Focused Resurvey for Agassiz's Desert Tortoise,
Habitat Evaluation for Burrowing Owl, and General Biological Resource Assessment for the Proposed South Side Community Park,
a 37.75-acre± Site (APN 0585-061-06) in the Town of Yucca Valley,
San Bernardino County, California

(U.S. Geological Survey 7.5' Yucca Valley South Quadrangle, Township 1 South, Range 5 East, a portion of the Northeast ¼ of Section 12, S.B.B.&M.)

Job#: 11-016

Prepared by:
Circle Mountain Biological Consultants, Inc.
P.O. Box 3197
Wrightwood, California 92397
PH: (760) 249-4948
FAX: (760) 249-4948
Email: circlemtn@yahoo.com
Contacts: Ed LaRue, Sharon Dougherty

Prepared for:
Town of Yucca Valley
Community Development Department
58928 Business Center Drive
Yucca Valley, California 92284
PH: (760) 369-1265 ext. 307
FAX: (760) 228-0084
Email: sstueckle@yucca-valley.org
Contact: Shane Stueckle

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.

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

October 2011

Figure 1. South Side Community Park: Vicinity Map

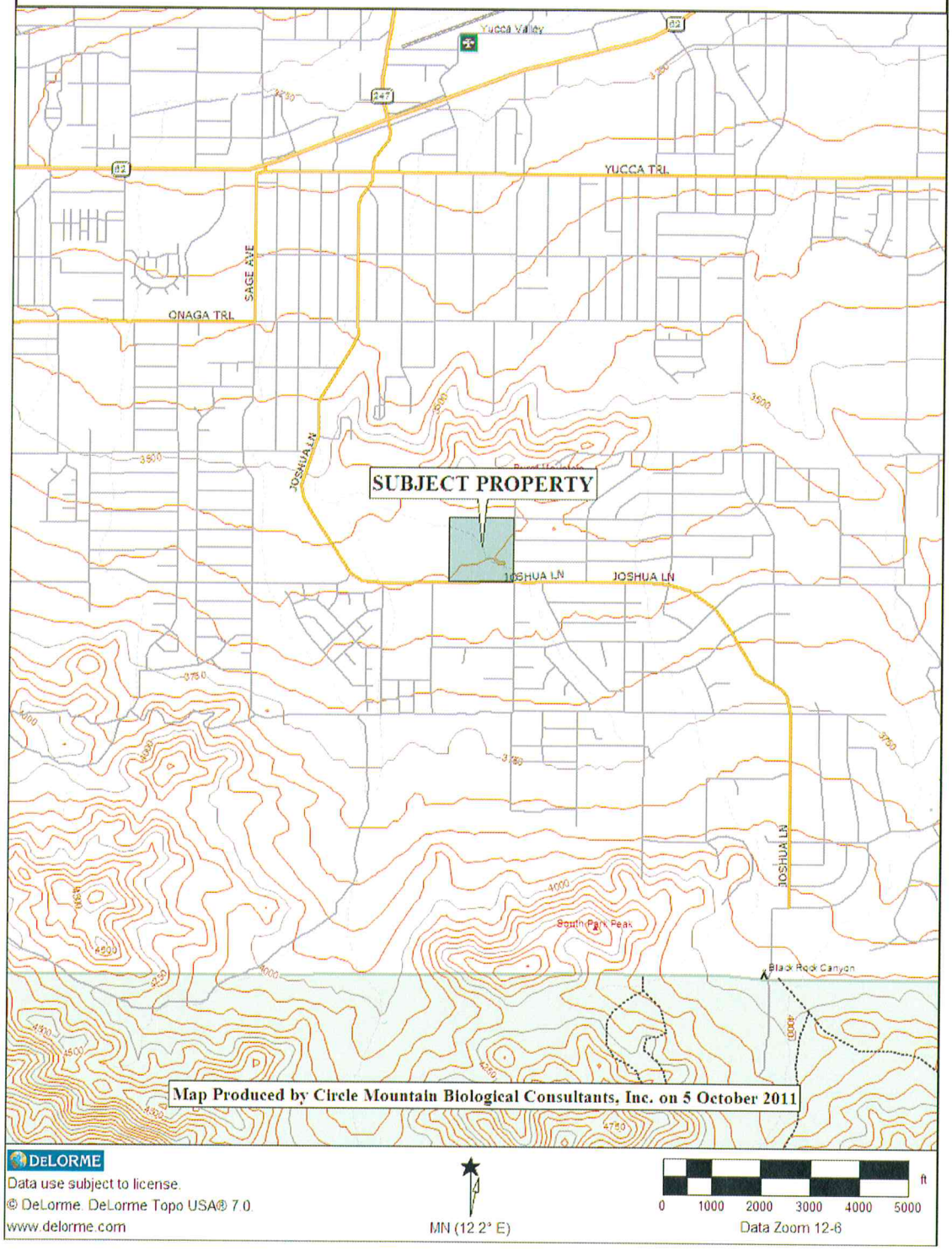


Figure 2. Site Map with Tortoise Sign from 2009 and 2011

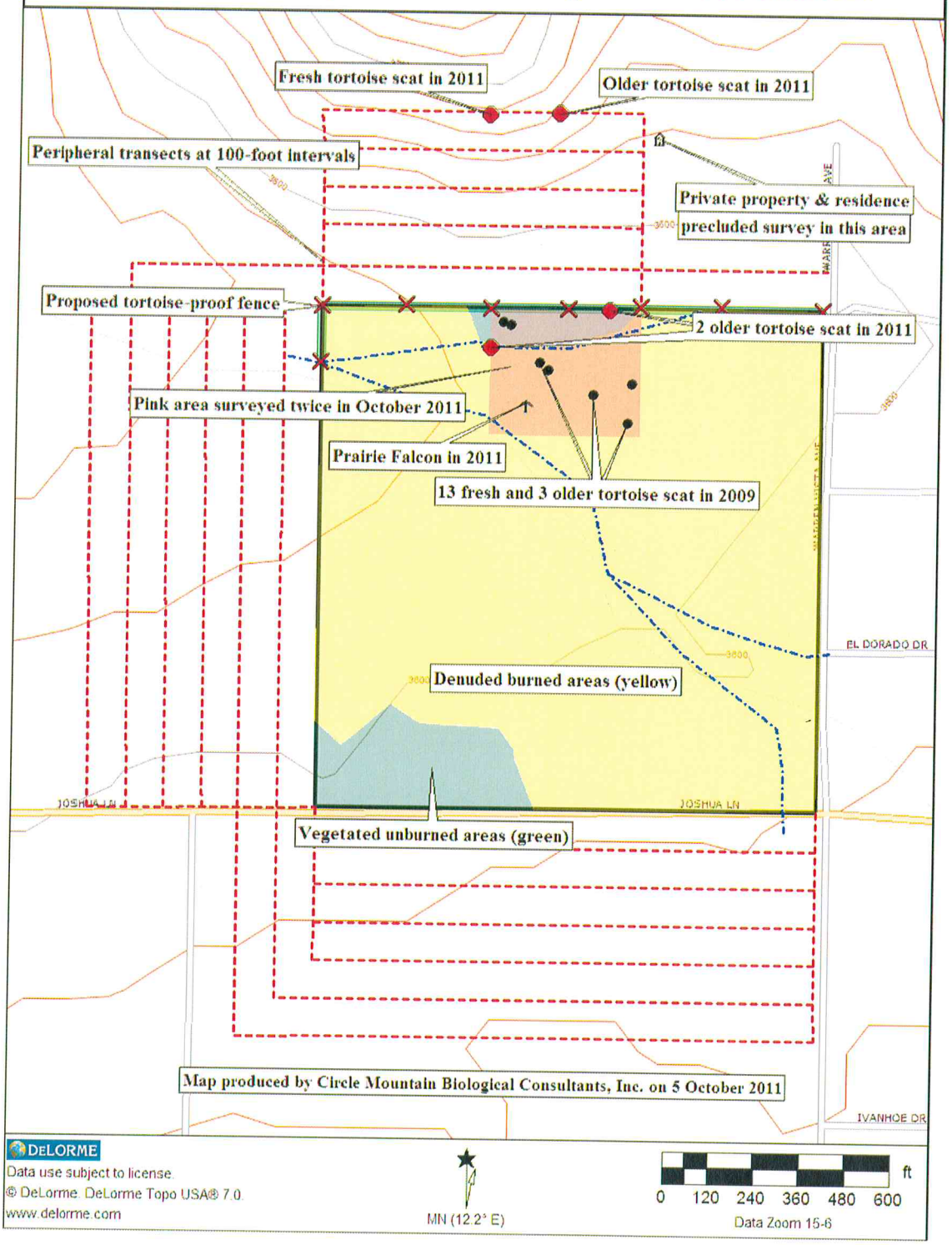


Figure 3. Results of 15 Surveys on 9 Sites from 1998 to 2011

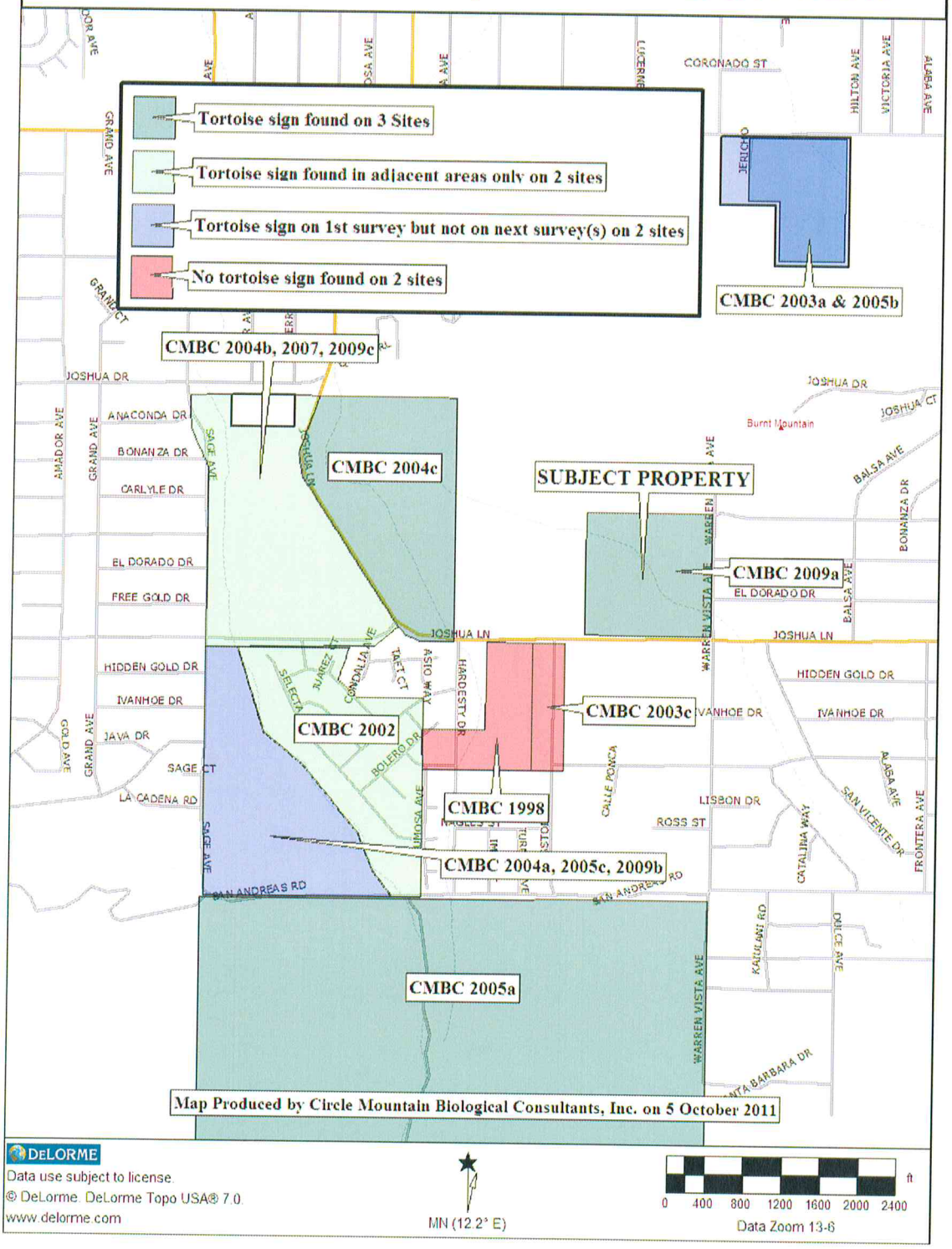
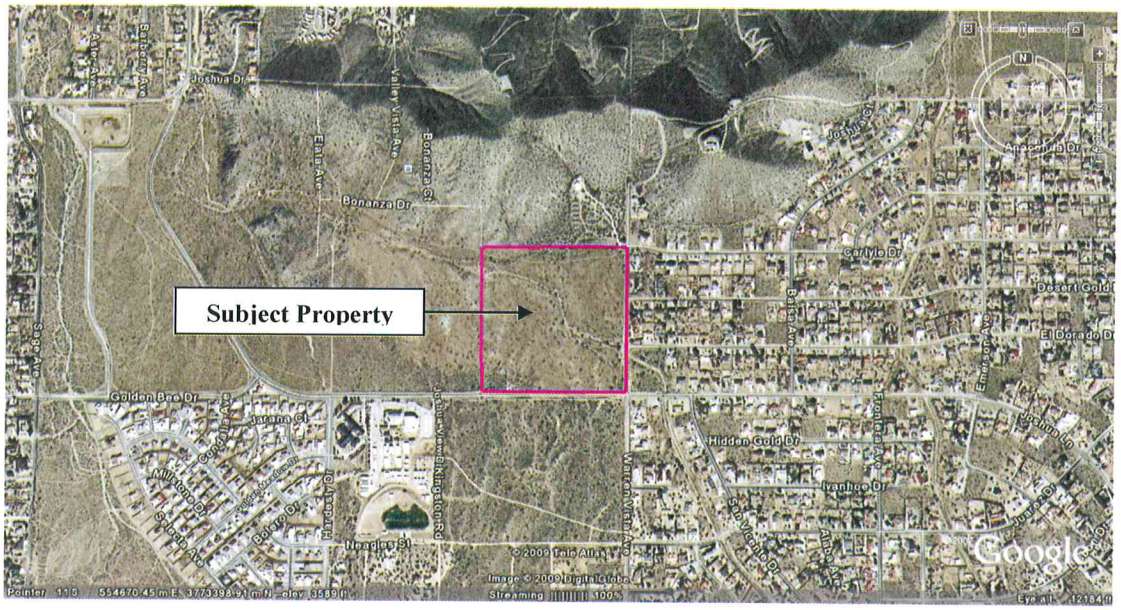
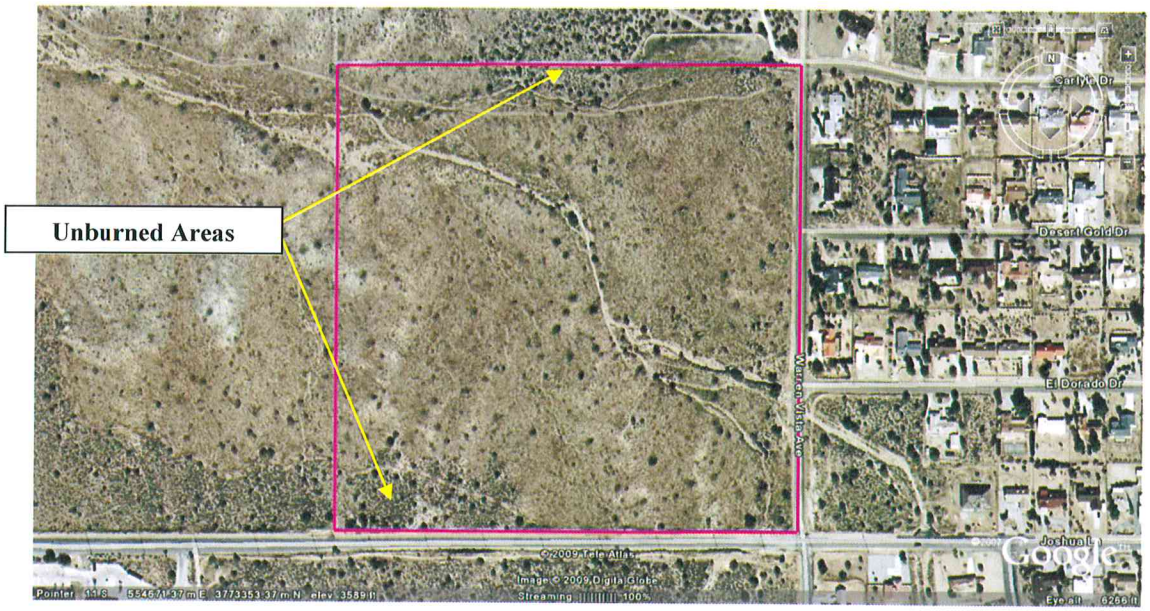


Figure 4. Proposed South Side Community Park: Aerial Photograph, ©2007Google™ Earth





Executive Summary

Circle Mountain Biological Consultants, Inc. was contracted by the Town of Yucca Valley to perform a focused survey for Agassiz's desert tortoise, habitat assessment for burrowing owl, and a general biological resource assessment on a 37.75-acre± site located in the Town of Yucca Valley, San Bernardino County, California. This is considered a "resurvey" because the site was first surveyed on 23 June 2009.

APN 0585-061-06 is a 37.75-acre± site located in the south part of the Town of Yucca Valley, with Joshua Lane along the south boundary and Warren Vista Avenue along the east. The legal description for the subject property is Township 1 South, Range 5 East, a portion of the Northeast ¼ of Section 12, S.B.B.&M. The Proponent plans to develop a community park on the site, which is depicted herein in Figure 5.

For a total of 15 hours, between 0930 and 1700 on 4 October 2011, LaRue of CMBC and subcontractor, Mike Radakovich, surveyed the site and adjacent areas as described herein. This entailed a survey of 40 transects, spaced at 30-foot intervals and oriented in a north-south direction throughout the 37.75-acre± parcel. When only a single, very old tortoise scat was found on the north boundary, LaRue reviewed the 2009 survey findings and established a 3.0-acre± area, shown in pink on Figure 2, which encompassed all areas where tortoise sign had been found in June 2009. LaRue then resurveyed that smaller area along 10 transects, spaced at 30-foot intervals, and oriented in an east-west direction, to be perpendicular to the original transects. In this way, the area deemed most likely to have tortoise sign was surveyed twice rather than once as recommended by USFWS.

Based on DeLorme Topo USA® 7.0 software, elevations on the proposed park site range from approximately 3,620 feet (1,103 meters) at the southeast corner down to 3,565 feet (1,086 meters) near the northwest corner. Terrain is relatively flat with a slight north aspect, with small hills on the west, and particularly southwest, portions of the site. Soils are mostly sandy with exposed bedrock in a few places. West Burnt Mountain Wash is a USGS-designated blueline stream that runs southeast-to-northwest through the site. The 95 plant species identified during the surveys performed in 2009 and/or 2011 are listed in Appendix A. The 5 reptile, 26 bird, and 9 mammal species identified during the surveys of 2009 and/or 2011 are listed in Appendix B.

