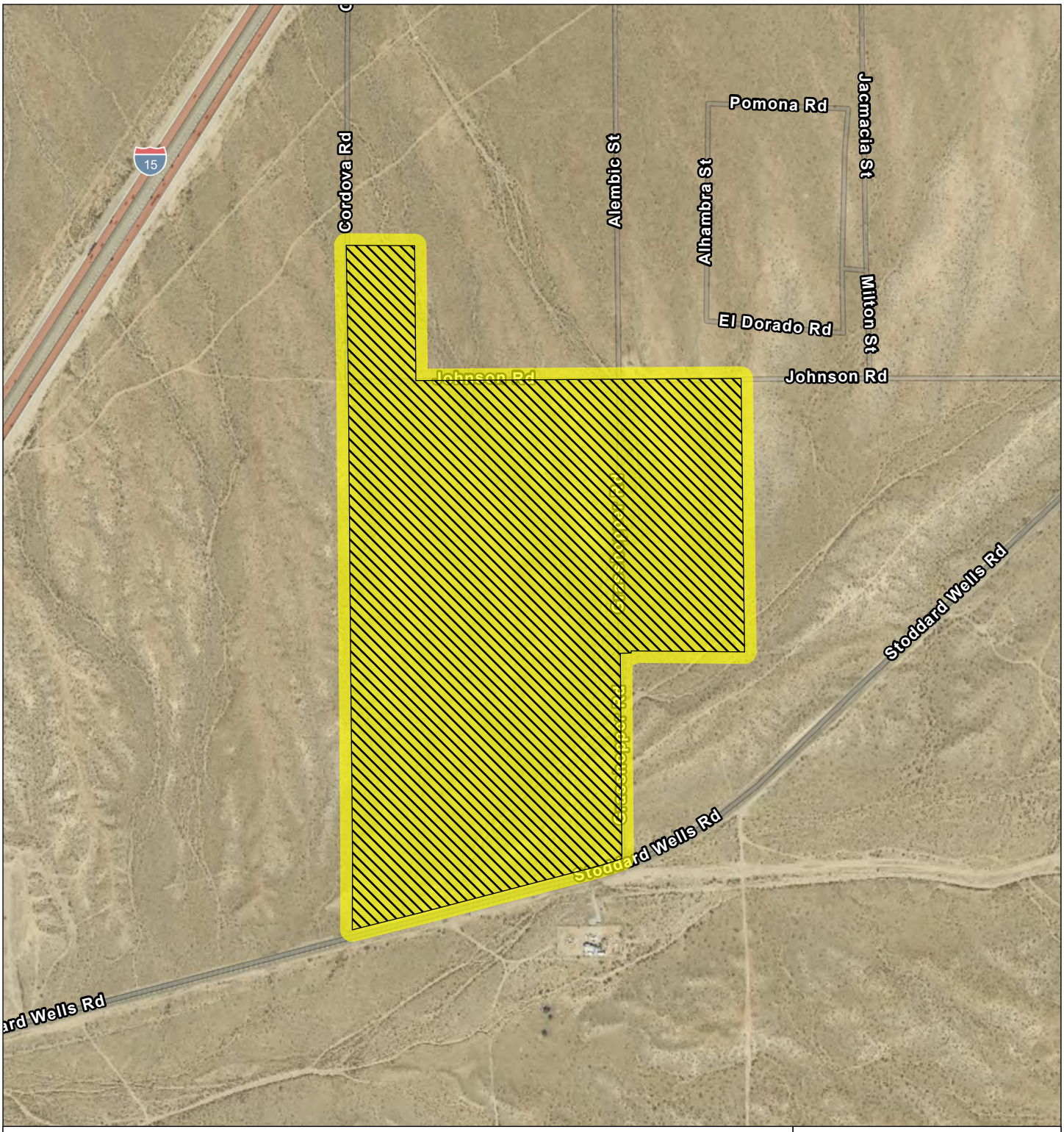


Figure 2. Site Vicinity

2.0 PROPERTY DESCRIPTION

The PS lies at approximately 2,500–3,000 feet above mean sea level, within the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle. Its legal location corresponds to Sections 13 and 24 of Township 6 North, Range 4 West, and Section 19 of Township 6 North, Range 3 West (San Bernardino Meridian). The PS and surrounding area support a Mojave Desert scrub community that shows signs of past human disturbance. Major roads (Stoddard Wells Road and the Interstate 15 freeway corridor) border the Project, creating edge effects and acting as barriers to local wildlife movement. Within the PS, visible human impacts include off-highway vehicle tracks, scattered trash from illegal dumping, an old concrete foundation, and abandoned well casings. These features suggest past attempts at development or agriculture on the property.

The dominant plant community is creosote bush scrub on sandy loam soils, characterized by open shrub cover with scattered WJTs. Spring 2025 surveys observed a low to moderate density of perennial shrubs, including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and Nevada ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to the arid conditions. Only minimal cover of annual grasses (e.g., *Schismus* spp.) and forbs was present in 2025, reflecting low germination from limited rainfall.

3.0 WESTERN JOSHUA TREE REGULATORY BACKGROUND

WJT is recognized as an environmental resource. Under CEQA, the WJT is treated as a protected biological resource, and impacts to WJTs or their habitat are evaluated for significance. In 2020 the California Fish and Game Commission accepted a petition to list the WJT as threatened, granting it temporary California Endangered Species Act (CESA) protections as a candidate species. In lieu of a final listing decision, the WJT Conservation Act (Fish & Game Code §1927) was enacted in 2023 to provide ongoing protection and management for the species. The WJTCA assigns CDFW a central role in permitting any "take" (removal) of WJT and mandates mitigation measures (i.e., including relocation protocols and conservation fees) for permitted removals. It is now unlawful to remove or transplant a WJT without an Incidental Take Permit (ITP) or other authorization from CDFW under the Act. In addition to state requirements, local protections apply. The City of Apple Valley Plant Protection and Management Policy (Chapter 9.76) and San Bernardino County's development code include WJT as protected desert native plants. These local ordinances prohibit removal of any WJT except under a valid permit issued by a designated authority. Therefore, the Project must comply with CEQA, WJTCA, and local native plant regulations in addressing any impacts to WJTs.

4.0 METHODS

Surveys for Western Joshua Trees were conducted by qualified biologists on 10, 11 and 12 April of 2025 following CDFW-recommended protocols for WJT census and inventory. The survey encompassed the entire PS as well as a 50-foot buffer around it (where accessible), in order to identify trees that could be subject to direct or indirect impacts (e.g. grading, root damage, or construction disturbance just outside the Project boundary). Field methods included walking systematic pedestrian transects covering 100% of the study area. When a WJT was encountered, its location was recorded using a handheld Global Positioning System (GPS) with sub-meter accuracy, and the individual was assigned a unique identifier. For each WJT, the following data were collected: height class, health status, and diameter of the trunk or root crown (where measurable). Height was measured using a marked surveying rod (for smaller trees) or estimated for taller trees, and branching structure was noted to distinguish mature, multi-branched individuals. The general health/vigor of each tree was assessed (e.g., live or dead, presence of green live crowns vs. dried limbs) and any evidence of damage or disease was recorded. These methods align with the CDFW WJT Census Data Sheet and Protocols (as referenced in the WJTCA guidelines) to safeguard consistency with regulatory standards.

The survey was conducted under suitable conditions for visibility and navigation. Field work took place when weather was clear with calm winds, temperature between roughly 57 to 90°F, providing good conditions to observe and record all WJTs within the study area. Surveys began at the PS's perimeter and proceeded inward in a grid pattern to safeguard that no WJTs were missed. All WJTs ≥12 inches in height were included in the census, consistent with CDFW guidance (very small recently germinated seedlings under that height are extremely rare and were not observed). For quality assurance, a second survey pass was conducted focusing on boundary areas and any dense vegetation patches, to verify that any WJTs within 50 feet of Project activities had been documented. These survey rounds secured complete and accurate accounting of WJTs in the survey area.

The positions of each WJTs were mapped on an aerial image. Tree numbers correspond to data entries in the survey table (Appendix A) which detail each tree's attributes. Trees were categorized into size classes A, B, or C as defined by the WJTCA (i.e., size class based on height):

- Class A for trees <1 m tall (seedling/sapling),
- Class B for trees 1–5 m tall (juvenile/sub-adult), and
- Class C for trees >5 m tall (mature).

Health status was noted as "Live" or "Dead" for each WJT as well. Any potential transplant suitability was also qualitatively noted (e.g., a tree was flagged in the data as not transplantable if large or multi-trunked with extensive root system, per typical criteria). Digital photographs were taken of representative trees and any notable conditions were recorded. No live trimming or disturbance of the trees occurred during the survey – all observations were made visually from ground level. The field survey methods were derived from the standard practices used in recent WJT assessments in the region.

5.0 RESULTS

As part of the Project's WJT census, a total of 11 individual Joshua trees were recorded during the biological surveys conducted in late April 2025. Of these, only 2 trees were alive and 9 were standing dead at the time of the survey. In other words, the majority of the trees were non-living (dead trunks still standing). This survey was completed within the PS and its 50-foot buffer, meaning all documented WJTs are within - or immediately adjacent to, the Project's planned disturbance footprint.

The recorded Joshua trees span a range of sizes from seedlings less than a meter tall to large mature specimens up to about 4.4 meters in height. However, the population is heavily skewed toward the medium size class. Trees were classified into one of three size classes based on height: Class A (small, <1 m tall), Class B (medium, 1–5 m tall), and Class C (large, ≥5 m tall). All live WJTS fell into the medium class (B), with only a two (i.e., 2 individuals) qualifying as Class A. Below is a breakdown by size class, including the number of live vs. dead trees in each category and the observed height ranges per class (see project data Appendix for full details):

- Class A (<1 m height) – This class consists of very small juveniles or seedlings. There are 2 Class A WJTs in total, of which both are dead. Heights in this class range from as small as ~0.4 m up to about 0.7 m for the tallest individual. Class A represents the youngest, smallest cohort of Joshua trees surveyed.

- Class B (1–5 m height) – This class represents medium-sized Joshua trees. It contains the bulk of the population with 9 trees total, of which 2 are live and 6 are dead. Observed heights in Class B range from approximately 1 m for the shorter individuals up to about 4.4 m for the tallest. Class B includes subadult and adult trees of moderate height.

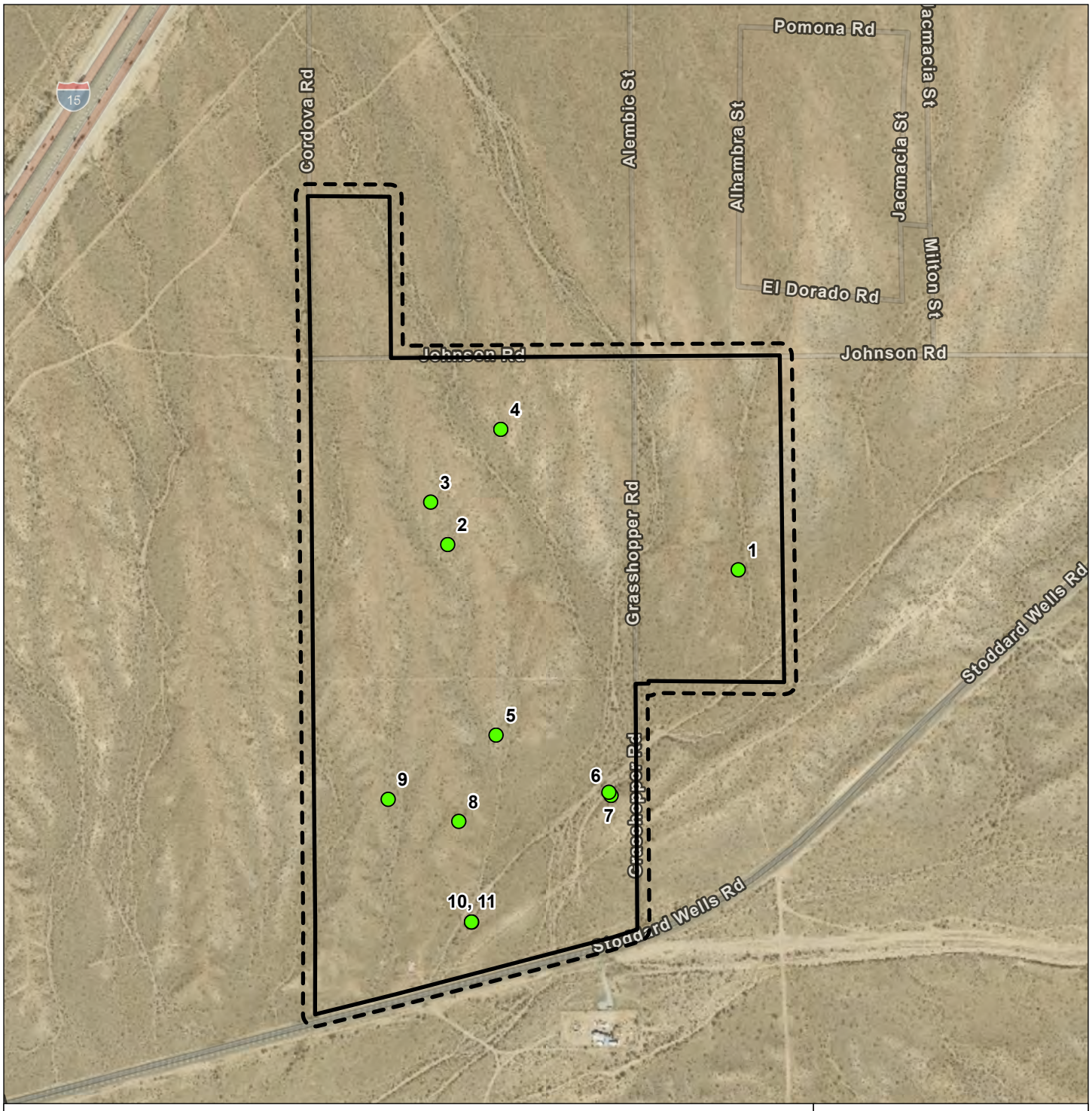
- Class C (≥5 m height) – This class represents the largest, mature Joshua trees. However, no trees fall in this category.

Overall, the size distribution indicates a poor and declining population of Joshua trees, dominated by mid-sized individuals with no mature specimens. While the presence of predominately dead trees suggests a negligible degree of recruitment, the high mortality rate points to poor long-term survival and limited regeneration success. More than 80% of the WJTs were recorded as dead, reflecting widespread mortality among the size classes. In contrast, no large, mature Class C trees were documented, underscoring the lack of healthy, well-established individuals capable of sustaining the population. This pattern suggests that the WJTs within the study area are stressed, poorly structured, and unlikely to persist without significant environmental improvement or protection.

From a California Environmental Quality Act (CEQA) perspective, the removal or disturbance of WTSs is considered a regulated activity due to the species' protected status under the WJTCA. Although WJT was formerly a candidate for state listing, the population present on the PS is small, isolated, and of low ecological quality, consisting primarily of medium size dead or stressed individuals with limited recruitment potential. The Project will require removal of two live WJTs, both of which are part of this sparse and degraded population. Given the limited number and poor condition of these individuals, the biological impact is considered minor and readily mitigable. Appropriate avoidance, minimization, and mitigation measures will be implemented in coordination with the CDFW to ensure full compliance with CEQA and the WJTCA, resulting in no significant residual impacts following mitigation.

The conclusion of this analysis is that with appropriate mitigation measures in place, the Project's impacts on WJTs will be minimal (i.e. the impact can be fully mitigated). Mitigation can occur through a combination of on-site protection, off-site relocation of certain trees - if feasible, and compensatory actions (such as payment of mitigation fees into the WJT Conservation Fund or acquisition of conservation lands) as mandated by the WJTCA.

It is important to note that the City of Apple Valley and San Bernardino County have additional ordinances protecting WJTs. Therefore, the Project must secure any required local permits for WJT removal in addition to state authorization. In conclusion, the WJT survey has provided a clear inventory of the resource, and with the implementation of appropriate mitigation measures, the Project will comply with CEQA, CDFW's WJTCA regulations, and local protective ordinances. Thereby, the Project can move forward without significant unmitigated impacts to WJTs.



Project Site (102.66 ac)

Study Area (114.74 ac)

Western Joshua Tree Locations

0 300 600 Feet

1 inch = 600 feet

Data Sources:
- ESRI World Imagery accessed Oct 2025

Map Prepared: 10-21-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 3. Survey Results

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the any Project representative, and that I have no financial interest in the Project.

DATE: October 28, 2025 SIGNED: _____

Report Author

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APPENDIX A
Survey Table

WJT Unique Identifier	Tree GPS Latitude:	Tree GPS Longitude:	Size Class:	Tree Height (meters):	Live or Dead?	Mature Tree (branched)?	Flowering or Fruiting Stage?	Impact to Tree:	Will project activities be within 15 meters (50 ft) of tree?
2	34.598958	-117.244346	A	0.7	Dead	No	None	Removal	Yes
3	34.599444	-117.244576	A	0.4	Dead	No	None	Removal	Yes
1	34.598645	-117.240343	B	3.1	Dead	Yes	None	Removal	Yes
4	34.600267	-117.243602	B	1	Dead	No	None	Removal	Yes
7	34.596121	-117.242149	B	4.4	Dead	Yes	None	Removal	Yes
8	34.595802	-117.244222	B	1.4	Dead	No	None	Removal	Yes
9	34.596059	-117.245193	B	2	Dead	Yes	None	Removal	Yes
10	34.594652	-117.244054	B	1.9	Dead	Yes	None	Removal	Yes
11	34.594654	-117.244058	B	3.4	Dead	Yes	None	Removal	Yes
5	34.596782	-117.243699	B	1.3	Live	No	None	Removal	Yes
6	34.596084	-117.24212	B	1.6	Live	No	None	Removal	Yes

APPENDIX B
Plant Species List

Scientific Name	Common Name
Yucca brevifolia	Joshua tree
Adenophyllum cooperi	Cooper's dogweed
Ambrosia dumosa	White bursage
Ambrosia salsola	Burrobrush
Malacothrix glabrata	Smooth desertdandelion
Pectis papposa var. papposa	Manybristle chinchweed
Stephanomeria parryi	Parry's wirelettuce
Stephanomeria pauciflora	Wire-lettuce
Amsinckia intermedia	Common fiddleneck
Phacelia tanacetifolia	Lacy phacelia
Caulanthus lasiophyllus	California mustard
Descurainia pinnata	Western tansymustard
*Sisymbrium altissimum**	Tall tumblemustard
*Sisymbrium irio**	London rocket
Streptanthella longirostris	Longbeak streptanthella
Cylindropuntia echinocarpa	Silver cholla
Atriplex canescens	Fourwing saltbush
*Salsola tragus**	Russian thistle
Cucurbita palmata	Coyote gourd
Ephedra nevadensis	Nevada jointfir
Chamaesyce albomarginata	Whitemargin sandmat
Acmispon brachycarpus	Foothill deervetch
Lupinus concinnus	Bajada lupine
*Erodium cicutarium**	Redstem stork's bill
Salvia columbariae	Chia
Scutellaria mexicana	Mexican bladdersage
Petalonyx thurberi	Thurber's sandpaper plant
Sphaeralcea ambigua	Desert globemallow
Mirabilis laevis	Desert wishbone-bush
Eremothera boothii	Booth's evening primrose
Eschscholzia minutiflora	Pygmy golden poppy
*Bromus madritensis subsp. rubens**	Red brome
*Bromus tectorum**	Cheatgrass
*Schismus arabicus**	Arabian schismus
*Schismus barbatus**	Common Mediterranean grass
Stipa hymenoides	Indian ricegrass
Stipa speciosa	Desert needlegrass
Linanthus dichotomus	Eveningsnow
Eriastrum	Woollystar
Gilia	Gilia
Eriogonum gracillimum	Rose and white buckwheat
Eriogonum pusillum	Yellowturbans
Thamnosma montana	Turpentinebroom
Lycium andersonii	Anderson's box thorn
Lycium cooperi	Peach thorn
Larrea tridentata	Creosote bush

Nomenclature follows the Jepson Manual, Second Edition (Baldwin et al 2011).
* = naturalized, non- native plant species

APPENDIX C
Photographic Log

	**Photograph 1.** Tree 1
	**Photograph 2.** Tree 2

Photograph 3. Tree 3

Photograph 4. Tree 4

Photograph 5. Tree 5

Photograph 6. Tree 6

Photograph 7. Tree 7

Photograph 8. Tree 8

Photograph 9. Tree 9

Photograph 10. Tree 10

Photograph 11. Tree 11

APPENDIX G
BURROWING OWL SURVEY REPORT

APPLE VALLEY 84 PROJECT

October 2025

BURROWING OWL SURVEY

Apple Valley North United States Geological Survey
7.5-MinuteTopographic Quadrangle Maps

Prepared By

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Environmental Engineering and Science

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TABLE OF CONTENTS

1.0 SUMMARY/INTRODUCTION

Covington Development Partners, LLC proposes to develop the Apple Valley 84 Project (Project) on approximately 102.66 acres of vacant land in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The Project Site (PS) lies at approximately 2,500–3,000 feet above mean sea level, within the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle. Its legal location corresponds to Sections 13 and 24 of Township 6 North, Range 4 West, and Section 19 of Township 6 North, Range 3 West (San Bernardino Meridian). For this report, the "study area" encompasses the PS plus a 500-foot buffer. This report provides the methods, assumptions, and results of the 2024–2025 non-breeding (overwintering) season and the 2025 breeding season surveys for Burrowing Owl (*Athene cunicularia*).

The PS and surrounding area support a Mojave Desert scrub community that shows signs of past human disturbance. Major roads (Stoddard Wells Road and the Interstate 15 freeway corridor) border the Project, creating edge effects and acting as barriers to local wildlife movement. Within the PS, visible human impacts include off-highway vehicle tracks, scattered trash from illegal dumping, an old concrete foundation, and abandoned well casings. These features suggest past attempts at development or agriculture on the property. The dominant plant community is creosote bush scrub on sandy loam soils, characterized by open shrub cover with scattered Joshua trees. Spring 2025 surveys observed a low to moderate density of perennial shrubs, including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and Nevada ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to the arid conditions. Only minimal cover of annual grasses (e.g., *Schismus* spp.) and forbs was present in 2025, reflecting low germination from limited rainfall.

Burrowing Owls were detected during the winter months of 2024–2025, but no owls or active nest sites were observed during the subsequent 2025 breeding season. These results indicate that the study area was used by at least one transient, non-resident Burrowing Owl during the winter, while the species was absent as a breeder in spring and summer 2025. Burrowing Owls in California are known to overwinter in areas outside of their breeding territories, especially in the Mojave and other desert and valley regions, without necessarily establishing nests there (Coulombe 1971; CDFG 2012).

The winter observations are consistent with this pattern of habitat use by migratory or dispersing individuals (James and Ethier 1989; CDFW 2012). The lack of any nesting activity in 2025 suggests the PS does not currently support a resident breeding pair, despite providing suitable foraging and roosting habitat in winter. The distinction between overwintering presence and breeding absence has been clearly made in this report. The Burrowing Owl remains a California Species of Special Concern and, as of October 2024, a candidate for listing under the California Endangered Species Act, and it is protected under the federal Migratory Bird Treaty Act (CDFW 2024). Accordingly, the findings of winter use without breeding residency will be used to inform an objective impact assessment and appropriate avoidance and mitigation measures, safeguarding that the species' seasonal presence is properly addressed.

2.0 BURROWING OWL BACKGROUND

The Burrowing Owl is a small, ground-dwelling raptor historically widespread throughout California's grasslands, deserts, and agricultural valleys. In 2003, the Center for Biological Diversity submitted a petition to list the Burrowing Owl as an endangered or threatened species under the California Endangered Species Act (CESA). However, that petition was ultimately denied by the California Fish and Game Commission, which concluded that the available data at the time did not support listing the species statewide.

Since then, concern over the species has only intensified. In October 2024, a new petition to list the Burrowing Owl as endangered under CESA was accepted by the California Fish and Game Commission, triggering "candidate species" status effective as of October 25, 2024. As a candidate for listing, the Burrowing Owl is now afforded full legal protections equivalent to those of a listed species under CESA during the review process (Fish & Game Code § 2085). These protections prohibit "take[1]" of individual owls. The formal status review is currently ongoing, with a decision expected within 12 months of the petition's acceptance. This species is not federally listed under the U.S. Endangered Species Act.

The species is also protected under the Migratory Bird Treaty Act of 1918 (MBTA), a federal statute that prohibits the taking, killing, or possession of migratory birds, their eggs, or nests without authorization. In California, additional protections are afforded under the California Fish and Game Code, specifically Sections 3503, 3503.5, and 3513, which prohibit the destruction of active nests and the take of any bird of prey. These laws, together with CESA candidate protections, mean that Burrowing Owls—and their burrows, when occupied—are legally protected from disturbance during both the breeding and non-breeding seasons. CDFW's 2012 Staff Report on Burrowing Owl Mitigation remains the guiding document for impact assessments and avoidance measures. In summary, while the Burrowing Owl is not currently federally listed, it receives layered legal protections under state law, federal treaties, and administrative guidance, and is now under formal review for state listing as endangered.

Burrowing Owls inhabit open, dry grasslands, agricultural and rangelands, deserts, and scrublands with low-growing vegetation. They rely heavily on mammal burrows, particularly those of ground squirrels, for nesting. These owls can be found at elevations from 200 feet below sea level to 9,000 feet above (CDFG, 1995). They are often seen perched on fence posts or mounds outside their burrows. Northern populations of Burrowing Owls are typically migratory, while southern populations may only move short distances or remain year-round (Haug et al., 1993; Botelho, 1996). Little is known about the winter ranges of migratory populations, but it is believed that they mix with resident populations in California during the winter months (Coulombe, 1971; Haug et al., 1993).

Burrowing Owls are opportunistic feeders with a diet that includes large arthropods such as beetles and grasshoppers, small mammals like mice, rats, gophers, and ground squirrels, and occasionally reptiles, amphibians, young cottontail rabbits, bats, and birds such as sparrows and horned larks. Insects become a larger part of their diet during the breeding season. They hunt by hovering and returning to perches to consume their prey. Burrowing Owls are primarily active at dusk and dawn but will hunt at any time if necessary (CBOC, 1993; CDFG, 1995; Rosenberg et al., 1998).

The peak of the breeding season for Burrowing Owls spans from March to late August, with the season lasting longer in the northern part of their range (CBOC, 1993; CDFG, 1995; Klute et al., 2003). Clutch sizes range from 1 to 12 eggs, averaging about 7 (Ehrlich, 1988). The incubation period lasts 28-30 days, with

[1] In California, "take" is defined as to hunt, pursue, catch, capture, or kill, or attempt to do so. (Cal. Fish & Game Code § 86).

the female responsible for incubation and brooding while the male hunts. Young owls fledge at 44 days but stay near the burrow, joining adults in foraging flights at dusk (Ehrlich, 1988). The maximum lifespan recorded for a wild banded Burrowing Owl is approximately 8.5 years (Rosenberg et al., 1998). In resident populations, nest site fidelity is common, with many adults nesting in the same burrow each year, and young often establishing nests near their natal sites (Trulio, 1997; Rosenberg et al., 1998). Migratory populations also exhibit nest site fidelity, especially following successful breeding seasons (Belthoff and King, 1997).

Wildlife agencies have developed standardized protocols to survey and mitigate impacts to Burrowing Owls. The California Burrowing Owl Consortium's 1993 Survey Protocol and Mitigation Guidelines provide recommendations for survey timing and methods. The CDFW (formerly California Dept. of Fish and Game) issued a Staff Report on Burrowing Owl Mitigation in 1995 and an updated Staff Report in 2012, which remains the primary guidance for current projects.

3.0 METHODS

Surveys were conducted in a manner consistent with the California Department of Fish and Game's Staff Report on Burrowing Owl Mitigation (CDFG 2012) to determine Burrowing Owl presence during both the non-breeding and breeding seasons.

Non-breeding season surveys.

