Focused Survey for Agassiz's Desert Tortoise,
Habitat Evaluation for Burrowing Owl, and
General Biological Resource Assessment for a
7.5-acre± Site (APN 0589-183-35) in the Community of Joshua Tree,
San Bernardino County, California

(U.S. Geological Survey 7.5' Joshua Tree South quadrangle, Township 1 North, Range 7 East, a portion of the Southeast ¼ of Section 7, S.B.B.&M.)

Job#: 17-022

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I hereby certify that the statements furnished herein, including 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. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Circle Mountain Biological Consultants, Inc.
Author and Field Investigator: Edward L. LaRue, Jr.

May 2017

Figure 1. APN 0589-183-35: Vicinity Map

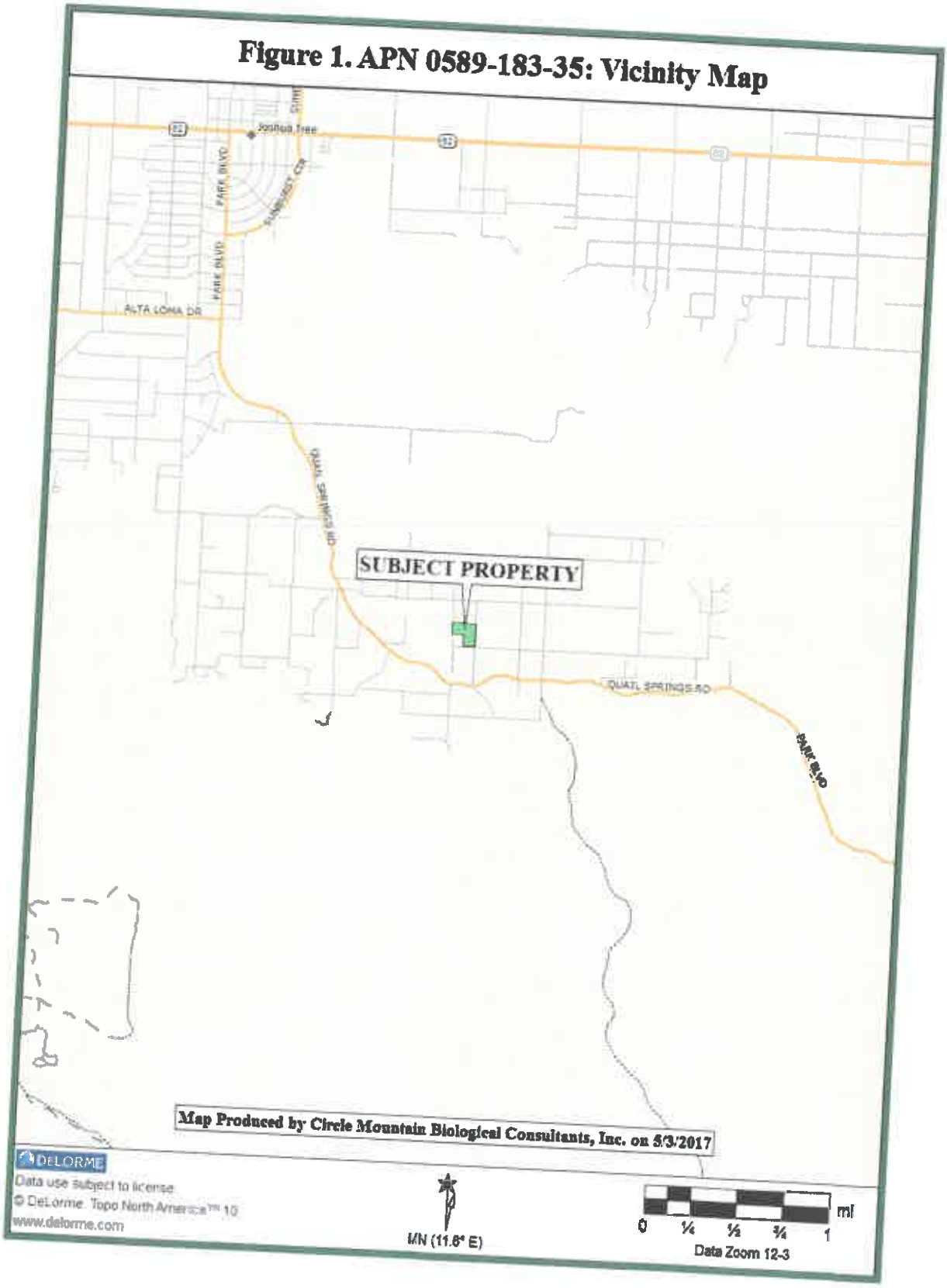


Figure 2. APN 0589-183-35: Site Map with Transect and Tortoise Sign Locations

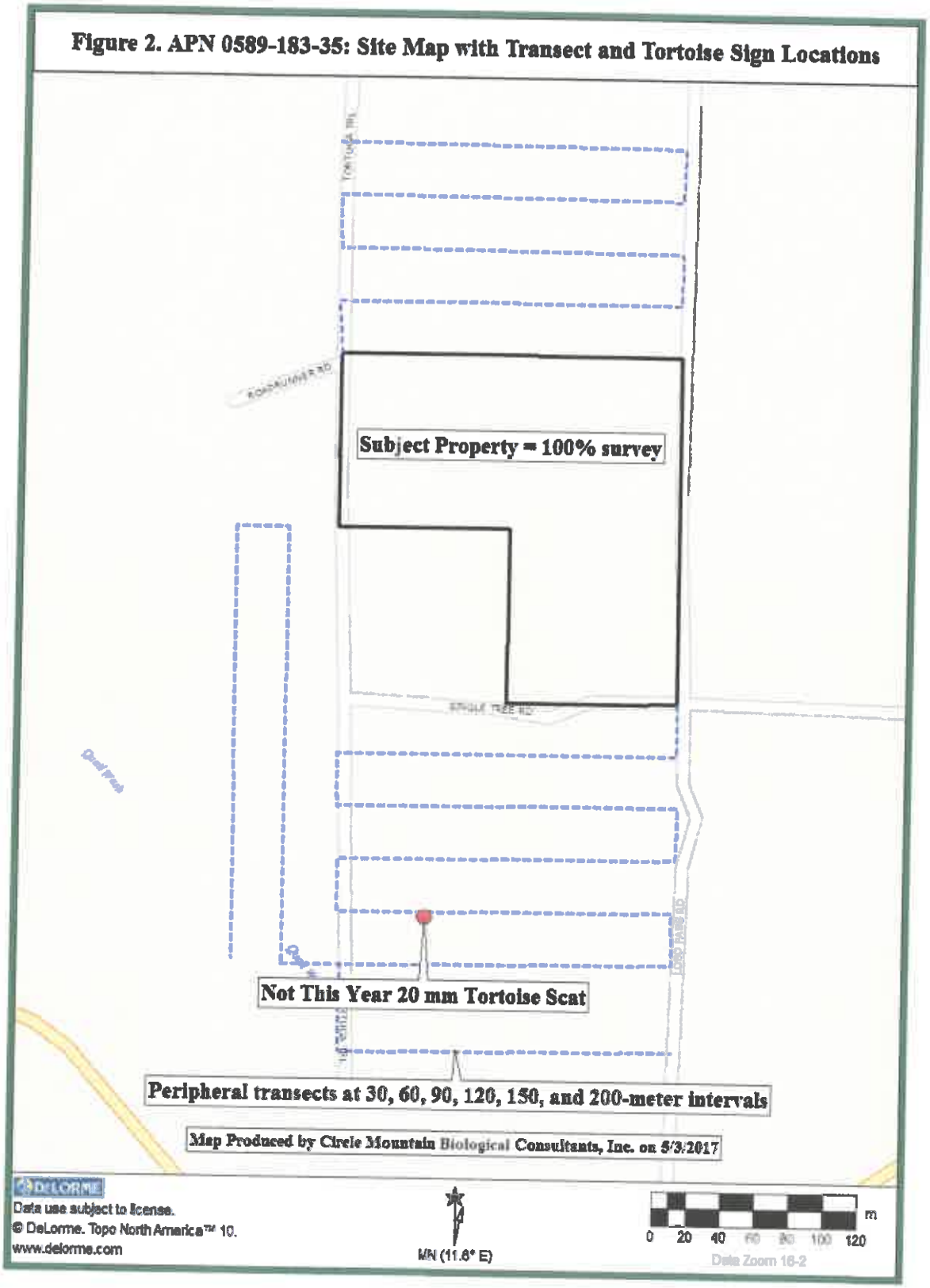


Figure 3. Results of Seven Tortoise Surveys in the Area between 2005 and 2017