Results of the focused resurvey for Agassiz's desert tortoise in October 2011 reveal that older tortoise scat remain on the site but there is no evidence of recent use. In June 2009, 16 tortoise scat were found onsite, including 13 fresh scat that were likely deposited in the spring of 2009. Only one of these 16 scat was found during the present study and no new evidence of recent tortoise use was found. Given these observations, CMBC concludes that tortoises are currently absent from the subject property. Importantly, no tortoise burrows were found onsite or in adjacent areas in 2009 or in 2011. A very fresh scat and an older scat were found in wood rat middens approximately 500 feet north of the site. These observations suggest that one or more tortoises occur in adjacent areas to the north, and occasionally visit the subject property, although there is no evidence they have visited the site in the last several years.

CMBC recommends that this report be submitted to both the CDFG (Becky Jones) and USFWS (Ray Bransfield) to consider and discuss a series of recommendations given herein (page 13 and 14) that could allow the site to be developed with no adverse direct impacts to tortoises.

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: Cooper's hawk, sharp-shinned hawk, or burrowing owl. As such, no adverse impacts have been identified and no mitigation measures are recommended.

The only three special-status species other than tortoise known from the immediate area or for which suitable habitats are present include *prairie falcon*, which forages onsite but would not nest there; *loggerhead shrike*, which could nest and forage on the subject property; and *Little San Bernardino Mountains linanthus*, which could occur along the margins of West Burnt Mountain Wash. The best way to avoid direct impacts to shrikes is to remove any large shrubs, trees, or Yuccas between August and January, outside the normal breeding and nesting season. Landscaping with larger trees and maintaining a greenbelt along West Burnt Mountain Wash could benefit loggerhead shrike and prairie falcon. In an ideal year of sufficient rainfall, it would be appropriate to survey for the linanthus, which if found, could be protected on-site by minimizing ground disturbance along West Burnt Mountain Wash.

It appears from the conceptual design in Figure 5, that West Burnt Mountain Wash would be avoided during park development, although it is not clear if the wash would be maintained in its natural state or "improved" by flood control structures. Impacts to washes, such as spoil deposition or alteration are regulated by the CDFG. If unavoidable, impacts to West Burnt Mountain Wash would require a 1601-03 Streambed Alteration Agreement from CDFG. At the time of this writing, CDFG biologist, Ms. Becky Jones is the appropriate contact. Her office phone number is (661) 285-5867.

California juniper, hedgehog cactus, silver cholla, beavertail cactus, cottontop cactus, pencil cholla, catclaw acacia, Joshua tree, and Mohave yucca are the plant species observed onsite that are protected Town, County, and/or State ordinances.

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San Bernardino County, California

1.0. Introduction

1.1. Purpose and Need for Study. Circle Mountain Biological Consultants, Inc. (CMBC) was contacted by Robert Kirschmann on behalf of the Town of Yucca Valley (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 37.75-acre± site located in the Town of Yucca Valley, San Bernardino County, California (see Figures 1 and 2). This is considered a "resurvey" because the site was first surveyed on 23 June 2009 (Circle Mountain Biological Consultants 2009a). Given the location of the site within San Bernardino County and because the Town does not have specified guidelines for report preparation, this report has been prepared according to County of San Bernardino's *Report Protocol for Biological Assessment Reports* (County of San Bernardino 2006).