Focused Burrowing Owl surveys were performed during the 2024–2025 winter (overwintering) period. Five visits were completed, two in late December 2024 (19 and 20 December 2024) and three in January 2025 (9, 24 and 25 January 2025), corresponding to the species' non-breeding season (generally September 1–January 31 in California). During each visit, all potential burrows and open areas within the study area were systematically searched for Burrowing Owls or sign (pellets, whitewash, feathers). Surveys were scheduled during fair weather windows and during morning periods for optimal detectability, as Burrowing Owls often perch near burrow entrances during daylight in winter (LaFever et al. 2008). Binoculars and spotting scopes were used to scan from multiple vantage points, and broadcast calls were not utilized during winter surveys in order to minimize disturbance.

Breeding season surveys.

Focused surveys were conducted between March and July 2025, spanning the expected breeding season (February 1–August 31) for Burrowing Owls in this region (CDFW 2012). Breeding season survey were performed on 03 and 04 March, 15 and 16 April, 08 and 09 May, 24 and 25 June, 07 and 08 July 2025. Survey timing and methods followed protocol recommendations for breeding season detection. Visits were spaced weeks apart and included dawn periods when owls are most active above ground (Conway and Simon 2003). Observers walked transects covering all suitable habitat within the PS and a 500-ft buffer, scanning for owls and evidence of occupancy. Special attention was given to any burrows identified during the winter surveys to check for renewed use. Surveys were conducted under clear weather and low wind conditions to maximize the likelihood of detecting owls if present (Conway et al. 2008). Any detections of owls or sign were recorded with Global Positioning System (GPS) coordinates, and behavioral observations were noted (e.g. alarm calls, pair bonding displays, etc.). The survey methods and effort were consistent with CDFW's 2012 protocol, ensuring a reliable determination of whether the PS was occupied by Burrowing Owls during the winter and/or breeding seasons.

Burrows or burrow-like structures encountered were documented and georeferenced.

- Following CDFW definitions, a "potential" or "suitable" burrow for Burrowing Owls was any burrow or cavity of appropriate size, configuration, and context that could accommodate an owl, even if the owl was not currently present.
- Typically, burrows created by California ground squirrels (or similarly sized fossorial mammals) serve as suitable owl burrows. Such burrows generally have an entrance diameter of at least ~11 cm (4–5 inches) and a depth of >150 cm (5+ feet), often with a single entrance (though owls may prefer burrows with multiple entrances when available).
- Man-made debris piles, drain pipes, culverts, or earthen berm cavities can also act as burrow surrogates and were treated as potential burrow sites if present.

According to CDFW guidelines, diagnostic sign of Burrowing Owl occupancy includes the presence of molted feathers, cast pellets (regurgitated owl pellets with fur/bone), prey remains (e.g. insect parts, rodent bones), eggshell fragments, or whitewash (owl droppings) at or near the burrow entrance. Burrowing Owls also sometimes decorate their burrow entrances with miscellaneous debris (dung, paper,

etc.), which can be another indicator of use. During the surveys, each burrow was closely examined for such sign without causing disturbance. The biologists took care not to intrude into or damage the burrows; no scoping cameras or excavation were used, in keeping with avoidance of any take of potential owl refuges. Throughout the surveys, weather remained mild and suitable for observations, and no interference from predators (such as hawks that could suppress owl activity) was noted.

Survey transects were spaced at appropriate intervals to allow for complete visual coverage of the study area. Where necessary, transect spacing was reduced or expanded in the field - to account for differences in terrain, vegetation density, visibility and access considerations (i.e., private property). Where access was limited, observations were made from the nearest appropriate vantage points by means of public rights-of-way with the use of binoculars, and spotting scopes. The presence of a species was based on direct observations of individual(s), sign, and/or vocalization. Avian scientific nomenclature and common names follow Sibley (2000).

4.0 BURROWING OWL SURVEY RESULTS

Burrowing Owl presence was confirmed within the northwestern portions of the study area – not within the PS, during the overwintering period. On 20 December 2024 and again on 9 January 2025, a single adult Burrowing Owl was observed perched and moving between multiple distinct ground squirrel burrows along the northwestern study area boundary (outside of Project boundaries) during these early morning surveys. The owl was seen briefly, foraging low over the ground before returning to burrows. Ancillary evidence of owl use was documented, including owl pellets, prey remains (beetle elytra and rodent bones), and whitewash at several burrow entrances outside of Project boundaries. But nonetheless, within the study area. No mate or juvenile owls were observed, and no auditory calls (such as breeding season mating calls or alarm calls) were heard during the winter surveys.

The observation of a solitary owl during winter is indicative of non-breeding season occupancy. It is possible this individual was a winter migrant or dispersing juvenile using the study area for foraging and shelter (CDFG 2012). Burrowing Owls in California often remain closely associated with burrows during the winter months for roosting and protection, even when not breeding (LaFever et al. 2008; CDFG 2012). The owl's presence in winter, combined with the lack of breeding activity later, suggests it was a transient individual rather than a resident breeder. No other raptors or predators were observed disturbing the owl during the survey period, and the bird appeared to utilize multiple nearby ground squirrel burrows as refuge (moving between observed burrow sites over several weeks). This non-breeding season use of the study area by a Burrowing Owl confirms that the habitat (open creosote bush scrub) provides suitable winter foraging and roosting opportunities.

In sharp contrast, focused breeding season surveys conducted in spring 2025 resulted in no detections of Burrowing Owls on the PS or within the 500-ft buffer. During the survey visits (March, April, May, June and July, 2025), no Burrowing Owls were seen or heard. Observers inspected all burrows that had shown owl sign in winter. By the spring, those burrow entrances showed little to no fresh sign of owl use (e.g., no new pellets or tracks, and vegetation had begun to grow around the openings). No evidence of nesting behavior was observed anywhere within the study area – there were no concentrations of pellets, no decoration of burrow entrances with dung or debris, and no defensive posturing or alarm calls that would indicate an active nest. Other wildlife (desert cottontails and ground squirrels) were observed using the burrows in the PS during spring, suggesting that the owl observed in winter had vacated the study area.

Within the PS, no nesting territories were established by Burrowing Owls in 2025. The absence of any breeding pairs is consistent with the notion that the study area was utilized only as winter habitat. It is also consistent with regional patterns. Many Burrowing Owls in southern California's interior valleys and deserts are year-round residents, but others migrate or shift seasonally – an influx of migratory owls in winter can temporarily increase local numbers, while some breeding individuals may leave or reduce activity in winter (James and Ethier 1989; Rosenberg and Haley 2004). In this case, the individual owl present over winter did not remain to attempt breeding on the PS. The detection probability for Burrowing Owls during our breeding surveys was high given the protocol followed, and we are confident that no active burrows or owls went undetected (Conway et al. 2008). Therefore, the 2025 breeding season surveys indicate an absence of Burrowing Owl nesting activity on the PS.

4.1 Burrow Documentation

It is worth noting that the 2025 surveys documented a total of 113 potential burrows within the 237.59-acre study area (Appendix A, Figure 3). The majority of these were typical California ground squirrel burrows with entrance diameters of roughly 4–6 inches, matching the size and configuration criteria for possible owl use. Overall burrow density was low – approximately 0.48 burrows per acre. Within the

~102.66-acre PS itself (a subset of the study area), this would equate to at most 0.74 burrows per acre, underscoring that even on the PS, shelter opportunities for owls are scant (i.e., 76 potential burrows across the PS).

By comparison, high-quality Burrowing Owl habitats typically support much higher burrow densities. Intact grasslands with active ground squirrel colonies often have several burrows per acre, and studies have documented densities exceeding 5 burrows/acre in occupied owl habitats (e.g. in parts of California) (Trulio 1997; Rosenberg & Haley 2004) and even up to ~63 burrows/acre in extreme cases (Trulio,1999). Against these benchmarks, the study area's rate of burrows per acres is extremely low, highlighting the suboptimal nature of the habitat for sustaining any resident owl population.

Wildlife detected during the surveys are provided within Table 1. and representative photographs of the study area are provided in Appendix B.

TABLE 1 – WILDLIFE DETECTED

Common Name	Scientific Name
Birds	
Burrowing Owl	*Athene cunicularia*
Anna's Hummingbird	*Calypte anna*
California Quail	*Callipepla californica*
Turkey Vulture	*Cathartes aura*
Lesser Nighthawk	*Chordeiles acutipennis*
Common Raven	*Corvus corax*
Horned Lark	*Eremophila alpestris*
House Finch	*Haemorhous mexicanus*
Hooded Oriole	*Icterus cucullatus*
Northern Mockingbird	*Mimus polyglottos*
Bushtit	*Psaltriparus minimus*
Lesser Goldfinch	*Spinus psaltria*
Black-chinned Sparrow	*Spizella atrogularis*
Western Meadowlark	*Sturnella neglecta*
Eurasian Collared Dove	*Streptopelia decaocto*
Bewick's Wren	*Thryomanes bewickii*
California Thrasher	*Toxostoma redivivum*
Western Kingbird	*Tyrannus verticalis*
Mourning Dove	*Zenaida macroura*
White-crowned Sparrow	*Zonotrichia leucophrys*
Mammals	
Coyote	*Canis latrans*
California ground squirrel	*Otospermophilus beecheyi*
Cottontail	*Sylvilagus audubonii*
Reptiles	
Western whiptail lizard	*Aspidoscelis tigris*
Zebra-tailed Lizard	*Callisaurus draconoides*
Horned lizard	*Phrynosoma platyrhinos*
Western fence lizard	*Sceloporus occidentalis*
Common Side-blotched Lizard	*Uta stansburiana*

4.2 Conclusions

The survey results demonstrate a clear seasonal distinction in Burrowing Owl use of the study area. The species was present during the 2024–2025 winter (non-breeding) season as a transient occupant, and it was absent during the 2025 breeding season as a resident breeder. In other words, the study area supported overwintering Burrowing Owl activity but did not support breeding activity. This finding is consistent with published literature and agency guidance, which recognize that Burrowing Owls may use a site for winter foraging and shelter without establishing it as a nesting territory (CDFG 2012; Coulombe 1971). According to the CDFG (2012) Staff Report, owls detected during the non-breeding season could be migratory individuals or dispersing owls that do not remain to breed, and winter observations alone are not confirmation of a resident population. Our surveys affirm this, the owl observed in winter was likely a non-resident migrant or winter visitor, as evidenced by its departure prior to the breeding months. Notably, historical research in California's desert regions (e.g., Imperial Valley) has documented that only a fraction of the breeding population remains through winter, with additional owls migrating in from elsewhere, and then leaving by spring (Coulombe 1971). At our Project, the seasonal pattern observed — winter presence and breeding absence — aligns with this transient use dynamic.

From a biological perspective, it is important to distinguish overwintering presence from breeding occupancy. Overwintering presence confirms that the habitat is suitable for Burrowing Owls and that individuals may be present during the winter months, requiring consideration of their protection during that time. Breeding absence indicates that the PS is not an active nesting site and thus would not, in its current condition, directly support reproduction of the species. In practical terms, this means the Project is unlikely to directly impact nesting Burrowing Owls in the breeding season, since none were present.

However, the site's use as winter habitat means Project activities conducted during the non-breeding season still have the potential effect Burrowing Owls, if they are present at that time. Regulatory guidance from CDFW (2012) emphasizes avoiding impacts to occupied burrows year-round, including those occupied during the non-breeding season by migratory or wintering owls. Therefore, impact minimization measures (e.g., pre-activity clearance surveys) and timing of construction should be planned to avoid disturbance to the owl(s) that may use the study area.

In conclusion, the Burrowing Owl survey effort has determined that while the study area functions as seasonal habitat for at least one Burrowing Owl, it did not serve as breeding habitat. This nuanced understanding allows for appropriate Project design. Protecting the owl's use of the study area (e.g., by scheduling ground-disturbing activities to avoid times when owls are present, or by establishing buffers around any burrows in use), while also acknowledging that the lack of PS nesting in the breeding season likely minimizes direct impacts to reproduction. All survey and analysis methods used in this report conform to current professional standards. By clearly differentiating the overwintering detections from the breeding-season absence, this report provides a transparent and biologically accurate basis for evaluating project impacts on the Burrowing Owl. The findings will help ensure that the species is afforded proper protection in line with state and federal wildlife regulations, without overestimating or underestimating the PS's biological importance for Burrowing Owls. The net outcome is that the Project can proceed with informed avoidance and minimization strategies that address the owl's seasonal presence, and no significant impacts to Burrowing Owls are expected after implementation of these measures. All conclusions are supported by the field data collected and are in agreement with known Burrowing Owl behavior and habitat use patterns in California's Mojave Desert region (Shuford and Gardali 2008; CDFG 2012).

5.0 CERTIFICATION

The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report. Opinions relating to presence, absence, or potential for occurrence of biological resources are based on limited data and actual conditions may vary from those encountered at the times and locations where the data were obtained despite due professional care.

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

DATE: October 28, 2025

SIGNED: 

Lenny Malo, MS

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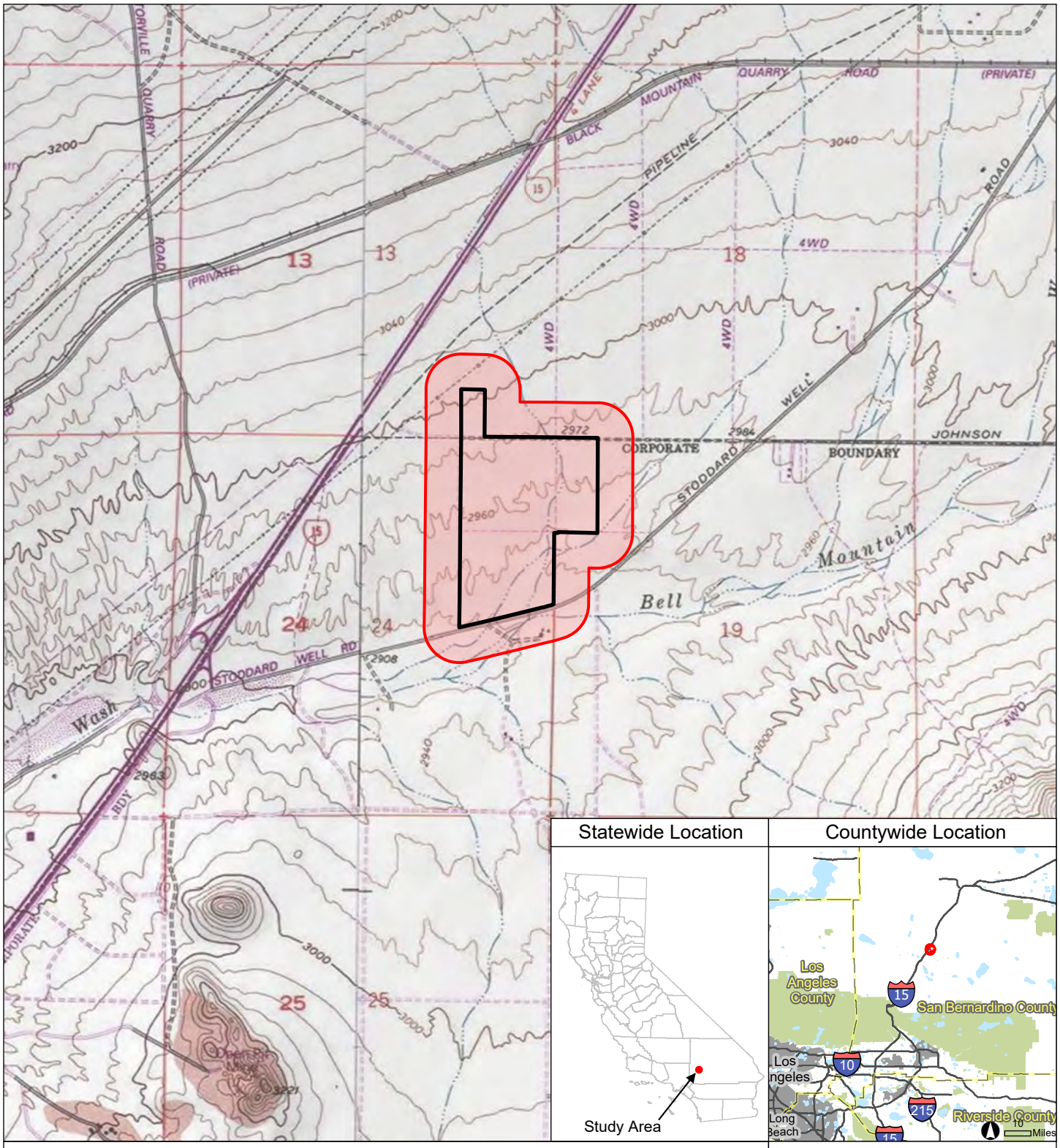
Appendix A – Figures



The Study Area is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13, 24, Township 6N, Range 3W, in Sections 18,19;

Center coordinates (WGS 1984): 117.341°W 34.397°N

Figure 1. Regional Location

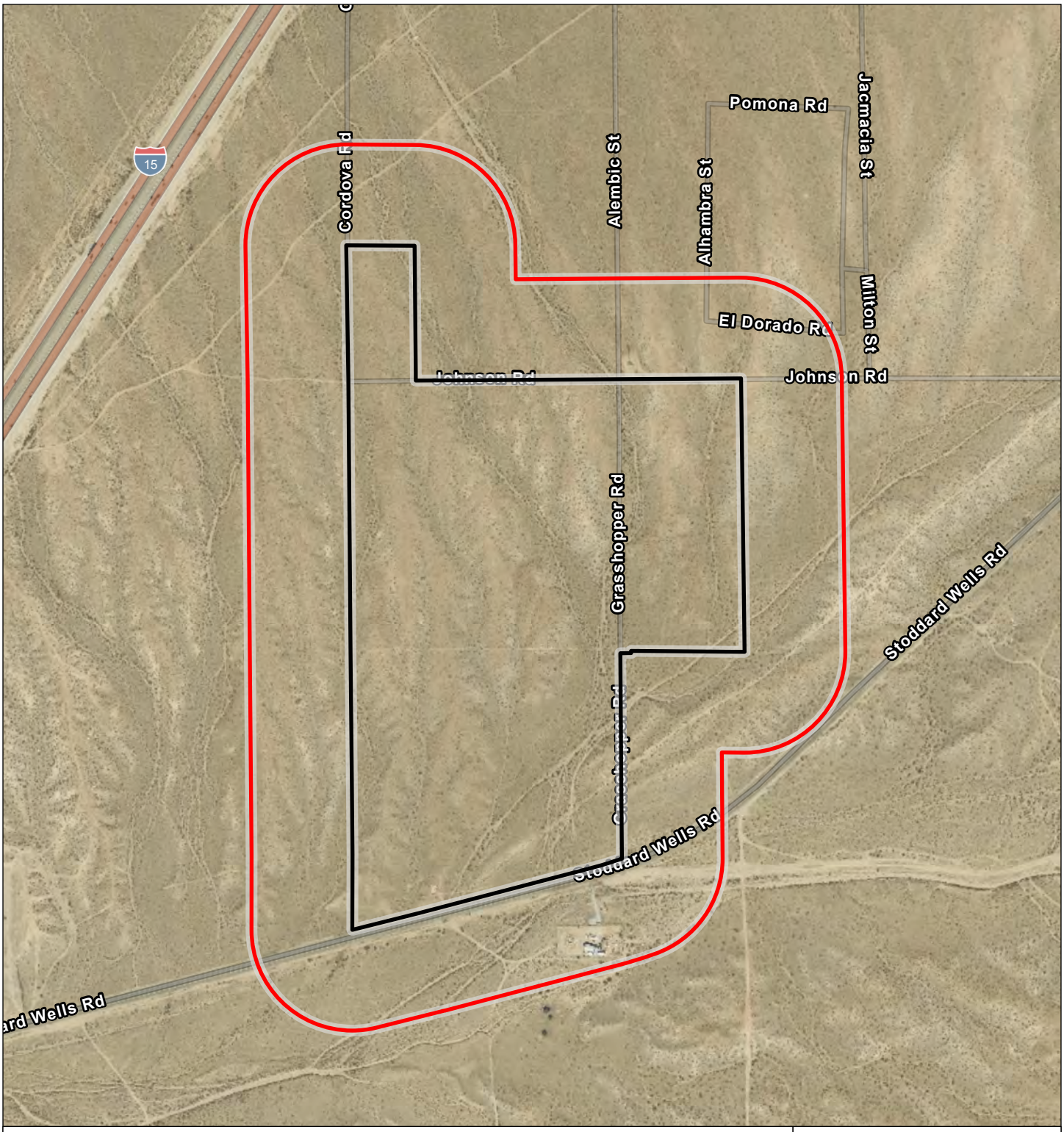


Figure 2. Site Vicinity

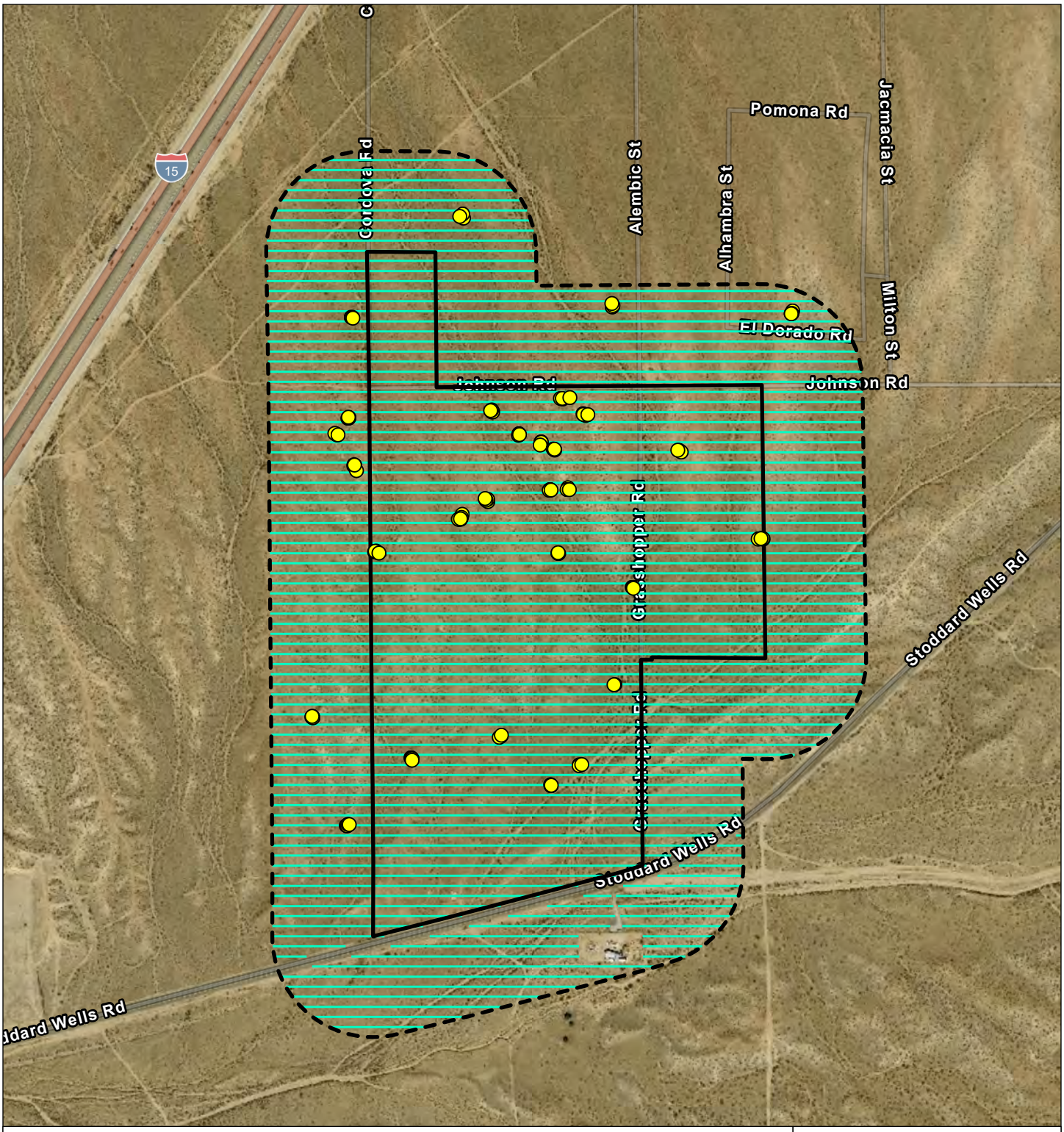


Figure 3. Burrowing Owl Potential Burrows

Appendix B – Photolog

Appendix B – Photolog

	**Photograph 1.**
	**Photograph 2.**

	**Photograph 3.**
	**Photograph 4.**

APPENDIX H
DESERT TORTOISE SURVEY REPORT

APPLE VALLEY 84 PROJECT

October 2025

DESERT TORTOISE SURVEY

Apple Valley North United States Geological Survey
7.5-Minute Topographic Quadrangle Map

Prepared By

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Environmental Engineering and Science

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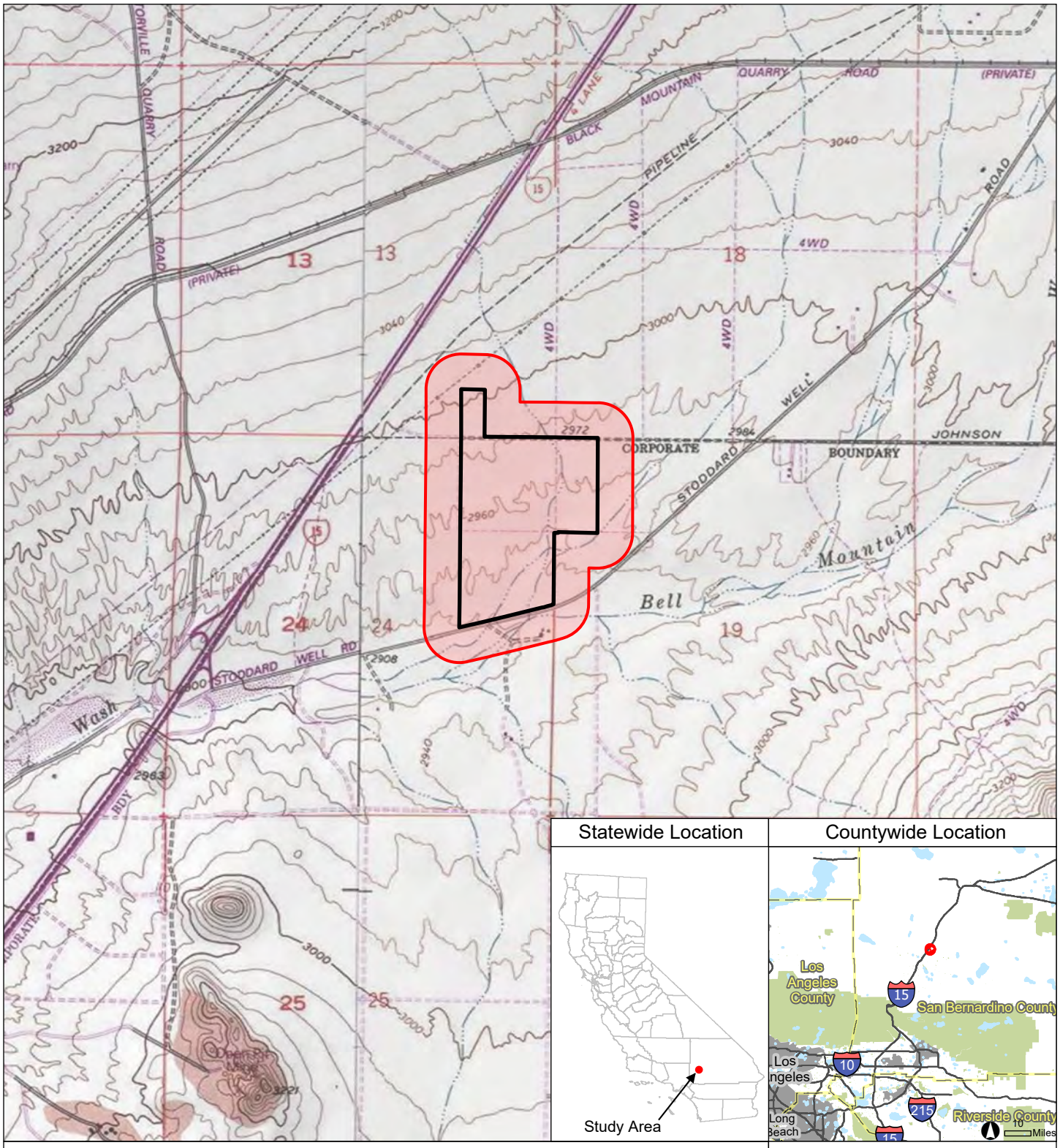
1.0 EXECUTIVE SUMMARY & INTRODUCTION

Covington Development Partners, LLC (Covington) proposes to develop the Apple Valley 84 Project (Project) on an approximately 102.65-acre site located in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The Project Site (PS) lies at roughly 2,500 to 3,000 feet above mean sea level on the United States Geologic Survey (USGS) Apple Valley North 7.5' quadrangle map (Sections 13 and 24 of Township 6 North and Range 4 West, and within Section 19 of Township 6 North and Range 3 West, San Bernardino Meridian). For this report, the "study area" encompasses the PS plus a 500-foot buffer. This document details the methods and results of focused surveys for the Mojave Desert tortoise (*Gopherus agassizii*) and provides an evaluation of habitat suitability.

