Biological Resource Assessment of
TTM 62484
Lancaster, California

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Abstract

Development has been proposed for TTM 62484, Lancaster, California. The approximately 10 acre (4 ha) study area was located south of Nugent Street and east of 25th Street East, T7N, R11W, the NW1/4 of the SW1/4 of the SW1/4 of Section 18, S.B.B.M. A line transect survey was conducted on 23 and 24 September 2020 to inventory biological resources. The proposed project area was characteristic of a highly disturbed field. A total of nineteen plant species and nine wildlife species or their sign were observed during the line transect survey. No desert tortoises (*Gopherus agassizii*) or their sign were observed during the field survey. The study site did not contain suitable habitat to support desert tortoises. The study site did not contain suitable habitat to support Mohave ground squirrels. No burrowing owls (*Athene cunicularia*) were observed during the field survey. California ground squirrel burrows (*Citellus beecheyi*) were present which can provide potential future cover sites for burrowing owls. The one salt cedar (*Tamarix aphylla*) just within the north boundary of the study area provides potential nesting sites for smaller migratory birds. Swainson's hawk (*Buteo swainsoni*) and other raptors would not nest within the study area given the lack of nesting sites. The study site appears to have no forage value for Swainson's hawks. No sensitive plants, specifically, alkali mariposa lily (*Calochortus striatus*), desert cymopterus (*Cymopterus deserticola*), and Barstow woolly sunflower (*Eriophyllum mohanense*) were observed during the field survey. No Joshua trees (*Yucca brevifolia*) are present within or adjacent to the study site. No sensitive plants are expected to occur within the study area due to the high level of impacts and the lack of suitable habitat. No other state or federally listed species are expected to occur within the proposed project area. No wetlands or ephemeral washes were observed within the study site.

Recommended Protection Measures:

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (pre-construction) survey should be accomplished within 14 days of ground disturbing activities (CDFG 2012). If burrowing owls or their sign are detected during the take avoidance (pre-construction) survey the Staff Report will be applied as appropriate.

If possible, removal of the salt cedar will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree removal will occur during or close to the nesting season, a qualified biologist will survey all potential nesting areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found, impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 50 feet around active migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Based on the condition of the habitat, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

Significance: This project would not result in a significant adverse impact to biological resources.

Development has been proposed for TTM 62484. TTM 62484 includes APNs 3150-027-026 and 022 (Figure 1). Development would include installation of access roads, parking, and utilities (water, sewer, electric, etc.). The entire project area would be graded prior to construction activities.

An environmental analysis should be conducted prior to any development project. An assessment of biological resources is an integral part of environmental analyses (Gilbert and Dodds 1987). The purpose of this study was to provide an assessment of biological resources potentially occurring within, or utilizing the proposed project area. Specific focus was on the presence/absence of rare, threatened and endangered species of plants and wildlife. Species of concern included the desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), desert kit fox (*Vulpes macrotis)*, desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), alkali mariposa lily (*Calochortus striatus*), and Joshua tree (*Yucca brevifolia*).

Study Area

The approximately 10 acre (4 ha) study area was located south of Nugent Street and east of 25th Street East, T7N, R11W, the NW1/4 of the SW1/4 of the SW1/4 of Section 18, S.B.B.M. (Figures 2 and 3). A highly disturbed field was present to the south of the study site. Nugent Street formed most of the northern boundary of the study site. Single-family homes were present north of Nugent Street. A small portion of the northeast corner was formed by a block wall and a chain link fence. A single-family house was present north of this block wall. A recently graded dirt road formed the eastern boundary. A chain link fence was present east of this dirt road. East of this was a storm drain channel and single-family housing. The western boundary was formed by 25th Street East. Single-family housing was present west of 25th Street East. Topography of the site was approximately 2,395 feet (773 m) above sea level.