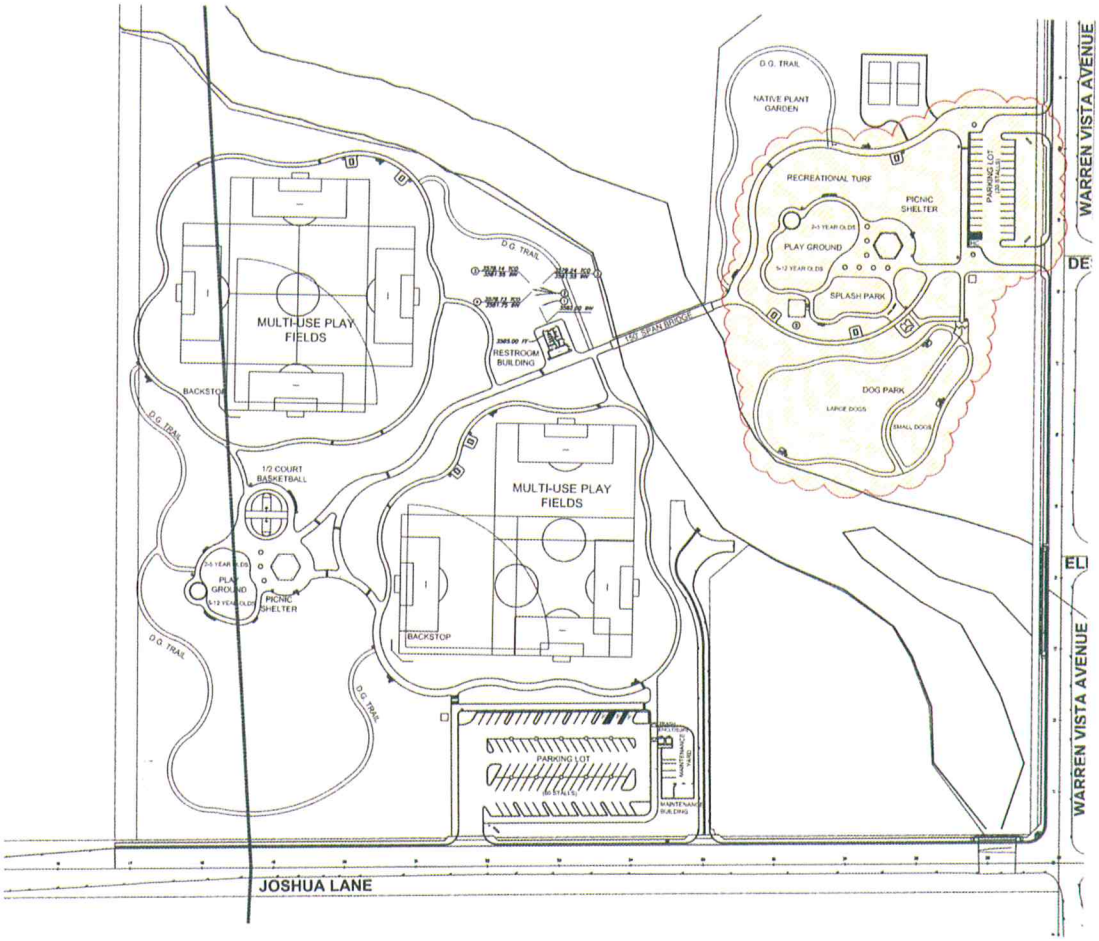
A significant paper was published in June 2011 (Murphy et al. 2011) whereby the "desert tortoise" of the Mojave Desert was split into two species, including *G. agassizii*, referred to as "Agassiz's desert tortoise," and a newly described species, *G. morafkai*, referred to as "Morafka's desert tortoise," 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 including the subject property.

As the California Environmental Quality Act (CEQA) Lead Agency, the Town of Yucca Valley Planning Department (Town) is required 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 Game (CDFG), respectively, if the Lead Agency asks them to assess impacts associated with proposed development.

Results of CMBC's focused tortoise survey, burrowing owl habitat assessment, 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 0585-061-06 is a 37.75-acre± site located in the south part of the Town of Yucca Valley, with Joshua Lane along the south boundary and Warren Vista Avenue along the east (see Figures 1 and 2). The legal description for the subject property is Township 1 South, Range 5 East, a portion of the Northeast ¼ of Section 12, S.B.B.&M. The Proponent plans to develop a community park on the site (see Figure 5 on next page).

Figure 5. Conceptual Plan for South Side Community Park
(Provided by Town on 15 September 2011)



2.0. Methods

2.1. Literature Review. CMBC consulted materials included in our library to determine the nearest locations of special status plant and animal species that have been reported from the vicinity of the subject property. Between 1989 and the present 2011 resurvey, CMBC has completed approximately 259 focused tortoise surveys in the Morongo Basin area, between Morongo Valley to the west and Twentynine Palms to the east. Of particular relevance are 14 focused tortoise surveys completed on 9 sites within approximately 3,600 feet of the site between 1998 and 2009, which, along with the subject property, are mapped in Figure 3. Importantly, the site was first surveyed in June 2009 so that technical report (Circle Mountain Biological Consultants, Inc. 2009a) is essential to discussing how conditions have changed in the past two years. These and other materials used in the completion of this report are listed in Section 5.0, below.

2.2. Field Survey. For **Agassiz's desert tortoises**, 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 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. Although several older tortoise scat were found on the subject property, CMBC deemed it appropriate to survey peripheral transects shown in Figure 2, which covered areas 600 feet north, south, and west of the site. Transects were not surveyed to the east because of residential development or farther in other directions since tortoise sign was already found to the north and posted private property occurred in other areas.

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 is considered to be the 40-acre site. As given above and depicted in Figure 4, the site is surrounded by posted private property that was not available to be surveyed. Ed LaRue of CMBC did receive permission from the property caretaker to the north, which allowed the biologists to survey portions of that private property. Most of the contiguous areas to the west are burned and comprise only marginal habitats for tortoises. Being surveyed in early October, the study was performed during the four-month survey period (i.e., April-to-May and September-to-October) recommended by USFWS (2010).

For **burrowing owl**, the CDFG (1995) survey protocol recommends transects be surveyed at 100-foot (30-meter) intervals throughout a given site with five transects spaced at 100-foot intervals surveyed in adjacent areas in potential habitat (i.e., excluding areas substantially developed for commercial, residential, industrial, etc. purposes). 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 wasn't, it would then have been necessary to perform breeding owl surveys during the spring and summer as outlined in CDFG (2007). With its narrower

transect intervals, the tortoise survey was sufficient to cover the site for burrowing owl. The burned areas on the site and to the west provide ideal habitats for burrowing owl, so full zone of influence transects were surveyed in all directions except to the east where residential development has eliminated available habitats (see Figure 2 for transect locations and Figure 4 for habitat conditions).

For a total of 15 hours, between 0930 and 1700 on 4 October 2011, LaRue of CMBC and subcontractor, Mike Radakovich, surveyed the site and adjacent areas as described herein. This entailed a survey of 40 transects, spaced at 30-foot intervals and oriented in a north-south direction throughout the 37.75-acre± parcel. When only a single, very old tortoise scat was found on the north boundary, LaRue reviewed the 2009 report (Circle Mountain Biological Consultants, Inc. 2009a) and established a 3.0-acre± survey area, shown in pink on Figure 2, which encompassed all areas where tortoise sign had been found in June 2009. LaRue then resurveyed that smaller area along 10 transects, spaced at 30-foot intervals, and oriented in an east-west direction, to be perpendicular to the original transects. In this way, the area deemed most likely to have tortoise sign was surveyed twice rather than once as recommended by the survey protocol. 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 the original transects were surveyed, LaRue kept tallies of observable human disturbances encountered on 20 of the 40 transects. The results of this method provide *encounter rates* for observable human disturbances. For example, two roads observed on each of 20 transects would yield a tally of 40 roads (i.e., two roads encountered 20 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 70°F, with 60% cloud cover, and average winds of 0.5 miles per hour and gusts up to 1.0 mile per hour out of the west, as measured by a hand-held Kestrel® weather and wind speed meter. Weather conditions were not recorded at the end of the survey.

All plant and animal species identified during both the 2009 and 2011 surveys 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, rare species 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 6. ©2007Google™ 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, adjacent land uses, and a burn that occurred three or four years ago. Based on DeLorme Topo USA® 7.0 software, elevations on the proposed park site range from approximately 3,620 feet (1,103 meters) at the southeast corner down to 3,565 feet (1,086 meters) near the northwest corner. Terrain is relatively flat with a slight north aspect, with small hills on the west, and particularly southwest, portions of the site. Soils are mostly sandy with exposed bedrock in a few places. West Burnt Mountain Wash is a USGS-designated blueline stream that runs southeast-to-northwest through the site (see Figures 2 and 4).

3.1.1. *Common Flora.* The 95 plant species identified during the surveys performed in 2009 and/or 2011 are listed in Appendix A. The following description is taken from Circle Mountain Biological Consultants, Inc. (2009a) and supplemented as necessary to reflect current conditions. In 2009, the site had been substantially impacted by recent (and likely historic) fires (see Figure 2). In spite of this, there is still a diverse assemblage of both annual and perennial plants on the subject property. Judging from the intact plant community to the south, the site was probably vegetated by Joshua tree-juniper woodland and Mojave mixed woody scrub before the fire.

Perennial plants remaining on-site even in burned areas include Joshua tree (*Yucca brevifolia*), Mohave yucca (*Yucca schidigera*), California juniper (*Juniperus californica*), California buckwheat (*Eriogonum fasciculatum*), paper bag bush (*Salazaria mexicana*), cheesebush (*Hymenoclea salsola*), and desert mallow (*Sphaeralcea ambigua*). Other plants commonly found in burned areas include adenophyllum (*Adenophyllum cooperi*), Parry rock-pink (*Stephanomeria parryi*), short-pod mustard (*Hirschfeldia incana*), rattlesnake weed (*Chamaesyce albomarginata*), indigo bush (*Psorothamnus arborescens*), wishbone bush (*Mirabilis bigelovi*), red brome (*Bromus madritensis* ssp. *rubens*), and cheat grass (*Bromus tectorum*).

Given the fire and adjacent residential development to the south and east, there are certain plants found on-site that are typically associated with degraded habitats. These plants include fiddleneck (*Amsinckia tessellata*), Jimsonweed (*Datura wrightii*), Saharan mustard (*Brassica tournefortii*), tansy (*Descurainia pinnata*), flixweed (*Descurainia sophia*), tumble mustard (*Sisymbrium altissimum*), London rocket (*Sisymbrium irio*), sisymbrium (*Sisymbrium orientale*), Russian thistle (*Salsola tragus*), caesalpinia (*Caesalpinia virgata*), Mexican palo verde (*Parkinsonia aculeata*), split-grass (*Schismus* sp.), and red-stemmed filaree (*Erodium cicutarium*). A single desert willow (*Chilopsis linearis* ssp. *arcuata*) found on-site in 2009 was not observed in 2011.

Species somewhat more common in unburned areas, some of which were likely dominant prior to the fire, include desert tea (*Ephedra californica*), Nevada joint-fir (*Ephedra nevadensis*), desert goldenhead (*Acamptopappus sphaerocephalus*), burrobush (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), Cooper's goldenbush (*Ericameria cooperi* var.

cooperi), matchweed (*Gutierrezia sarothrae*), hedgehog cactus (*Echinocereus engelmannii*), beavertail cactus (*Opuntia basilaris*), silver cholla (*Opuntia echinocarpa*), cottontop cactus (*Echinocactus polycephalus*), catclaw acacia (*Acacia greggii*), white rhatany (*Krameria grayi*), paper-bag bush, California buckwheat, yucca buckwheat (*Eriogonum plumatella*), blackbush (*Coleogyne ramosissima*), desert almond (*Prunus fasciculatus*), Anderson's box-thorn (*Lycium andersonii*), peach thorn (*Lycium cooperi*), creosote bush (*Larrea tridentata*), Joshua tree, and Mojave yucca.

Plant species found in adjacent areas only included desert mariposa-lily (*Calochortus kennedyi*), fowl bluegrass (*Poa secunda*), larkspur (*Delphinium parishii*), buckwheat (*Eriogonum gracillimum*), linear leaf goldenbush (*Ericameria linearifolia*), spiny hopsage (*Grayia spinosa*), desert aster (*Xylorhiza tortifolia*), and wild rhubarb (*Rumex hymenosepalus*).