The PS and its surroundings are best characterized as a desert scrub community that has been anthropogenically influenced. The PS is bordered by infrastructure including Stoddard Wells Road and the Interstate-15 freeway corridor, which contributes heavy disturbance and create significant edge effects and barriers to wildlife movement. Within the PS, the ground surface bears evidence of off-highway vehicle [OHV] tracks, scattered trash, illegal dump sites, old fencing, and ruderal weeds are prevalent. Several dirt utility roads transect the PS, and trespass activity has further disrupted the natural habitat. Focused surveys for desert tortoise were conducted by qualified biologists in spring 2025 following the U.S. Fish and Wildlife Service's established protocols (USFWS 2010; USFWS 2019). The Project lies at the periphery of the range of the federally and state Threatened desert tortoise. Focused presence/absence surveys found no sign of desert tortoise – no individuals, burrows, scat, tracks, shell fragments, or other sign – was found anywhere on the PS or within the 500-foot buffer during these surveys. A few old small mammal burrows were noted within the PS, but none had the size or shape indicative of tortoise burrows, and all showed signs of use by only rodents or were long inactive. In summary, no desert tortoise occurs on the PS, and the habitat is considered unsuitable to marginal for the species.

These comprehensive negative findings confirm that desert tortoise is absent from the study area. Our comprehensive survey results confirm that the Desert Tortoise is absent from the PS and surrounding study area. Although the PS contains features that could potentially serve as desert tortoise habitat under ideal conditions, no desert tortoises were detected during the surveys. The PS is also not within any designated critical habitat for desert tortoise within the area, and the nearest known core tortoise populations are far removed, and separated by infrastructure and development. Therefore, the Project will not directly or indirectly affect desert tortoise. In regulatory terms, the Project would result in no impact to this species, as desert tortoises do not occur on or near the PS.



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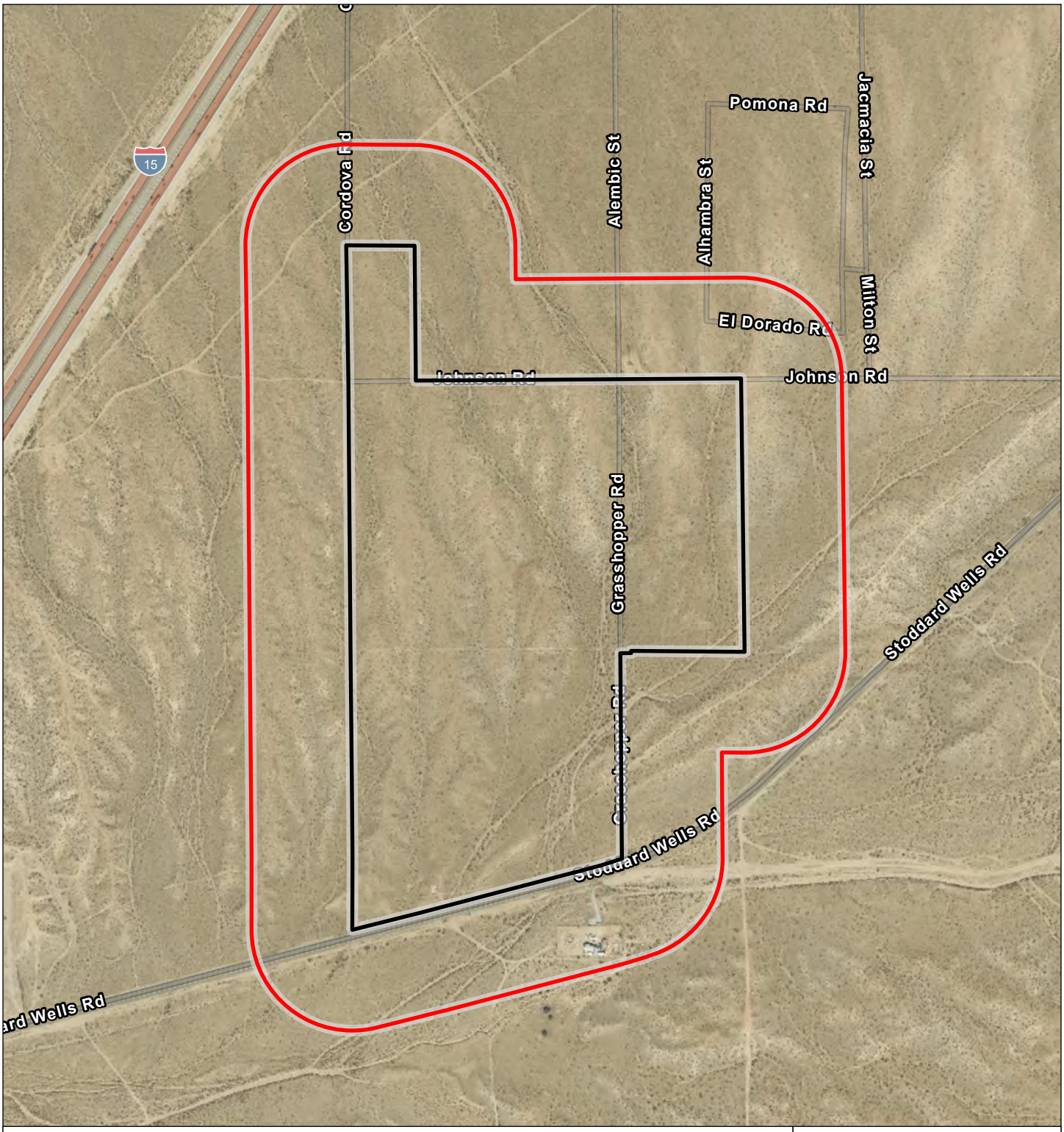


Figure 2. Site Vicinity

2.0 DESERT TORTOISE BACKGROUND

The Mojave Desert tortoise is a federally and state-listed Threatened species throughout the Mojave Desert of California. On April 2, 1990, the U.S. Fish and Wildlife Service (USFWS) listed the Mojave population of the desert tortoise as Threatened under the Endangered Species Act, following its 1989 listing as Threatened under the California Endangered Species Act. USFWS subsequently designated approximately 6.4 million acres of Critical Habitat across the species' range on February 8, 1994 (effective March 10, 1994), to protect essential tortoise habitat (59 Federal Register 5820). In California, multiple Desert Wildlife Management Areas and other preserves now conserve tortoise habitat (CDFW 2015).

- The Project lies within the tortoise's historical range. However, the PS is not within any designated Critical Habitat unit or tortoise conservation area. No wild tortoises are recorded in the immediate vicinity (per CNDDB records). These factors indicate that the species' local range has contracted due to urbanization and habitat fragmentation (USFWS 2011)

The desert tortoise (*Gopherus agassizii*) is a large, herbivorous reptile native to the Mojave and Sonoran Deserts of the southwestern United States and northwestern Mexico. Adult Mojave Desert tortoises reach 8–15 inches (20–38 cm) in carapace length and 4–6 inches in shell height, weighing 8–15 pounds. They have a high-domed, brown to greenish-tan carapace with bold growth rings, and unhinged, flattened plastron. The forelimbs are large and flattened with heavy claw-like scales adapted for digging burrows, while hind limbs are columnar and elephantine (USFWS 1994). Hatchlings emerge at roughly 2 inches long. Desert tortoises are long-lived (50+ years) and have low reproductive rates, factors which make their populations vulnerable to adult mortality.

Optimal tortoise habitat is typically described as creosote bush scrub on gently sloping terrain with scattered shrubs and abundant inter-shrub space to support a diverse annual flora (Luckenbach 1982; Turner 1982). Ideal tortoise areas receive 2–8 inches of annual precipitation, supporting high spring ephemeral plant production for forage (Turner and Brown 1982). Soils are generally friable (soft-loamy) for digging deep burrows, yet firm enough to maintain burrow structure (Luckenbach 1982). Elevations from near sea level up to about 3,000 feet are considered most favorable – tortoise densities tend to be highest in valleys and alluvial fans below 3,000 feet (Luckenbach 1982). They can occur up to ~7,300 feet in elevation at the extreme, but such high sites are marginal. Basic habitat needs include sufficient nutritious forage plants, suitable burrow and nest sites, and protection from predators and extreme temperatures. Throughout the Mojave region, tortoises are most common on soft sandy-loam soils or sandy-gravel substrates with open vegetation structure (Gardner and Brodie 2000).

- By contrast, heavily disturbed or human-altered environments generally do not support tortoises. Urbanization causes fragmentation and habitat alteration that render areas largely unsuitable for tortoise populations (Berry and Nicholson 1984; Boarman 2002). Physical barriers (i.e., major roadways) can isolate tortoise subpopulations, and chronic disturbances (vehicle traffic, off-road recreation) degrade habitat quality through loss of native plants (Bury and Luckenbach 2002; USFWS 2011). Invasive grasses and weeds often proliferate in disturbed desert soils as well, reducing the availability of native forbs that tortoises rely on for nutrition (Brooks 1998; Esque et al. 2010). These factors are evident in the study area's landscape and help explain the absence of tortoises from the PS.

3.0 METHODS

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of resources that have the potential to exist within and adjacent to the study area. Resources were evaluated within several miles of the Project.

The materials reviewed included, but were not limited to, the following:

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2025a);
- USFWS Field Office Species List for San Bernadino County (USFWS 2025b);
- California Natural Diversity Database maintained by the CDFW (CDFW 2025);
- U.S. Fish and Wildlife Service (USFWS). Desert Tortoise (Mojave Population) Field Manual (USFWS 2010); and
- Aerial Photographs (Microsoft Corporation 2025).

Subject matter experts evaluated the PS on 15, 16, 18, 21, 22, 23 and 24 April 2025. Weather conditions during the surveys included clear to cloudy skies, temperatures ranging from 56–84 °F, and winds fluctuating from 0 to 15 miles per hour (mph).

Desert Tortoise field assessment techniques were derived from the 2010 protocol for *Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise* (USFWS 2010). As such, the field surveys specifically included walking predetermined 30-foot-wide belt transects throughout the study area. Where necessary, transect spacing was reduced, or expanded, to account for differences in terrain, vegetation density, and visibility. Surveyors focused on detecting desert tortoises and other herpetofauna both above ground and below ground (in burrows). Surveyors walked slowly and systematically across the entire study area, continuously scanning for desert tortoises, other herpetofauna, and their characteristic signs. When any desert tortoise sign was detected (e.g., live individuals, burrows, scat, tracks, shell fragments), surveyors recorded the details on standardized data forms, obtained a GPS location, and took photographs to document the find. All observations were documented to the greatest extent practicable. Weather conditions were recorded during each survey, and the fieldwork was spread over multiple days to ensure thorough coverage. Field surveys were led by qualified Desert Tortoise biologists who completed the Desert Tortoise Training Workshop and are approved by the regulatory agencies to handle and monitor this species.

For the purposes of this survey, *Burrow Condition Class* and *Sign Condition Class* were defined as follows.

Burrow Condition Class

1. Currently active, with Desert Tortoise or recent Desert Tortoise sign;
2. Good condition, definitely Desert Tortoise but no evidence of recent use;
3. Deteriorated condition - includes collapsed burrows[1], definitely Desert Tortoise;
4. Good condition, possibly Desert Tortoise; and
5. Deteriorated condition, possibly Desert Tortoise.

Scat Condition Class

[1] The condition class of a burrow does not necessarily exclude use or occupation by desert tortoise. When aestivating in a burrow, desert tortoise may backfill the burrow giving the appearance of a false terminus or back wall. Spider webs, litter, and other debris may accumulate in burrow openings overnight, and openings may collapse during winter rains. Therefore, it was not assumed that a burrow is inactive or not occupied simply because it looks unused or collapsed.

1. Wet (not from rain or dew) or freshly dried, obvious odor;
2. Dried with glaze, some color and dark brown;
3. Dried, no glaze or odor, bleached (light brown) and tightly packed;
4. Dried, light brown to pale yellow and loose material; and
5. Bleached or consisting of only plant fiber.

Aerial maps illustrating the study area were also utilized in the field to accurately navigate. These efforts were further complemented with the use of a hand-held GPS.

4.0 DESERT TORTOISE SURVEY RESULTS

No Desert Tortoises or tortoise sign were detected anywhere within the PS or the 500-foot buffer during focused surveys in 2025. Surveyors did not observe any burrows attributable to tortoise, nor any scat, tracks, shells, or other indicators of this species. Numerous animal burrows were noted (e.g., rodent burrows), but all were identified as belonging to other wildlife (via size, shape, or sign) and showed no evidence of tortoise use. The complete absence of tortoise sign was consistent across all transects and survey dates.

The survey effort met or exceeded USFWS protocol standards, with 100% coverage of suitable habitat at 10 m (30 ft) transect spacing. Given the thorough coverage and favorable observation conditions, any tortoise or recent tortoise sign in the area would likely have been discovered. Even low-density tortoise populations typically leave some detectable sign (e.g., a single burrow or scat) when an area is systematically surveyed (USFWS 2019; Peaden et al. 2015). The lack of any evidence of tortoise despite intensive search strongly indicates true absence (or a density effectively at zero) on the PS.

The PS lies at the periphery of the range of the Desert Tortoise. Moreover, the busy Interstate-15 corridor - adjacent to the PS. has been a known mortality hazard and barrier for tortoises in this region, making it unlikely for any to migrate into the area (Peaden, et al. 2017). Also, very few burrow-like structures of any kind were present in the hard, compacted ground (aside from shallow small mammal burrows). This reinforces that the substrate is largely unsuitable for tortoise burrowing. Photographs of representative site conditions are provided below. A list of all vertebrate wildlife species observed during the surveys is included in Table 2, which primarily includes common birds, small rodents, and lizards.

Overall, no evidence of Desert Tortoise was found in the project site or buffer. Given the intensive survey effort and favorable conditions, this result provides definitive confirmation that the study area is unoccupied by Desert Tortoise.

	**Photograph 1.**
	**Photograph 2.**

	**Photograph 3.**
	**Photograph 4.** Facing North.

TABLE NO. 2 – WILDLIFE DETECTED

Common Name	Scientific Name
Birds	
Anna's Hummingbird	*Calypte anna*
California Quail	*Callipepla californica*
Turkey Vulture	*Cathartes aura*
Lesser Nighthawk	*Chordeiles acutipennis*
Common Raven	*Corvus corax*
Horned Lark	*Eremophila alpestris*
House Finch	*Haemorhous mexicanus*

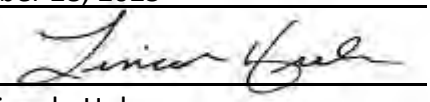
Common Name	Scientific Name
Hooded Oriole	*Icterus cucullatus*
Northern Mockingbird	*Mimus polyglottos*
Bushtit	*Psaltriparus minimus*
Lesser Goldfinch	*Spinus psaltria*
Black-chinned Sparrow	*Spizella atrogularis*
Western Meadowlark	*Sturnella neglecta*
Eurasian Collared Dove	*Streptopelia decaocto*
Bewick's Wren	*Thryomanes bewickii*
California Thrasher	*Toxostoma redivivum*
Western Kingbird	*Tyrannus verticalis*
Mourning Dove	*Zenaida macroura*
White-crowned Sparrow	*Zonotrichia leucophrys*
Mammals	
Coyote	*Canis latrans*
California ground squirrel	*Otospermophilus beecheyi*
Cottontail	*Sylvilagus audubonii*
Reptiles	
Western whiptail lizard	*Aspidoscelis tigris*
Zebra-tailed Lizard	*Callisaurus draconoides*
Horned lizard	*Phrynosoma platyrhinos*
Western fence lizard	*Sceloporus occidentalis*
Common Side-blotched Lizard	*Uta stansburiana*

5.0 CONCLUSIONS

Focused surveys have confirmed the absence of Desert Tortoise in the PS and study area. No tortoise or tortoise sign was detected on the PS or within the buffer, despite extensive survey effort in accordance with agency protocols. Because no desert tortoises (and no designated critical habitat or even suitable habitat) are present on the site, the Project will not result in any direct, indirect, or cumulative impacts to the species. Consequently, a finding of no impact is appropriate, and no mitigation measures for desert tortoise are required. Because no Desert Tortoises (and no designated critical habitat or even suitable habitat) are present on the PS, the Project will not result in any direct, indirect, or cumulative impacts to the species. Consequently, a finding of no impact is appropriate, and no mitigation measures for desert tortoise are required. Based on the convergent evidence from focused surveys, habitat analysis, and regional data, it is concluded that Desert Tortoise is absent from the PS and its vicinity. The PS's history of disturbance and landscape isolation provide a compelling ecological explanation for the absence of tortoises.

The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report, despite due professional care. I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: October 28, 2025

SIGNED: 

Lincoln Hulse

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APPENDIX I
MOHAVE GROUND SQUIRREL REPORT

APPLE VALLEY 84 PROJECT
September 2025

MOHAVE GROUND SQUIRREL ASSESSMENT

Apple Valley North United States Geological Survey
7.5-Minute Topographic Quadrangle Map

Prepared By

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FIGURES

1.0 EXECUTIVE SUMMARY & INTRODUCTION

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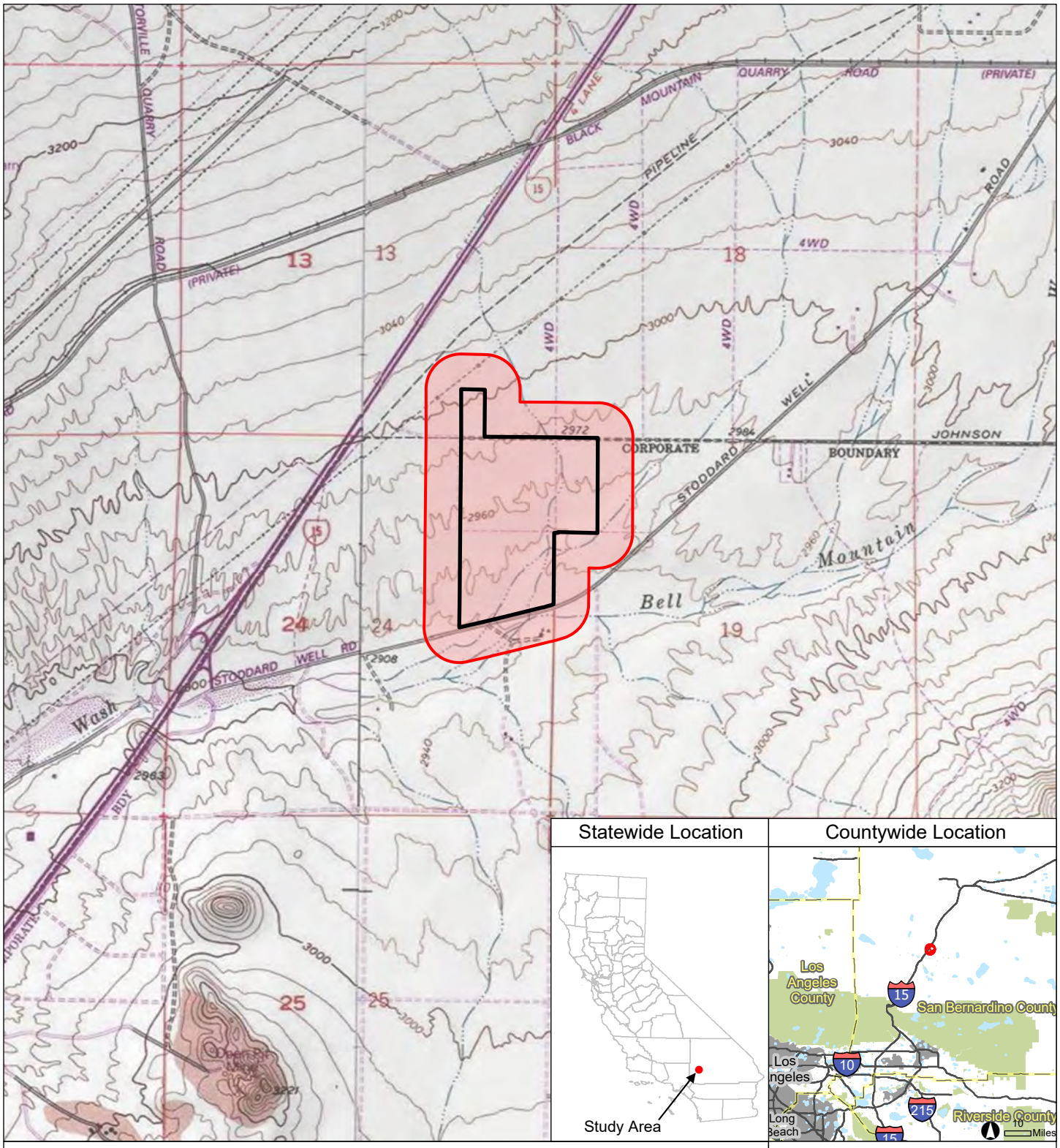
Survey results were conclusive. No MGS or diagnostic sign (e.g. burrows, scat, tracks, vocalizations) were detected on the PS. The habitat is marginal to low-quality for MGS and shows no indication of current or historical occupancy. The PS is isolated by adjacent development and infrastructure, and it lacks the vegetative components critical to MGS persistence. Key forage and cover shrubs such as winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), allscale saltbush (*Atriplex polycarpa*), and creosote bush (Larrea tridentata) were absent or extremely sparse within the PS. Vegetation is dominated instead by creosote bush scrub and ruderal grasses, with overall shrub cover at <20%. While the sandy-loam soils on the PS are physically suitable for burrow excavation, no ground squirrel burrows or other sign suitable for MGS were observed during field surveys.

Past and ongoing disturbances (e.g. off-road vehicle trails, old foundations/wells, illegal dumping) have further degraded habitat quality and connectivity on and around the PS. Given the absence of required forage plants, cover, and any recent regional MGS records – the nearest known occurrence is miles from the Project (i.e., historic California Natural Diversity Database record) – the PS is determined not to support MGS. No further focused MGS trapping surveys are recommended. The Project is not expected to impact this species, and MGS-specific mitigation measures are not anticipated to be necessary.



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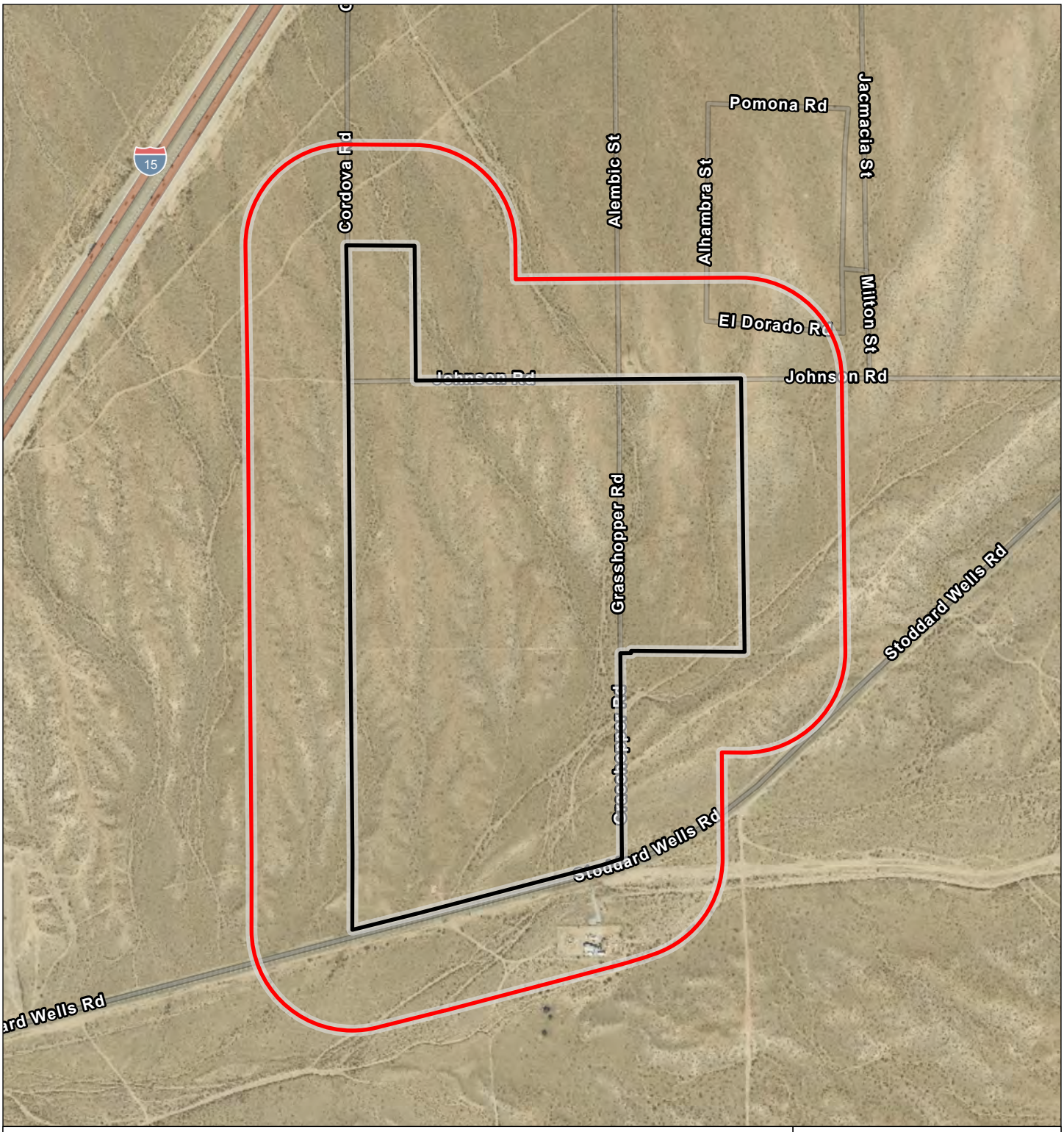


Figure 2. Site Vicinity

2.0 MOHAVE GROUND SQUIRREL BACKGROUND

The Mohave ground squirrel is a small, diurnal ground squirrel endemic to California's western Mojave Desert, occurring only in parts of Los Angeles, Kern, San Bernardino, and Inyo Counties. It has been listed as a Threatened species under CESA since 1984 (Gustafson 1993). Notably, MGS is not federally listed under the Endangered Species Act, but it is recognized as a focal species for conservation in the Mojave Desert. Within its historical range, the distribution of MGS has become patchy and greatly contracted. In particular, the Antelope Valley region (which includes the Palmdale-Lancaster area at the southwestern edge of the range) has seen severe habitat fragmentation (U.S. Bureau of Land Management [BLM], 2019). Research and surveys strongly indicate that MGS no longer occupies the southern Antelope Valley west of State Route 14, from the vicinity of Mojave south through Lancaster/Palmdale (Leitner, 2008). In other words, past records from west of SR-14 suggest those local populations have been extirpated, and no recent occurrences have been documented in the area.