Methods

A line transect survey was conducted to inventory plant and wildlife species occurring within the proposed project area (Cooperrider et al. 1986, Davis 1990). The USFWS (2010) has provided recommendations for survey methodology to determine presence/absence and abundance/distribution of desert tortoises. Line transects were walked in an east-west orientation within the study site. Line transects were approximately 660 feet (213 m) long and spaced approximately 50 feet (16 m) apart (U.S. Fish & Wildlife Service 2010). The California

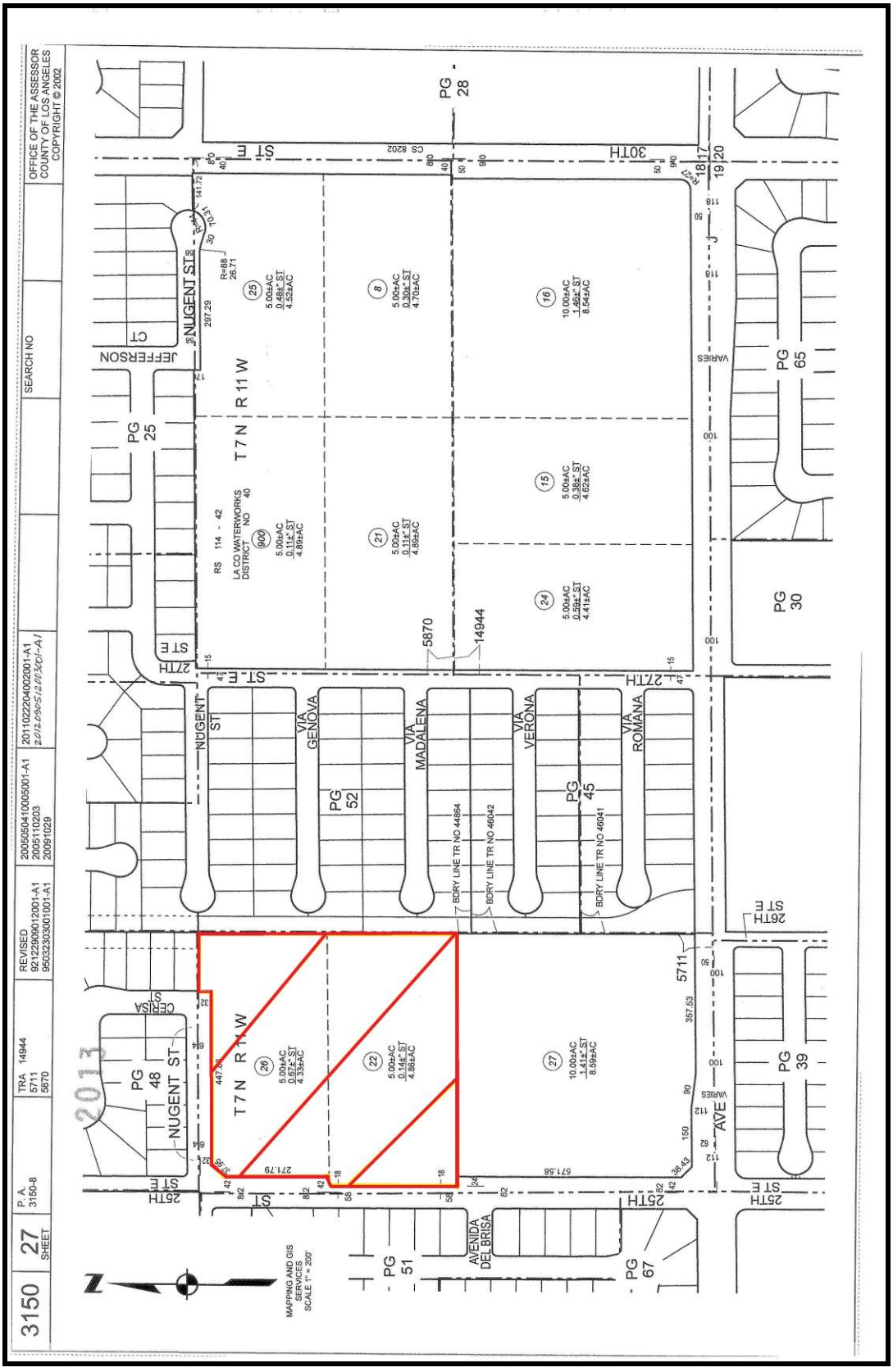

Figure 1. Location of proposed project site as depicted on APN map.

Figure 2. Approximate location of study area as depicted on U.S.G.S. Quadrangle, Lancaster East, Calif., 7.5', 1974.

Figure 3. Approximate location of study area showing surrounding land use as depicted on excerpt from Google Earth Aerial Photography, April 2017.