3.1.2. *Common Fauna*. The 5 reptile, 26 bird, and 9 mammal species identified during the surveys of 2009 and/or 2011 are listed in Appendix B. Interestingly, the exact same reptiles and mammals, no more no less, identified in 2009 were also identified in 2011. Reptiles observed or detected during both surveys included desert spiny lizard (*Sceloporus magister*), side-blotched lizard (*Uta stansburiana*), desert horned lizard (*Phrynosoma platyrhinos*), and western whiptail (*Cnemidophorus tigris*). Other locally common reptile species that may occur include zebra-tailed lizard (*Callisaurus draconoides*), long-nosed leopard lizard (*Gambelia wislizenii*), 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.).

Except for the prairie falcon observed in 2011, all birds identified in both years are common to the region, some tolerant of urbanizing areas and others associated with undisturbed desert habitats. Those that may nest on-site in remaining vegetated areas or in adjacent areas include Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), ladder-backed woodpecker (*Picoides scalaris*), Anna's hummingbird (*Calypte anna*), scrub jay (*Aphelocoma coerulescens*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), verdin (*Auriparus flavipes*), cactus wren (*Campylorhynchus brunneicapillus*), northern mockingbird (*Mimus polyglottos*), black-throated sparrow (*Amphispiza bilineata*), western meadowlark (*Sturnella neglecta*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*).

The two raptors observed in 2009, including turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*), and several seasonal visitors observed in 2011, including Brewer's sparrow (*Spizella breweri*) and white-crowned sparrow (*Zonotrichia leucophrys*), are incidental to the site and would not nest there. An American kestrel (*Falco sparverius*) was observed several times foraging onsite, and the carcass of a barn owl (*Tyto alba*) was found in 2011, possibly a prey item of the prairie falcon observed dive-bombing Gambel's quail.

The exact same mammal species detected in both 2009 and 2011 are also common to the region and fairly tolerant of suburbanizing areas. Small mammals included California ground squirrel (*Otospermophilus beecheyi*), antelope ground squirrel (*Ammospermophilus leucurus*), Botta pocket gopher (*Thomomys bottae*), kangaroo rat (*Dipodomys* sp.), and desert wood rat (*Neotoma lepida*). Medium-sized mammals included black-tailed hare (*Lepus californicus*) and Audubon cottontail (*Sylvilagus audubonii*). Predators included coyote (*Canis latrans*) and bobcat (*Lynx rufus*).

3.2. Uncommon Biological Resources.

3.2.1. *Agassiz's Desert Tortoise*. A primary goal of this survey was to see how the distribution of tortoise sign may have changed between the first survey of June 2009 (Circle Mountain Biological Consultants, Inc. 2009a) and the present survey of October 2011. As depicted in Figure 2, in June 2009 LaRue and Radakovich found 16 scat of one or more adult tortoises, including 13 fresh scat and 3 older ones. The scat were distributed on the north part of the site within and immediately adjacent to areas that had not burned prior to the 2009 survey. CMBC concluded in 2009 that the presence of both older and newer scat indicated some persisting occurrence of one or two adult tortoises in the area; and the absence of burrows suggested that the tortoise(s) is/are primarily resident in undeveloped areas to the north with occasional forays south onto the site, likely for foraging.

Only a single, very old tortoise scat (depicted in Exhibit 6 at the end of this report) was found on the subject property during the first survey of the site on 4 October 2011. When mapped, the scat was in the exact same location as an old scat found in 2009, so that the two may be the same. During the second coverage in 2011 of the 3.0-acre± area where all the tortoise sign had been found in 2009 (the pink area in Figure 2), Radakovich found a very old scat (depicted in Exhibit 5) deposited by an adult tortoise several years ago. None of the then-fresh scat found in 2009 were observed during the present survey. Two other scat of adult tortoise(s) were found in wood rat middens, including a very fresh one (depicted in Exhibit 7) and an older one, both approximately 500 feet north of the site as depicted in Figure 2.

These observations further support CMBC's conclusions in 2009. Namely, that the fire had eliminated most of the suitable tortoise habitat from the site, and that in 2009 one or more tortoises occurred in adjacent areas with occasional visits onto the subject property, likely to forage. Importantly, no burrows were found onsite in either 2009 or 2011, indicating that tortoises do not have their primary residences on the subject property. The results of the 2011 survey suggest that tortoises have not visited the site within the past two years, and that the tortoise detected in 2009 is no longer on the subject property but may still occur within several hundred feet north of the site, as evidenced by fresh scat found 500 feet north.

The proposed park site is located in a part of Yucca Valley where there are persisting individual tortoises that are, unfortunately, slowly disappearing. As depicted in Figure 3, tortoise sign has been found on or adjacent to five sites, was not found on two sites, and

was initially found on two sites but not found during subsequent surveys; these are the sites from which tortoises have disappeared. Burnt Mountain functions as relatively intact habitat that could support tortoises for years to come. In fact, three of the nine sites depicted in Figure 3 that either had tortoise sign or still do, including a 35-acre site (Circle Mountain Biological Consultants 2003a), 71-acre site (Circle Mountain Biological Consultants 2004c), and the subject property are immediately adjacent to Burnt Mountain.

Encounter rates for observable human disturbances along 20 of 40 transects in 2009 included (in descending order of prevalence) 45 off-highway vehicle tracks, 13 shot gun shells, 11 domestic dog signs (exclusively along the east boundary), 10 dumps, 1 dirt trail, and 1 rifle shell. Encounter rates along 20 transects in 2011 revealed 81 off-highway vehicle tracks, 32 shot gun shells, 25 dumps (mostly vegetation), 20 domestic dog signs (not exclusively along the eastern boundary), and 1 dirt trail. Given these observations, the incidences of vehicle use, shot gun shooting (likely hunting quail and/or rabbits, which are each very common), domestic dogs, and dumping have each doubled in the past two years.

The County (2004) requires that habitat categories designated by the U.S. Bureau of Land Management (1989) be identified in all desert tortoise technical reports. Although habitat categories apply only to public lands administered by the BLM, regulatory agencies typically determine habitat compensation ratios based on the nearest BLM habitat categories (Desert Tortoise Compensation Team 1991). With the adoption of the West Mojave Plan (U.S. Bureau of Land Management 2005), all lands that are outside Desert Wildlife Management Areas, including the subject property, are characterized as Category 3 Habitat, which is the lowest priority management area for viable populations of the desert tortoise.

The site is not found within desert tortoise critical habitat, which was designated in 1994 (U.S. Fish and Wildlife Service 1994a) nor is it within a Desert Wildlife Management Area as recommended in the Desert Tortoise (Mojave Population) Recovery Plan (U.S. Fish and Wildlife Service 1994b) and formally adopted in March 2006 as a result of the West Mojave Plan (U.S. Bureau of Land Management 2005). The nearest such areas are the Pinto Mountain Critical Habitat Unit and Desert Wildlife Management Area, which are located approximately 23 miles east of the site.

3.2.2. *Other Special Status Species*. U.S. Fish and Wildlife Service (2008), California Department of Fish and Game (2011a, 2011b, 2011c), and California Native Plant Society (CNPS 2011) maintain lists of animals and/or plants considered rare, threatened, or endangered, which are collectively referred to as "special status species." Special status species considered in the original report, which are reiterated herein, included prairie falcon, Cooper's hawk, sharp-shinned hawk, loggerhead shrike, burrowing owl, and Little San Bernardino Mountains linanthus. Each of the bird species discussed below is considered a Bird of Conservation Concern by the USFWS (2008) and a Bird Species of Special Concern by the CDFG (2011a).

Prior to the current survey, **prairie falcon** (*Falco mexicanus*) had been observed 3,500 feet west (Circle Mountain Biological Consultants 2004b and 2007) and 3,000 feet south of the site (Circle Mountain Biological Consultants 2005a). Between 1989 and 2011, CMBC personnel have observed prairie falcons on 22 occasions in the Morongo Basin, including one during the present survey. At about 1600 on 4 October 2011, a prairie falcon was observed in an unsuccessful attempt to depredate a Gambel's quail on the subject property. The carcasses of a recently dead barn owl and mourning dove found onsite may have resulted from this or another prairie falcon depredation. CMBC's conclusion in 2009 that prairie falcon may occasionally forage on-site but would not nest there remains the same.

Cooper's hawk (*Accipiter cooperii*) is a year-round resident, medium-sized raptor that has been observed 3,500 feet west (Circle Mountain Biological Consultants 2004b), 1,800 feet west (Circle Mountain Biological Consultants 2004c), and 1,800 feet southwest (Circle Mountain Biological Consultants 2002) of the subject property. Having been observed on 31 occasions in the Morongo Basin over the past 22 years, it is the third most common special-status species observed by CMBC personnel in that region to date. This raptor is also relatively tolerant of, if not benefited by, urbanizing development, often observed depredating small passerine birds at backyard bird feeders. They also may occasionally forage on-site but would not nest there.

Sharp-shinned hawk (*Accipiter striatus*) is a smaller winter resident raptor that has been observed 3,000 feet south (Circle Mountain Biological Consultants 2005a). Like Cooper's hawk, sharp-shinned hawks are often observed in urbanizing areas at backyard bird feeders. They may occasionally forage on-site but would not nest there.

Loggerhead shrike (*Lanius ludovicianus*) has been observed 3,000 feet south (Circle Mountain Biological Consultants 2005a) and 3,500 feet west (Circle Mountain Biological Consultants 2004b). Having been observed by CMBC personnel on 38 occasions in the Morongo Valley since 1989, this is the most commonly encountered special-status species in the region. This smaller insectivore requires shrubs and/or trees for nesting, and may conceivably nest in one of the junipers or yuccas remaining in unburned areas. As such, it is the only special-status bird species that could both nest and forage on the proposed community park site.

Burrowing owl (*Athene cunicularia*) has not been observed or detected on any of the sites depicted in Figure 3. Nor was any evidence found during either the 2009 or 2011 surveys of the subject property and adjacent areas. The nearest known burrowing owl location was 2.8 miles northeast, where CMBC observed an owl at a burrow on a 140-acre site in 2006 (Circle Mountain Biological Consultants 2006a), which is the only burrowing owl CMBC has yet to find in Yucca Valley. The next nearest sites are 5.1 miles east in Joshua Tree (Circle Mountain Biological Consultants 2006b) and 6.8 miles north in the Yucca Mesa area (Circle Mountain Biological Consultants 2006c). Habitats in Yucca Valley are for the most part too densely vegetated to be ideal for burrowing owls. Although burned habitats such as are found on-site and to the west comprise suitable habitat for burrowing owl, no diagnostic owl sign was found at the many burrows (particularly those of California ground squirrels) inspected during this study. Burrowing owl is presumed to be absent at this time.

Little San Bernardino Mountains linanthus (*Linanthus maculatus*) (formerly referred to as "Little San Bernardino Mountains gilia") is a diminutive annual plant that is rarely observed due to its small stature (see Exhibits 11 and 12 in CMBC 2009a) and ephemeral nature. The plant is less than a quarter inch tall, germinates only during years of favorable rainfall, and then, is only detectable for a few weeks to a month in the spring. In 2008, LaRue observed this plant along Park Boulevard in southern Joshua Tree, approximately 5.6 miles east of the proposed park; 2.5 miles east in 2011 (Circle Mountain Biological Consultants, Inc. 2011); and 3.4 miles northeast in 2010 (Circle Mountain Biological Consultants, Inc. 2010). In the Morongo Basin, this linanthus is mainly found alongside ephemeral, intermittent streams (see Exhibit 13 along Park Boulevard in CMBC 2009a). Both the 2009 and 2011 surveys were conducted too late in the season to find this plant, which has some potential to occur along West Burnt Mountain Wash.

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.