MGS typically inhabits creosote bush scrub, saltbush scrub, Joshua tree woodland, and other open desert scrub or semi-grassland communities in the Mojave Desert (Gustafson 1993). Friable sandy or loamy soils are an important habitat feature, as they allow for digging of burrows. MGS generally avoids rocky terrain and favors areas with soft, sandy to gravelly soils. MGS require a diversity of native desert shrubs and seasonal forbs that provide both food and shelter. Key forage plants for the Mohave ground squirrel include certain water-rich shrub species such as winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), desert thorn (*Lycium spp.*), and evergreen saltbush (*Atriplex spp*.). These perennial shrubs can constitute a major portion of the MGS diet (over 50–60% of dietary intake in spring, especially during drought years when annual wildflowers are scarce). In years of favorable rainfall, MGS also feed heavily on the green parts, seeds, and flowers of annual forbs such as lotus, lupines, *Astragalus* (locoweeds), *Eremalche* (desert forget-me-not), and *Coreopsis* daisy species. The availability of succulent vegetation with adequate moisture content is vital for the squirrels' water balance and fat storage. MGS obtain most of their water from their food and can forego drinking free water. Thus, the presence of abundant annual wildflowers in spring and perennial shrubs for dry periods is a key indicator of suitable habitat. They also use native shrubs (e.g. spiny hopsage, allscale, etc.) for cover and to situate their burrow entrances at the base, which offers protection from predators and thermal cover.

The MGS has a short active season and spends much of the year in dormancy to avoid extreme desert conditions. Adults typically emerge from hibernation in late winter (February), and the species is active above ground through the spring and early summer months. By mid-summer (often around late July, though as early as April in drought years), MGS enter estivation/hibernation to conserve energy and water. Breeding occurs shortly after emergence – usually in March – and pups are born about a month later, becoming active above ground by May to June. During the active season, MGS are diurnal foragers with a peak in activity during morning hours.

They are known to emit a high-pitched alarm whistle or "peep" when alarmed, which can be a useful auditory cue during surveys (though this call can be confused with bird calls in the field). MGS typically have small home ranges, on the order of 1 hectare or less (roughly 2 acres) for adults, and they do not migrate long distances. They tend to remain in the vicinity of their burrow system, which can be up to 20 feet in length and 3 feet deep, often with multiple entrances hidden under shrubs. This sedentary nature means that habitat connectivity is important for the species' dispersal. Major barriers like urban development or large cleared areas can prevent MGS from moving into otherwise suitable patches. Predators of MGS include coyotes, badgers, birds of prey, and snakes, among others, but predation pressure is greatly exacerbated when cover is removed (e.g., by vegetation clearing).

3.0 METHODS

Prior to commencing field surveys, a literature and database review was conducted to gather background information on MGS occurrence and habitat in the region.
Sources consulted included.

- U.S. Fish and Wildlife Service (USFWS) – online Critical Habitat Mapper and current species occurrence lists for the Apple Valley area (Inland Deserts Region). This included the USFWS Environmental Conservation Online System and the species list for San Bernardino County (USFWS 2025a, 2025b).

- California Natural Diversity Database (CNDDB) – a query of the CDFW CNDDB (RareFind 5) was performed for MGS and other sensitive species within a 10-mile radius of the PS (CDFW 2025).

- Soils and Vegetation Mapping – USDA Natural Resources Conservation Service (NRCS) Soil Survey data (SSURGO) for the area was reviewed to characterize soil types (USDA-NRCS 2025). Vegetation alliances on site were assessed in accordance with standard classifications (after Sawyer et al. 2009), and the most common plant species were noted.

- MGS Survey Protocols and Research – The Mohave Ground Squirrel Survey Guidelines (CDFG 2010; revised CDFW 2023) were consulted for recommended survey methods and habitat assessment criteria. Key scientific references on MGS were also reviewed, including the CDFG status review (Gustafson 1993), recent distribution studies (Leitner 2008; Leitner 2015), and regional conservation analyses (e.g., BLM 2019 West Mojave Route Network Project SEIS).

- Aerial Imagery – Recent high-resolution aerial photographs (Microsoft Bing Maps 2025) were examined to understand landscape context, surrounding land uses, and any large-scale barriers or linkages relevant to MGS movement.

All plant species were identified in the field or through subsequent analysis using taxonomic keys in the Jepson Manual (Baldwin et al. 2012). Scientific and common names follow The Jepson Manual, 2nd Edition nomenclature (Baldwin et al. 2012). Wildlife species identifications were based on direct observation and/or diagnostic sign (tracks, scat, burrows, vocalizations), using standard field guides for reference (e.g., Burt and Grossenheider 1980; Halfpenny 2000 for tracks).

A focused habitat assessment and visual encounter survey for MGS was conducted on site in Spring 2025, timed to coincide with the species' active season. Surveys were performed on April 3 and April 4, 2025, by a qualified wildlife biologist (Mr. Philippe Vergne) who holds a USFWS permit to handle sensitive small mammals (TE-068072-5) and a CDFW Memorandum of Understanding for MGS and other species. Weather conditions during the surveys were seasonally optimal, with clear skies, morning temperatures ~65–70 °F, and calm to light winds. These conditions maximized the likelihood of observing any active MGS, as the species would be above ground foraging under mild temperatures.

Systematic walking transects were employed to ensure 100% visual coverage of the PS. Transects were oriented to traverse all habitat types present. The surveyors navigated using a handheld GPS unit (sub-meter accuracy) and aerial maps. Whenever possible, adjacent undeveloped lands immediately bordering the PS were also briefly surveyed to assess connectivity and detect any nearby wildlife that might use the PS. During transects, the biologist paused at regular intervals and at high points to scan the area with binoculars for wildlife movement or distant observations. Special attention was given to

examining ephemeral drainages and sandy patches on site for animal sign, as wildlife tend to concentrate activity in these areas.

All potential MGS sign was searched for, including burrow openings of appropriate size (2–4 inches in diameter), scat deposits, trackways, or individuals themselves. The surveyors were alert for the MGS's distinctive high-pitched alarm whistle ("peep") during morning hours, although none was heard. Locations of any noteworthy observations were recorded with GPS. No live trapping or camera stations were deployed for MGS at this stage because the habitat assessment results indicated the PS lacked suitable habitat features per CDFW guidelines, supporting a probable absence determination without the need for intensive trapping. Throughout the survey, efforts were made to minimize disturbance; no off-road driving occurred, and the surveyor accessed all areas on foot.

4.0 MOHAVE GROUND SQUIRREL SURVEY RESULTS

The PS encompasses relatively undulating desert terrain on the outskirts of Apple Valley. Soils on the PS are loose sandy loams with scattered gravel and cobbles, underlain by alluvial substrates – a soil profile that is friable and in principle suitable for burrowing by MGS or other fossorial animals. Terrain across the PS ranges from flat open flats to low rises (small sandy hills) with several ephemeral signatures. No perennial water sources or riparian areas are present. No standing water was observed during the survey, consistent with the arid setting. Overall, the microhabitats available include creosote bush scrub on gentle slopes and sparse Joshua tree on the flats, interspersed with bare ground and dry drainage corridors.

Vegetation on the PS is characteristic of creosote bush scrub but notably lacks the diversity of shrubs and forbs associated with MGS habitat. The dominant plant species observed was creosote bush (*Larrea tridentata*), with a few Joshua trees (*Yucca brevifolia*) and very sparse saltbush (*Atriplex* spp.) individuals. Crucially, the preferred forage shrubs for MGS – such as winterfat, spiny hopsage, desert thorn, and perennial wildflower patches – were absent from the PS, even along the ephemeral drainage areas where moisture is presumably slightly higher. The understory consisted of patchy annual grasses and weedy forbs (e.g. red brome, filaree), providing <20% ground cover in total. The overall vegetative cover is low and openings between shrubs are relatively large, which superficially is favorable for ground squirrel visibility and movement. However, the scarceness of succulent forbs and moisture-rich shrubs means the site offers very limited forage value for MGS. In short, floristic quality is poor from an MGS perspective – a key factor in the species' absence at this location.

Evidence of anthropogenic disturbance was noted across the PS. An old concrete foundation and abandoned well casings were present near the western portion of the PS, suggesting past attempts at development or agriculture. Scattered trash dumping (e.g., household debris, target shooting litter) was observed as well. Numerous off-road vehicle tracks cross the PS, especially along the drainage signatures, indicating use by recreational vehicles (likely from the nearby Stoddard Valley Off Highway Vehicle area). These disturbances have led to some noticeable soil compaction, loss of native vegetation, and establishment of ruderal weeds within the PS. The PS is bounded on the west by Stoddard Wells Road and the Interstate-15 freeway corridor to the west, which together form a significant barrier to wildlife movement. To the south and southeast, the PS is adjacent to existing and planned industrial development (the Project will extend infrastructure in this area), further isolating it from larger undisturbed desert tracts. To the north and northeast, relatively open desert lands continue, but those areas are subject to heavy off-road vehicle use and are bisected by transmission corridors. Given this context, the PS is effectively a fragmented habitat island, separated from known MGS population centers by both distance and urban barriers. This isolation greatly reduces the likelihood of any MGS re-colonizing the PS, especially considering the species' limited dispersal capability.

No MGS were observed during the focused assessments and surveys, nor was any definitive sign of MGS found. The biologists did not detect any burrows that appeared to be of appropriate size or morphology for MGS. All burrows encountered were either small rodent burrows of kangaroo rats/ground squirrels with signs of long disuse, or larger holes likely made by jackrabbits or canids. No MGS scat (distinctive quarter-inch, cylindrical dropping) was found on or around rock piles, burrow aprons, or shrub bases. Similarly, no track or tail drag imprints of MGS were noted in sandy areas. The survey included periods of quiet listening in early morning, but no MGS alarm calls or other vocalizations were heard. Other diurnal wildlife was active, which increases confidence that any active ground squirrels would have been seen if present. The complete absence of any diagnostic MGS sign strongly indicates that the species is absent from the PS at this time.

Several other wildlife species were recorded during the survey, reflecting the general faunal community of the area. Notably, no white-tailed antelope ground squirrels (AGS) were observed either, even though AGS is a common species in many Mojave Desert habitats. The lack of AGS sightings (or their burrows) further underscores the low carrying capacity of the PS for small ground-dwelling squirrels. A few desert cottontail rabbits (*Sylvilagus audubonii*) were observed. Abundant coyote (*Canis latrans*) scat was noted on dirt tracks, and occasional domestic dog scat was present, likely from dog-walking in the area. No evidence of desert kit fox (burrows or distinctive scat) was found, and in fact the prevalence of coyote sign suggests kit fox are likely excluded from establishing dens on the PS. As coyotes are the primary predator and competitor of kit fox. A variety of common birds (horned lark, common raven, mourning dove) were observed, but no sensitive avian species (e.g. burrowing owl) or their sign were detected.

In summary, no sign of MGS was detected despite intensive coverage of the PS under favorable conditions. The absence of MGS is consistent with the habitat assessment. The PS lacks the forage base and connectivity needed to support MGS, and regional records of the species are scarce to nonexistent in this part of Apple Valley in recent decades. The closest documented MGS occurrence in the CNDDB database lies miles from the PS (record dated pre-2000), and numerous protocol surveys in the broader area (Victorville–Apple Valley) have yielded no detections in the past decade. Given these lines of evidence, it is highly unlikely that MGS occupies the PS or immediate vicinity at present.

Representative photographs of the PS are provided below.

Photograph 1.

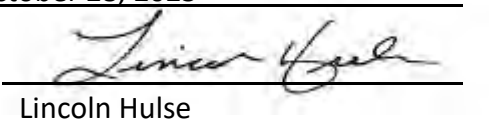
	**Photograph 2.**

5.0 CONCLUSIONS

The results of this assessment lead to the conclusion that the Project will not have any direct or indirect impacts on MGS. The PS does not provide suitable habitat for MGS – it is lacking in essential forage plants, has a history of disturbance, and is geographically isolated from known populations. Accordingly, the negative finding (no animals or sign observed, and no high-quality habitat present) is well supported by the data. In light of these results, no further focused MGS surveys (such as live trapping or camera surveys) are warranted for the Project. Development of the PS can proceed with respect to MGS without mitigation, as the species is absent and will not be affected by the Project.

The professional opinions and recommendations in this report are provided based on the site-specific surveys and analysis described herein. The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by reputable biological consultants under similar circumstances. No other warranty or representation, either expressed or implied, is made as to the findings or conclusions in this assessment. I hereby certify that the statements and data presented above and in all attached exhibits are true and correct to the best of my knowledge and belief, and that this report fully and accurately describes the results of the MGS.

DATE: October 28, 2025

SIGNED: 

Lincoln Hulse

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APPENDIX J
DELINEATION OF WATERS OF THE UNTED STATES

APPLE VALLEY 84 PROJECT
Apple Valley, San Bernardino County, California
Delineation of Waters of the United States

October 2025

Prepared By

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Certification

The undersigned certify - under penalty of law, that they have personally examined and are familiar with the information submitted in this document and all attachments and that, based on an inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. The undersigned are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Prepared By: *Lenny Malo* Date: 10/28/25

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COMMON ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APT	Antecedent Precipitation Tool
CFR	Code of Federal Regulations
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
USEPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
KMZ	Keyhole Markup Language Zipped
NI	No Indicator
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NOAA	National Oceanic and Atmospheric Administration
NOREAS	NOREAS Inc.
OBL	Obligate Wetland
OHWM	Ordinary High-Water Mark
PS	Project Site
RPW	Relatively Permanent Waters
SSURGO	Soil Survey Geographic Database
TNW	Traditional Navigable Waters
UPL	Upland
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1.0 INTRODUCTION AND SUMMARY OF FINDINGS

This report presents a Waters of the United States (WOTUS) delineation for the Apple Valley 84 Project (Project) in Apple Valley, San Bernardino County, California (Figures 1 and 2). The Project Site (PS) is approximately 102.66-acres, and lies at roughly 2,500 to 3,000 feet above mean sea level. The Project occurs on the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle Map (Sections 13 and 24 of Township 6 North and Range 4 West, and within Section 19 of Township 6 North and Range 3 West, San Bernardino Meridian). This delineation was conducted to identify any potential aquatic features on the PS that may fall under U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA).

The PS is an undeveloped Mojave Desert scrub habitat. Surrounding infrastructure (e.g., Stoddard Wells Road and the Interstate-15 freeway) and on-site disturbances (off-highway vehicle [OHV] tracks, illegal dumping, dirt utility roads, etc.) have altered the natural landscape. The ground surface shows braided swales, rills, and other erosional signatures that carry water only during or immediately after infrequent storm events. These ephemeral features trend southwest across the PS and dissipate within Project boundaries under normal hydrologic conditions, lacking any well-defined or continuous ordinary high-water mark (OHWM). According to U.S. Department of Agriculture soil mapping, the PS is underlain by well-drained, non-hydric desert soils (e.g. Cajon-Arizo complex and Helendale-Bryman loamy sands). These coarse sandy loam soils have high infiltration capacity and negligible to low runoff potential. No hydric soil indicators were observed in the field. The absence of hydric soils indicates that prolonged soil saturation or wetland conditions have not occurred on the PS.

Apple Valley has an arid climate (roughly 5 inches of rain per year on average). Surface water flow is ephemeral and occurs only after rare heavy rains. Even a 100-year storm event (approximately 3.4 inches/24 hrs.) would only generate brief runoff, much of which would infiltrate into the porous ground or evaporate. The PS's gentle southwest slope causes any stormwater to spread out as sheet flow and quickly soak into the soil. There are no perennial or intermittent streams on the PS. No blue-line streams are mapped on USGS topographic maps, and no FEMA 100-year floodplains encompass the PS. Under normal circumstances, any swales within the PS do not continue as defined channels off-site but instead fade out before reaching the nearby Bell Mountain Wash. This confirms that the PS's drainage is internally contained and discontinuous, with no sustained surface connection to any downstream navigable, or relatively permanent waters. The PS supports a creosote bush scrub plant community typical of upland Mojave Desert terrain. Dominant species observed include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*) and other drought-tolerant shrubs. The vegetation is sparse and xerophytic, with only occasional annual forbs and grasses after seasonal rains. In regulatory terms, all dominant plants are classified as Facultative Upland (FACU) or Upland (UPL) on the National Wetland Plant List, meaning they are rarely if ever found in wetlands. This lack of wetland vegetation indicates upland conditions across the entire PS.

This delineation has been performed in accordance with the latest federal definitions and guidance regarding WOTUS. The definition of WOTUS was updated by the agencies in 2023, with a final rule published January 18, 2023 (effective March 20, 2023). However, the U.S. Supreme Court's decision in Sackett v. Environmental Protection Agency (May 25, 2023) prompted revisions to that rule. A conforming rule published on August 29, 2023 (effective September 8, 2023) aligned the regulations with the Sackett ruling. In essence, the current rule and jurisprudence narrow the scope of federal jurisdiction, emphasizing that only relatively permanent waterways and wetlands with a continuous surface water connection to traditional navigable waters are considered WOTUS. On March 12, 2025, the EPA and USACE issued a joint memorandum to field staff that further clarified implementation of the "continuous surface connection"

standard in light of Sackett. This guidance stresses that for a wetland to be jurisdictional, it must directly abut a jurisdictional water without any intervening upland or break in surface flow. In practical terms, ephemeral features or isolated wet areas that lack an unbroken surface linkage to a navigable water are not regulated under the CWA. This delineation was tailored to these criteria, ensuring compliance with the most up-to-date interpretation of WOTUS.

The assessment employed a combination of desktop analysis, field surveys, and regulatory tools to evaluate the PS for jurisdictional features. Prior to fieldwork, current and historic aerial imagery was reviewed to identify any potential water features or vegetation changes over time. U.S. Geological Survey (USGS) topographic maps were consulted to verify if any blue-line streams or drainage features are mapped on, or near the PS (none are shown on the PS itself). Additionally, the team utilized the EPA WATERS GeoViewer tool to explore hydrologic data, including upstream/downstream connections. FEMA flood hazard maps were reviewed to understand floodplains and flow patterns.

During field surveys (conducted in May 2023, and March 2025), delineators walked the PS and its immediate surroundings to look for any evidence of aquatic features. They used standard techniques outlined in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Arid West Region Regional Supplement (USACE 2008c) to test for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Data points were documented on the current USACE Arid West Wetland Determination Data Sheets, if appropriate. Potential non-wetland waters (e.g., ephemeral channels) were evaluated for an Ordinary High-Water Mark (OHWM) consistent with the field guidance A Field Guide to the Identification of the OHWM in the Arid West (Lichvar and McColley 2008). It should be noted that while these traditional delineation methods identify physical and biological indicators of aquatic resources, the new WOTUS rule imposes an additional legal test. The presence of a relatively permanent, continuous surface connection to downstream (a)(1)–(a)(5) waters. Thus, even if a signature exhibited some characteristics of an ephemeral stream or seasonal wetland under older criteria, it must also have an unbroken surface water path to a traditional navigable water or relatively permanent water to be jurisdictional. We kept this requirement at the forefront of our evaluation.

No areas meeting the definition of WOTUS were identified within the PS. The ephemeral swales, erosional signatures and rills observed within the PS are non-jurisdictional upland features. They lack a notable hydrophytic plant community, hydric soil development, and any persistent flow. Critically, these signatures do not connect to any downstream WOTUS through continuous surface flow. They begin and end within the PS under normal hydrologic conditions, with runoff infiltrating before it can reach the nearest waterway (the off-site Bell Mountain Wash, which itself is an ephemeral tributary to the intermittent Mojave River). Under the Sackett-standard rule, such ephemeral, isolated signatures are not regulated by Section 404 of the CWA. Likewise, no wetlands of any kind are present on the PS. In summary, the PS is properly characterized as entirely upland, containing no WOTUS.

2.0 REGULATORY SETTING

2.1 Regulatory Review

2.1.1 Army Corps of Engineers

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into WOTUS. The term "WOTUS" is defined in USACE regulations at 33 CFR Part 328.3(a) as:

(1) Waters which are:
   (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   (ii) The territorial seas; or
   (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as WOTUS under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
   (i) Waters identified in paragraph (a)(1) of this section; or
   (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

USACE regulations in 33 CFR Part 328.3(b) exclude the following from being "WOTUS" even where they otherwise meet the terms of paragraphs (a)(2) through (5) above:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the CWA;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with USEPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WOTUS; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(c)(4) as:

> ...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

"Adjacent" wetlands are defined by 33 CFR 328.3(c)(2) as having a "continuous surface connection" to other WOTUS.

<u>Wetland Definition Pursuant to Section 404 of the CWA</u>

The term "wetlands" (a subset of WoUS) is defined at 33 CFR 328.3(b) as:

> "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands under USACE jurisdiction must have the following field indicators:

1. Hydrophytic vegetation (A prevalence of vegetation typically adapted for life in saturated soil conditions in which more than 50 percent of the dominant plants are obligate wetland plants [OBL], facultative wetland plants [FACW] and facultative plants [FAC] (Environmental Laboratory 1987).

   Plant wetland indicator status from The National Wetland Plant List: 2016 Update of Wetland Ratings (NWPL) (Lichvar et al. 2016) is abbreviated as follows:

   a. OBL = Obligate wetland plants. Almost always occur in wetlands.

b. FACW = Facultative wetland plants. Usually occur in wetlands but may occur in non-wetlands.
c. FAC = Facultative plants. Occur in wetlands and non-wetlands.
d. FACU = Facultative upland plants. Usually occur in non-wetlands but may occur in wetlands.
e. UPL = Obligate upland plants. Almost never occur in wetlands.
f. For species not listed in the NWPL, "Not Listed" (NL) is used to indicate their absence in the list. These species can be assumed to be upland species.

2. Hydric soils (soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part) (Natural Resources Conservation Services [NRCS] 2018); and

3. Wetland hydrology (areas that are periodically inundated or have soils saturated to the surface at some time during the growing season; where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively [Environmental Laboratory 1987]).

Growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperatures. Growing season dates may be approximated by using Climate Analysis for Wetlands (WETS) (tables available from the NRCS National Water and Climate Center (NWCC) to determine the median dates of 28 degrees Fahrenheit (°F) (-2.2 degree Celsius) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station (USACE 2008a).

The USACE defines "water body" as any area that in a normal year has water flowing or standing above ground to the extent that evidence of an OHWM is established (FR Volume 67, Number 10, Tuesday January 15, 2002). Water bodies are not required to be dominated by hydrophytic vegetation or to have positive hydric soil indicators to be considered USACE-jurisdictional.

<u>March 12, 2025, Memorandum on "Continuous Surface Connection" in WOTUS Delineation</u>
On March 12, 2025, the U.S. Department of the Army, USACE, and the USEPA issued a Memorandum to the Field clarifying the proper implementation of the "continuous surface connection" standard under the WOTUS definition within the CWA. This memorandum provides further regulatory guidance following the Supreme Court's decision in Sackett v. USEPA (2023), reinforcing a narrower interpretation of jurisdictional waters by emphasizing that only wetlands and water features with an unbroken, physical surface water connection to a traditionally navigable water body qualify as WOTUS.

Key Considerations from the Memorandum
1. Strict Interpretation of "Continuous Surface Connection"
    a. A surface water connection must be direct, persistent, and unbroken to a jurisdictional water (i.e., navigable-in-fact waters, interstate waters, or tributaries with relatively permanent flow).
    b. Ephemeral, intermittent, or indirect hydrologic connections, including subsurface or groundwater links, do not establish jurisdiction.
    c. Water features that only connect during extreme weather events, seasonal rainfall, or infrequent flooding are not considered WOTUS under this memorandum.

2. Implications for Adjacent Wetlands
    a. Wetlands must have an active, observable, and sustained surface water connection to WOTUS.
    b. If a wetland is separated from jurisdictional waters by upland areas, natural barriers, or constructed levees, it does not meet the definition of WOTUS, even if hydrologically influenced by proximity.

3. Delineation and Assessment Method
    a. The burden of proof now requires clear documentation of a continuous, uninterrupted surface water connection in field delineations.
    b. Hydrologic indicators such as an OHWM, direct overland flow, or sustained surface connectivity must be present year-round or consistently during normal hydrologic conditions.
    c. Remote sensing data, historical imagery, or occasional ponding alone cannot establish jurisdiction unless there is physical evidence of continuous connectivity to WOTUS.

3.0 METHODS

Documentation relevant to the PS and surrounding area was reviewed using the methods below.

3.1 Literature Reviews

Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the PS:

- Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a) (Figure 4);
- Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2025b) (Figure 5);
- Federal Emergency Management Agency (FEMA 2025) (Figure 6);
- NWI maintained by the US Fish and Wildlife Service (USFWS 2025) (Figure 7);
- USGS 7.5-minute Topographic Map, California, (USGS 1987);
- 2025 color aerial photographs (Bing Maps 2025);
- Google Earth version 5.2.1.1588 (March 2025);
- USACE Navigable Waterways in the Los Angeles District (USACE 2025b);
- Environmental Protection Agency Enviromapper for Water (USEPA 2025a);
- U.S. Environmental Protection Agency (USEPA) (2025b) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer) (Figures 8 and 9);
- USEPA Antecedent Precipitation Tool (APT) (2025c) (epa.gov/wotus/antecedent-precipitation-tool-apt); and
- Western Regional Climate Center Data California Weather Station (WRCC 2025).

The above documents were reviewed and the PS was assessed for the presence of indicators of jurisdictional aquatic resources, including an OHWM, hydrophytic vegetation, hydric soils, and evidence of surface hydrology. The intent of this assessment was to determine where water may flow, or may not flow under normal circumstances - or terminate, and was used to determine efficient locations for visual inspections to occur in the field.

3.1.1 Aerial Photography

Historic and current aerial photography of the PS were reviewed, prior to and during the field assessments. Aerial photography was used to view land resources in both the present, and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

3.1.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The USEPA WATERS GeoViewer tool provided access to spatial data sets (Figures 8 and 9) - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within the PS (epa.maps.arcgis.com/apps/webappviewer). Additionally, the FEMA flood zone is depicted in Figure 6. Furthermore, the NWI – which is maintained by the USFWS, was reviewed to support the identification of potential jurisdictional resources within the PS. However, this database (i.e., the NWI) is not used for regulatory jurisdictional review.

3.1.3 Antecedent Precipitation Tool

The Antecedent Precipitation Tool (APT) was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

3.1.4 Topography

USGS topographic maps were reviewed as well (Figure 1). These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the PS. USGS 7.5-Minute Topographic Quadrangles "Apple Valley North" were evaluated to facilitate identification of potential drainage features within the PS - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

3.2 Procedures and Field Data Collection Techniques

Potential USACE-defined wetlands, and other WOTUS, and additional riverine resources were evaluated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdiction area within the PS. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged, or demarked within the PS at the time of the delineation.

3.2.1 Waters of the United States Delineation Techniques

The specific delineation of signatures tied to WOTUS was conducted within the PS using a combination of on the ground quantification, remote sensing and ground verification via pedestrian surveys conducted in May 2023, and March 2025. Assessment of the presence - or absence, of an OHWM was based on observations - evidence of flow, and unique characteristics indicating the presence of active water flow, shelving, drift lines, disturbed vegetation, etc. Or other indicators identified in the "Field Guide to Identification of the OHWM in the Arid West Region of the Western United States" (Lichvar and McColley 2008). OHWM characteristics in this region would primarily consist of sediment sorting, destruction of terrestrial vegetation, and a change in substrate in the feature as compared to the surrounding upland area. However, features were excluded from this assessment if they are human-made ditches, exhibited swales or erosional characteristics, etc., in accordance with USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States[1].

Data collected included digital format GPS locations, and photos (Appendix B). Both a routine off-site and on-site field determination was conducted for USACE-defined wetlands, and non-wetland WOTUS. This delineation also uses the current USACE Arid West Wetland Determination Data Sheet and OHWM Data Form, which have not yet been updated to reflect the recent U.S. Supreme Court decision in Sackett v. USEPA, or the recent 2025 Memorandum on "Continuous Surface Connection." With that said, the new WOTUS rule introduces additional requirements beyond the traditional OHWM and three-parameter test to define WOTUS and wetlands. The new rule now mandates a relatively permanent, continuous - or uninterrupted, surface water connection to an (a)(1) through (a)(5) Waters. Therefore, although the

[1] USACE CWA Regulations Title 33 CFR Part 328.3(b) Not Waters of the United States – In summary, ditches, swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow, are not WOTUS.

physical, chemical, and biological criteria for a WOTUS may be superficially satisfied, an individual feature may not meet the legal definition of a WOTUS under the CWA, and related legal jurisdiction. The term continuous surface water connection to a Traditional Navigable Water (TNW) or Relatively Permanent Water (RPW)is used only for wetlands. Connected to - or tributary to, are terms used for non-wetland aquatic resources and the relative permanence of a hydrological connection to TNW.