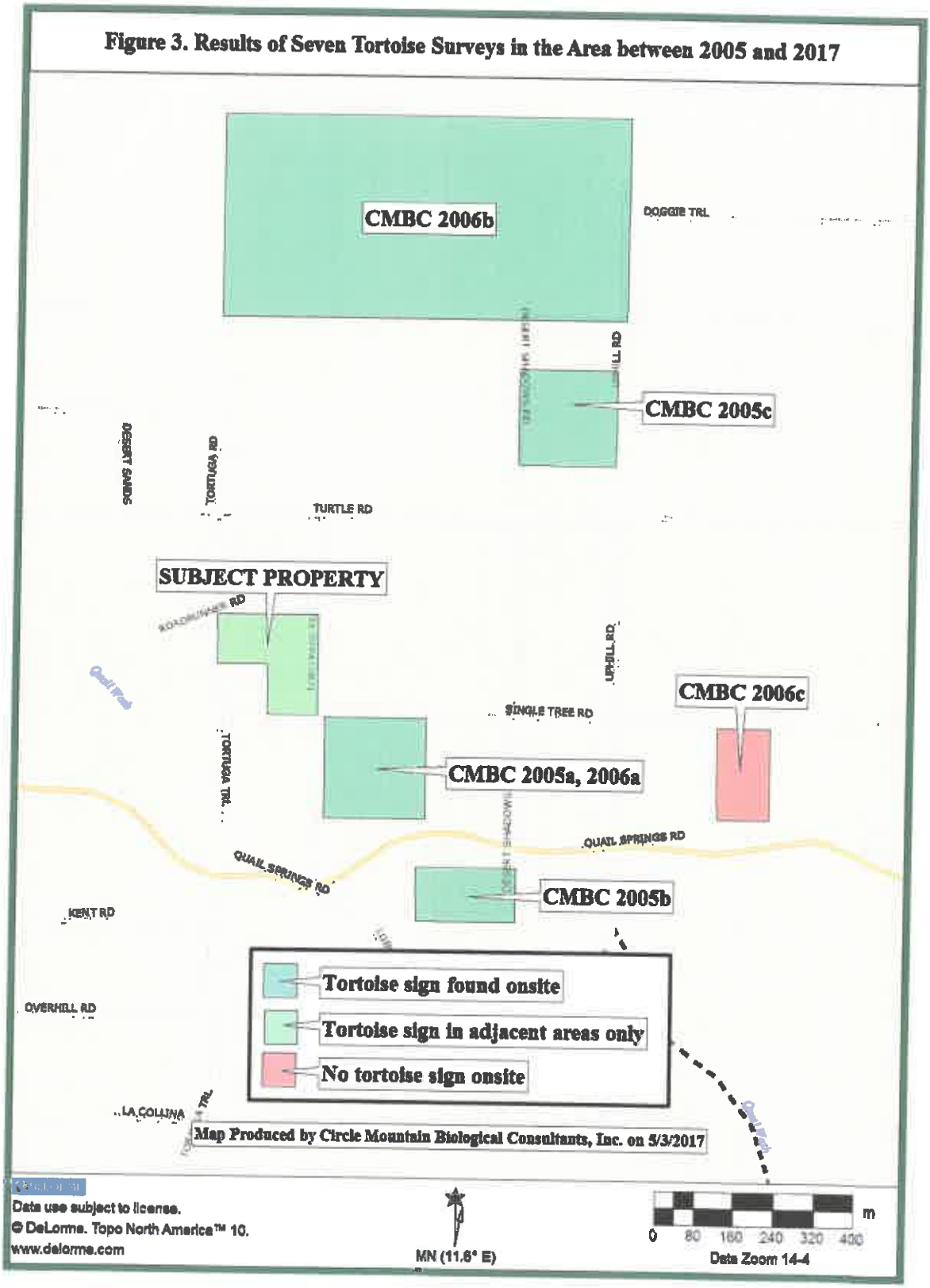
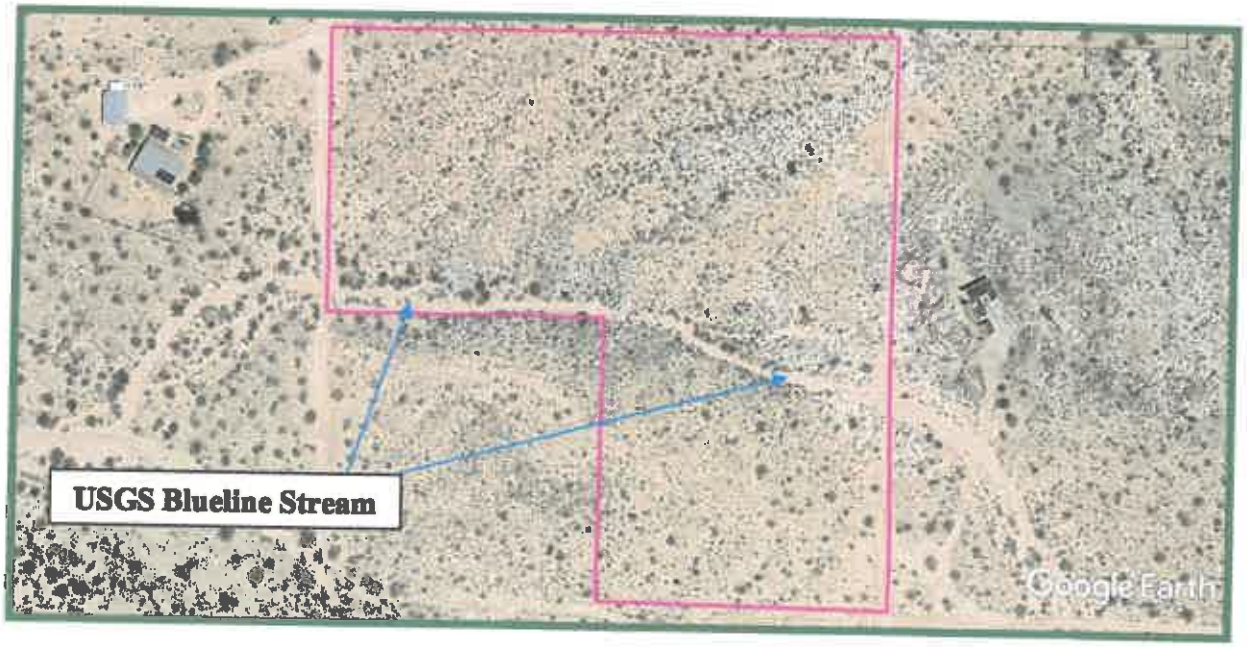


Figure 4. APN 0589-183-35: Aerial Photograph (©2017Google)

Regional aerial view from approximately 11,700 feet altitude (Image date: 7/14/16)



Enlarged aerial view from approximately 4,400 feet altitude

Executive Summary

Circle Mountain Biological Consultants, Inc. was contracted by Blue Point Ventures, LLC (Proponent) to perform a focused survey for Agassiz's desert tortoise, habitat assessment for burrowing owl, and a general biological resource assessment on a 7.5-acre± site located in San Bernardino County, California. APN 0598-183-35 is a 7.5-acre± parcel located northwest of the intersection of Lobo Pass Road and Single Tree Road with Tortuga Trail along the western boundary in the unincorporated community of Joshua Tree, San Bernardino County, California. The legal description for the subject property is Township 1 North, Range 7 East, a portion of the Southeast ¼ of Section 7, S.B.B.&M.