West Burnt Mountain Wash is a USGS-designated intermittent blueline stream with several channels that run southeast to northwest through the subject property (see Figures 2 and 4). Unburned junipers and denser shrubs persist in places along these channels, providing cover for larger mammals residing in and traveling through the area. It appears from the conceptual site plan in Figure 5 that the wash may not be impacted by proposed development. It is strongly recommended that native plant growth be maintained and perhaps enhanced to continue to provide habitat for resident and migratory birds.

At the Town level, the following information is taken from an undated brochure, entitled *Town of Yucca Valley, Before You Remove Native Vegetation, What You Need To Know About "Protected Native Plants."* This brochure reiterates regulations for protecting a variety of native plants indentified in Town Ordinance No. 140 of 2003. Compliance with the Native Plant Protection and Management ordinance helps promote the continued health of the Town's abundant and diverse plant resources by not allowing the indiscriminate removal, and to further promote the protection of native plants and their relationship to the identity of the Town.

Regulated Desert Native Plants include:

- All species of genus *Prosopis* (mesquites): stems 2" & greater in diameter or 6' or greater in height.
- Creosote rings (10' or greater in diameter).
- All species of yuccas, including those commonly found in Yucca Valley:
  - Mojave yucca (*Yucca shidigeria*)
  - Chaparral yucca (*Yucca whipplei*)
  - Joshua trees (*Yucca brevifolia*)
- California juniper (*Juniperus californica*)
- Desert willow (*Chilopsis linearis*)
- Piñon pine (*Pinus monophylla*)
- Palo verde (*Cercidium* sp.)
- Manzanita (*Arcostaphylos* sp.)
- Additional plants protected or regulated by the California Desert Native Plants Act.

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) *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.

California juniper, hedgehog cactus, silver cholla, beavertail cactus, cottontop cactus, pencil cholla, catclaw acacia, Joshua tree, and Mohave yucca 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 the Agassiz's Desert Tortoise and Proposed Mitigation. Results of the focused resurvey for Agassiz's desert tortoise in October 2011 reveal that older tortoise scat remain on the site but there is no evidence of recent use. In June 2009, 16 tortoise scat were found onsite, including 13 fresh scat that were likely deposited in the spring of 2009. Only one of these 16 scat was found during the present study and no new evidence of recent tortoise use was found. Given these observations, CMBC concludes that tortoises are currently absent from the subject property.

Importantly, no tortoise burrows were found onsite or in adjacent areas in 2009 or in 2011. A very fresh scat (see Exhibit 7) and an older scat (but still newer than those found on the subject property) were found in wood rat middens approximately 500 feet north of the site. According to Vaughan (1990), wood rats collect materials between 90 and 150 feet from their middens. In any case, these observations suggest that one or more tortoises occur in adjacent areas to the north, and occasionally visit the subject property, although there is no evidence they have visited the site in the last several years.

According to USFWS (2010) pre-project survey protocol the results of this survey will remain valid for the period of one year, or until 4 October 2012, after which time, if the site has not been developed in the interim, another survey may be required to determine the presence or absence of tortoises on-site. Additionally, the Town typically requires that a given site be resurveyed within 30 days of ground disturbance to ensure that a tortoise has not established residency since the last survey (personal communication from Robert Kirschmann, Associate Planner to LaRue on 31 October 2007).

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 on-site at the time of construction, all activities likely to affect that animal(s) should cease and the Town 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 California Department of Fish and Game (i.e., authorization under section 2081 of the Fish and Game Code) and U.S. Fish and Wildlife Service [i.e., authorization under section 10(a)(1)(B) of the Federal Endangered Species Act].

Finally, it has been CMBC's policy since 1994 to NOT submit technical reports to either the USFWS or the CDFG unless asked to do so by the Proponent. However, the Proponent is advised of the following two 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 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 [Ventura] USFWS office. Informal consultation with the USFWS may be required even though no desert tortoises or sign are found during surveys.

CMBC recommends that this report be submitted to both the CDFG (Becky Jones) and USFWS (Ray Bransfield) to consider and discuss the following recommendations:

- The absence of fresh tortoise sign onsite in 2011 suggests that tortoises are not currently using the subject property as part of their primary residences. Fresh tortoise sign found in 2009 and in adjacent areas to the north in 2011 demonstrate that tortoises do still occur in the area and there is some potential for them to return to the site at a later date.

- In the Yucca Valley area, most adult tortoises are likely to enter brumation (i.e., winter hibernation) by the end of October. Juvenile tortoises may be active year-round and adults may become active if warm temperatures are combined with rainstorms. In any case, tortoises would be most likely to reenter the site after March 2012.

- Pending input and approval from CDFG and USFWS, CMBC suggests that a *clearance* survey be performed on the northern portions of the site, between the north boundary and 500 feet south. Unlike the presence-absence surveys performed thus far, a clearance survey requires that the site is surveyed at least two times without finding any fresh tortoise sign.

- If the clearance survey is performed and neither *fresh* tortoise scat nor *any* burrows are found, then the Town could have a contractor install a tortoise-proof fence along the entire north boundary and out to approximately 150 feet south from the northwest corner along the west boundary (see proposed location in Figure 2). It would be acceptable to find several additional *older* tortoise scat and still install this fence; but if either fresh scat or any tortoise burrows are found, the fence would not be installed and this approach would be abandoned while proper take permits are acquired.

- The survey should be performed during the winter of 2011, between early November and late January, and within several days of installing the fence. If no tortoise sign, as described above is found, the fence could be installed in the presence of an on-site biological monitor. The 150-foot extension to the south along the west boundary is intended to preclude tortoises from immigrating onto the site from the north and northwest, and assumes that tortoises would not immigrate from the south or west. The 150-foot length is intended to fence the western boundary from the northwest corner out to Burnt Mountain Wash, but not into the wash, which would likely destroy the fence during rainstorms. Appendix E includes descriptions and diagrams of tortoise fences recommended by the USFWS.

- Given the intended function of the park to service the general public, including domestic dogs, the Town should consider installing a more permanent fence along the north boundary, perhaps even a block wall, to protect tortoises occurring on Burnt Mountain from activities associated with the park. It will also be prudent to maintain a litter-free environment and minimize the attractiveness of the park to common ravens and coyotes, both of which are known tortoise predators.

• Finally, the Town typically requires that a final tortoise survey be performed within 30 days of clearing vegetation from a given site. This final clearance survey will provide one last opportunity to detect any tortoises that may have immigrated onto the site from the west or south, which are unlikely scenarios at this time.

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: Cooper's hawk, sharp-shinned hawk, or burrowing owl. As such, no adverse impacts have been identified and no mitigation measures are recommended.

The only three special-status species other than tortoise known from the immediate area or for which suitable habitats are present include **prairie falcon**, which does forage onsite but would not nest there; **loggerhead shrike**, which could nest *and* forage on the subject property; and **Little San Bernardino Mountains linanthus**, which could occur along the margins of West Burnt Mountain Wash. The best way to avoid direct impacts to shrikes is to remove any large shrubs, trees, or Yuccas between August and January, outside the normal breeding and nesting season. Landscaping with larger trees and maintaining a greenbelt along West Burnt Mountain Wash could benefit loggerhead shrike and prairie falcon. In an ideal year of sufficient rainfall, it would be appropriate to survey for the linanthus, which if found, could be protected on-site by minimizing ground disturbance along West Burnt Mountain Wash.

4.2.2. *Other Protected Biological Resources.* It appears from the conceptual design in Figure 5, that West Burnt Mountain Wash would be avoided during park development, although it is not clear if the wash would be maintained in its natural state or "improved" by flood control structures. Impacts to washes, such as spoil deposition or alteration are regulated by the CDFG. If unavoidable, impacts to West Burnt Mountain Wash would require a 1601-03 Streambed Alteration Agreement from CDFG. At the time of this writing, CDFG biologist, Ms. Becky Jones is the appropriate contact. Her office phone number is (661) 285-5867.

It is beyond the scope of this focused tortoise survey and general biological resource assessment to provide necessary baseline data and a proposed program to minimize and mitigate impacts to protected native desert plants. Given the tags observed on the many protected Joshua trees and junipers onsite, it appears that a Desert Native Plant Assessment has already been performed. A few seedling junipers, some less than a foot tall, were observed that are not tagged, and may have colonized the site since it was surveyed for plants. In any case, California juniper, hedgehog cactus, silver cholla, beavertail cactus, cottontop cactus, pencil cholla, catclaw acacia, Joshua tree, and Mohave yucca are the plant species observed onsite that are protected Town, County, and/or State ordinances.

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Appendix A. Plant Species Detected

The following plant species were identified on-site or in adjacent areas (i.e., signified by "+") in 2009 ("09"), 2011 ("11"), or in both years ("09/11") during the general biological inventories described in this report. Those plant species that are protected by pertinent Town, County, and/or State ordinances are signified by "(SC)" following the common name.

CONIFERAE	CONE-BEARING PLANTS
Cupressaceae	**Cypress family**
09/11 *Juniperus californica*	California juniper (SC)
GNETAE	GNETAE
Ephedraceae	**Joint-fir family**
09 *Ephedra californica*	Desert tea
09/11 *Ephedra nevadensis*	Nevada joint-fir
ANGIOSPERMAE: DICOTYLEDONES	DICOT FLOWERING PLANTS
Asteraceae	**Sunflower family**
09/11 *Acamptopappus sphaerocephalus*	Desert goldenhead
09/11 *Adenophyllum cooperi*	Adenophyllum
09/11 *Ambrosia acanthicarpa*	Annual bur-sage
09 *Ambrosia dumosa*	Burrobush
11 *Baileya pleniradiata*	Woolly marigold
09 *Chaenactis fremontii*	Desert pincushion
09 *Chrysothamnus nauseosus*	Rubber rabbitbrush
09/11 *Encelia farinosa*	Brittlebush
09/11 *Ericameria cooperi* var. *cooperi*	Cooper's goldenbush
11+ *Ericameria linearifolia*	Linear leaf goldenbush
09 *Erigeron foliosus*	Leafy daisy
09/11 *Gutierrezia sarothrae*	Matchweed
09/11 *Hymenoclea salsola*	Cheesebush
11 *Malacothrix glabrata*	Desert dandelion
11 *Nicolettia occidentalis*	Nicolettia
09/11 *Stephanomeria exigua*	Milk aster
09/11 *Stephanomeria parryi*	Parry rock-pink
09/11 *Stephanomeria pauciflora*	Desert milk aster
11+ *Xylorhiza (Machaeranthera) tortifolia*	Desert aster

Bignoniaceae	**Bigonia family**
09 *Chilopsis linearis* ssp. *arcuata*	Desert willow (SC)
Boraginaceae	**Borage family**
09/11 *Amsinckia tessellata*	Fiddleneck
Brassicaceae	**Mustard family**
09/11 **Brassica tournefortii*	Saharan mustard
09/11 **Descurainia pinnata*	Tansy
09 **Descurainia sophia*	Flixweed
09/11 **Hirschfeldia incana (Brassica geniculata)*	Short-pod mustard
11+ *Lepidium flavum*	Peppergrass
09/11 **Sisymbrium altissimum*	Tumble mustard
09/11 **Sisymbrium irio*	London rocket
09 **Sisymbrium orientale*	Sisymbrium
09 *Thysanocarpus curvipes*	Lace pod
Cactaceae	**Cactus family**
09+/11 *Echinocactus polycephalus*	Cottontop cactus (SC)
09/11 *Echinocereus engelmannii*	Hedgehog cactus (SC)
09/11 *Opuntia basilaris*	Beavertail cactus (SC)
09/11 *Opuntia echinocarpa*	Silver cholla (SC)
11 *Opuntia ramosissima*	Pencil cholla (SC)
Chenopodiaceae	**Goosefoot family**
11+ *Grayia spinosa*	Spiny hopsage
09/11 **Salsola tragus*	Russian thistle
Cucurbitaceae	**Gourd family**
09/11 *Cucurbita palmata*	Coyote gourd
Euphorbiaceae	**Spurge family**
09/11 *Chamaesyce (Euphorbia) albomarginata*	Rattlesnake weed
11 *Croton californicus*	Croton
Fabaceae	**Pea family**
09/11 *Acacia greggii*	Catclaw acacia (SC)
09/11 *Caesalpinia virgata*	Caesalpinia
09 *Lupinus* sp.	Lupine
09 *Lupinus concinnus*	Bajada lupine
09/11 *Parkinsonia aculeata*	Mexican palo verde
09/11 *Psorothamnus arborescens*	Indigo bush
Geraneaceae	**Geranium family**
09/11 **Erodium cicutarium*	Red-stemmed filaree