Features that did not meet the hydrophytic vegetation wetland criteria are also reviewed to determine if they met the definition of other WOTUS (i.e., had evidence of an OHWM). Data collected from georeferenced aerial photographs, topographic maps, and soils data are viewed on handheld mobile devices, and used to target areas with potential to be WOTUS. During fieldwork, all accessible areas within the PS were visually surveyed for hydrophytic vegetation, standing water, scoured areas, etc. Inaccessible areas were viewed from the elevated locales with the aid of binoculars, aerial photographs, and so forth. Areas that were determined to have an OHWM, defined bed/bank or suspected of being WOTUS, wetlands or other sensitive riparian/riverine communities were further analyzed for a dominance of hydrophytic vegetation, hydric soils, and hydrology as described below. The evaluation process for USACE-defined wetlands considered vegetation, soils, and hydrological parameters of suspected features. The location of the OHWM, is defined based on clear lines visible on banks; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; and differences in vegetation species, composition or structure.

3.2.2 Vegetation

The dominance and/or prevalence of hydrophytic vegetation was determined using USACE methods. Plant species not readily identifiable in the field were determined based on diagnostic keys from the Jepson Manual: Vascular Plants of California (Second Edition) (Baldwin et al. 2012). The wetland indicator status of plant species was based on the National Wetland Plant List (NWPL): 2018 Update of Wetland Ratings (Lichvar et al. 2018) - Table 1.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Plants that occur almost always (estimated probability > 99%) in wetlands under natural conditions
Facultative Wetland (FACW)	Plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands
Facultative (FAC)	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands
Facultative Upland (FACU)	Plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands
Obligate Upland (UPL)	Plants that occur rarely (estimated probability < 1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions
No Indicator (NI)	Wetland indicator status not assigned. Species is assumed to be upland.

The wetland vegetation criterion was considered met when more than 50 percent of the dominant plant species across all strata were rated OBL, FACW, or FAC, or if the aerial cover of hydrophytic plant species resulted in a prevalence rating of 3.0 or less. The USACE defines “dominant” plant species as those with at least 20 percent coverage of the total canopy.

The "50/20 rule" method was utilized to determine plant dominance (USACE 2024a). The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50% of the total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum. The list of dominant species is then combined across strata (McIntosh 2011). The USACE defines an area to be vegetated if it has 5 percent or more total plant cover at the peak of the growing season. Those sites supporting either a dominance or prevalence of hydrophytes under USACE definition or a dominance or absence of hydrophytes under Water Boards definition were further examined for indicators of hydric soils and wetland hydrology discussed below.

3.2.3 Soils

Soil texture, matrix, redoximorphic features (i.e., mottles), and any presence of subsoil layers impervious to water infiltration were documented from hand-excavated soil pits to the greatest extent practical. Soils were examined for positive hydric soil indicators such as low chroma, mottles (e.g., iron or manganese concretions), histic epipedons, organic layers, gleization, sulfidic odor or other primary hydric soil indicators listed on an Arid West Wetland Determination Data Form – as appropriate. Soil color and characteristics were determined from moist soil peds using Munsell Soil Color Book (Munsell Color 2000). When possible, soils were evaluated in the field to a depth of approximately 8–20 inches, if warranted. GPS position data are collected at each soil pit and detailed within Project figures – when this type of sampling is appropriate. If warranted, upland and wetland soil pits are evaluated as well to delineate the wetland/upland boundary – when necessary. Hydric soil assessments were predominately based upon the guidance provided in the Arid West Regional Supplement (USACE 2008c). General soil information for the PS was obtained from the online GIS that provides the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) with soil data (USDA-NRCS 2025a).

3.2.4 Hydrology & Impounded Features

Hydrology was evaluated in areas suspected of seasonal inundation and/or saturation to the surface during the growing season. Recent precipitation data was analyzed to evaluate the frequency and amount of rainfall events within the PS, and on surrounding lands. Hydrological information was also determined for features by signatures on aerial photographs over time, as well as field analysis of the presence/absence of primary - or secondary hydrological indicators (i.e., surface water, saturation, sediment or drift deposits, watermarks, soil cracks, oxidized root channels, and/or biotic or salt crusts). Personnel also examined if there was any physical evidence of a continuous surface water connection, or uninterrupted surface water connection to any (a)(1) through (a)(5) Waters, as described in Title 33 CFR Part 328(a). Additionally, impounded features – if observed, were assessed to determine if they possessed natural characteristics with indicators of all three (3) wetland parameters: 1) dominance of hydrophytic vegetation (or Facultative Neutral), 2) possess hydric soils in the upper part, and 3) wetland hydrology.

4.0 RESULTS

The delineation determined that no signatures meeting the definition of WOTUS are present within the PS under the current regulatory criteria. The PS contains predominately upland desert landforms and does not support any jurisdictional wetlands or other WOTUS. Although a few ephemeral swales, erosional features and rills were observed, these signatures lack notable hydrophytic vegetation, hydric soils, or wetland hydrology and do not exhibit any continuous surface flow off-site. Notably, under normal hydrologic conditions these erosional signatures and swales - visible on aerials, dissipate within the PS and show no continuous evidence of an OHWM - or continuing off the PS. In the absence of any perennial or intermittent watercourses, and with only isolated ephemeral runoff, the PS's signatures were determined to be non-jurisdictional upland swales, depressions and erosional features. Under the post-Sackett (2023) interpretation of the Clean Water Act, ephemeral features and isolated waters that are not "relatively permanent, standing or continuously flowing" are not subject to federal jurisdiction. Accordingly, the Project's ephemeral swales do not qualify as WOTUS because they flow only in direct response to precipitation and have no continuous surface connection to downstream navigable or relatively permanent waters.

4.1 PS Soils

The USDA Natural Resources Conservation Service (NRCS) Soil Survey (SSURGO) map of the PS, shows two mapped soil units (118 & 133) within Project boundaries (Figure 4). Both soil types are well-drained, and non-hydric desert soils typical of the area.

- Cajon-Arizo complex, 2–15% slopes (Map Unit 118) – Very deep, excessively drained sandy alluvium derived from granitic rock. This soil is classified in Hydrologic Soil Group A (high infiltration, low runoff potential). It has rapid permeability and negligible surface runoff under most conditions. The Cajon series, for example, is described as "somewhat excessively drained; negligible to low runoff; rapid permeability." No seasonally high-water table or hydric indicators are associated with these soils.

- Helendale-Bryman loamy sands, 2–5% slopes (Map Unit 133) – Deep well-drained loamy sand on gentle fan terraces. This unit has a higher fine fraction, placing it in Hydrologic Soil Group C (moderate to slow infiltration, higher runoff potential than Group A). It is still dry and porous, but can generate some runoff in larger storms. Like the Cajon-Arizo soils, it is not hydric and has no anoxic saturation layer.

These two soil types cover the entire PS and the surrounding area. Neither soil unit is listed as hydric in the NRCS database, meaning they do not develop the prolonged saturation or anaerobic conditions needed for hydric soil indicators. Field observations confirmed no hydric soil characteristics (e.g. no low-chroma gleying, mottles, or sulfidic odors) in test pits excavated in representative areas. The soil profiles consisted of dry, oxidized sandy loams and sands with high percolation capacity. Subsoil layers were uniformly coarse-textured and lacked any restrictive clay or hardpan that would perch water. These findings indicate an absence of hydric soils on site, consistent with the soil map data.

From a runoff standpoint, the PS's soils confer a high infiltration capacity. The predominance of coarse-textured sands (especially the Cajon and similar alluvium) allows rainfall to infiltrate rapidly, minimizing surface runoff generation in all but the most intense storms. The NRCS classifies the Cajon-Arizo complex as having "negligible to low" runoff potential. Even the loamy sands of the Helendale-Bryman unit have relatively good permeability given the arid climate. The lack of any mapped hydric or poorly drained soils further suggests that water does not pond or persist on the surface. Overall, the Project's soils tend to retain and infiltrate precipitation rather than contributing to prolonged surface flow. This soil profile

supports the conclusion that any stormwater within the PS will quickly dissipate into the ground or evaporate, rather than creating wetlands or flowing off-site.

4.2 PS Hydrology

The PS lies in a desert climate on the northern flank of the San Bernardino Mountains, within the Mojave Desert region. Long-term climate data indicate mean annual precipitation on the order of 5 inches/year, with high interannual variability. Most rainfall occurs in the winter months (December–February) as well as occasional summer thunderstorms. Given this arid setting, extreme storm events are required to generate substantial runoff. According to National Oceanic and Atmospheric Administration (NOAA) Atlas 14 (Volume 6) precipitation frequency estimates for this area, even the largest storms deliver only a few inches of rain, as summarized below:

- ✓ 2-year, 24-hour storm: ~1.3 inches of rainfall (50% annual chance)
- ✓ 10-year, 24-hour storm: ~2.3 inches of rainfall (10% annual chance)
- ✓ 100-year, 24-hour storm: ~3.4 inches of rainfall (1% annual chance)

These figures illustrate that the 100-year extreme event would drop on the order of 3–3.5 inches in 24 hours, which is roughly two-thirds of the area's annual precipitation total. More frequent events (e.g. the 2-year storm of ~1.3") produce much smaller rainfall amounts. Peak intensities in summer storms can be high, but their cells are usually localized and short-lived. Given the PS's high infiltration rates (particularly in the sandy soils), much of the rainfall from sub-10-year events is expected to soak into the soil or evaporate before producing meaningful overland flow. Only the most intense cloudbursts or multi-day winter storms would generate enough runoff to form continuous flow paths, and even then, the dry, porous ground strongly attenuates such flows via infiltration. This runoff/infiltration dynamic is supported by regional data indicating rapid loss of stormwater into the desert alluvium due to high permeability and low antecedent moisture.

Hydrologically, the Project is within the larger Mojave River Basin. Surface drainage in this region is ephemeral. During rare large storms, local unnamed washes convey flow southwest toward Bell Mountain Wash, which in turn flows toward the Mojave River. The Mojave River is an intermittent desert river that is usually dry except during significant storm events or seasonal snowmelt flows. It ultimately terminates in dry lakes downstream (it is not a perennial, coastal-flowing river). Bell Mountain Wash itself is an ephemeral channel network that runs roughly southwest of the Project (paralleling Stoddard Wells Road) and drains into the Mojave River's floodplain. Importantly, no continuous OHWM traverse the PS. A review of USGS 7.5-minute Topographic Maps shows no blue-line streams within the Project boundaries. The Bell Mountain Wash is located off-site to the south and the PS drainage is limited. Field surveys noted only swales and braided rills. No evidence of surface flow crossing the PS boundary (e.g. onto Stoddard Wells Road to the south) was observed. This indicates that any runoff generated on the PS infiltrates or ponds locally rather than coalescing into off-site flows under normal hydrologic conditions.

The PS topography is characterized by very gentle slopes trending toward the southwest. Overall relief across the site is minimal (slope on the order of ~1–2%). Elevations range around 2,900 feet above MSL, with a slight decline toward Stoddard Wells Road and the Bell Mountain Wash corridor. Because of this gentle grade, when runoff occurs, it disperses broadly as sheet flow. These observations support the conclusion that stormwater on the PS does not regularly or significantly contribute to Bell Mountain Wash. Instead, any surface flow likely infiltrates before reaching the wash under normal conditions, given the high infiltration noted in the area.

Consistent with the on-site conditions, FEMA floodplain maps do not identify any 100-year flood zones within the PS (Figure 6). The Project is within Zone D (Areas of Undetermined Flood Hazard). Zone D

indicates no detailed analysis has been conducted. Effectively, the PS is regarded as an area of minimal known flood risk (it is outside the mapped 1% annual chance floodplains). The nearest mapped flood hazard areas are associated with Bell Mountain Wash and the Mojave River corridor farther to the west/south. The absence of a designated floodplain within the PS is consistent with the lack of a significant drainage signatures—there is no concentrated flow on the PS under normal circumstances that would warrant FEMA mapping. In summary, the hydrologic regime at PS is one of infrequent, short-duration storm runoff that is largely attenuated on-site by infiltration. The Project lies in a terminal, ephemeral watershed where water flows only immediately following storm events and does not reach traditionally navigable or relatively permanent waters in a sustained manner.

As part of this delineation, standard reference datasets such as the U.S. Fish & Wildlife Service's National Wetlands Inventory and the EPA/USGS surface hydrology database (e.g., the National Hydrography Dataset, depicted as Figures 7, 8 and 9) were reviewed and are included for completeness. Including these figures provides transparency, as consulting these industry-standard resources is expected during analysis and helps safeguard that no potential aquatic features are overlooked. However, it is important to note that these broad-scale datasets often contain outdated or unverified hydrologic signatures that do not reflect current on-the-ground conditions within the PS. In the present case, many mapped "features" and depicted flowlines do not align with field-verified PS conditions, largely due to hydrologic disconnection, infrastructure modifications, and the lag in updating public databases. Decades of development have severed natural drainage pathways in this region and the PS, so some features shown in the EPA's hydrology layer no longer carry flow through the PS despite appearing as lines on maps. This limitation of national datasets is well documented – for instance, the NHD can sometimes map streams that "do not exist or no longer exist on the ground." Accordingly, while Figures 7, 8 and 9 are included to document all reference information considered, the delineation's conclusions are based on current PS-specific observations and on-site field data rather than on potentially outdated map indications.

4.3 PS Vegetation

The PS supports a plant community typical of the high desert Mojave scrub ecosystem. The dominant vegetation is creosote bush scrub on sandy loam soils, with an open cover of shrubs and scattered Joshua trees on the landscape. During the spring 2025 surveys, the PS was noted to have low to moderate density of perennial shrubs, including species such as Creosote bush (*Larrea tridentata*), White bursage (*Ambrosia dumosa*), Cheesebush (*Hymenoclea salsola*), and Ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to arid conditions. Only a minimal cover of annual grasses (e.g. *Schismus* spp.) and forbs was present in 2025, reflecting low rainfall germination. Overall, the vegetation is characteristic of upland desert slopes and shows no specialization for wetlands or aquatic environments.

Creosote bush, for example, is an obligate upland species (National Wetland Plant List [NWPL] indicator status UPL in the Arid West region), meaning it almost never occurs in wetlands. Similarly, Joshua tree and white bursage are upland (or at most facultative-upland) species that thrive in dry, well-drained habitats. No obligate wetland (OBL) or facultative-wetland (FACW) plants were identified within the PS. In fact, virtually all species observed are FACU or UPL, indicating a <33% probability of occurrence in wetlands and a >67% probability in non-wetlands. The vegetation survey did not encounter any stands with a dominance of hydrophytic vegetation. There are no riparian trees, sedges/rushes, cattails, hydrophilic grasses, or wetland herbaceous species present. Even in the swales, the plant composition remains typical upland scrub (creosote, cheesebush, etc.), with no change in species or density or diversity that would suggest wetter conditions. This uniformity of upland vegetation across the PS means the hydrophytic vegetation criterion is not met anywhere.

Under the USACE 1987 Wetland Delineation Manual (Arid West Supplement, 2008), a plant community is considered hydrophytic if more than 50% of the dominant species are rated FAC, FACW, or OBL. Within the PS, 0% of the dominant species are FAC/FACW/OBL – all dominants are upland species. Therefore, no area of the PS comes close to meeting the hydrophytic vegetation threshold. Because the vegetation parameter is definitively upland, any potential wetland determination would fail on this basis alone. Moreover, the vegetation correlates with the absence of wetland hydrology – there is simply no persistent water source within the PS to support water-dependent plants. Overall, the plant assemblage is indicative of xeric upland conditions, not wetlands or other WOTUS. This provides a strong line of evidence (in conjunction with soils and hydrology) that no WOTUS are present.

4.4 Waters of the United States (WOTUS)

Based on the evidence above – including soil characteristics, hydrologic regime, and vegetation – the PS does not contain any WOTUS as defined under current federal law. The post-Sackett (2023) interpretation of WOTUS (following the U.S. Supreme Court decision in Sackett v. EPA, 143 S. Ct. 1322) significantly narrowed the scope of federal jurisdiction, especially over ephemeral features and isolated wetlands. In Sackett, the Court held that the Clean Water Act covers only those waters that are "relatively permanent, standing or continuously flowing," and wetlands with a "continuous surface connection" to such waters. By contrast, intermittent and ephemeral streams and swales – those that flow only in response to rainfall – do not fall within the scope of federal jurisdiction. The PS signatures are precisely of this ephemeral character. They are briefly active only during storm events and cease to flow shortly thereafter, leaving no continuous connection to any downstream navigable, or relatively permanent water.

To be considered jurisdictional, an ephemeral signature would need to at least feed into a relatively permanent water that ultimately connects to a traditional navigable water. In this case, the nearest major drainage is Bell Mountain Wash, an ephemeral wash located off-site to the south. Bell Mountain Wash in turn drains toward the Mojave River, which is an intermittent, non-perennial river. Notably, the Mojave River is not a traditional navigable water (it does not flow year-round and does not empty into an ocean), and even Bell Mountain Wash is dry most of the year. Under the Sackett standard, these features would likely not qualify as WOTUS absent a permanent flow regime. Crucially, the PS is hydrologically disconnected from even those ephemeral signatures. As documented, runoff from the PS does not reach Bell Mountain Wash in any regular or meaningful way under normal hydrologic conditions. There is no continuous or uninterrupted surface connection from the PS to Bell Mountain Wash – any stormwater that leaves the Project diffuses across the landscape and infiltrates before joining the wash under normal hydrologic conditions. In essence, the PS's swales are "isolated" ephemeral signatures, terminating in situ and lacking any surface outflow that could tie them into a downstream jurisdictional water. Therefore, under the current 2023 WOTUS regulations, none of these signatures are regulated as WOTUS.

In conclusion, under the current federal definition of "WOTUS," the Project contains no jurisdictional features. The onsite signatures are non-jurisdictional ephemeral upland swales and erosional features that do not contribute to downstream navigable or relatively permanent waters in any appreciable way. Wetlands are also not present within the PS. The findings herein provide a scientifically grounded justification – based on soils, hydrology, and vegetation data – that the PS should be classified as upland for the purposes of Clean Water Act jurisdiction, consistent with the Sackett 2023 precedent and current USACE regulations. This delineation represents NOREAS Inc.'s best professional judgment, utilizing the most current regulatory policies, scientific methods, and technical guidance from the USACE.

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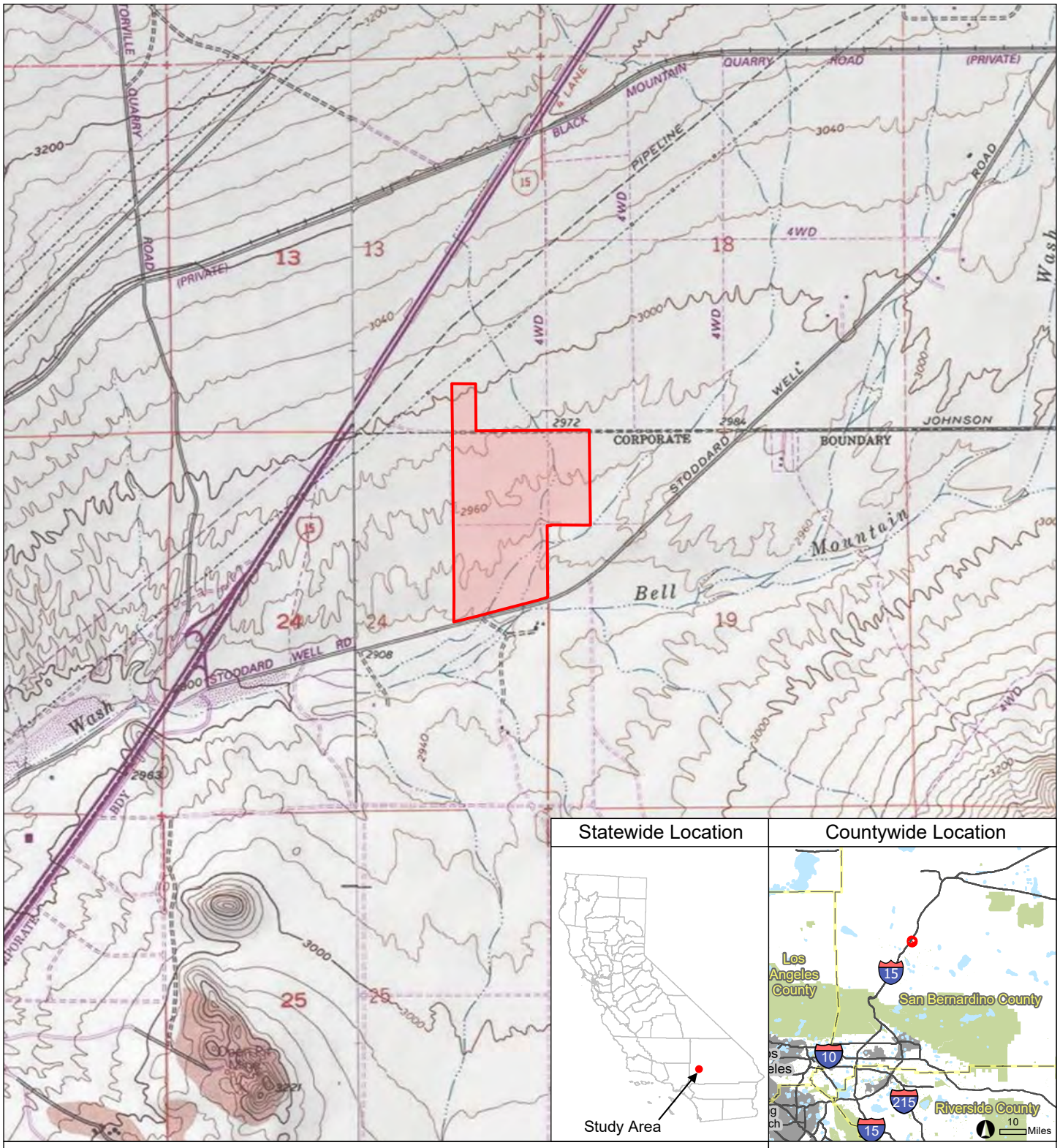
Appendix A Figures



The Project Site is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13,24, Township 6N, Range 3W, in Section 19;

Center coordinates (WGS 1984): 117.242°W 34.361°N

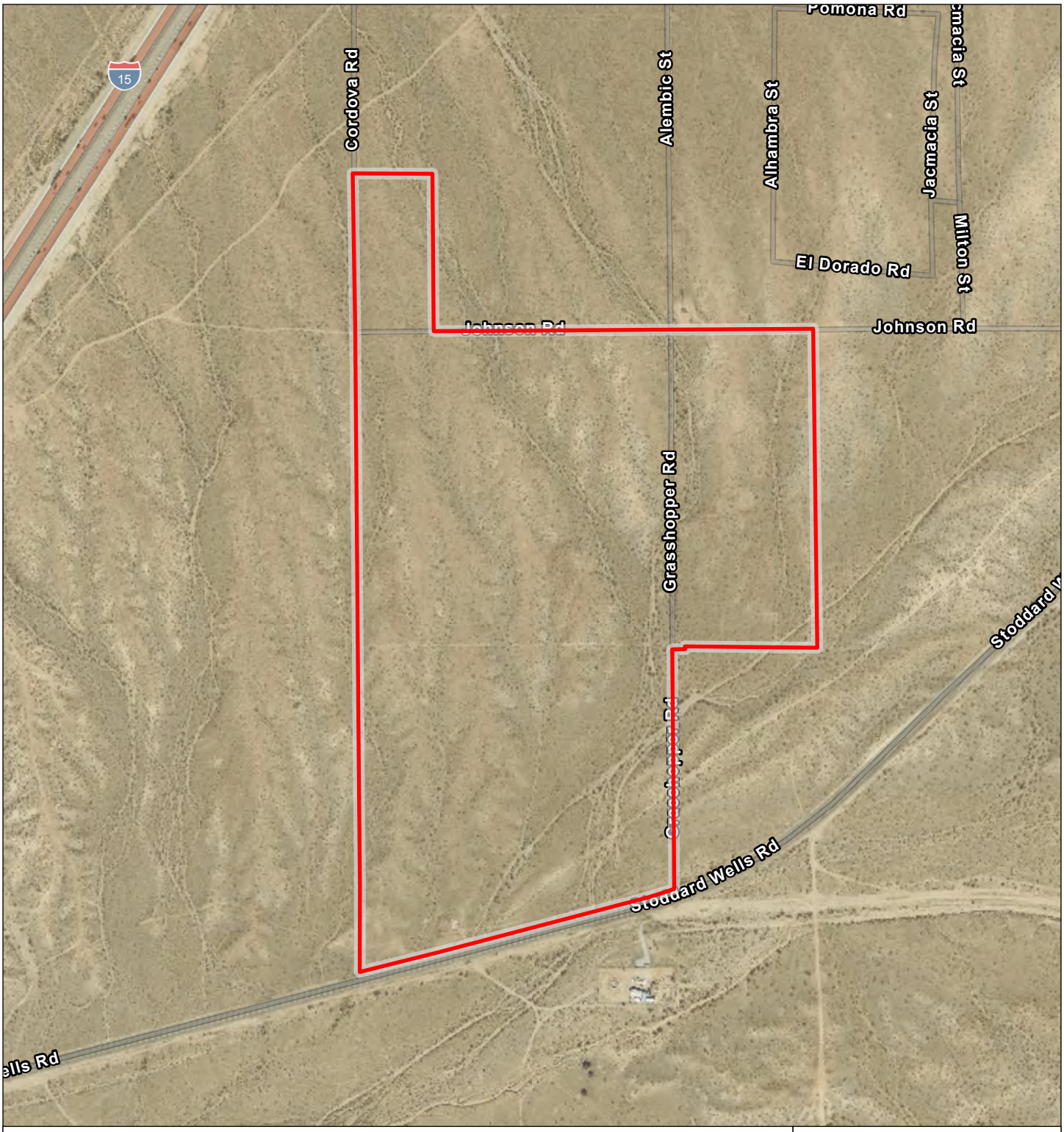
Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location



Project Site (102.66 ac)

0 300 600 Feet

1 inch = 600 feet

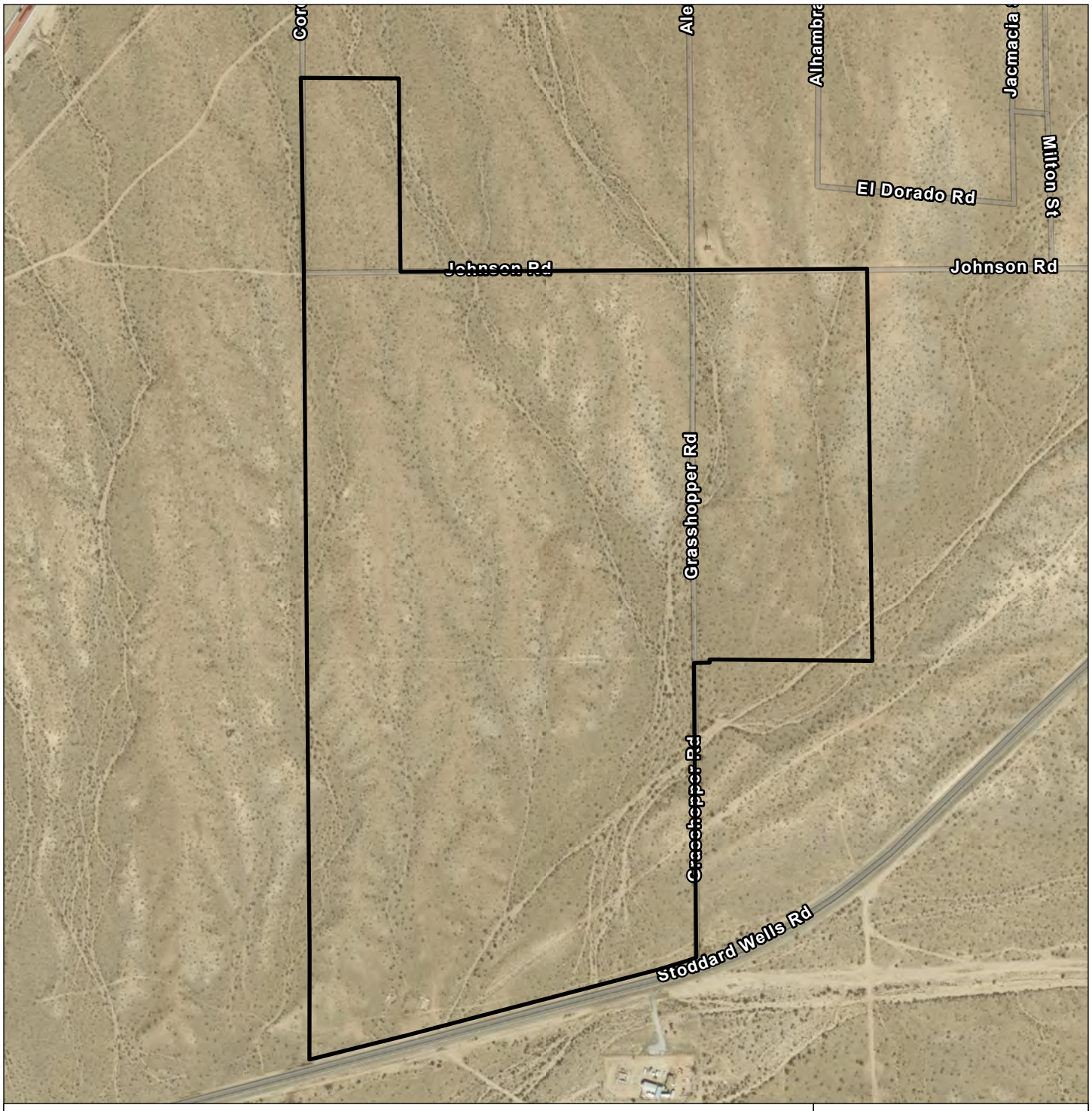
Data Sources:
- ESRI World Imagery accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 2. Site Vicinity



Project Site (102.66 ac)

No Waters of the U.S. within Project Site

0 250 500 Feet

1 inch = 500 feet

Data Sources:
- ESRI World Imagery accessed Oct 2025

Map Prepared: 10-25-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 3. Waters of the U.S.