For a total of 5.5 hours, between 1530 and 1815 on 28 April 2017, Ed LaRue of CMBC and subcontractor, Mike Radakovich, surveyed the site and adjacent areas as described herein. This entailed a survey of 20 transects, spaced at 30-foot (10-meter) intervals and oriented in a north-south direction throughout the 7.5-acre± parcel. As depicted in Figure 2, zone of influence transects were surveyed for detection of tortoise sign and burrowing owls at 30-, 60-, 90-, 120-, 150- and 200-meter intervals to the south, at 30-, 60-, 90-, and 120-meter intervals to the north, and at 30- and 60-meter intervals to the southwest. Additional peripheral transects could not be surveyed due to posted residential properties.

Based on DeLorme Topo USA® 10.0 software, elevations on the subject property range from approximately 984 meters (3,228 feet) at the northeast corner down to 971 meters (3,186 feet) at the central southwestern corner. Terrain is gently sloping from the northeast to the southwest, with a southern aspect. Soils range from being sandy in the central wash to boulder outcrops in several places. As depicted in the lower half of Figure 4, there is a USGS-designated blueline stream running through the middle of the site, flowing from east to west. The 106 plant species identified during the survey, including 97 onsite and 9 in adjacent areas, are listed in Appendix A. The 4 reptile, 18 bird, and 9 mammal species identified during the survey are listed in Appendix B.

Based on the presence of an older scat of an adult tortoise deposited about 120 meters south of the site yet no evidence of tortoises on the site, CMBC concludes that Agassiz's desert tortoise has recently (within the last several years but not in 2017) occurred south of the site and at this time is absent from the site. Since the survey was performed in April and tortoises are likely to be intermittently active through about October of 2017 before going into dormancy, there is some chance that this or another tortoise may enter the site in the interim.

Given these findings, we recommend that if the site is to be developed prior to 28 April 2018, it should be resurveyed prior to ground disturbance to confirm that tortoises continue to be absent. If the site will not be developed until after 28 April 2018, according to USFWS (2010) pre-project survey protocol the results of this survey will remain valid for the period of one year, or until 28 April 2018, after which time, if the site has not been developed in the interim, another survey would be required to confirm the absence of tortoises on-site. We suggest that Brian Croft of the Palm Springs office of the USFWS be contacted (brian_croft@fws.gov) and Becky Jones of the CDFW be contacted (dfgpalm@wildlife.com) to see if they concur with these recommendations or not.

Based on the field survey and habitat assessment, CMBC concludes that none of the following special status species reported from the region will be adversely affected by site development: Burrowing owl, LeConte's thrasher, loggerhead shrike, Little San Bernardino Mountains linanthus, or any other special status plant or animal species. As such, no adverse impacts have been identified and no mitigation measures are recommended.

If the streambed cannot be avoided, a consultant will generally collect data along each course, including measurements of the channels; dominant plants comprising the forb, shrub, and tree strata; and photographs at regular intervals, depending on how long the course is (100-foot intervals works well). If CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Streambed Alteration Agreement will be prepared.

Catclaw acacia, Joshua tree, Mojave yucca, silver cholla, pencil cholla, cottontop cactus, hedgehog cactus, Yaqui mammillaria, and beavertail cactus are plant species found on-site that may be subject to pertinent development codes.

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests, including raptors and other migratory nongame birds (As listed under the Migratory Bird Treaty Act). Typically, CDFW requires that vegetation not be removed from a project site between March 15 and September 15 to avoid impacts to nesting birds. If it is necessary to commence project construction between March 15 and September 15, a qualified biologist should survey all shrubs and structures within the project site for nesting birds, prior to project activities (including construction and/or site preparation).

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Habitat Evaluation for Burrowing Owl, and
General Biological Resource Assessment for a
7.5-acre± Site (APN 0589-183-35) in the Community of Joshua Tree,
San Bernardino County, California**

1.0. Introduction

1.1. Purpose and Need for Study. Circle Mountain Biological Consultants, Inc. (CMBC) was contacted by Mark Williams on behalf of Blue Point Ventures, LLC (Proponent) to perform a focused survey for Agassiz's desert tortoise (*Gopherus agassizii*), habitat assessment for burrowing owl (*Athene cunicularia*), and a general biological resource assessment on a 7.5-acre± site located in San Bernardino County, California (see Figures 1 and 2). Given the location of the site in an unincorporated portion of the county, this report has been prepared according to County of San Bernardino's *Report Protocol for Biological Assessment Reports* (County of San Bernardino 2006).

As the California Environmental Quality Act (CEQA) Lead Agency, the County of San Bernardino, Public and Support Services Group, Land Use Services Department, Advance Planning Division (County) is required to complete an initial study to determine if site development will result in any adverse impacts to rare biological resources. The information may also be useful to federal and State regulatory agencies, including U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), respectively, if the Lead Agency asks them to assess impacts associated with proposed development. Results of CMBC's focused tortoise survey, burrowing owl and Mohave ground squirrel habitat assessments, and general biological resource assessment are intended to provide sufficient baseline information to these agencies to determine if impacts will occur and to identify mitigation measures, if any, to offset those impacts.

1.2. Project Description. APN 0598-183-35 is a 7.5-acre± parcel located northwest of the intersection of Lobo Pass Road and Single Tree Road with Tortuga Trail along the western boundary in the unincorporated community of Joshua Tree, San Bernardino County, California (see Figures 1 and 2). The legal description for the subject property is Township 1 North, Range 7 East, a portion of the Southeast ¼ of Section 7, S.B.B.&M.

2.0. Methods

2.1. Literature Review. CMBC consulted materials included in our library to determine the nearest tortoise locations and other special status plant and animal species that have been reported from the vicinity of the subject property. Of particular relevance given their proximity to the subject property are six focused tortoise surveys completed on five sites, located immediately southeast of the subject property out to 800 feet east of the parcel, between 2005 and 2006, which, along with the subject property, are mapped in Figure 3. These and other materials used in the completion of this report are listed in Section 5.0, below.

2.2. Field Survey.

2.2.1. *Survey and Habitat Assessment Protocols*. For **Agassiz's desert tortoise**, CMBC generally followed the survey protocol first identified by the USFWS (1992) and recently revised (USFWS 2010) for their detection. USFWS (2010) protocol recommends that transects be surveyed at 30-foot (10-meter) intervals throughout all portions of a given parcel. If neither tortoises nor sign are encountered during *action area* surveys and the project, or any portion of project, is ≤ 0.8 km^2 (200 acres) or linear, three additional 30-foot (9 meters) belt transects at 655-foot (200 meters), 1,310-foot (400 meters), and 1,970-foot (600 meters) intervals parallel to and/or encircling the project perimeter should be surveyed.

The *action area* is defined by regulation as all areas to be affected directly or indirectly and not merely the immediate area involved in the action (50 CFR §402.02). For this site, the action area had to be restricted to the subject property, as all adjacent areas are private and mostly occupied by residents.

For **burrowing owl**, the CDFG (2012) survey protocol recommends transects be surveyed at 30-meter intervals throughout a given site, with five additional transects surveyed at 30-meter intervals out to 150 meters in adjacent areas in potential habitat (i.e., excluding areas substantially developed for commercial, residential, and/or industrial purposes). With its narrower transect intervals, the tortoise survey is sufficient to cover the site for burrowing owl. The focus of the survey is to find and inspect all burrows sufficiently large to be used by burrowing owls. Importantly, this methodology is considered a formal *habitat assessment* for presence of burrowing owls, which can be conducted any time of the year. Had burrowing owl sign been found, which it was not, it would have then been necessary to perform breeding burrowing owl surveys during the spring and summer as outlined in CDFG (2012).

2.2.2. *Field Survey Methods*. For a total of 5.5 hours, between 1530 and 1815 on 28 April 2017, Ed LaRue of CMBC and subcontractor, Mike Radakovich, surveyed the site and adjacent areas as described herein. This entailed a survey of 20 transects, spaced at 30-foot (10-meter) intervals and oriented in a north-south direction throughout the 7.5-acre± parcel. As depicted in Figure 2, zone of influence transects were surveyed for detection of tortoise sign and burrowing owls at 30-, 60-, 90-, 120-, 150- and 200-meter intervals to the south, at 30-, 60-, 90-, and 120-meter intervals to the north, and at 30- and 60-meter intervals to the southwest. Additional peripheral transects could not be surveyed due to posted residential properties. Copies of CMBC's data sheet completed in the field and USFWS' (2010) pre-project survey data sheet are included in this report (see Appendix C).