Hydrophyllaceae	**Water-leaf family**
09 *Phacelia tanacetifolia*	Phacelia
Krameriaceae	**Krameria family**
11 *Krameria erecta*	Pima rhatany
09/11+ *Krameria grayi*	White rhatany
Lamiaceae	**Mint family**
09/11 *Salazaria mexicana*	Paper-bag bush
09/11 *Salvia columbariae*	Chia
Loasaceae	**Stick-leaf family**
09 *Mentzelia albicaulis*	Little blazing star
Malvaceae	**Mallow family**
09/11 *Sphaeralcea ambigua*	Desert mallow
Nyctaginaceae	**Four o'clock family**
09/11 *Mirabilis bigelovi*	Wishbone bush
Onagraceae	**Evening-primrose family**
09 *Camissonia claviformis*	Brown-eyed primrose
09/11 *Oenothera deltoides*	Devil's lantern
Polemoniaceae	**Phlox family**
09/11 *Eriastrum densifolium*	Woolly star
09/11 *Eriastrum sapphirinum*	Woolly star
09 *Gilia latiflora*	Broad-flowered gilia
11 *Loeseliastrum (Langloisia) schottii*	Loeseliastrum
Polygonaceae	**Buckwheat family**
09/11 *Centrostegia thurberi*	Thurber's spineflower
09/11 *Chorizanthe brevicornu*	Brittle spineflower
09/11 *Eriogonum davidsonii*	Davidson buckwheat
09/11 *Eriogonum fasciculatum*	California buckwheat
09+*Eriogonum gracillimum*	Buckwheat
09/11 *Eriogonum inflatum*	Desert trumpet
09 *Eriogonum maculatum*	Spotted buckwheat
11 *Eriogonum nidularium*	Whiskbroom
09/11 *Eriogonum plumatella*	Yucca buckwheat
09 *Eriogonum pusillum*	Buckwheat
11 *Eriogonum viridescens*	Buckwheat
09+*Rumex hymenosepalus*	Wild rhubarb
Ranunculaceae	**Crowfoot larkspur**
09+*Delphinium parishii*	Larkspur

Rosaceae	**Rose family**
09/11 *Coleogyne ramosissima*	Blackbush
09/11 *Prunus fasciculatus*	Desert almond
Solanaceae	**Nightshade family**
09/11 *Datura wrightii (meteloides)*	Jimsonweed
09/11 *Lycium andersonii*	Anderson's box-thorn
09/11 *Lycium cooperi*	Peach thorn
Zygophyllaceae	**Caltrop family**
09/11 *Larrea tridentata*	Creosote bush
ANGIOSPERMAE: MONOCOTYLEDONES	MONOCOT FLOWERING PLANTS
Liliaceae	**Lily family**
09+*Calochortus kennedyi*	Desert mariposa-lily
09/11 *Yucca brevifolia*	Joshua tree (SC)
09/11 *Yucca schidigera*	Mojave yucca (SC)
Poaceae	**Grass family**
09/11+ *Achnatherum (Oryzopsis) hymenoides*	Indian ricegrass
09/11 *Achnatherum speciosum (Stipa speciosa)*	Desert needlegrass
11 **Bromus diandrus*	Common ripgut-grass
09/11 **Bromus madritensis* ssp. *rubens*	Red brome
09/11 **Bromus tectorum*	Cheat grass
09/11 *Elymus elymoides*	Squirreltail
09/11 *Pleuraphis (Hilaria) rigida*	Big galleta
09+*Poa secunda*	Fowl bluegrass
09/11 **Schismus* sp.	Split-grass

* - 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 identified in 2009 ("09"), 2011 ("11"), or in both years ("09/11") during the general biological inventories described in this report. Those animal species that are protected by pertinent federal or State ordinances are signified by "(SC)" following the common name.

REPTILIA	REPTILES
Testudinidae	**Land tortoises**
09/11 *Gopherus agassizii*	Agassiz's desert tortoise (SC)
Iguanidae	**Iguanids**
09/11 *Sceloporus magister*	Desert spiny lizard
09/11 *Uta stansburiana*	Side-blotched lizard
09/11 *Phrynosoma platyrhinos*	Desert horned lizard
Teiidae	**Whiptails**
09/11 *Cnemidophorus tigris*	Western whiptail
AVES	BIRDS
Cathartidae	**Vultures**
09 *Cathartes aura*	Turkey vulture
Accipitridae	**Hawks, eagles, harriers**
09 *Buteo jamaicensis*	Red-tailed hawk
Falconidae	**Falcons**
11 *Falco sparverius*	American kestrel
11 *Falco mexicanus*	Prairie falcon (SC)
Phasianidae	**Grouse and quail**
09/11 *Callipepla gambelii*	Gambel's quail
Columbidae	**Pigeons and doves**
11 *Columba livia*	Rock dove
09/11 *Zenaida macroura*	Mourning dove
Cuculidae	**Cuckoos**
09 *Geococcyx californianus*	Greater roadrunner
Tytonidae	**Barn Owls**
11 *Tyto alba*	Common barn owl (carcass)

Camprimulgidae	**Nightjars**
09 *Chordeiles acutipennis*	Lesser nighthawk
Trochilidae	**Hummingbirds**
09/11 *Calypte anna*	Anna's hummingbird
Picidae	**Woodpeckers**
11 *Picoides scalaris*	Ladder-backed woodpecker
Tyrannidae	**Tyrant flycatchers**
09/11 *Sayornis saya*	Say's phoebe
Corvidae	**Crows and jays**
11 *Aphelocoma coerulescens*	Scrub jay
09/11 *Corvus corax*	Common raven
Remizidae	**Verdins**
09/11 *Auriparus flavipes*	Verdin
Troglodytidae	**Wrens**
09/11 *Campylorhynchus brunneicapillus*	Cactus wren
Mimidae	**Mockingbirds and thrashers**
09/11 *Mimus polyglottos*	Northern mockingbird
Sturnidae	**Starlings**
11 *Sturnus vulgaris*	European starling
Emberizidae	**Sparrows, warblers, tanagers**
11 *Spizella breweri*	Brewer's sparrow
09/11 *Amphispiza bilineata*	Black-throated sparrow
11 *Amphispiza belli*	Sage sparrow
09 *Sturnella neglecta*	Western meadowlark
11 *Zonotrichia leucophrys*	White-crowned sparrow
Fringillidae	**Finches**
09/11 *Carpodacus mexicanus*	House finch
Passeridae	**Weavers**
09 *Passer domesticus*	House sparrow
MAMMALIA	MAMMALS
Leporidae	**Hares and rabbits**
09/11 *Lepus californicus*	Black-tailed hare
09/11 *Sylvilagus audubonii*	Audubon cottontail

Sciuridae	**Squirrels**
09/11 *Otospermophilus beecheyi*	California ground squirrel
09/11 *Ammospermophilus leucurus*	Antelope ground squirrel
Geomyidae	**Pocket gophers**
09/11 *Thomomys bottae*	Botta pocket gopher
Heteromyidae	**Pocket mice**
09/11 *Dipodomys* sp.	Kangaroo rat
Cricetidae	**Rats and mice**
09/11 *Neotoma lepida*	Desert wood rat
Canidae	**Foxes, wolves and coyotes**
09/11 *Canis latrans*	Coyote
Felidae	**Cats**
09/11 *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 4 October 2011

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 this report are derived. As such, following this page are copies of the data sheets completed by Ed LaRue on 4 October 2011.

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4 Oct 2011 (day, month, year) Survey biologist(s): Ed LaRue Mike Radakovich (name, email, and phone number)

Site description: 37.75-acre proposed community park in south Yucca Valley (project name and size, general location)

County: San Bernardino Quad: Yucca Valley South Location: T1S/R5E/ NE¼ S 12 (UTM coordinates, lat-long, and/or TRS, map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 37.75 ac Transect #: 40 Transect length: 1320

GPS Start-point: 554845/3773560, 1096m (easting, northing, elevation in meters) Start time: 0930 am/pm

GPS End-point: 554440/3773160, 1098 m (easting, northing, elevation in meters) End time: 1700 am/pm

Start Temp: 70°F °C End Temp: ? °C

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL >160-mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

All NAD 83

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	554580	3773523	MTYA	
2	554615	3773554	MTYA	
3	554576	3773709	TYA	In woodrat midden
4	554631	3773711	MTYA	In midden
5				
6				
7				
8				

Page: _____of_____

Transect number: _____

JOB #/NAME	DATE	DRIVE TIME TO	DRIVE TIME FROM	MILES	FIELD TIME BEGIN	FIELD TIME END	SURVEYORS
Yucca Val South Park	4 Oct 2011	0730 →	→ 1900	200	0930	1700	Clarke, Radabaugh

WEATHER CONDITIONS (Start/End)

TEMP: 70°F WIND X: 0.5↑1.0 N S E (W) CLOUD: 60 %

TEMP: °F WIND X: ↑ N S E W CLOUD: %

UTM (NAD 83) (circle starting corner)

(NE)→	NW→	SE→	SW→
554840	4440	4840	4440
3775360	5360	3165	3165

PERENNIAL PLANTS				ANNUAL PLANTS				BIRDS		HERP	MAM
Ambarg	Ophnev	Prosfm	Zoti	Bromal	Hordhc			GRDOW	BRSP	SBLT	Coyote
Lortr	Yucsch	Ceniths	Eri Lun	Schsp.	Brafar			MOUO	ANKE	DS LIZ	Kit Fox
Lycc00	Ephfem	Acaspe	Oxytym	Bro Tec	Sisarh			HOFI	SCSA	WEWT	Ad Gol
Opu Ech	Achspe	Eri Inf	Gro Sq	Eri Pay	Salco)			CAHR	EUST	DEHOC(S)	Bobcat
Colfan	Adecon	Cycand	Xylfor	Pat Mel	Ste Per			BTSP	LBWP		BTKA
Phrcr	Cha Alb	Acaspa	Krafra	Eri Sup	Eri Med			MOOO			Both
Spa Pinb	Xylfor	Bai Plu	Lep Fla	Erec	Lan (Sno)			BAOW(F)		Photographs	
Mir B.	Eri Plu	Micoac		Amsbes	Des Pon			VERD	1	SE →	NW
Yucbr	Sit Hes	Gre Cal		Sal Tra	Bro Rig			COLA	2	SW →	NE
Jun Cal	Opu Bai	Pin Pas		Ste Exi	Cho Bre			ROOO	3	NW →	SE
Hym Cal	Echcen	Oen Rel		Sis Di	Eri Var			SAPH	4	NE →	SW
Lut Sar	Kra Erc	Coe Pm		Mal Ech				AMHU	5	MSHYC	4660/3529
Sal Mex	Pso Arb	Euh Pol		Cur Pal				SASP	6	MTHAC	4675/3555
Eri Fas	Ste Pan	Cur Pho		Eri Obo				YUCSP	7	THA up north	

PWRA 22

AGS

CAGS

OBSERVABLE HUMAN DISTURBANCES

T#	East	North	OHV	Road	Dog	Dump	S Gun	Rifle	Target		
1	4840	3560	1		10	6 - Vegetation				North	East
3	4820	3165	Ø		Ø	13			100's	3590	4440
5	4800	3560				4					
7	4780	3165			1		old				
9	4760	3560	7				- new				
11	4740	3165	8								
13	4720	3560	7		1		4				
15	4700	3165	6		2		2				
17	4680	3560	3				2				
19	4660	3165	4		1		4				
21	4640	3560	6		1		1				
23	4620	3165	0		1		4				
25	4600	3560	8				4				
27	4580	3165	2		1		9				
29	4560	3560	2				1				
31	4540	3165	4		2		1				
33	4520	3560	2								
35	4500	3165	5								
37	4480	3560	2								
39	4460	3165	7				1				

2011 Field Season Page __ of __

OTHER SPECIES		UTM COORDINATES	
PRFA	4690/3282 Dive-bomb GAQU.		