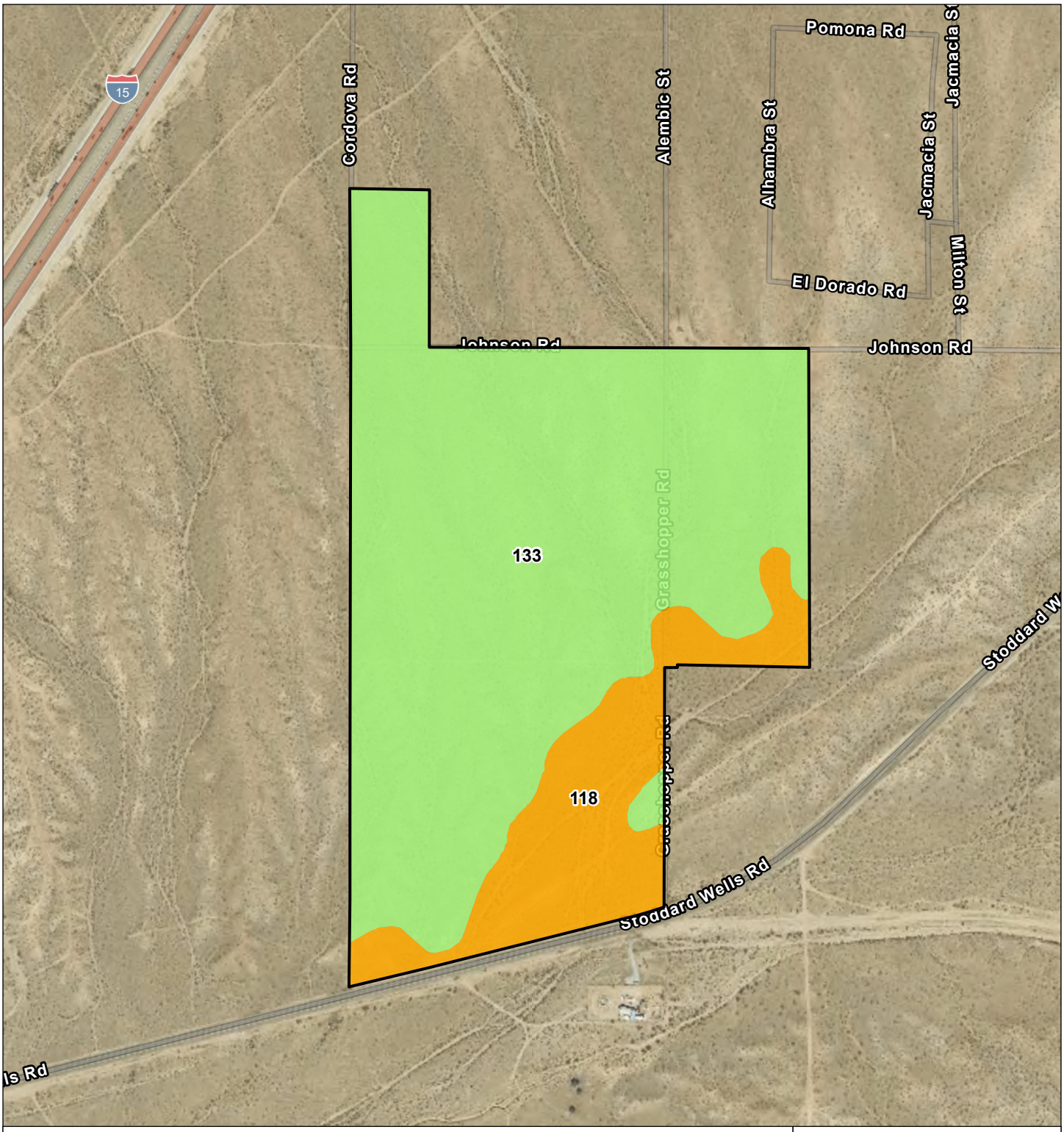
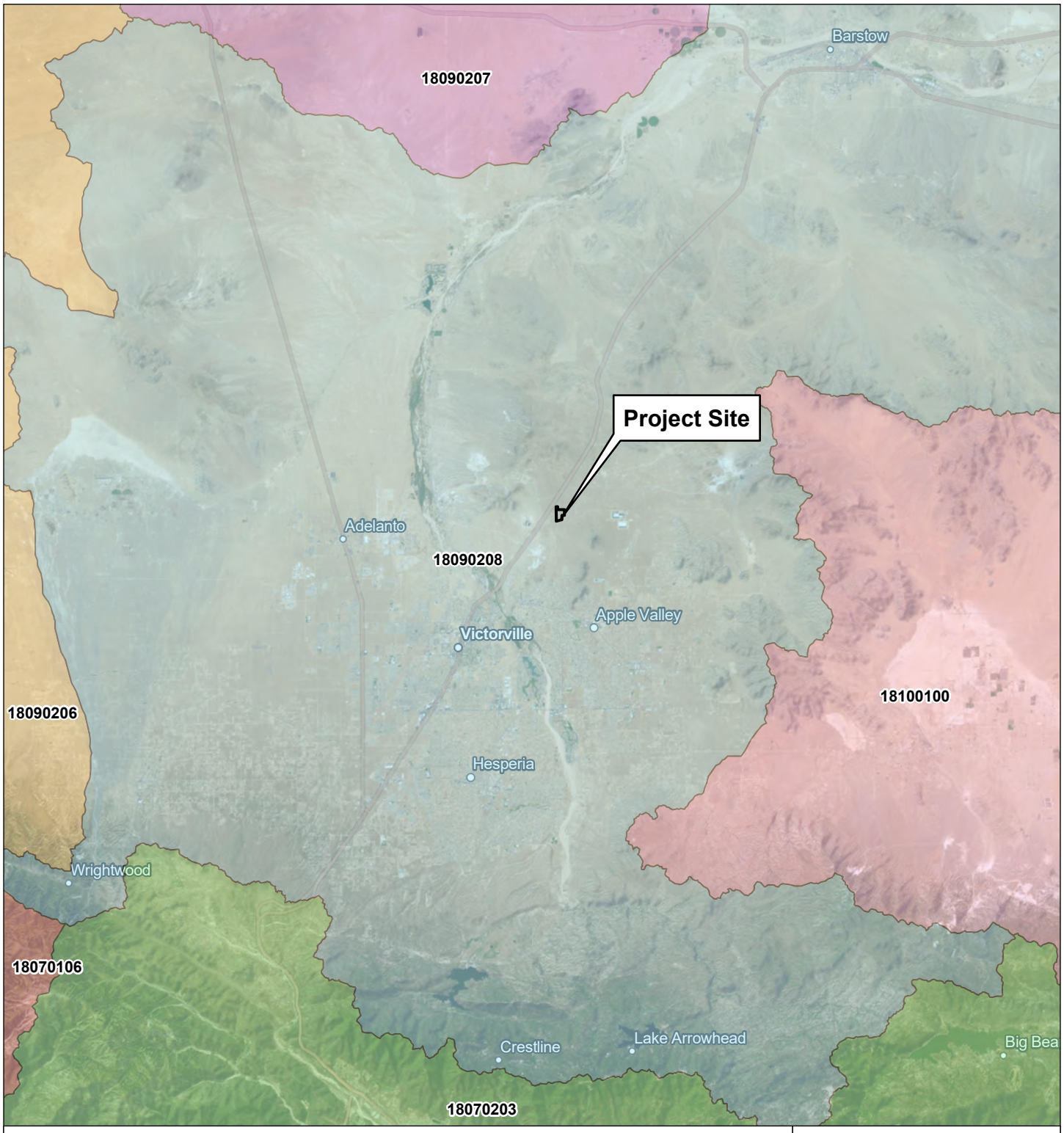


Figure 4. Soils Map



Project Site

Regional Watershed (HUC8)

Antelope-Fremont Valley (18090206)

Coyote-Cuddeback Lakes (18090207)

Mojave (18090208)

San Gabriel (18070106)

Santa Ana (18070203)

Southern Mojave (18100100)

0 3 6 Miles

1 inch = 6 miles

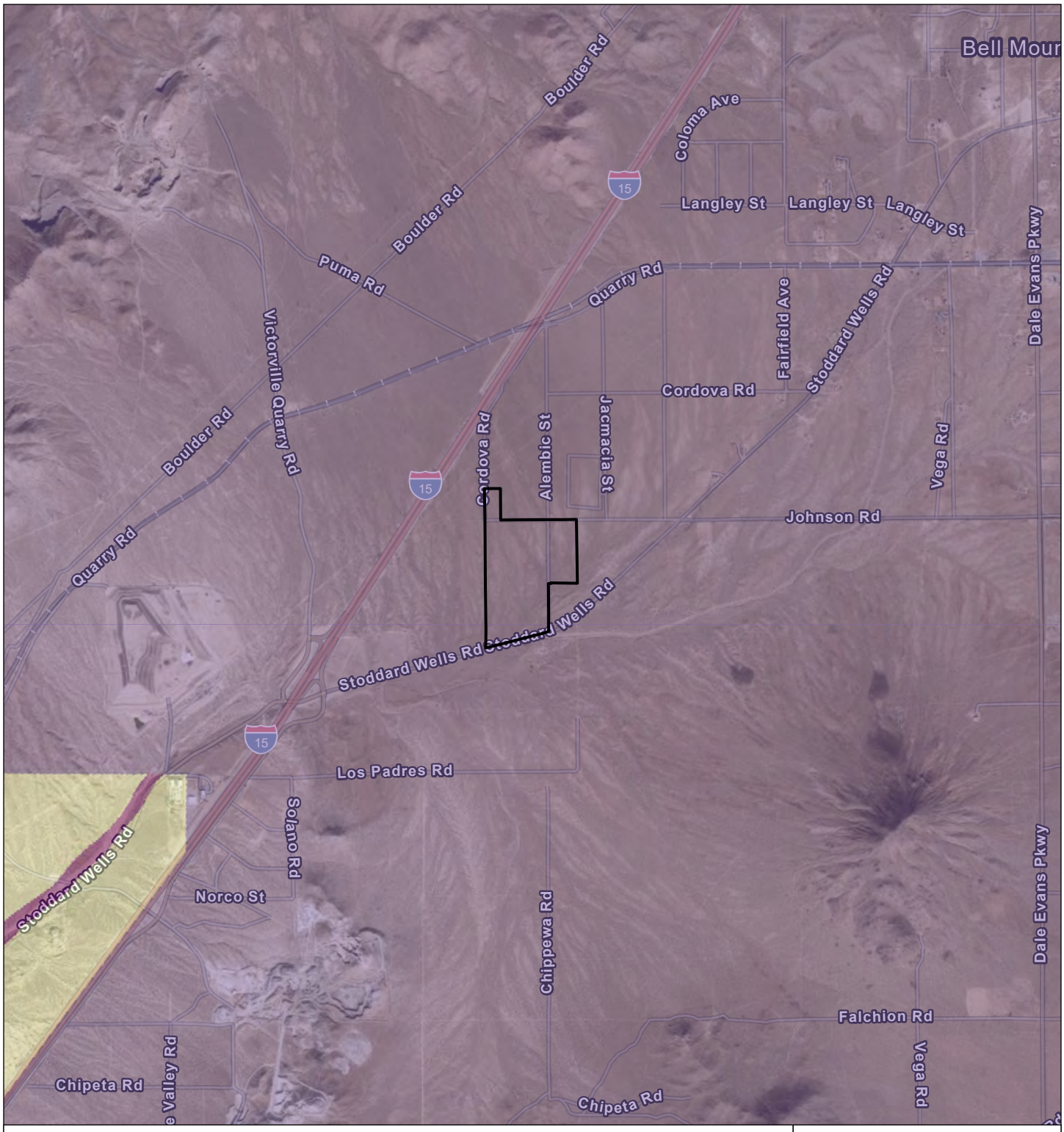
Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS-WBD accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 5. Regional Watershed Map



Project Site

FEMA Flood Hazard Zone

1% Annual Chance Flood Hazard

Area of Minimal Flood Hazard

Area of Undetermined Flood Hazard

0 1,500 3,000 Feet

1 inch = 3,000 feet

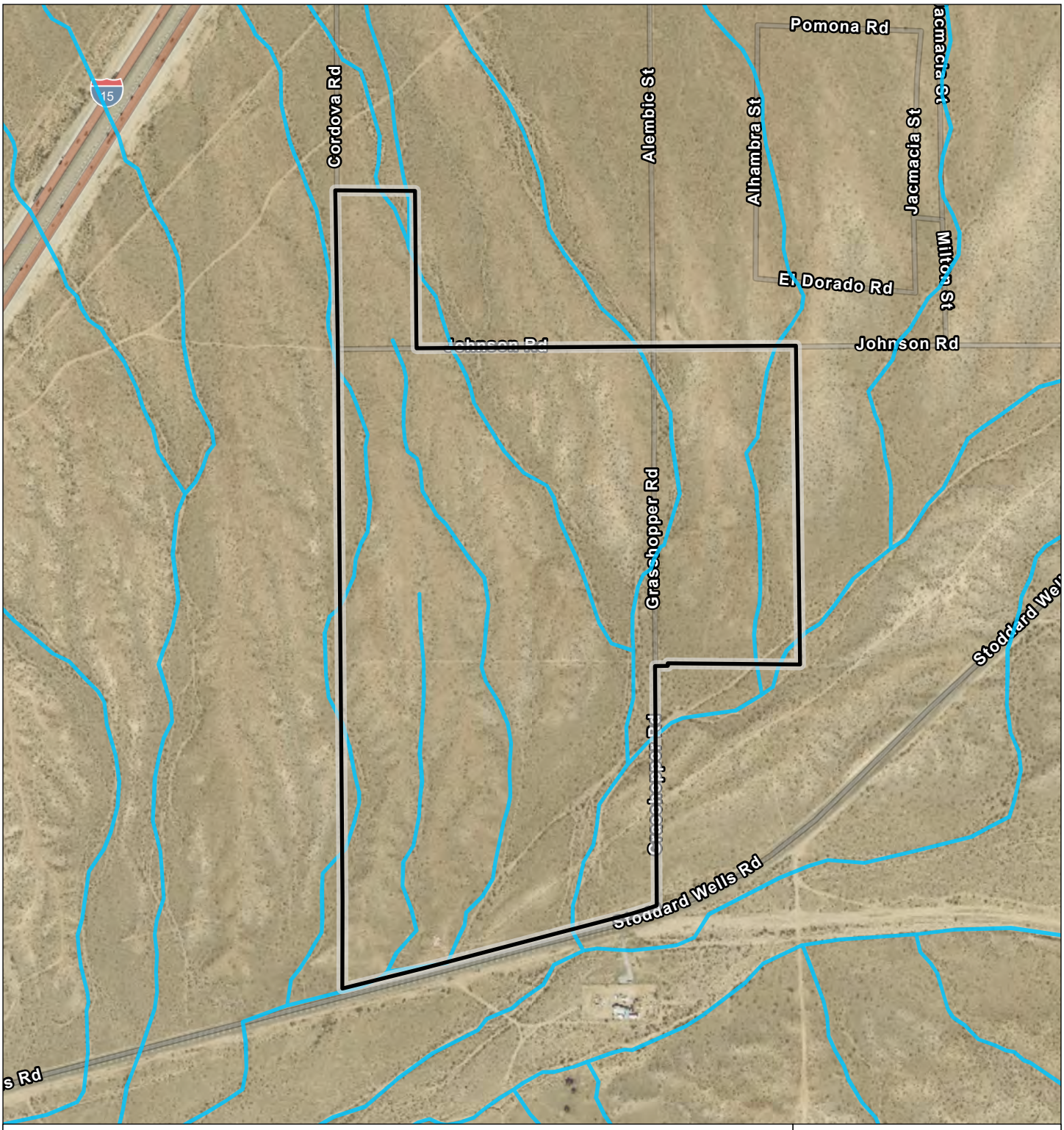
Data Sources:
- ESRI World Imagery accessed Oct 2025
- FEMA National Flood Hazard Layer accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 6. FEMA 100-Year Flood Zone



Project Site

USA Wetlands

River

0 300 600 Feet

1 inch = 600 feet

Data Sources:
- ESRI World Imagery accessed Oct 2025
- US Fish and Wildlife Service National Wetland Inventory accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 7. National Wetland Inventory

Project Site

Surface Water Flowlines and Flow Direction

0 0.75 1.5 Miles

1 inch = 1.5 miles

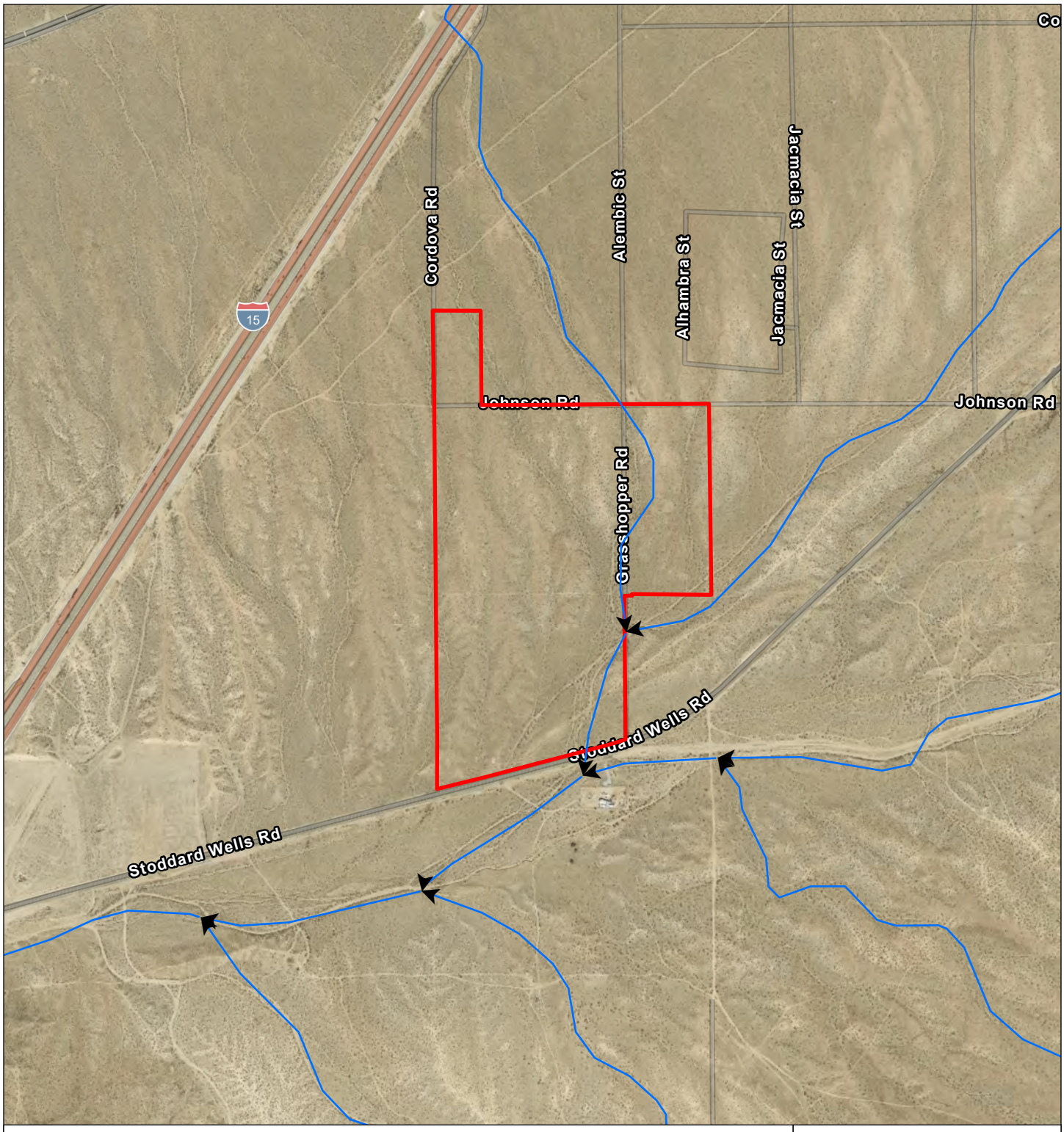
Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 8. Surface Water Map (Regional Area)



Project Site

Surface Water Flowlines and Flow Direction

0 0.1 0.2 Miles

1 inch = 0.2 mile

Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 9. Surface Water Map (Local Area)

Appendix B Photograph Log

PHOTOGRAPH LOG

	Photograph 1.
	Photograph 2.

PHOTOGRAPH LOG

	Photograph 3.
	Photograph 4.

PHOTOGRAPH LOG

	Photograph 5.
	Photograph 6.

APPENDIX K
DELINEATION OF WATERS OF THE STATE

APPLE VALLEY 84 PROJECT
Apple Valley, San Bernardino County, California
Delineation of Waters of the State

October 2025

Prepared By

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(949) 467-9116

Certification

The undersigned certify - under penalty of law, that they have personally examined and are familiar with the information submitted in this document and all attachments and that, based on an inquiry of those individuals immediately responsible for obtaining the information, believe that the information is true, accurate, and complete. The undersigned are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Prepared By: *Lenny Malo MS* Date: 10/28/25

Lenny Malo
Senior Project Manager & Regulatory Specialist
NOREAS, Inc.
16361 Scientific Way
Irvine, CA 92618

TABLE OF CONTENTS

COMMON ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APT	Antecedent Precipitation Tool
CDFW	California Department of Fish and Wildlife
CDFG	California Department of Fish and Game
CFGC	California Fish and Game Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
CWC	California Water Code
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning Systems
HUC	Hydrologic Unit Code
KMZ	Keyhole Markup Language Zipped
LRSs	Lake, River, or Streambed subject to Section 1600 of the California Fish and Game Code
MESA	Mapping Episodic Stream Activity Field Guide
NOREAS	NOREAS Inc.
NRCS	National Resources Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetlands Inventory
PS	Project Site
RWQCB	Regional Water Quality Control Board
SSURGO	Soil Survey Geographic Database USDA United States Department of Agriculture
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	Waters of the State
WDR	Waste Discharge Requirements

1.0 INTRODUCTION AND SUMMARY OF FINDINGS

This report presents a Waters of the State (WOTS) delineation for the Apple Valley 84 Project (Project) on approximately 102.66 acres of vacant land in Apple Valley, an incorporated town in the Victor Valley region of San Bernardino County, California (Figures 1 and 2). The Project Site (PS) lies at approximately 2,500–3,000 feet above mean sea level, within the United States Geologic Survey (USGS) Apple Valley North 7.5' Quadrangle. Its legal location corresponds to Sections 13 and 24 of Township 6 North, Range 4 West, and Section 19 of Township 6 North, Range 3 West (San Bernardino Meridian). This delineation was conducted to determine the extent of potential features within the PS that may be subject to regulation pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFGC) and Section 13260 of the California Water Code (CWC) - which regulate streams, wetlands, and other aquatic features under state jurisdiction.

The PS and surrounding area support a Mojave Desert scrub community that shows signs of past human disturbance. Major roads (Stoddard Wells Road and the Interstate 15 freeway corridor) border the Project. Within the PS, visible human impacts include off-highway vehicle tracks, scattered trash from illegal dumping, an old concrete foundation, and abandoned well casings. These features suggest past attempts at development or agriculture on the property. The ground surface shows braided swales, rills, and other erosional signatures that carry water only during or immediately after infrequent storm events. These ephemeral features trend southwest across the PS and dissipate within Project boundaries under normal hydrologic conditions. According to U.S. Department of Agriculture soil mapping, the PS is underlain by well-drained, non-hydric desert soils (e.g. Cajon-Arizo complex and Helendale-Bryman loamy sands). These coarse sandy loam soils have high infiltration capacity and negligible to low runoff potential. No hydric soil indicators were observed in the field. The absence of hydric soils indicates that prolonged soil saturation or wetland conditions have not occurred on the PS.

Apple Valley has an arid climate (roughly 5 inches of rain per year on average). Surface water flow is ephemeral and occurs only after rare heavy rains. Even a 100-year storm event (approximately 3.4 inches/24 hrs.) would only generate brief runoff, much of which would infiltrate into the porous ground or evaporate. The PS's gentle southwest slope causes any stormwater to quickly soak into the soil. There are no perennial or intermittent streams on the PS. No blue-line streams are mapped on USGS topographic maps, and no FEMA 100-year floodplains encompass the PS. Under normal circumstances, any swales within the PS do not continue as defined channels off-site but instead fade out before reaching the nearby Bell Mountain Wash. This confirms that under normal circumstances the PS's drainage is internally contained and discontinuous, with no sustained surface connection to any downstream permanent waters. The PS supports a creosote bush scrub plant community typical of upland Mojave Desert terrain. Dominant species observed include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*) and other drought-tolerant shrubs. The vegetation is sparse and xerophytic, with only occasional annual forbs and grasses after seasonal rains. In regulatory terms, all dominant plants are classified as Facultative Upland (FACU) or Upland (UPL) on the National Wetland Plant List, meaning they are rarely if ever found in wetlands. This lack of wetland vegetation indicates upland conditions across the entire PS.

This delineation has been completed using data acquired from current and historic imagery, hydrologic databases, analytic tools, physical on the ground analyses and measurements, and a review of the regulations, manuals, and guidance documentation created to identify features regulated under the aforementioned CFGC and CWC sections. A description of mapped WOTS within the PS and a discussion of their characteristics, and regulatory status is provided herein. This delineation was conducted following provisions of the CFGC, as well as guidance created by California Department of Fish and

Wildlife (CDFW) and the State Water Resources Control Board (e.g., its 2021 Wetland Definition and Procedures) and the Regional Water Quality Control Board.

In May 2023, and March 2025, subject matter experts surveyed the PS and its adjacent watershed for features potentially subject to CDFW and State Water Board jurisdiction, including streambeds, riparian corridors, and wetlands, using standard indicators of hydrology, soils, and vegetation. Historic and current aerial photography of the PS were also reviewed - prior to, and during the field assessments. Aerial photography was informative with deference to the state and function of land resources in both the present, and historic context. The United States Environmental Protection Agency (USEPA) WATERS GeoViewer tool also provided access to spatial data sets - such as interactive upstream and downstream search capabilities, to assist in determining the jurisdictional status of resources detected within the region. Additionally, the Federal Emergency Management Agency (FEMA) flood zone was reviewed, and the National Wetland Inventory (NWI) which is maintained by the U.S. Fish and Wildlife Service (USFWS). This was all done to support the identification of potential WOTS within the PS.