As transects were surveyed, LaRue kept tallies of observable human disturbances encountered on 10 of the 20 transects. The results of this method provide *encounter rates* for observable human disturbances. For example, two roads observed on each of 10 transects would yield a tally of 20 roads (i.e., two roads encountered 10 times). Habitat quality, adjacent land uses, and this disturbance information are discussed below in Section 3.2 relative to the potential occurrence of Agassiz's desert tortoise and other special status species on and adjacent to the subject property.

Weather conditions at the beginning of the survey included a temperature [measured approximately 2.5 inches (5 centimeters) above the ground] of 77°F (25°C), with 10% cloud cover, and average winds of 3.0 miles per hour and gusts up to 6.0 miles per hour out of the north, as measured by a hand-held Kestrel® weather and wind speed meter. Weather conditions at the end of the survey included a temperature of 70°F (21°C), with 25% cloud cover, and average winds of 3.0 miles per hour and gusts up to 7.0 miles per hour out of the north.

All plant and animal species identified during the survey were recorded in field notes and are listed in Appendices A and B, respectively. A Garmin® hand-held, global positioning system (GPS) unit was used to survey straight transects and record Universal Transverse Mercador (UTM) coordinates (North American Datum – NAD 83) for property boundaries, tortoise sign locations, and other pertinent information (Appendix C). A digital camera was used to take representative photographs (Appendix D), with locations and directions of exhibits shown in Figure 5. ©2017Google™ Earth was accessed via the internet to provide recent aerial photographs of the subject property and surrounding areas (Figure 4).

3.0. Results

3.1. Common Biological Resources. The common plant and animal species identified during the survey are influenced by multiple factors such as elevation, topography, soil substrates, and adjacent land uses. Based on DeLorme Topo USA® 10.0 software, elevations on the subject property range from approximately 984 meters (3,228 feet) at the northeast corner down to 971 meters (3,186 feet) at the central southwestern corner. Terrain is gently sloping from the northeast to the southwest, with a southern aspect. Soils range from being sandy in the central wash to boulder outcrops in several places. As depicted in the lower half of Figure 4, there is a USGS-designated blueline stream running through the middle of the site, flowing from east to west.

3.1.1. *Common Flora*. The 106 plant species identified during the survey, including 97 onsite and 9 in adjacent areas, are listed in Appendix A. The site is vegetated by creosote bush scrub, with creosote (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), desert tea (*Ephedra californica*), pima rhatany (*Krameria erecta*), desert senna (*Senna armata*), and Acton encelia (*Encelia actoni*) among the most abundant perennial species observed. The site's perennial vegetation is very diverse, with six different cactus species observed: silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), cottontop cactus (*Echinocactus polycephalus*), hedgehog cactus (*Echinocereus engelmannii*), Yaqui mammillaria (*Mammillaria tetrancistra*), and beavertail cactus (*Opuntia basilaris*). Some species like cheesebush (*Ambrosia salsola*), cat-claw acacia (*Senegalia greggii*), paper-bag bush (*Sambucus nigra* ssp. *caerulea*), and desert almond (*Prunus fasciculatus*) are associated with the central wash while others like Parish's goldeneye (*Viguiera parishii*), desert aster (*Xylorhiza tortifolia*), and several of the cactus species are associated with rocky outcrops.

This was an exceptional year for germination of annual plants, which is reflected in the number of species detected, including 11 aster species, 8 borage species, 7 mustard species (including natives and non-natives), 4 in the pea family, 5 in the water-leaf family, 5 primroses, 4 phloxes, and 5 grasses. Of the 106 species indentified, seven (6.6%) are not native to California, including mostly mustard and grass species, which is a relatively low incidence of exotic species.

3.1.2. *Common Fauna*. The 4 reptile, 18 bird, and 9 mammal species identified during the survey are listed in Appendix B. Reptiles included common side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), and common chuckwalla (*Sauromalus obesus*), the latter of which are only associated with rocky substrates. Other locally common reptile species that may occur include zebra-tailed lizard (*Callisaurus draconoides*), long-nosed leopard lizard (*Gambelia wislizenii*), desert horned lizard (*Phrynosoma platyrhinos*), desert night lizard (*Xantusia vigilis*), red racer (*Masticophis flagellum*), glossy snake (*Arizona elegans*), gopher snake (*Pituophis melanoleucus*), long-nosed snake (*Rhinocheilus lecontei*), and various rattlesnake species (*Crotalus* ssp.).

The bird species observed include those that are either tolerant of or benefitted by human development, including common raven (*Corvus corax*), house finch (*Carpodacus mexicanus*), northern mockingbird (*Mimus polyglottos*), Eurasian collared-dove (*Streptopelia decaocto*), and rock dove (*Columba livia*). Others may be found in both urbanizing areas and pristine desert habitats, such as mourning dove (*Zenaida macroura*), cactus wren (*Campylorhynchus brunneicapillus*), black-throated sparrow (*Amphispiza bilineata*), Gambel's quail (*Callipepla gambelii*), and greater roadrunner (*Geococcyx californianus*). Migrants and seasonal visitors included lesser nighthawk (*Chordeiles acutipennis*), white-crowned sparrow (*Zonotrichia leucophrys*), Brewer's sparrow (*Spizella breweri*), and black-headed grosbeak (*Pheucticus melanocephalus*). There are several specialists including phainopepla (*Phainopepla nitens*), which utilizes wash habitats, rock wrens (*Salpinctes obsoletus*), which as their name implies, use rocky outcrops for observation and singing, and ladder-backed woodpeckers (*Picoides scalaris*), which would not be present except for the presence of Joshua trees (*Yucca brevifolia*) onsite.

Small mammals identified included kangaroo rats (*Dipodomys* sp.), desert wood rats (*Neotoma lepida*), Botta pocket gophers (*Thomomys bottae*), and California ground squirrels (*Otospermophilus beecheyi*), the latter of which are typically associated with urbanizing areas. Medium-sized mammals included Audubon cottontail (*Sylvilagus audubonii*) and black-tailed hare (*Lepus californicus*). The predators that were detected included coyote (*Canis latrans*), bobcat (*Lynx rufus*), and kit fox (*Vulpes macrotis*), the latter of which are not associated with highly degraded habitats.

3.2. Uncommon Biological Resources.

3.2.1. *Agassiz's Desert Tortoise*. A significant paper was published in June 2011 (Murphy et al. 2011) whereby the "desert tortoise" of the Mojave Desert was split into two species, including *G. agassizii*, referred to as "Agassiz's desert tortoise," and a newly described species, *G. morafkai*, referred to as "Morafka's desert tortoise," which occurs in the Sonoran Desert. According to Murphy et al. (2011), "...this action reduces the distribution of *G. agassizii* to only 30% of its former range. This reduction has important implications for the conservation and protection of *G. agassizii*, which may deserve a higher level of protection." Agassiz's desert tortoise is the threatened species that occurs in the region surrounding the subject property.

Although no tortoise sign was found on the subject property, a scat (= dropping) of an adult tortoise, deposited sometime prior to this year, was found approximately 120 meters south of the site. This finding indicates that at the time of the survey tortoises are absent from the subject property but have recently occurred in the area and still likely occur in adjacent areas.

As depicted in Figure 3, CMBC personnel have surveyed five sites within approximately 800 feet of the subject property. One can see that tortoises have been detected on four of the five sites (CMBC 2005a, 2005b, 2005c, 2006a, and 2006b) and were not detected on the five-acre site located 2,600 feet to the east (CMBC 2006c). The 80-acre site located 1,950 feet to the north (CMBC 2006b) harbored the most sign with 19 older adult scat, 10 fresh adult scat, 1 fresh subadult scat, 2 burrows, and 1 adult female tortoise. Five scat and the partial remains of a dead tortoise were found during two separate surveys on the 10-acre site located immediately southeast (CMBC 2005a and 2006a). These findings indicate that tortoises are persisting in the immediate area, somewhat coexisting with sparse human development, for now.