DESERT TORTOISE SCAT

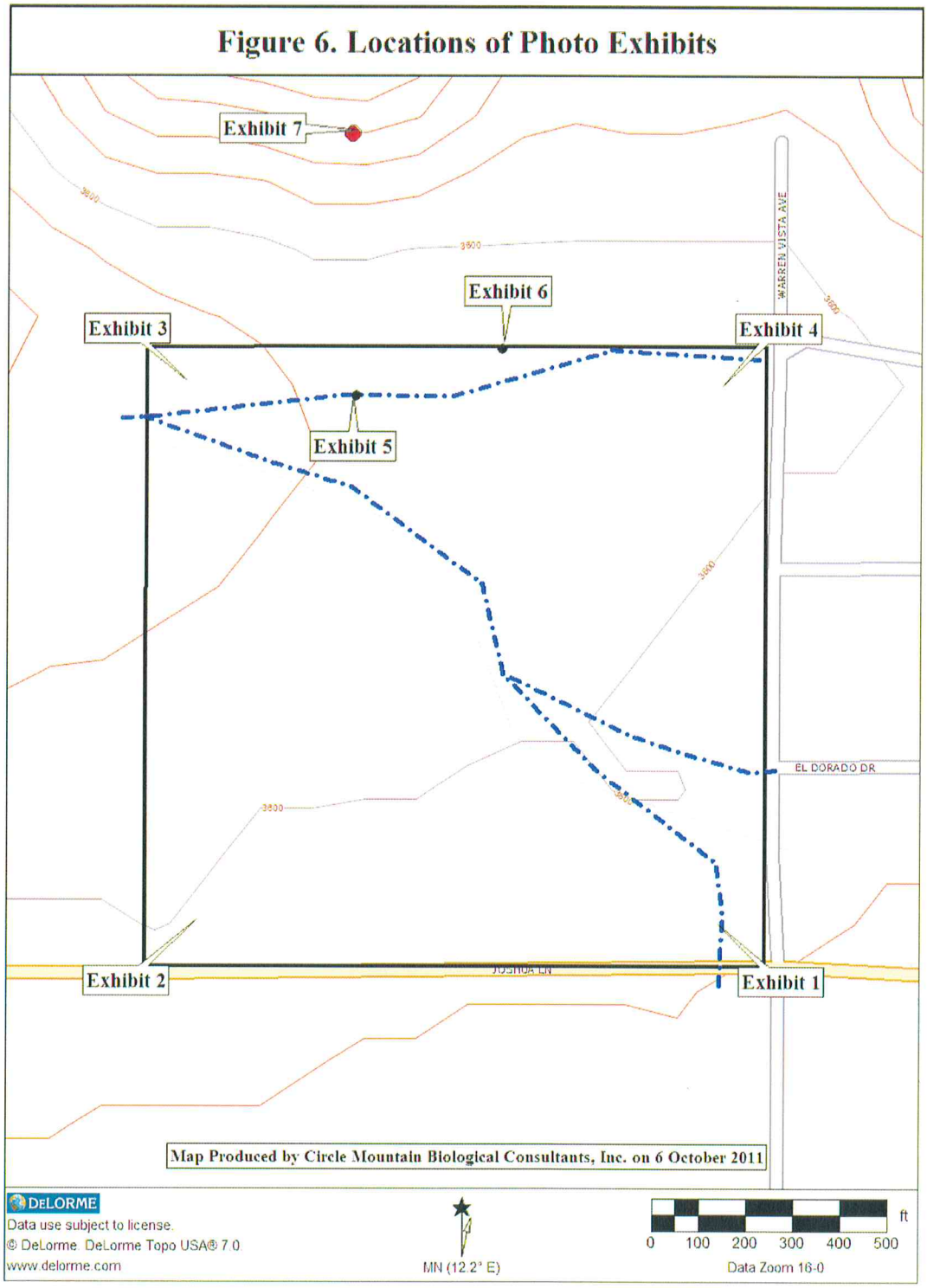
	SCAT	EAST	NORTH	SCAT	EAST	NORTH	SCAT	EAST	NORTH
onsite	NTYA	4675	3555	NAD83					
	NTYA	4660	3329	NAD27					
offsite	TYA	4577	3693	NAD 83	in midden				
	NTYA	4631	3703	NAD83	in midden				

TORTOISES			UTM COORDINATES	
AGE CLASS/GENDER	MCL	COMMENTS	EAST	NORTH

CARCASSES			UTM COORDINATES	
AGE CLASS/GENDER	TIME OF DEATH	DESCRIPTION	EAST	NORTH

BURROWS				UTM COORDINATES	
WIDTH	DEPTH	CONDITION	COMMENTS	EAST	NORTH

Appendix D. Photographic Exhibits



Locations of the seven photographic exhibits on the next four pages are depicted in Figure 6.

Exhibit 1. Proposed South Side Community Park: View from the southeast corner of the parcel, facing northwest (see Figure 6 for locations and directions of photographs).

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

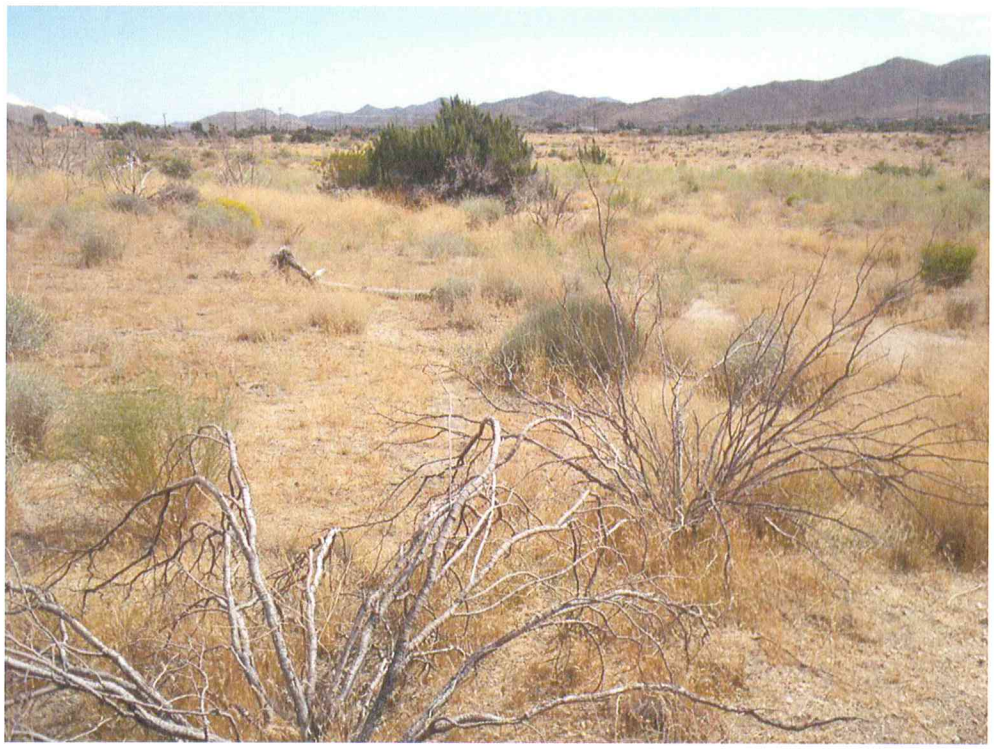


Exhibit 3. View from the northwest corner of the parcel, facing southeast.

Exhibit 4. View from the northeast corner of the parcel, facing southwest.

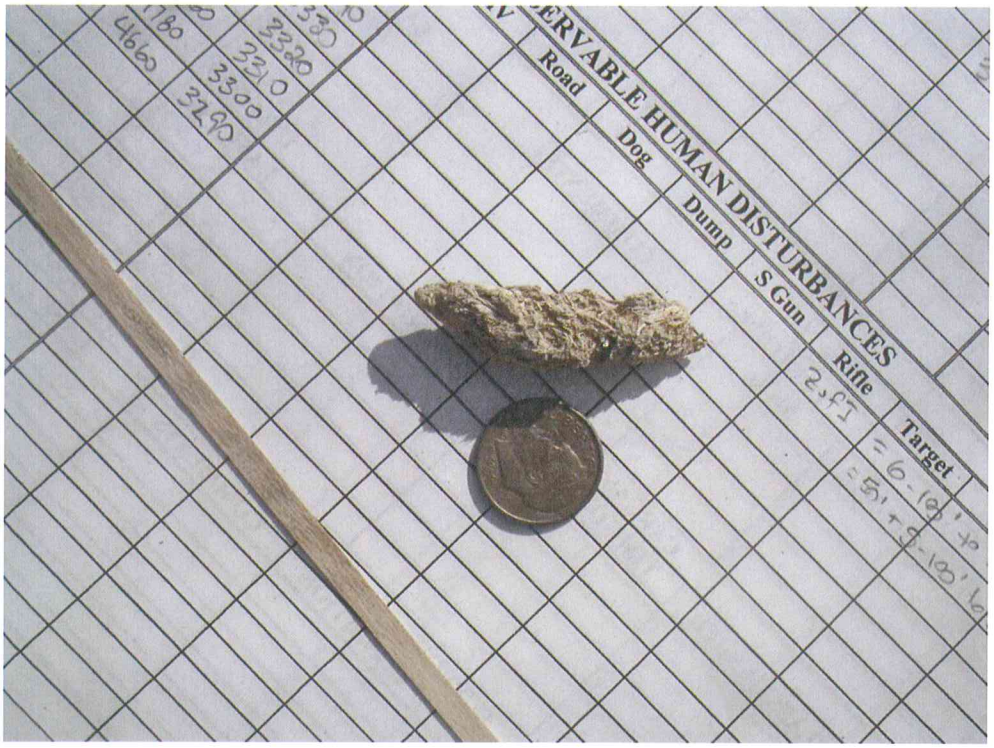


Exhibit 5. Very old tortoise scat found on-site (see location in Figure 6).