The PS encompasses 2.17-acres of ephemeral swale signatures (identified as Features 1 through 6). The six (6) features are delineated on Figure 3 and are entirely within the PS. No wetlands were identified within the PS. To that end, Features 1 through six (6) qualify as WOTS subject to regulation under CFGC Section 1600 and CWC Section 13260.

2.0 REGULATORY SETTING

2.1 Regulatory Review

The SWRQB and each of its nine Regional Water Quality Control Boards (RWQCB) regulate the discharge of waste (dredged or fill material) into WOTS. WOTS are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (CWC 13050[e]). This definition explicitly includes ephemeral streams and other non-perennial watercourses, even if they are not regulated under federal law.

When a project could impact waters outside of federal jurisdiction, the RWQCB has the authority under the Porter-Cologne Water Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act (CWA) Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

State Wetland Definition

The SWRQB Definition and Procedures define an area as wetland as follows:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are WOTS:

1. *Natural wetlands;*

2. *Wetlands created by modification of a surface water of the state[1]; and*

3. *Artificial wetlands[2] that meet any of the following criteria:*

    a. Approved by an agency as compensatory mitigation for impacts to other WOTS, except where the approving agency explicitly identifies the mitigation as being of limited duration;

    b. Specifically identified in a water quality control plan as a wetland or other water of the state;

    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

    d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not WOTS unless they also satisfy the criteria set forth in 2, 3a, or 3b):

[1] "Created by modification of a surface water of the state" means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

[2] Artificial wetlands are wetlands that result from human activity.

i. Industrial or municipal wastewater treatment or disposal,
ii. Settling of sediment,
iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WOTS. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

2.1.1 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the CFGC, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. In its most general sense, CFGC Sections 1600 (et seq.) establishes a fee-based process to safeguard that projects conducted in and around lakes, rivers, or streams do not adversely impact fish, aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife resources. Or, when adverse impacts cannot be avoided, compliance with the aforesaid CFGC Sections safeguards that adequate mitigation and/or compensation is provided.

While there is no definition for the term lake in the CFGC or associated regulations, the term stream, which includes creeks and rivers, is defined within Title 14, California Code of Regulations, Section 1.72:

- "A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and ***supports fish or other aquatic life***. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation." (Emphasis added.)

Sections 1600-1602 of the California Fish and Game Code Definition

1600. The Legislature finds and declares that the protection and conservation of the fish and wildlife resources of this state are of utmost public interest. Fish and wildlife are the property of the people and provide a major contribution to the economy of the state, as well as providing a significant part of the people's food supply; therefore, their conservation is a proper responsibility of the state.

This chapter is enacted to provide conservation for these resources.

1601. The following definitions apply to this chapter:

(a) "Agreement" means a lake or streambed alteration agreement.

(b) "Day" means calendar day.

(c) "Emergency" has the same definition as in Section 21060.3 of the Public Resources Code.

(d) "Entity" means any person, state or local governmental agency, or public utility that is subject to this chapter.

1602. (a) An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement ***where it may pass into any river, stream, or lake***, unless all of the following occur:

(1) The department receives written notification regarding the activity in the manner prescribed by the department. The notification shall include, but is not limited to, all of the following:

(A) A detailed description of the project's location and a map.

(B) The name, if any, of the river, stream, or lake affected.

(C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.

(D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(E) A copy of any other applicable local, state, or federal permit or agreement already issued.

(F) Any other information required by the department.

(2) The department determines the notification is complete in accordance with Chapter 4.5 (commencing with Section 65920) of Division 1 of Title 7 of the Government Code, irrespective of whether the activity constitutes a development project for the purposes of that chapter.

(3) The entity pays the applicable fees, pursuant to Section 1609.

(4) One of the following occurs:

(A)

(i) The department informs the entity, in writing, that the activity will not substantially adversely affect an existing fish or wildlife resource, and that the entity may commence the activity without an agreement, if the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(ii) Each region of the department shall log the notifications of activities where no agreement is required. The log shall list the date the notification was received by the department, a brief description of the proposed activity, and the location of the activity. Each item shall remain on the log for one year. Upon written request by any person, a regional office shall send the log to that person monthly for one year. A request made pursuant to this clause may be renewed annually.

(B) The department determines that the activity may substantially adversely affect an existing fish or wildlife resource and issues a final agreement to the entity that includes reasonable measures necessary to protect the resource, and the entity conducts the activity in accordance with the agreement.

(C) A panel of arbitrators issues a final agreement to the entity in accordance with subdivision (b) of Section 1603, and the entity conducts the activity in accordance with the agreement.

(D) The department does not issue a draft agreement to the entity within 60 days from the date notification is complete, and the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(b) (1) If an activity involves the routine maintenance and operation of water supply, drainage, flood control, or waste treatment and disposal facilities, notice to and agreement with the department shall not be required after the initial notification and agreement, unless the department determines either of the following:

(A) The work described in the agreement has substantially changed.

(B) Conditions affecting fish and wildlife resources have substantially changed, and those

resources are adversely affected by the activity conducted under the agreement.

(2) This subdivision applies only if notice to, and agreement with, the department was attained prior to January 1, 1977, and the department has been provided a copy of the agreement or other proof of the existence of the agreement that satisfies the department, if requested.

(c) It is unlawful for any person to violate this chapter.

3.0 METHODS

Documentation relevant to the PS and surrounding area was reviewed using the methods below.

3.1 Literature Reviews

Prior to conducting fieldwork, the following information was reviewed to determine watershed characteristics, locations and types of aquatic resources that may be present within the PS:

- Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2025a) (Figure 4);
- Natural Resource Conservation Service, Watershed Boundary Dataset (USDA-NRCS 2025b) (Figure 5);
- Federal Emergency Management Agency (FEMA 2025) (Figure 6);
- NWI maintained by the US Fish and Wildlife Service (USFWS 2025) (Figure 7);
- USGS 7.5-minute Topographic Map, California, (USGS 1987);
- 2025 color aerial photographs (Bing Maps 2025);
- Google Earth version 5.2.1.1588 (March 2025);
- Environmental Protection Agency Enviromapper for Water (USEPA 2025a);
- U.S. Environmental Protection Agency (USEPA) (2025b) WATERS GeoViewer Tool (epa.maps.arcgis.com/apps/webappviewer) (Figures 8 and 9);
- USEPA Antecedent Precipitation Tool (APT) (2025c) (epa.gov/wotus/antecedent-precipitation-tool-apt); and
- Western Regional Climate Center Data California Weather Station (WRCC 2025).

The above documents were reviewed. Subject matter experts conducted field assessments of the PS and its surrounding watershed in May 2023, and March 2025 to evaluate the presence of WOTS—including streambeds, riparian habitats, and wetlands—based on indicators such as hydrophytic vegetation, hydric soils, and evidence of surface hydrology. The intent of this assessment was to determine where water may flow, or may not flow during ordinary hydrologic conditions - or terminate.

3.1.1 Aerial Photography

Historic and current aerial photography of the PS were reviewed prior to and during the field assessments. Aerial photography was used to view land resources in both the present and historic context. Inundation and vegetative signatures on aerial images can imply the presence - or absence, of lakes, rivers, or streambed systems within a discrete location.

3.1.2 U.S. Fish and Wildlife Service National Wetland Inventory Data and Environmental Protection Agency WATERS GeoViewer

The USEPA WATERS GeoViewer tool provided access to spatial data sets (Appendix A, Figures 8 and 9) - such as interactive Upstream/Downstream search capabilities, and interactive watersheds, to assist in determining the jurisdictional status of resources detected within the PS (epa.maps.arcgis.com/apps/webappviewer). Additionally, the FEMA flood zone is depicted in Figure 6. Furthermore, the NWI – which is maintained by the USFWS, was reviewed to support the identification of potential jurisdictional resources within the PS. However, this database (i.e., the NWI) is not used for regulatory jurisdictional review, and the PS has not been ground-truthed by NWI, as it depicts marsh habitat where none exists.

3.1.3 Antecedent Precipitation Tool

The APT was also utilized to determine whether field observations are representative of typical climatic conditions (i.e., those that have been experienced over the past thirty years). This tool is informative when assessing whether certain field conditions are observed during typical, as opposed to atypical rainfall cycles. The APT queries data from weather stations that are located within a 30-mile radius from the Project.

3.1.4 Topography

USGS topographic maps were reviewed as well (Figure 1). These maps tend to illustrate elevation contours, drainage patterns, and hydrography within the PS. USGS 7.5-Minute Topographic Quadrangle Pap "Apple Valley North" was evaluated to facilitate identification of potential drainage features within the PS - as indicated from topographic changes, blue-line features, or visible drainage patterns in order to characterized features.

3.2 Procedures and Field Data Collection Techniques

The delineation defined areas within the PS subject to regulation under Section 1600 (et seq.) of the CFGC and Section 13260 of the CWC. Potential WOTS were delineated in the field with a handheld Global Positioning System (GPS) receiver. The surface area of each feature was then calculated within a Geographic Information System (GIS) to determine total jurisdictional area within the PS. KMZ (Keyhole Markup Language Zipped) files and GIS/ESRI shapefiles are available for all mapped resources, upon request, as aquatic resource boundaries were not permanently flagged or demarked within the PS at the time of delineation in 2025.

The field delineation for WOTS was conducted within the PS using a combination of on the ground quantification, and remote sensing with on the ground verification via pedestrian surveys in May 2023, and March 2025. With respect to suspected WOTS; they were assessed in the field for the presence of definable streambeds (i.e., having a bed, bank, and channel) and any associated riparian habitat. Streambeds and suspected riparian habitats were also evaluated using the CFGC Section 1600 (et seq.), direction described in *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607* (ESD-CDFG 2025) and the recommendations detailed within the Mesa Field Guide: Mapping Episodic Stream Activity (MESA) (Brady and Vyverberg 2014).

Accordingly, CFGC Section 1600 (et seq.) jurisdiction is presumed to extend to the following features:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects, and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated as natural waterways.
- Artificial waterways without the attributes of natural waterways should generally not be subject to CFGC provisions.

In this context, WOTS include rivers, streams, lakes, and riparian vegetation associated with these features. A dominance of hydrophytic vegetation, where associated with a stream channel, was used to determine regulated riparian areas, where appropriate. Streambeds and other waterways were also delineated using the Cowan and Wallace classification system— a framework used to classify environments based on observed species distribution patterns —and environmental variables such as

elevation, climate, and vegetation. Additionally, WOTS were delineated based on watercourse characteristics present in the field, which include surface flow, sediment transportation and sorting, physical indicators of channel forms, channel morphology, and riparian habitat associated with a streambed**.**

4.0 RESULTS

Features 1 through 6 are within a combined 2.17-acre area. The six (6) features are delineated on Figure 3, and are entirely within the PS. No wetlands were identified within the PS itself. To that end, Features 1 through 6 qualify as WOTS subject to regulation under CFGC Section 1600 and CWC Section 13260. The ground surface shows braided swales, rills, and other erosional signatures that carry water only during or immediately after infrequent storm events. These ephemeral swales trend southwest across the PS, and dissipate within Project boundaries under normal hydrologic conditions.

4.1 PS Soils

The USDA Natural Resources Conservation Service (NRCS) Soil Survey (SSURGO) map of the PS, shows two mapped soil units (118 & 133) within Project boundaries (Figure 4). Both soil types are well-drained, and non-hydric desert soils typical of the area.

- Cajon-Arizo complex, 2–15% slopes (Map Unit 118) – Very deep, excessively drained sandy alluvium derived from granitic rock. This soil is classified in Hydrologic Soil Group A (high infiltration, low runoff potential). It has rapid permeability and negligible surface runoff under most conditions. The Cajon series, for example, is described as "somewhat excessively drained; negligible to low runoff; rapid permeability." No seasonally high-water table or hydric indicators are associated with these soils.

- Helendale-Bryman loamy sands, 2–5% slopes (Map Unit 133) – Deep well-drained loamy sand on gentle fan terraces. This unit has a higher fine fraction, placing it in Hydrologic Soil Group C (moderate to slow infiltration, higher runoff potential than Group A). It is still dry and porous, but can generate some runoff in larger storms. Like the Cajon-Arizo soils, it is not hydric and has no anoxic saturation layer.

These two soil types cover the entire PS and the surrounding area. Neither soil unit is listed as hydric in the NRCS database, meaning they do not develop the prolonged saturation or anaerobic conditions needed for hydric soil indicators. Field observations confirmed no hydric soil characteristics (e.g. no low-chroma gleying, mottles, or sulfidic odors) in test pits excavated in representative areas. The soil profiles consisted of dry, oxidized sandy loams and sands with high percolation capacity. Subsoil layers were uniformly coarse-textured and lacked any restrictive clay or hardpan that would perch water. These findings indicate an absence of hydric soils on site, consistent with the soil map data.

From a runoff standpoint, the PS's soils confer a high infiltration capacity. The predominance of coarse-textured sands (especially the Cajon and similar alluvium) allows rainfall to infiltrate rapidly, minimizing surface runoff generation in all but the most intense storms. The NRCS classifies the Cajon-Arizo complex as having "negligible to low" runoff potential. Even the loamy sands of the Helendale-Bryman unit have relatively good permeability given the arid climate. The lack of any mapped hydric or poorly drained soils further suggests that water does not pond or persist on the surface. Overall, the Project's soils tend to retain and infiltrate precipitation rather than contributing to prolonged surface flow. This soil profile supports the conclusion that any stormwater within the PS will quickly dissipate into the ground or evaporate, rather than creating wetlands or flowing off-site.

4.2 PS Hydrology

The PS lies in a desert climate on the northern flank of the San Bernardino Mountains, within the Mojave Desert region. Long-term climate data indicate mean annual precipitation on the order of 5 inches/year, with high interannual variability. Most rainfall occurs in the winter months (December–February) as well as occasional summer thunderstorms. Given this arid setting, extreme storm events

are required to generate substantial runoff. According to National Oceanic and Atmospheric Administration (NOAA) Atlas 14 (Volume 6) precipitation frequency estimates for this area, even the largest storms deliver only a few inches of rain, as summarized below:

- ✓ 2-year, 24-hour storm: ~1.3 inches of rainfall (50% annual chance)
- ✓ 10-year, 24-hour storm: ~2.3 inches of rainfall (10% annual chance)
- ✓ 100-year, 24-hour storm: ~3.4 inches of rainfall (1% annual chance)

These figures illustrate that the 100-year extreme event would drop on the order of 3–3.5 inches in 24 hours, which is roughly two-thirds of the area's annual precipitation total. More frequent events (e.g. the 2-year storm of ~1.3") produce much smaller rainfall amounts. Peak intensities in summer storms can be high, but their cells are usually localized and short-lived. Given the PS's high infiltration rates (particularly in the sandy soils), much of the rainfall from sub-10-year events is expected to soak into the soil or evaporate before producing meaningful overland flow. Only the most intense cloudbursts or multi-day winter storms would generate enough runoff to form continuous flow paths, and even then, the dry, porous ground strongly attenuates such flows via infiltration. This runoff/infiltration dynamic is supported by regional data indicating rapid loss of stormwater into the desert alluvium due to high permeability and low antecedent moisture.

Hydrologically, the Project is within the larger Mojave River Basin. Surface drainage in this region is ephemeral. During rare large storms, local unnamed washes convey flow southwest toward Bell Mountain Wash, which in turn flows toward the Mojave River. The Mojave River is an intermittent desert river that is usually dry except during significant storm events or seasonal snowmelt flows. It ultimately terminates in dry lakes downstream (it is not a perennial, coastal-flowing river). Bell Mountain Wash itself is an ephemeral channel network that runs roughly southwest of the Project (paralleling Stoddard Wells Road) and drains into the Mojave River's floodplain. Importantly, no continuous OHWM traverse the PS. A review of USGS 7.5-minute Topographic Maps shows no blue-line streams within the Project boundaries. The Bell Mountain Wash is located off-site to the south and the PS drainage is limited. Field surveys noted only swales and braided rills. No evidence of surface flow crossing the PS boundary (e.g. onto Stoddard Wells Road to the south) was observed. This indicates that any runoff generated on the PS infiltrates or ponds locally rather than coalescing into off-site flows under normal hydrologic conditions.

The PS topography is characterized by very gentle slopes trending toward the southwest. Overall relief across the site is minimal (slope on the order of ~1–2%). Elevations range around 2,900 feet above MSL, with a slight decline toward Stoddard Wells Road and the Bell Mountain Wash corridor. These observations support the conclusion that stormwater on the PS does not regularly or significantly contribute to Bell Mountain Wash. Instead, any surface flow likely infiltrates before reaching the wash under normal conditions, given the high infiltration noted in the area.

Consistent with the on-site conditions, FEMA floodplain maps do not identify any 100-year flood zones within the PS (Figure 6). The Project is within Zone D (Areas of Undetermined Flood Hazard). Zone D indicates no detailed analysis has been conducted. Effectively, the PS is regarded as an area of minimal known flood risk (it is outside the mapped 1% annual chance floodplains). The nearest mapped flood hazard areas are associated with Bell Mountain Wash and the Mojave River corridor farther to the west/south. The absence of a designated floodplain within the PS is consistent with the lack of a significant drainage signatures—there is no concentrated flow on the PS under normal circumstances that would warrant FEMA mapping. In summary, the hydrologic regime at PS is one of infrequent, short-duration storm runoff that is largely attenuated on-site by infiltration. The Project lies in a terminal,

ephemeral watershed where water flows only immediately following storm events and does not reach traditionally navigable or relatively permanent waters in a sustained manner.

As part of this delineation, standard reference datasets such as the U.S. Fish & Wildlife Service's National Wetlands Inventory and the EPA/USGS surface hydrology database (e.g., the National Hydrography Dataset, depicted as Figures 7, 8 and 9) were reviewed and are included for completeness. Including these figures provides transparency, as consulting these industry-standard resources is expected during analysis and helps safeguard that no potential aquatic features are overlooked. However, it is important to note that these broad-scale datasets often contain outdated or unverified hydrologic signatures that do not reflect current on-the-ground conditions within the PS. In the present case, many mapped "features" and depicted flowlines do not align with field-verified PS conditions, largely due to hydrologic disconnection, infrastructure modifications, and the lag in updating public databases. Decades of development have severed natural drainage pathways in this region and the PS, so some features shown in the EPA's hydrology layer no longer carry flow through the PS despite appearing as lines on maps. This limitation of national datasets is well documented – for instance, the NHD can sometimes map streams that "do not exist or no longer exist on the ground." Accordingly, while Figures 7, 8 and 9 are included to document all reference information considered, the delineation's conclusions are based on current PS-specific observations and on-site field data rather than on potentially outdated map indications.

4.3 PS Vegetation

The PS supports a plant community typical of the high desert Mojave scrub ecosystem. The dominant vegetation is creosote bush scrub on sandy loam soils, with an open cover of shrubs on the landscape. During the spring 2025 surveys, the PS was noted to have low to moderate density of perennial shrubs, including species such as Creosote bush (*Larrea tridentata*), White bursage (*Ambrosia dumosa*), Cheesebush (*Hymenoclea salsola*), and Ephedra (*Ephedra nevadensis*). The herbaceous understory is sparse due to arid conditions. Only a minimal cover of annual grasses (e.g. *Schismus* spp.) and forbs was present in 2025. Overall, the vegetation is characteristic of upland desert slopes and shows no specialization for wetlands or aquatic environments.

Creosote bush, for example, is an obligate upland species (National Wetland Plant List [NWPL] indicator status UPL in the Arid West region), meaning it almost never occurs in wetlands. Similarly, Joshua tree and white bursage are upland (or at most facultative-upland) species that thrive in dry, well-drained habitats. No obligate wetland (OBL) or facultative-wetland (FACW) plants were identified within the PS. In fact, virtually all species observed are FACU or UPL, indicating a <33% probability of occurrence in wetlands and a >67% probability in non-wetlands. The vegetation survey did not encounter any stands with a dominance of hydrophytic vegetation. There are no riparian trees, sedges/rushes, cattails, hydrophilic grasses, or wetland herbaceous species present. Even in the swales, the plant composition remains typical upland scrub (creosote, cheesebush, etc.), with no change in species or density or diversity that would suggest wetter conditions. This uniformity of upland vegetation across the PS means the hydrophytic vegetation criterion is not met anywhere.

Moreover, there is simply no persistent water source within the PS to support water-dependent plants and riparian species. Overall, the plant assemblage is indicative of xeric upland conditions

4.4 Waters of the States (WOTS)

Six ephemeral drainages (identified as Features 1 thought 6) were observed within the PS. Features 1 through 6 are within a combined 2.17-acre area (Figure 3). No potential wetlands were identified. Features 1 through 6 qualify as a WOTS subject to regulation under CFGC Section 1600 and CWC Section 13260. Table 1 provides a summary of the six features evaluated.

Table 1. Summary of Features Evaluated[3]

Feature Identifier	Status	Rationale	Total PS (Linear Feet)	Total PS (Acres)
1	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	2,231	0.31
2	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	2,519	0.92
3	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	1,556	0.13
4	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	4,481	0.69
5	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	1,922	0.08
6	WOTS	Feature possesses a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events.	1,303	0.03

To calculate the acreage for Features 1 through 6, the delineation used sub-meter accurate GPS receivers to walk and map their full extent. The features boundaries were defined in the field using multiple lines of evidence, including primary indicators (e.g., bed-and-bank morphology and scour marks) and secondary indicators (e.g., sediment deposits, changes in soil texture, shifts in vegetation patterns, and other remnant hydrologic cues that mark past flow). The mapped boundary of the signatures were then converted to a polygon within a geographic information system, and the total jurisdictional acreage was calculated from each polygon. This approach provides a precise, field-verified measurement of the areas subject to WOTS jurisdiction. Features 1 through 6 are acknowledged as WOTS by definition – as they possess a discernible (if intermittent) bed and bank and can convey stormwater during rare, long duration, intense rainfall events. In other words, by operation of law these ephemeral swales and erosional features meet the basic criteria for jurisdiction under California Fish and Game Code §1600 (streambed alteration) and the Porter-Cologne Water Quality Control Act.

Approximately 2.17-acres of ephemeral swales (six features) were delineated within the PS as WOTS pursuant to California Water Code §13260 (Porter-Cologne Act) and Fish and Game Code §1600 et seq. No wetlands are present within the PS. Any proposed impacts to these State-jurisdictional features will need to be coordinated with the RWQCB and CDFW, ensuring that the proper approvals (e.g., WDRs and an Agreement) are obtained and that avoidance, minimization, or compensatory mitigation measures are implemented as necessary. The presence of State jurisdiction, coupled with the functional considerations discussed, supports a defensible conclusion that even disturbed or low-functioning ephemeral swales are afforded protection under California law. This delineation represents NOREAS Inc.'s best professional judgment, utilizing the most current regulatory policies, scientific methods, and technical guidance from CDFW and RWQCB. Appendix A, Figure 3, provides a spatial representation of WOTS within the PS.

[3] Due to rounding error, the sum of individual acreages differs from the subtotals.

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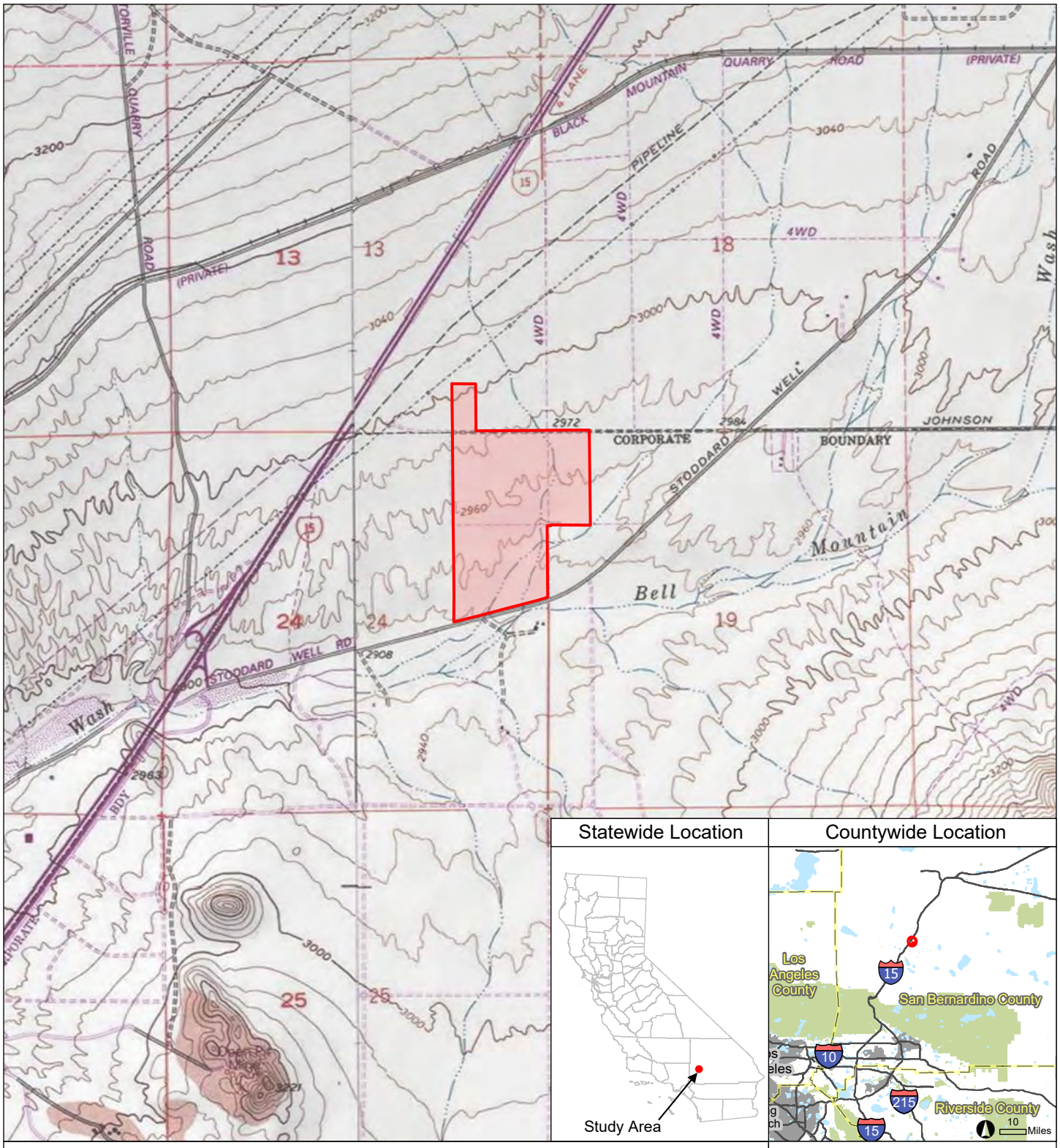
Appendix A Figures



The Project Site is located in San Bernardino County on the Apple Valley North USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 6N, Range 4W, in Sections 13,24, Township 6N, Range 3W, in Section 19;