Encounter rates for observable human disturbances included (in descending order of prevalence) four domestic dog signs and one shotgun shell, which for the Joshua Tree area, is very low. The rockiness and dense vegetation likely preclude much cross-country vehicle travel on the site, and dumping, which is prevalent in many places, was not observed. Given these observations, the site is judged to comprise suitable habitat throughout.

With the publication of the Record of Decision (BLM 2016), the Desert Renewable Energy Conservation Plan (DRECP) revised the 1980 California Desert Conservation Area Plan (CDCA Plan; BLM 1980) in significant ways for the conservation and recovery of desert tortoises in the California Deserts. Although desert tortoise critical habitat was not changed (USFWS 1994a), Desert Wildlife Management Areas (DWMAs; USFWS 1994b) and Multiple Use Classes on BLM lands were eliminated.

In addition to critical habitat, the two main designated areas under the DRECP CDCA Plan amendment that provide for tortoise conservation and recovery are Areas of Critical Environmental Concern (ACECs) and California Desert National Conservation Lands (CDNCLs). The subject property is approximately 11 miles east and 15 miles west of the nearest CDNCL-designated lands in the Pinto Lucerne Valley and Eastern Slopes CDNCL subarea. The area found 15 miles to the east corresponds to the Pinto Mountain ACEC. The site is not found within Agassiz's desert tortoise critical habitat, which was designated in 1994 (U.S. Fish and Wildlife Service 1994a). The nearest critical habitat area is the Pinto Mountain Critical Habitat Unit, which is located approximately 15 miles east of the site.

3.2.2. *Other Special Status Species*. U.S. Fish and Wildlife Service (2008), California Department of Fish and Wildlife (CDFW 2017a for California Natural Diversity Data Base; 2017b for Special Plant Species list; and 2017c for Special Animal Species list), and California Native Plant Society (CNPS 2017) maintain lists of animals and/or plants considered rare, threatened, or endangered, which are collectively referred to as "special status species." No other special status species were identified on-site during the current survey. Several rare species that are relatively common to the region, including LeConte's thrasher (*Toxostoma lecontei*) and loggerhead shrike (*Lanius ludovicianus*) were not observed. The surveyors also sought Little San Bernardino Mountains linanthus (*Linanthus maculata*) but did not find any on the subject property

Burrowing owl is one of the focal species specifically sought during field studies. Diagnostic signs of this species include regurgitated pellets with small reptile and/or mammal bones, or those that are primarily composed of insect parts. There may also be distinctive feathers, zygodactyl (x-shaped) tracks, and whitewash, although fecal material deposited away from burrows may be from other bird species. Although pellets and feathers are sufficiently distinctive that they may be identified away from burrows, it is one or more of these signs at sufficiently large burrows that are the most definitive means of determining burrowing owl use of a given site.

In the case of the subject property, there was no evidence of burrowing owl. Much of the site is too densely vegetated to be suitable. Burrowing owls do not create their own burrows; rather they find existing burrows, which they may slightly modify in order to occupy. Typical existing burrows used by burrowing owls include abandoned kit fox dens, both active and inactive tortoise burrows, deeper badger digs, and inactive California ground squirrel burrows. That no such burrows were found onsite may be one of the reasons no burrowing owl sign was found. No burrowing owls were detected on any of the other sites depicted in Figure 3. Given these findings, CMBC concludes that burrowing owl is absent from the subject property.

3.3. Other Protected Biological Resources. Stream courses provide relatively important resources to animals and plants. In dry years, and particularly during prolonged drought, annual plants may only germinate in the vicinity of washes where the water table is relatively near the surface. Perennial shrubs adjacent to washes are often the only plants that produce flowers and fruit, which in turn are important to insects and the avian predators that feed on them. Shrubs also tend to be somewhat taller and denser alongside washes, which provides cover for medium and larger sized animals that may use them as travel corridors. Biodiversity is generally enhanced by washes, and there are often both annual and perennial plants that are either restricted to or mostly associated with wash margins. There are both anecdotal accounts and published literature on washes being important to tortoises, which use them as travel corridors and access to nearby annual forage.

The wash running along the southern boundary of the western portion of the site and through the middle of the eastern portions is a well-developed drainage that is designated as an intermittent blueline stream by the USGS (Exhibit 2 shows where the wash exits the western boundary of the site).

At the County level, the San Bernardino County Development Code was revised and adopted on 12 April 2007. Chapter 88.01 Plant Protection and Management, Section 88.01.020 states, "The provisions of this Chapter apply to the removal and relocation of regulated trees or plants and to any encroachment (for example, grading) within the protected zone of a regulated tree or plant on all private land within the unincorporated areas of the County and on public lands owned by the County, unless otherwise specified..."

Section 88.01.060 Desert Native Plant Protection states, "This Section provides regulations for the removal or harvesting of specified desert native plants in order to preserve and protect the plants and to provide for the conservation and wise use of desert resources..."

Section 88.01.060(c) Regulated Desert Native Plants states, "The following desert native plants or any part of them, except the fruit, shall not be removed except under a Tree or Plant Removal Permit in compliance within Section 88.01.050 (Tree or Plant Removal Permits):

(1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
  (A) *Dalea spinosa* (smoke tree).
  (B) All species of the genus *Prosopis* (mesquites).
(2) All species of the family *Agavaceae* (century plants, nolinas, yuccas).
(3) Creosote Rings, 10 feet or greater in diameter.
(4) All Joshua trees.
(5) Any part of the following species, whether living or dead:
  (A) *Olneya tesota* (desert ironwood).
  (B) All species of the genus *Prosopis* (mesquites).
  (C) All species of the genus *Cercidium* (palo verdes)."

At the State level, the 1998 Food and Agricultural Code, Division 23: California Desert Native Plants, Chapter 3: Regulated Native Plants, Section 80073 states: The following native plants, or any parts thereof, may not be harvested except under a permit issued by the commissioner or the sheriff of the county in which the native plants are growing:

(a) All species of the family Agavaceae (century plants, nolinas, yuccas).
(b) All species of the family Cactaceae (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072 (i.e., saguaro and barrel cacti), which may be harvested under a permit obtained pursuant to that section.
(c) All species of the family Fouquieriaceae (ocotillo, candlewood).
(d) All species of the genus *Prosopis* (mesquites).
(e) All species of the genus *Cercidium* (palo verdes).
(f) *Senegalia (Acacia) greggii* (catclaw acacia).
(g) *Atriplex hymenelytra* (desert holly).
(h) *Dalea (Psorothamnus) spinosa* (smoke tree).
(i) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood.

Catclaw acacia, Joshua tree, Mojave yucca, silver cholla, pencil cholla, cottontop cactus, hedgehog cactus, Yaqui mammillaria, and beavertail cactus are the plant species included in one or both of the above lists that were observed on the subject property.

4.0. Conclusions and Recommendations

4.1. Impacts to Agassiz's Desert Tortoise and Proposed Mitigation. Based on the presence of an older scat of an adult tortoise deposited about 120 meters south of the site yet no evidence of tortoises on the site, CMBC concludes that Agassiz's desert tortoise has recently (within the last several years but not in 2017) occurred south of the site and at this time is absent from the site. Since the survey was performed in April and tortoises are likely to be intermittently active through about October of 2017 before going into dormancy, there is some chance that this or another tortoise may enter the site in the interim.

Given these findings, we recommend that if the site is to be developed prior to 28 April 2018, it should be resurveyed prior to ground disturbance to confirm that tortoises continue to be absent. If the site will not be developed until after 28 April 2018, according to USFWS (2010) pre-project survey protocol the results of this survey will remain valid for the period of one year, or until 28 April 2018, after which time, if the site has not been developed in the interim, another survey would be required to confirm the absence of tortoises on-site. We suggest that Brian Croft of the Palm Springs office of the USFWS be contacted (brian_croft@fws.gov) and Becky Jones of the CDFW be contacted (dfgpalm@roadrunner.com) to see if they concur with these recommendations or not.