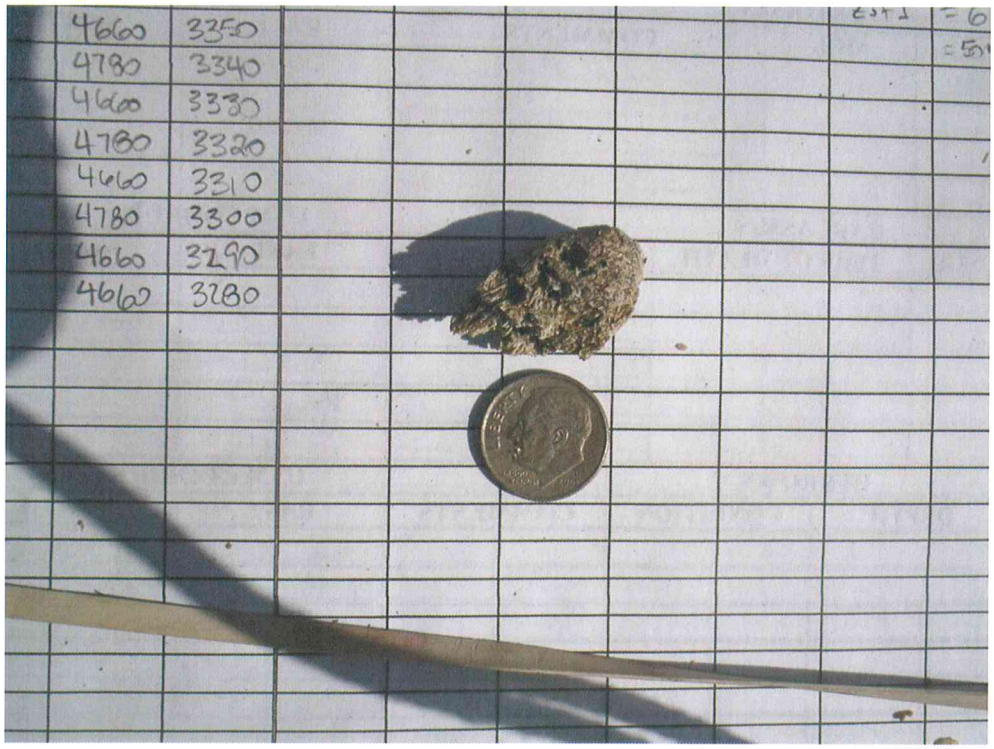


Exhibit 6. It appears that this old scat was deemed already old when first found in 2009.

Exhibit 7. This very fresh scat of an adult tortoise was found in a wood rat midden during the 2011 survey approximately 500 feet north of the proposed park.

Appendix E. Recommended Specifications for Desert Tortoise Exclusion Fencing September 2005

These specifications were developed to standardize fence materials and construction procedures to confine tortoises or exclude them from harmful situations, primarily roads and highways. Prior to commencing any field work, all field workers should comply with all stipulations and measures developed by the jurisdictional land manager and the U.S. Fish and Wildlife Service for conducting such activities in desert tortoise habitat, which will include, at a minimum, completing a desert tortoise education program.

FENCE CONSTRUCTION

Materials

Fences should be constructed with durable materials (*i.e.,* 16 gauge or heavier) suitable to resist desert environments, alkaline and acidic soils, wind, and erosion. Fence material should consist of 1-inch horizontal by 2-inch vertical, galvanized welded wire, 36 inches in width. Other materials include: Hog rings, steel T-posts, and smooth or barbed livestock wire. Hog rings should be used to attach the fence material to existing strand fence. Steel T-posts (5 to 6-foot) are used for new fence construction. If fence is constructed within the range of bighorn sheep, 6-foot T-posts should be used (see New Fence Construction below). Standard smooth livestock wire fencing should be used for new fence construction, on which tortoise-proof fencing would be attached.

Retrofitting Existing Livestock Fence

Option 1 (see enclosed drawing). Fence material should be buried a minimum of 12 inches below the ground surface, leaving 22-24 inches above ground. A trench should be dug or a cut made with a blade on heavy equipment to allow 12 inches of fence to be buried below the natural level of the ground. The top end of the tortoise fence should be secured to the livestock wire with hog rings at 12 to 18-inch intervals. Distances between T-posts should not exceed 10 feet, unless the tortoise fence is being attached to an existing right-of-way fence that has larger interspaces between posts. The fence must be perpendicular to the ground surface, or slightly angled away from the road, towards the side encountered by tortoises. After the fence has been installed and secured to the top wire and T-posts, excavated soil will be replaced and compacted to minimize soil erosion.

Option 2 (see enclosed drawing). In situations where burying the fence is not practical because of rocky or undigable substrate, the fence material should be bent at a 90° angle to produce a lower section approximately 14 inches wide which will be placed parallel to, and in direct contact with, the ground surface; the remaining 22-inch wide upper section should be placed vertically against the existing fence, perpendicular to the ground and attached to the existing fence with hog rings at 12 to18-inch intervals. The lower section in contact with the ground should be placed within the enclosure in the direction of potential tortoise encounters and level with the ground surface. Soil and cobble

(approximately 2 to 4 inches in diameter; can use larger rocks where soil is shallow) should be placed on top of the lower section of fence material on the ground covering it with up to 4 inches of material, leaving a minimum of 18 inches of open space between the cobble surface and the top of the tortoise-proof fence. Care should be taken to ensure that the fence material parallel to the ground surface is adequately covered and is flush with the ground surface.

New Fence Construction

Options 1 or 2 should be followed except in areas that require special construction and engineering such as wash-out sections (see below). T-posts should be driven approximately 24 inches below the ground surface spaced approximately 10 feet apart. Livestock wire should be stretched between the T-posts, 18 to 24 inches above the ground to match the top edge of the fence material; desert tortoise-proof fencing should be attached to this wire with hog rings placed at 12 to 18-inch intervals. Smooth (barb-less) livestock wire should be used except where grazing occurs.

If fence is constructed within the range of bighorn sheep, two smooth-strand wires are required at the top of the T-post, approximately 4 inches apart, to make the wire(s) more visible to sheep. A 20 to 24-inch gap must exist between the top of the fence material and the lowest smoothstrand wire at the top of the T-post. The lower of the top two smooth-strand wires must be at least 43 inches above the ground surface.

(72-inch T-posts: 24 inches below ground + 18 inches of tortoise fence above ground + 20 to 24-inch gap to lower top wire + 4 inches to upper top wire = 66 to 70 inches).

INSPECTION OF DESERT TORTOISE BARRIERS

The risk level for a desert tortoise encountering a breach in the fence is greatest in the spring and fall, particularly around the time of precipitation including the period during which precipitation occurs and at least several days afterward. All desert tortoise fences and cattleguards should be inspected on a regular basis sufficient to maintain an effective barrier to tortoise movement. Inspections should be documented in writing and include any observations of entrapped animals; repairs needed including bent T-posts, leaning or non-perpendicular fencing, cuts, breaks, and gaps; cattleguards without escape paths for tortoises or needed maintenance; tortoises and tortoise burrows including carcasses; and recommendations for supplies and equipment needed to complete repairs and maintenance.

All fence and cattleguard inventories should be inspected at least twice per year. However, during the first 2 to 3 years all inspections will be conducted quarterly at a minimum, to identify and document breaches, and problem areas such as wash-outs, vandalism, and cattleguards that fill-in with soil or gravel. GPS coordinates and mileages from existing highway markers should be recorded in order to pinpoint problem locations and build a database of problem locations that may require more frequent checking. Following 2 to 3 years of initial inspection, subsequent inspections should focus on known problem areas which will be inspected more frequently than twice per year. In

addition to semi-annual inspections, problem areas prone to wash-outs should be inspected following precipitation that produces potentially fence-damaging water flow. A database of problem areas will be established whereby checking fences in such areas can be done efficiently.

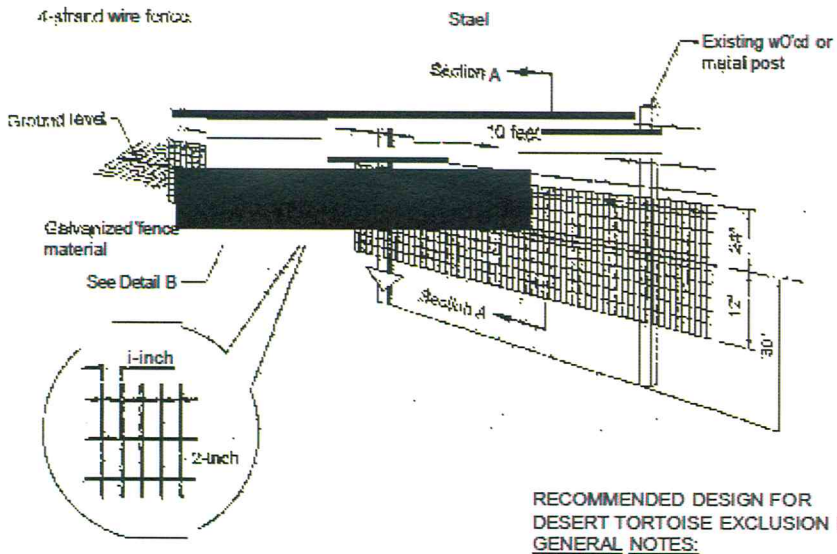
REPAIR AND MAINTENANCE OF DESERT TORTOISE BARRIERS

Repairs of fence wash-outs: (1) realign the fence out of the wash if possible to avoid the problem area, or (2) re-construct tortoise-proof fencing using techniques that will ensure that an effective desert tortoise barrier is established that will not require frequent repairs and maintenance.

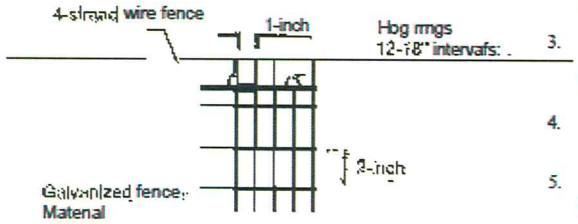
Gaps and breaks will require either: (a) repairs to the existing fence in place, with similar diameter and composition of original material, (b) replacement of the damaged section to the nearest T-post, with new fence material that original fence standards, (c) burying fence, and/or (d) restoring zero ground clearance by filling in gaps or holes under the fence and replacing cobble over fence constructed under Option 2. Tortoise-proof fencing should be constructed and maintained at cattleguards to ensure that a desert tortoise barrier exists at all times.

All fence damage should be repaired in a timely manner to ensure that tortoises do not travel through damaged sections. Similarly, cattleguards will be cleaned out of deposited material underneath them in a timely manner. In addition to periodic inspections, debris should be removed that accumulates along the fence. All cattleguards that serve as tortoise barriers should be installed and maintained to ensure that any tortoise that falls underneath has a path of escape without crossing the intended barrier.

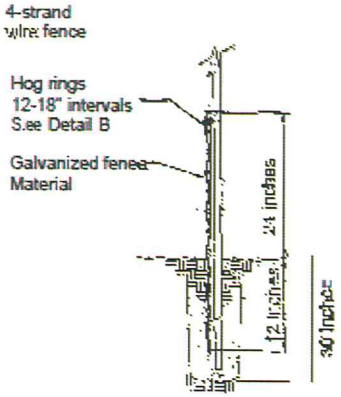
DESERT TORTOISE EXCLUSION FENCE (2005)



DETAIL A



DETAIL B



SECTION A

RECOMMENDED DESIGN FOR
DESERT TORTOISE EXCLUSION FENCE
GENERAL NOTES:

1. Ensure that fence posts and materials conform to the standards approved by the U.S. Fish and Wildlife Service.
2. Ensure that the height above ground level is no less than 18 inches and no higher than 24 inches.
3. Ensure that the depth of fence material below ground level is about 12 inches but no less than 6 inches. (See SECTION A above)
4. Install additional steel posts when between existing fence posts exceed 10 feet.
5. Attach fence material to existing fence or wire using hog rings at 12-inch intervals.
6. Fasten fence material to posts with 3 tie wires with a wire near the top, bottom, and center of the fence material.
7. Backfill trenches with excavated material and compact the material.
8. Attach fence material to all gates. Ensure that clearance at base of gate achieves zero ground clearance.
9. Substitute smooth wire for barbed wire if additional support wires are necessary.
10. The number placement of support wires may be modified to allow sheep and deer to pass safely.
11. Erosion at the edge of the fence material where the fence crosses washes may occur and requires appropriate and timely monitoring and repair.
12. Tie the fence into existing culverts and cattleguards when determined necessary to allow desert tortoise passage underneath roadways.