Center coordinates (WGS 1984): 117.242°W 34.361°N

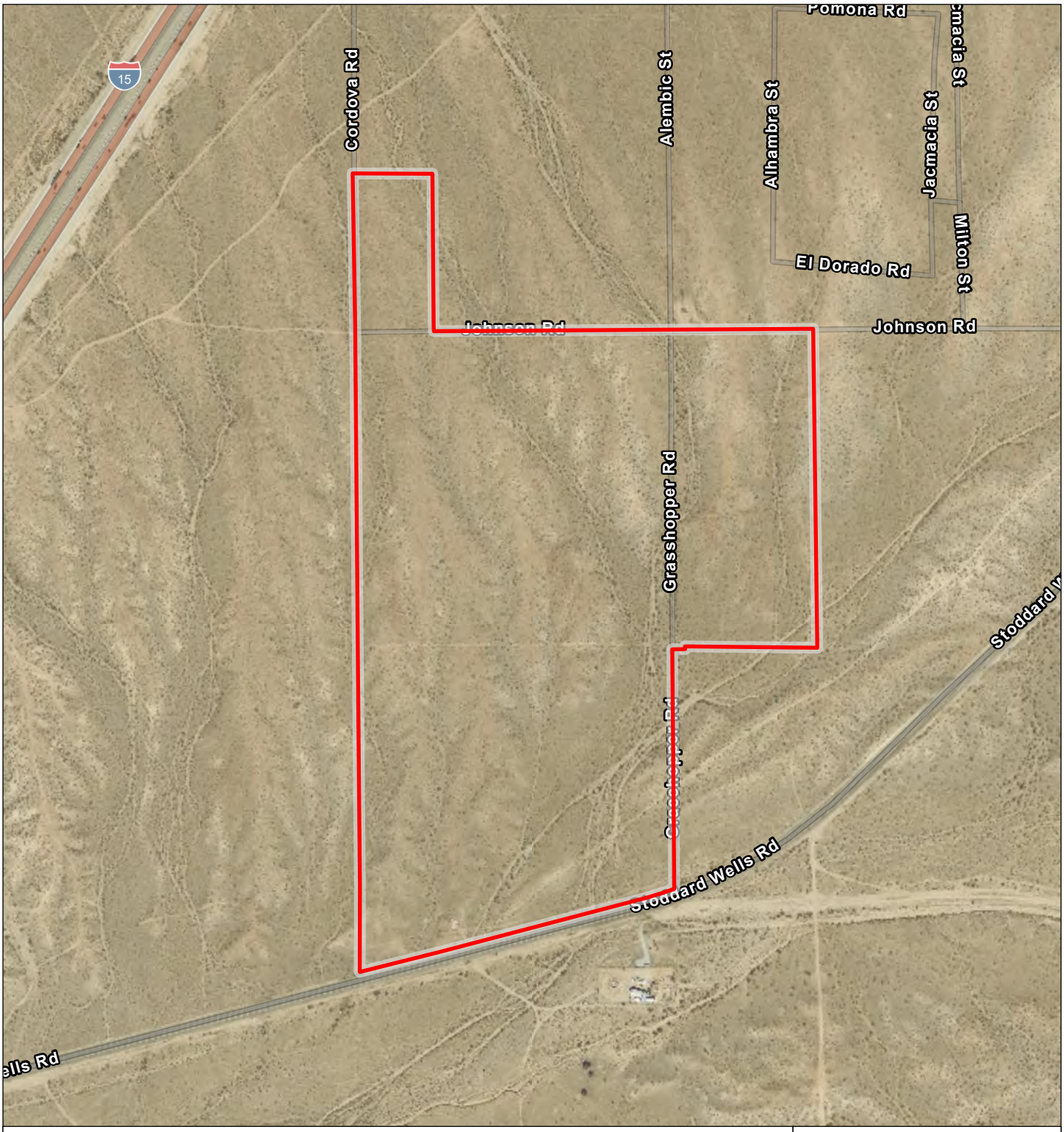
Data Sources:
- California Public Land Survey System 2020
- USGS 7.5-minute quadrangle map
- ESRI US Topo Maps accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 1. Regional Location



Project Site (102.66 ac)

0 300 600 Feet

1 inch = 600 feet

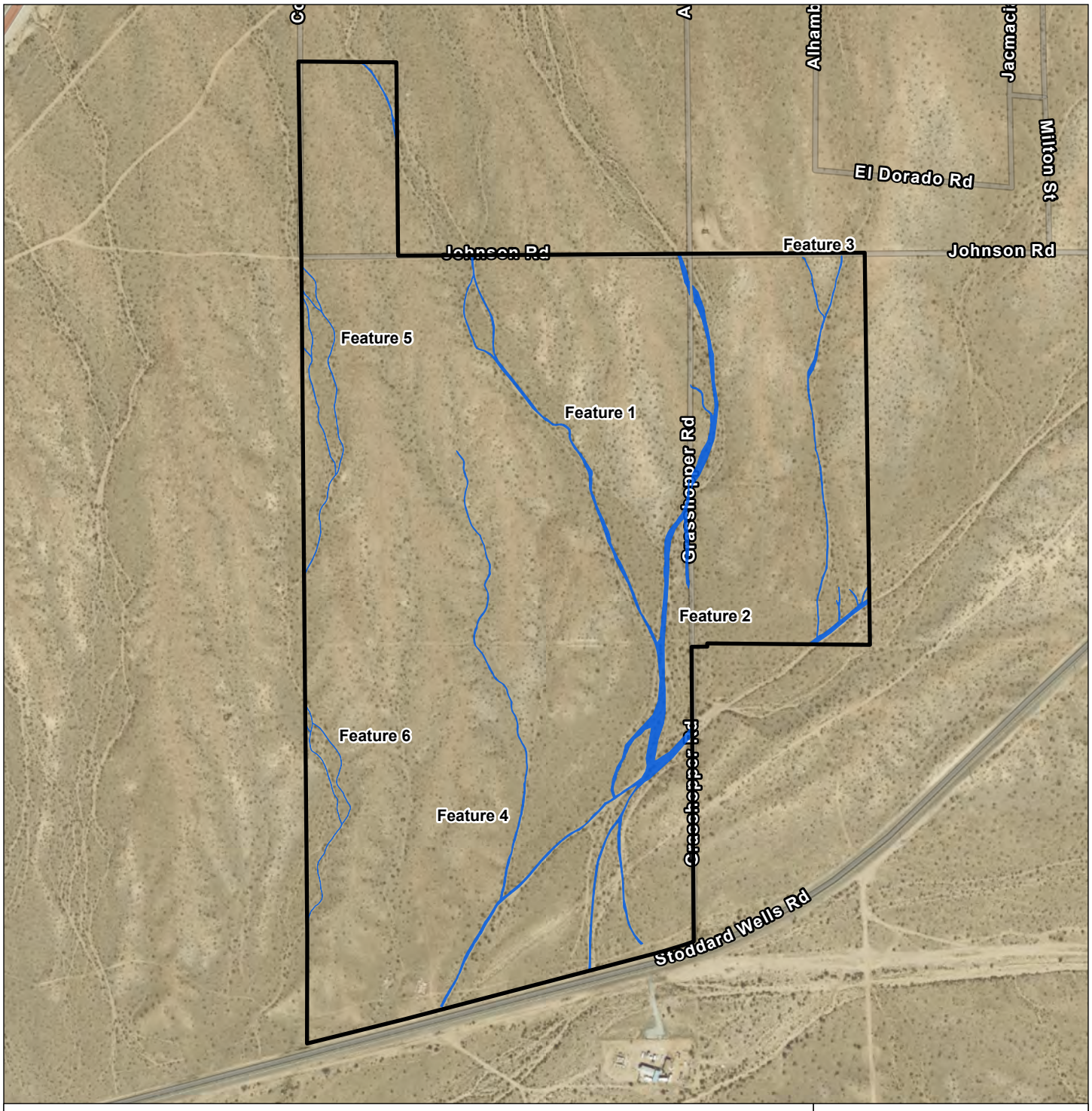
Data Sources:
- ESRI World Imagery accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 2. Site Vicinity



Project Site (102.66 ac)

Waters of the State (2.17 ac)

Feature ID	Acreage	Linear Feet
Feature 1	0.31	2,231
Feature 2	0.92	2,519
Feature 3	0.13	1,556
Feature 4	0.69	4,481
Feature 5	0.08	1,922
Feature 6	0.03	1,303

0 250 500 Feet

1 inch = 500 feet

Data Sources:
- ESRI World Imagery accessed Oct 2025

Map Prepared: 10-25-25

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 3. Waters of the State

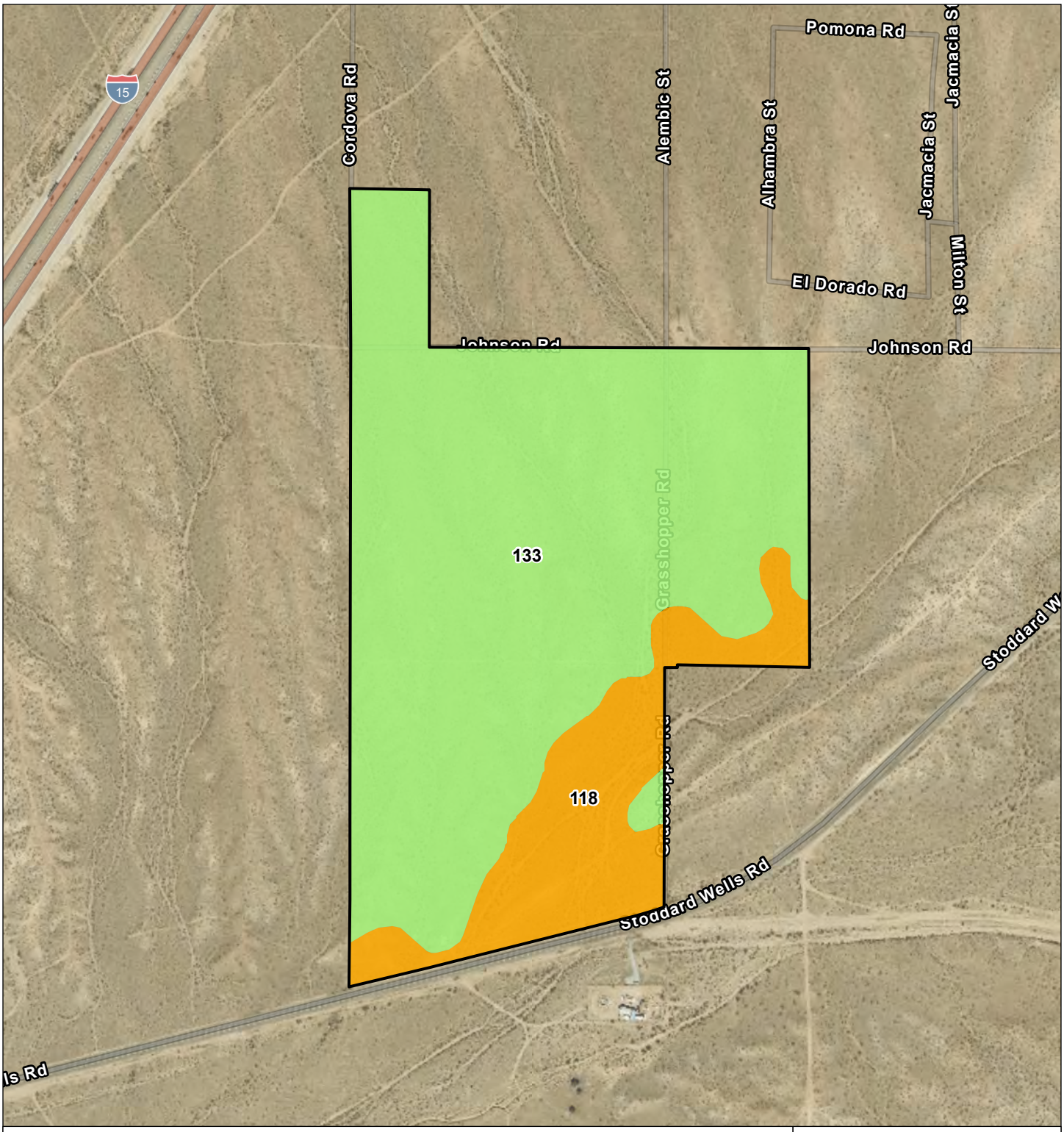
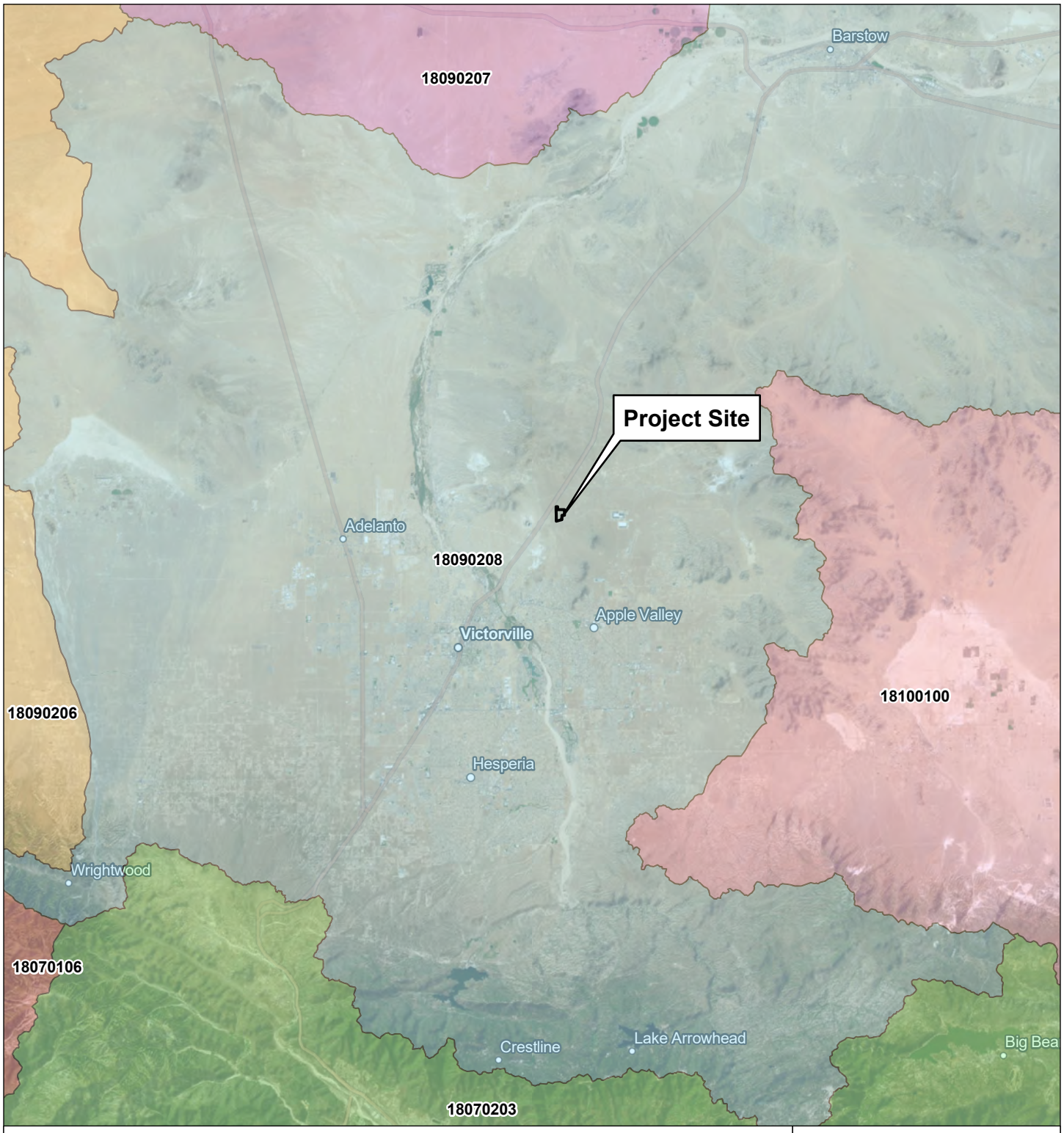


Figure 4. Soils Map



Project Site

Regional Watershed (HUC8)

Antelope-Fremont Valley (18090206)

Coyote-Cuddeback Lakes (18090207)

Mojave (18090208)

San Gabriel (18070106)

Santa Ana (18070203)

Southern Mojave (18100100)

0 3 6 Miles

1 inch = 6 miles

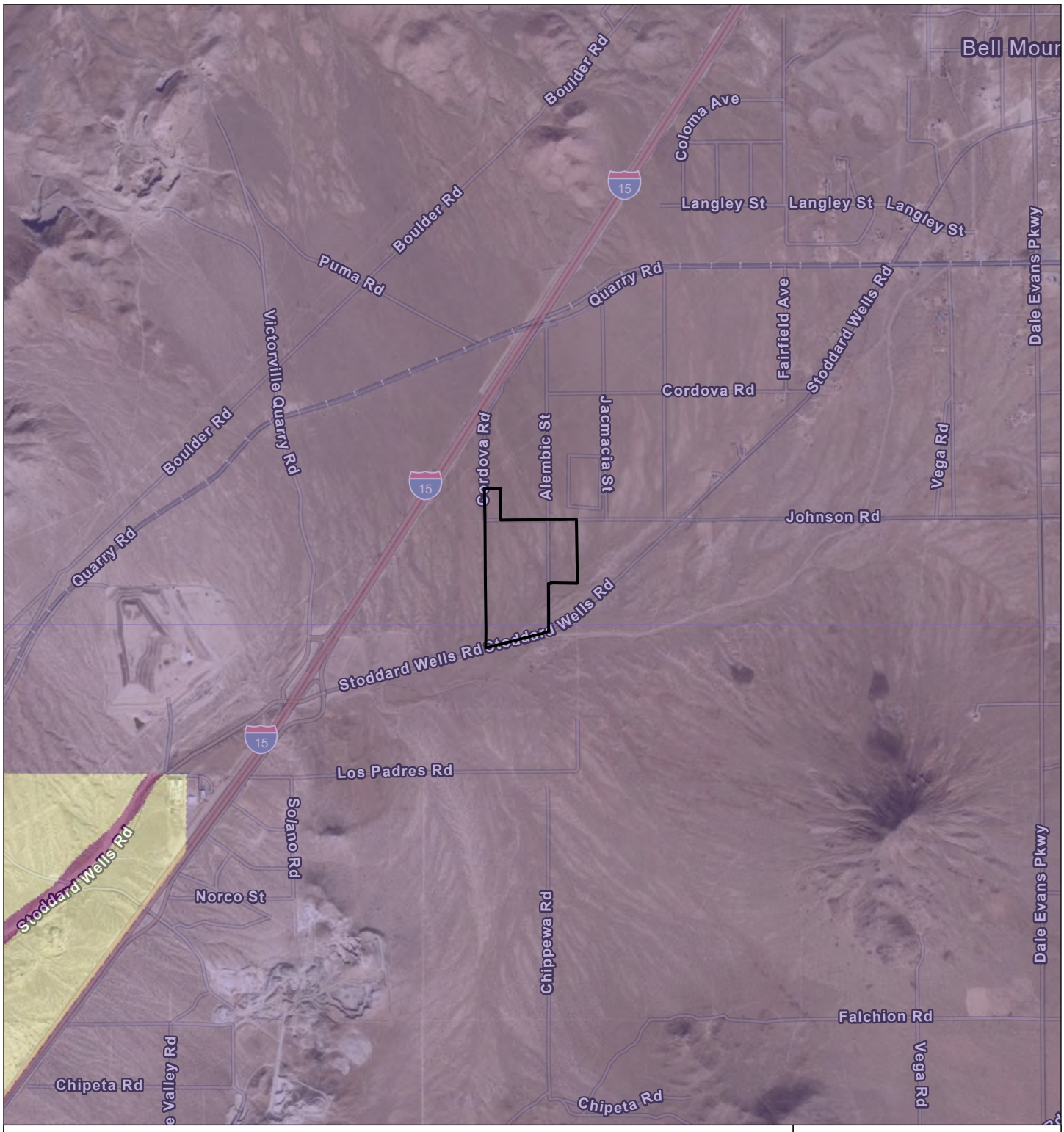
Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS-WBD accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 5. Regional Watershed Map



Project Site

FEMA Flood Hazard Zone

1% Annual Chance Flood Hazard

Area of Minimal Flood Hazard

Area of Undetermined Flood Hazard

0 1,500 3,000 Feet

1 inch = 3,000 feet

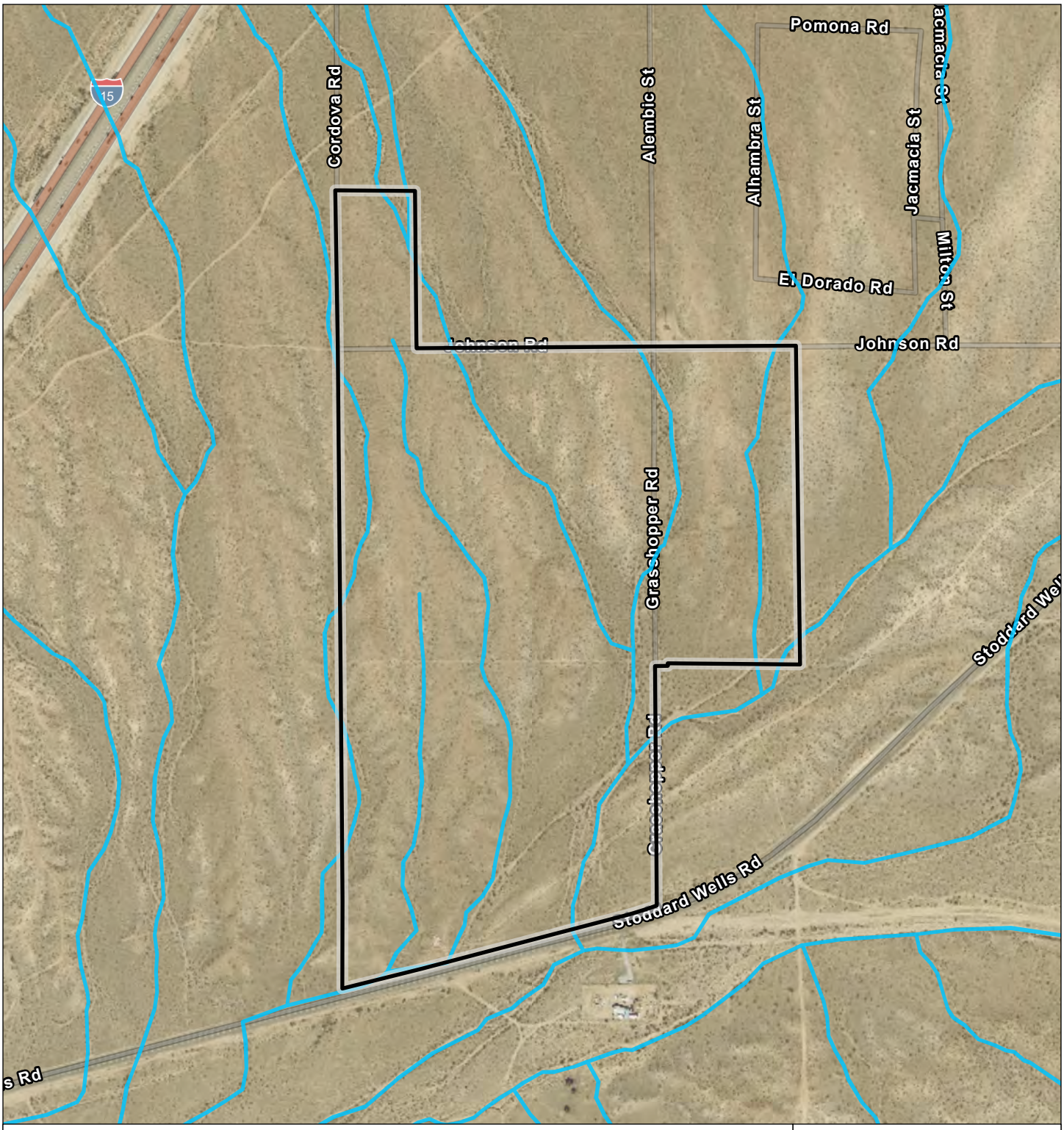
Data Sources:
- ESRI World Imagery accessed Oct 2025
- FEMA National Flood Hazard Layer accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 6. FEMA 100-Year Flood Zone



Project Site

USA Wetlands

River

0 300 600 Feet

1 inch = 600 feet

Data Sources:
- ESRI World Imagery accessed Oct 2025
- US Fish and Wildlife Service National Wetland Inventory accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 7. National Wetland Inventory

Project Site

Surface Water Flowlines and Flow Direction

0 0.75 1.5 Miles

1 inch = 1.5 miles

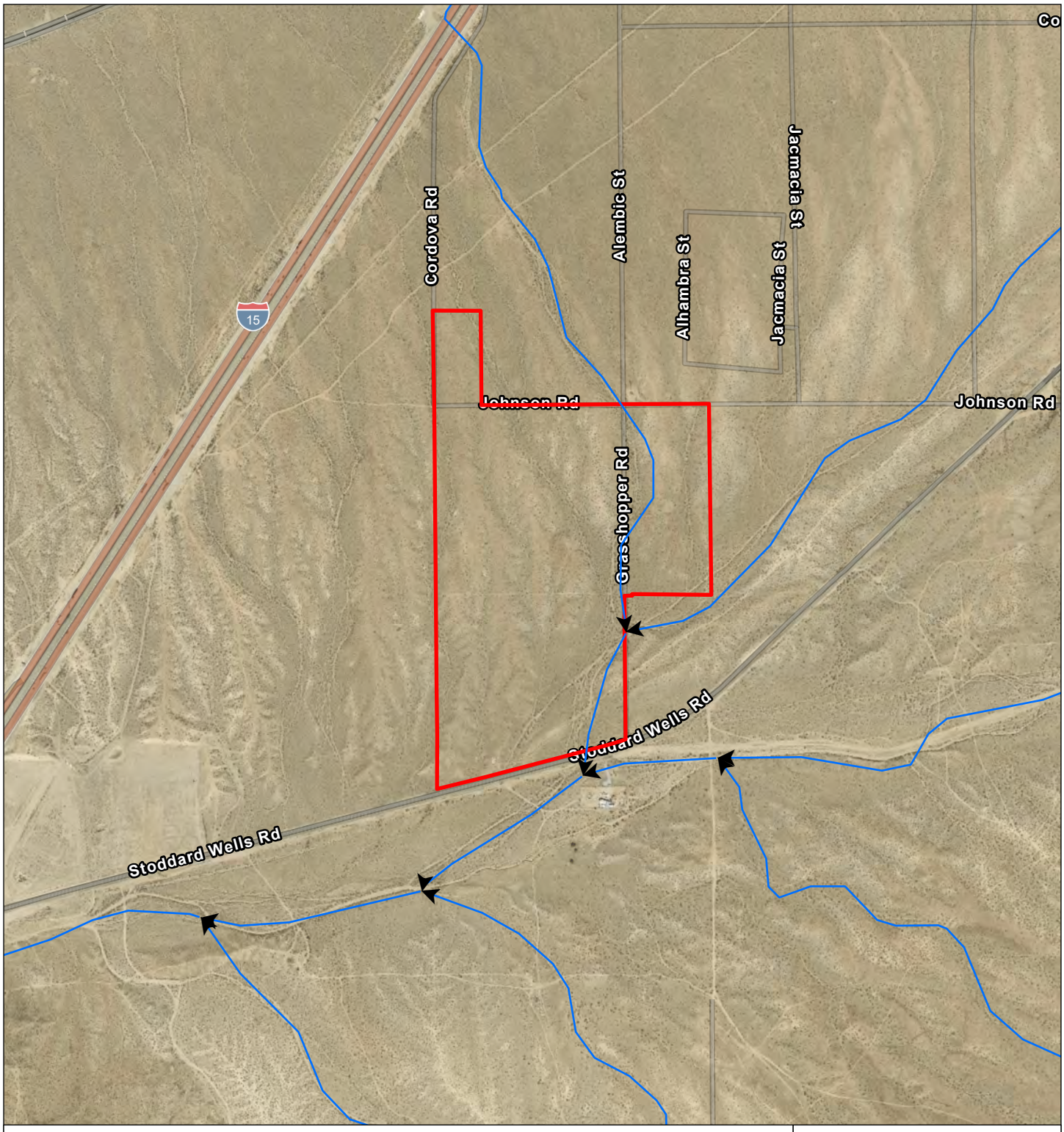
Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 8. Surface Water Map (Regional Area)



Project Site

Surface Water Flowlines and Flow Direction

0 0.1 0.2 Miles

1 inch = 0.2 mile

Data Sources:
- ESRI World Imagery accessed Oct 2025
- USGS National Hydrology Dataset Plus Version 2.1 accessed Oct 2025

Map Prepared: 10-22-25

Prepared by:

NOREAS
Environmental Engineering and Science

Figure 9. Surface Water Map (Local Area)

Appendix B Photograph Log

	Photograph 1. Feature 1.
	Photograph 2. Feature 2.

	Photograph 3. Feature 3.
	Photograph 4. Feature 4.

	Photograph 5. Feature 5.
	Photograph 6. Feature 6.