Regardless of survey results and conclusions given herein, tortoises are protected by applicable State and federal laws, including the California Endangered Species Act and Federal Endangered Species Act, respectively. As such, if a tortoise is found onsite at the time of construction, all activities likely to affect that animal(s) should cease and the County contacted to determine appropriate steps.

Importantly, nothing given in this report, including recommended mitigation measures, is intended to authorize the incidental take of Agassiz's desert tortoises during site development. Such authorization must come from the appropriate regulatory agencies, including CDFW (i.e., authorization under section 2081 of the Fish and Game Code) and USFWS [i.e., authorization under section 10(a)(1)(B) of the Federal Endangered Species Act].

Finally, it has been CMBC's practice since 1994 to NOT submit technical reports to either the USFWS or the CDFW unless asked to do so by the Proponent. However, the Proponent is advised of the following three conditions identified in January 2010 in the USFWS' revised pre-project survey protocol and assumes responsibility for implementing (or not) these recommendations:

• Occurrence of either live tortoises or tortoise sign (burrows, scats, and carcasses) in the action area [which describes this particular site] indicated desert tortoise presence and therefore requires formal consultation with USFWS.

• If neither tortoises nor tortoise sign are encountered during the action area surveys, as well as project perimeter surveys where appropriate, please contact your local USFWS office. Informal consultation with the USFWS may be required even though no desert tortoises or sign are found during surveys.

• Please submit a copy of the original data sheets with results of the survey to the local USFWS office within 30 days of survey completion.

4.2. Impacts to Other Biological Resources and Proposed Mitigation.

4.2.1 *Other Special Status Species*. Based on the field survey and habitat assessment, CMBC concludes that none of the following special status species reported from the region will be adversely affected by site development: Burrowing owl, LeConte's thrasher, loggerhead shrike, Little San Bernardino Mountains linanthus, or any other special status plant or animal species. As such, no adverse impacts have been identified and no mitigation measures are recommended.

4.2.2. *Other Protected Biological Resources.*

4.2.2.a. Washes. Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW before beginning any activity that will do one or more of the following: (1) substantially divert or obstruct the natural flow of any river, stream or lake; (2) substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or (3) 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. Fish and Game Code section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, including many dry washes in desert regions.

If the streambed cannot be avoided, a consultant will generally collect data along each course, including measurements of the channels; dominant plants comprising the forb, shrub, and tree strata; and photographs at regular intervals, depending on how long the course is (100-foot intervals works well). If CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Streambed Alteration Agreement will be prepared. The Agreement includes reasonable conditions necessary to protect those resources and must comply with CEQA. The proponent may proceed with the activity in accordance with the final Agreement. The form is available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3754&inline=1. The completed form is sent along with the field baseline data to CDFW, Inland Deserts Region, Streambed Alteration, 3602 Inland Empire Boulevard, Suite C-220, Ontario, California 91764.

4.2.2.b. Protected Plants. It is beyond the scope of this focused survey and general resource assessment to provide necessary baseline data and a proposed program to minimize and mitigate impacts to protected native desert plants. The County may require a Desert Native Plant Assessment to identify the numbers and locations of protected plants to be in compliance with the California Native Plant Protection Act. Catclaw acacia, Joshua tree, Mojave yucca, silver cholla, pencil cholla, cottontop cactus, hedgehog cactus, Yaqui mammillaria, and beavertail cactus are species found on-site that may be subject to pertinent development codes.

4.2.2.c. Bird Nests. Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests, including raptors and other migratory nongame birds (As listed under the Migratory Bird Treaty Act). Typically, CDFW requires that vegetation not be removed from a project site between March 15 and September 15 to avoid impacts to nesting birds. If it is necessary to commence project construction between March 15 and September 15, a qualified biologist should survey all shrubs and structures within the project site for nesting birds, prior to project activities (including construction and/or site preparation).

Surveys should be conducted at the appropriate time of day during the breeding season, and surveys would end no more than three days prior to clearing. CDFW is typically notified in writing prior to the start of the surveys. Documentation of surveys and findings should be submitted to the CDFW within ten days of the last survey. If no nesting birds were observed project activities may begin. If an active bird nest is located, the plant in which it occurs should be left in place until the birds leave the nest. No construction is allowed near active bird nests of threatened or endangered species.

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Appendix A. Plant Species Detected

The following plant species were identified on-site during the focus floral inventory described in this report. Those found only in adjacent areas are signified by "+."

CONIFERAE	CONE-BEARING PLANTS
Cupressaceae	**Cypress family**
Juniperus californica	California juniper
GNETAE	GNETAE
Ephedraceae	**Joint-fir family**
Ephedra californica	Desert tea
Ephedra nevadensis	Nevada joint-fir
Ephedra viridis	Green joint-fir
ANGIOSPERMAE: DICOTYLEDONES	DICOT FLOWERING PLANTS
Apiaceae	**Carrot family**
Lomatium mohavense	Lomatium
Asteraceae	**Sunflower family**
Ambrosia dumosa	Burrobush
Ambrosia salsola	Cheesebush
+Anisocoma acaulis	Scale bud
+Brickellia incana	Brickellbush
Chaenactis fremontii	Desert pincushion
Encelia actoni	Acton encelia
Eriophyllum pringlei	Pringle's woolly daisy
Eriophyllum wallacii	Wallace's woolly daisy
+Layia glandulosa	White tidy tips
Leptosyne (*Coreopsis*) *bigelovii*	Bigelow coreopsis
Malacothrix glabrata	Desert dandelion
Nicolettia occidentalis	Nicolettia
Porophyllum gracile	Odora
Stephanomeria exigua	Milk aster
Stephanomeria pauciflora	Desert milk aster
Stylocline gnaphalioides	Mountain nest-straw
Syntrichopappus fremontii	Syntrichopappus
Tetradymia sp.	Cottonthorn
Viguiera parishii	Parish's goldeneye
Xylorhiza tortifolia	Desert aster

Boraginaceae	**Borage family**
Amsinckia tessellata	Fiddleneck
Cryptantha angustifolia	Narrow-leaved forget-me-not
Cryptantha dumetorum	Forget-me-not
Cryptantha micrantha	Forget-me-not
Cryptantha nevadensis	Nevada forget-me-not
Cryptantha pterocarya	Wing-nut forget-me-not
Pectocarya recurvata	Curved combseed
Pectocarya setosa	Round pectocarya
Brassicaceae	**Mustard family**
**Brassica tournefortii*	Saharan mustard
Caulanthus cooperii	Cooper's mustard
Caulanthus lasiophyllus (*Guillenia lasiophylla*)	California mustard
Descurainia pinnata	Tansy
Lepidium lasiocarpum	Sand peppergrass
**Sisymbrium altissimum*	Tumble mustard
**Sisymbrium irio*	London rocket
Buxaceae	**Jojoba family**
Simmondsia chinensis	Jojoba
Cactaceae	**Cactus family**
Cylindropuntia echinocarpa	Silver cholla (SC)
Cylindropuntia ramosissima	Pencil cholla (SC)
Echinocactus polycephalus	Cottontop cactus (SC)
Echinocereus engelmannii	Hedgehog cactus (SC)
Mammillaria tetrancistra	Yaqui mammillaria (SC)
Opuntia basilaris	Beavertail cactus (SC)
Cucurbitaceae	**Gourd family**
Cucurbita palmata	Coyote gourd
Cuscutaceae	**Dodder family**
Cuscuta sp.	Dodder
Euphorbiaceae	**Spurge family**
Stillingia linearifolia	Stillingia
Fabaceae	**Pea family**
Acmispon (*Lotus*) *rigidus*	Desert rockpea
Acmispon (*Lotus*) *strigosus*	Interior lotus
Astragalus acutirostris	Milk-vetch
Lupinus truncatus	Lupine
Psorothamnus arborescens	Indigo bush
Senegalia (*Acacia*) *greggii*	Catclaw acacia (SC)
Senna armata	Senna

Geraneaceae	**Geranium family**
**Erodium cicutarium*	Red-stemmed filaree
Hydrophyllaceae	**Water-leaf family**
Emmenanthe penduliflora	Whispering bells
Nama demissum	Purple mat
Phacelia distans	Common phacelia
+Phacelia tanacetifolia	Phacelia
Pholistoma membranaceum	Sticky nama
Krameriaceae	**Krameria family**
Krameria (grayi) bicolor	White rhatany
Krameria erecta	Pima rhatany
Lamiaceae	**Mint family**
Sambucus nigra ssp. *caerulea* (*Salazaria mexicana*)	Paper-bag bush
Salvia columbariae	Chia
Loasaceae	**Stick-leaf family**
Mentzelia albicaulis	Little blazing star
+Petalonyx thurberi	Sandpaper plant
Malvaceae	**Mallow family**
Sphaeralcea ambigua	Desert mallow
Melanthiaceae	**Melanth family**
Toxicoscordion (*Zigadenus*) *brevibracteatum*	Desert deathcamus
Nyctaginaceae	**Four o'clock family**
+Abronia villosa	Desert sand verbena
Mirabilis (*bigelovii*) *laevis*	Desert wishbone plant
Onagraceae	**Evening-primrose family**
Camissoniopsis (*Camissonia*) *pallida*	Suncup
+Chylismia (*Camissonia*) *brevipes*	Yellow cups
+Chylismia (*Camissonia*) *claviformis*	Brown-eyed primrose
Eremothera (*Camissonia*) *boothii*	Red primrose
Eremothera (*Camissonia*) *californica*	Camissonia
Papaveraceae	**Poppy family**
Eschscholzia minutiflora	Little gold-poppy
Eschscholzia parishii	Parish's poppy
Plantaginaceae	**Plantain family**
Plantago ovata	Plantain
Polemoniaceae	**Phlox family**
Eriastrum c.f. *sapphirinum*	Woolly star
Gilia latiflora var. *davyi*	Davy's broad-flowered gilia
Loeseliastrum matthewsii	Sunbonnets
Loeseliastrum schottii	Loeseliastrum

Polygonaceae	**Buckwheat family**
Chorizanthe brevicornu	Brittle spineflower
Eriogonum fasciculatum	California buckwheat
Eriogonum inflatum	Desert trumpet
+Rumex hymenosepalus	Wild rhubarb
Portulaceae	**Purslane family**
Calyptridium monandrum	Sand cress
Ranunculaceae	**Crowfoot larkspur**
Delphinium parishii	Larkspur
Rosaceae	**Rose family**
Coleogyne ramosissima	Blackbush
Prunus fasciculatus	Desert almond
Solanaceae	**Nightshade family**
Lycium andersonii	Anderson's box-thorn
Lycium cooperi	Peach thorn
Viscaceae	**Mistletoe family**
Phorodendron californicum	Mesquite mistletoe
Zygophyllaceae	**Caltrop family**
Fagonia laevis	Fagonia
Larrea tridentata	Creosote bush
ANGIOSPERMAE: MONOCOTYLEDONES	MONOCOT FLOWERING PLANTS
Liliaceae	**Lily family**
Yucca brevifolia	Joshua tree (SC)
Yucca schidigera	Mojave yucca (SC)
Poaceae	**Grass family**
**Bromus madritensis* ssp. *rubens*	Red brome
Dasyochloa (*Erioneuron*) *pulchellum*	Low fluffgrass
Pleuraphis rigida	Big galleta
Poa secunda	Fowl bluegrass
**Schismus* sp.	Split-grass
**Triticum aestivum*	Wheat

* - indicates a non-native (introduced) species.
c.f. - compares favorably to a given species when the actual species is unknown.

Some species may not have been detected because of the seasonal nature of their occurrence. Common names are taken from Beauchamp (1986), Hickman (1993), Jaeger (1969), and Munz (1974).

Appendix B. Animal Species Detected

The following animal species were detected during the general biological inventory described in this report. Special status animal species are highlighted in red and signified by "(SC)" following the common names. Those only found in adjacent areas are signified by "+."

REPTILIA	REPTILES
Testudinidae	**Land tortoises**
Gopherus agassizii	Agassiz's desert tortoise (SC)
Iguanidae	**Iguanids**
Sauromalus obesus	Common chuckwalla
Uta stansburiana	Common side-blotched lizard
Teiidae	**Whiptails**
Cnemidophorus tigris	Western whiptail
AVES	BIRDS
Phasianidae	**Grouse and quail**
Callipepla gambelii	Gambel's quail
Columbidae	**Pigeons and doves**
Columba livia	Rock dove
Streptopelia decaocto	Eurasian collared-dove
Zenaida macroura	Mourning dove
Cuculidae	**Cuckoos**
Geococcyx californianus	Greater roadrunner
Camprimulgidae	**Nightjars**
Chordeiles acutipennis	Lesser nighthawk
Picidae	**Woodpeckers**
Picoides scalaris	Ladder-backed woodpecker
Corvidae	**Crows and jays**
Corvus corax	Common raven
Troglodytidae	**Wrens**
Campylorhynchus brunneicapillus	Cactus wren
Salpinctes obsoletus	Rock wren

Mimidae	**Mockingbirds and thrashers**
Mimus polyglottos	Northern mockingbird
Ptilogonatidae	**Silky flycatchers**
Phainopepla nitens	Phainopepla
Emberizidae	**Sparrows, warblers, tanagers**
Pheucticus melanocephalus	Black-headed grosbeak
Spizella breweri	Brewer's sparrow
Amphispiza bilineata	Black-throated sparrow
Zonotrichia leucophrys	White-crowned sparrow
Fringillidae	**Finches**
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
MAMMALIA	MAMMALS
Leporidae	**Hares and rabbits**
Lepus californicus	Black-tailed hare
Sylvilagus audubonii	Audubon cottontail
Sciuridae	**Squirrels**
Otospermophilus beecheyi	California ground squirrel
Geomyidae	**Pocket gophers**
Thomomys bottae	Botta pocket gopher
Heteromyidae	**Pocket mice**
Dipodomys sp.	Kangaroo rat
Cricetidae	**Rats and mice**
Neotoma lepida	Desert wood rat
Canidae	**Foxes, wolves and coyotes**
Canis latrans	Coyote
Vulpes macrotis	Kit fox
Felidae	**Cats**
Lynx rufus	Bobcat

Nomenclature follows Stebbins, *A Field Guide to Western Reptiles and Amphibians* (2003), third edition; Sibley, National Audubon Society, the Sibley Guide to Birds (2000), first edition; and Ingles, Mammals of the Pacific States (1965), second edition.

Appendix C. Field Data Sheets Completed on 28 April 2017

The USFWS and County have recently required consultants to include copies of the data collected in the field from which the results and conclusions given in reports are derived. As such, on this and the next page are copies of the data sheets completed by Ed LaRue on 28 April 2017.

USFWS 2009 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Date of survey: 28/4/2017 Survey biologist(s): Ed LaRue, Mike Radakovich

Site description: [illegible]

County: San Bernardino Quad: [illegible] Location: [illegible]

Transect #: 20 Transect length: 3225 Type of survey: [illegible]

GPS Start-point: [illegible] Start time: 1535 am/pm

GPS End-point: [illegible] End time: 165 am/pm

Start Temp: 77 F Weather: [illegible]

End Temp: 70 F

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location	MCL	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign	Description and comments
1	565370	3772874	1 HTY 20mm	Older scat of adult tortoise
2				
3				
4				
5				
6				
7				
8				

Page ___ of ___

Date of survey: ________

Transect number: _____

2017 Field Season

Page __ of __

JOB #/NAME	DATE	DRIVE TIME TO	DRIVE TIME FROM	MILES	FIELD TIME BEGIN	FIELD TIME END	SURVEYORS
Tortuga.1722	4-28-17	1500	1830	120	1530	1815	LaRue Rudolph[illegible]

WEATHER CONDITIONS (Start/End) W/Thin

TEMP: 77°F WIND X: 3 ↑ 6 (N) S E W CLOUD: 60 %

Thin

TEMP: 70°F WIND X: 3 ↑ 7 (N) S E W CLOUD: 25 %

UTM (NAD 83) (circle starting corner)

NE→	(NW) • S	SE→	SW→
605515	5320	5515	5320
3773220	3220	3020	3120

PERENNIAL PLANTS				ANNUAL PLANTS				BIRDS		HERP	MAM
LarTri	LycCoo	EncFar		BarLoc	CamCal	LayGla	SoSi	CorvR	HAFI	SBA	Ampe
HeBe	Krape	SunCal		Schis	CamBoo	LomAda	[illegible]	CORA	SAPR	Cnemi	KoT
HeSa	Ambdum	BriFas		ChoRe	PerEr	CryMe	WilaT	GAQU			Amo
PlaRig	SenPrm	MyTBr		BeMn	CalLas	Gamm	EriPi	HAFI			PURA
PhFed	PoAD	LotGa		SalCol	DesPin	ThomPm	CrySr	MOD			BTJA
UlAsp	Ehra	StiSpe		AmTes	CryPte	LanPet	LenSch	LEHH			KIFO
CylEch	SenCh	FerVas		ChrSpe	HalAcu	CryAn	Phacel	WEKI			CACS
Am[illegible]	Man[illegible]	[illegible]		MonHb	TriNeo	LotStr	BraTou	BASP			Bat
MenSa	StePau	GutMS		Strep	NeDe	MonBen	CaeGra	HOFI			Bom
Sammes	Ba[illegible]	Peristo		Sand[illegible]	GeraCal	EriPi	PeTal	LEGO			
AmbDel	Cylra	SalLeu (Leu)		UpPlas	PhaDi	EcFr	ForAn	DHeB			
EphVir	LucAnd	EnFre		CryNev	SoAH	Salvia	PecS	WBuP			
Krater	EchCol	RumHy		PecRec	DraBn	GorCal	[illegible]	ECOD			
AsteLe	Tetsp	Pectin		BySe	CryAm	CryAn	CamPre	BTSP			
MtMAB	SphAmb	AmiAcu		BrTSr	EriWal	[illegible]	CamClr	RODO			
SalFor	NeDel	LarGla	PhaFin	MalGla	ErVir	LuaTM	Lepla	RouR			

Photographs

1	NW→ SE
2	5320/3120 →NE
3	NE→ SW
4	SE→ MW

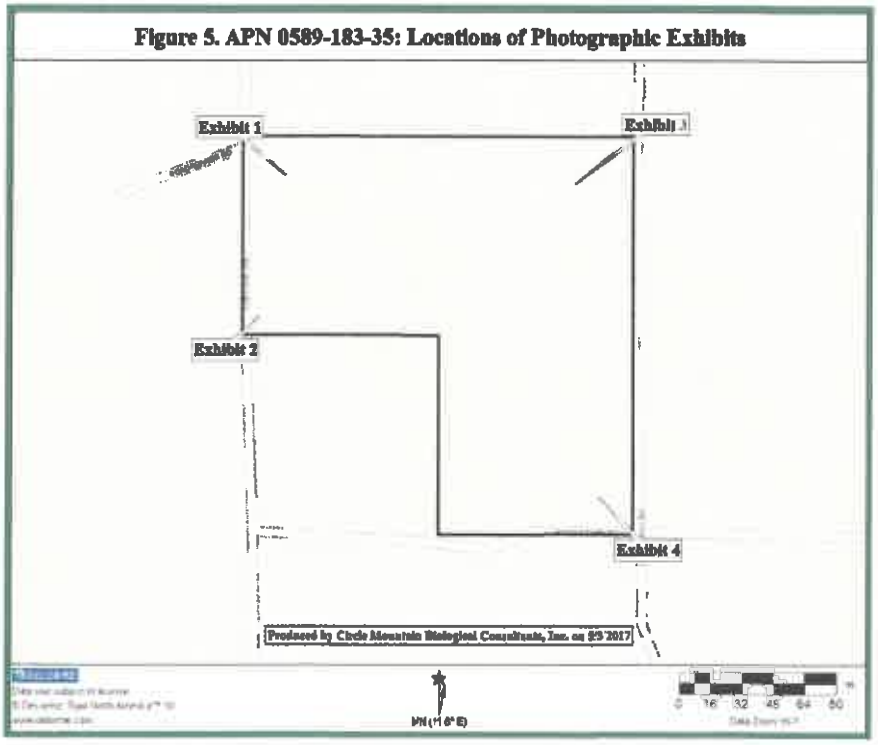
OBSERVABLE HUMAN DISTURBANCES

T#	East	North	OHV	Road	Dug	Dump	S Gun	Rifle	Target		
1	5830	3220									
3	5800	3120									
5	5860	3220									
7	5580	3120									
9	5800	3220									
11	5480	3120									
13	5440	3020									
15	5400	3220									
17	5480	3020									
19	5500	3220									
ZPT											
530 =	2990		305W	5290		30M	3250				
605	2960		60 SW	5260		60M	3280				
905	2930					90M	3310				
1205	2900					120M	3340				
1505	2870										
2015	2820										

NT120 @ 5370/2894

Appendix D. Photographic Exhibits

Figure 5. APN 0589-183-35: Locations of Photographic Exhibits



Locations of the four photographic exhibits on the next two pages are depicted in Figure 5.

Exhibit 1. APN 0589-183-35: View from the northwest corner of the parcel, facing southeast (see Figure 5 for locations and directions of photographs).

Exhibit 2. View from the "upper" southwest corner of the parcel, facing northeast.

Exhibit 3. APN 0589-183-35: View from the northeast corner of the parcel, facing southwest.

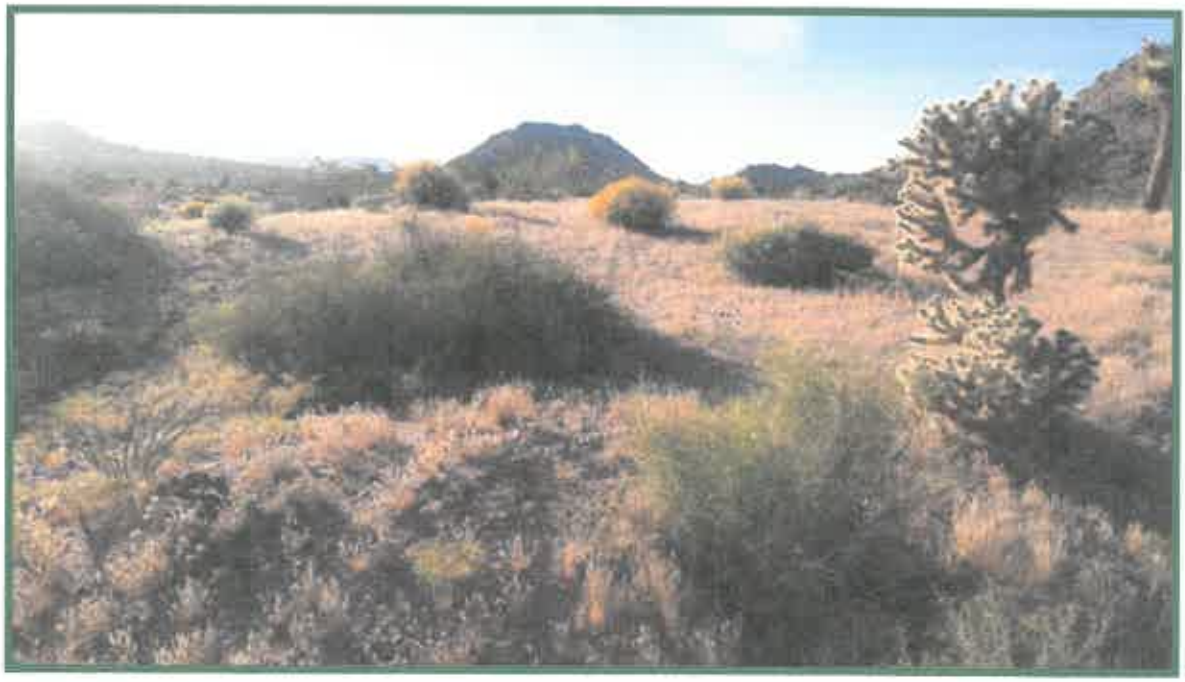


Exhibit 4. View from the southeast corner of the parcel, facing northwest.