Department of Fish and Game (2012) prepared recommendations for burrowing owl survey methodology. Consistent with the survey protocol the entire site was surveyed and adjacent areas were evaluated (CDFG 2012). A habitat assessment was conducted for Mohave ground squirrels (MGS) to determine whether potential habitat was present for the species (CDFW 2019, Leitner and Leitner 2017).

All observations of plant and animal species were recorded in field notes. Field guides were used to aid in the identification of plant and animal species (Arnett and Jacques 1981, Borror and White 1970, Burt and Grossenheider 1976, Gould 1981, Jaeger 1969, Knobel 1980, Robbins et al. 1983, Stark 2000). Observations were aided with the use of 10x42 binoculars. Observations of animal tracks, scat, and burrows were also utilized to determine the presence of wildlife species inhabiting the proposed project area (Cooperrider et al. 1986, Halfpenny 1986, Lowrey 2006, Murie 1974). Aerial photographs, California Natural Diversity Database (CNDDB 2018), previous reports (Hagan 2005a-b, 2020a-b), and the USGS topographic map were reviewed. Photographs of the study site were taken (Figures 4 and 5).

Results

A total of 12 line transects were walked on 23 and 24 September 2020. Weather conditions consisted of warm temperatures (estimated 60 to 75 degrees F), 100% smoke cover, and light winds during surveys on both days. Clay sandy loam and sandy loam surface soil textures were present within the study area. There were no blue line streams delineated on the USGS topographic maps within the study area. There were no washes or streams observed on the aerial photography. No washes or streams were observed during the field survey.

The proposed project area was characteristic of a highly disturbed field. A total of nineteen plant species were observed during the line transect survey (Table 1). The project site was all but devoid of shrubs except for an approximately 0.1 acre (0.04 ha) area. This area was in the north center portion and dominated by rabbit brush (*Chrysothamnus nauseosis*). Red stemmed filaree (*Erodium cicutarium*), tumble mustard (*Sisymbrium altisissiimum*), and invasive grasses (*Bromus* spp.) were the dominant plant species within the project site. Annuals within the study site were predominately invasive, weedy species (Table 1). No alkali mariposa lilies, Barstow woolly sunflowers, desert cymopterus, or suitable habitat were observed within the study site. No Joshua trees (*Yucca brevfolia*) were present within or adjacent to the study site.

A total of nine wildlife species, or their sign were observed during the line transect survey (Table 2). No desert tortoises or their sign were observed during the field survey. No burrowing owls or their sign were observed within the study site during the field survey. California ground squirrel (CGS) (*Citellus beecheyi*) burrows observed within the study area provide future potential cover sites for burrowing owls. No bird nests were observed during the field survey. No Swainson's hawk nesting, roosting, or foraging habitat was present within the study site. No desert kit foxes or their sign were observed during the field survey. No suitable MGS habitat was present within the study site.

Figure 4. Representative photographs depicting general site characteristics.

Figure 5. Representative photographs depicting general site characteristics. Top photograph is a view of the small rabbit brush area and one salt cedar. Bottom photograph is a view of the eastern boundary looking from south to north

Table 1. List of plant species that were observed during the line transect survey of TTM 62484, Lancaster, California.

Common Name	Scientific Name
Salt cedar (1 individual)	*Tamarix aphylla*
Allscale (1 individual)	*Atriplex polycarpa*
Rabbit brush	*Chrysothamnus nauseosis*
Desert straw	*Stephanomeria pauciflora*
Vinegar weed	*Trichostema lanceolatum*
Fiddleneck	*Amsinckia tessellata*
Yellow flowered clover	Family: Fabaceae
Gilia	*Gilia minutiflora*
Horseweed	*Canyza honariensis*
Annual burweed	*Franseria acanthicarpa*
Russian thistle	*Salsola iberica*
Bermuda grass	*Cynodon dactylon*
Schismus	*Schismus* sp.
Foxtail barley	*Hordeum leporinum*
Red brome	*Bromus rubens*
Cheatgrass	*Bromus tectorum*
Red stemmed filaree	*Erodium cicutarium*
Tansy mustard	*Descurainia sophia*
Tumble mustard	*Sisymbrium altisissiimum*

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of TTM 62484, Lancaster, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Domestic cat	*Felis catus*
Domestic dog	*Canis familiaris*
Rock dove	*Columba livia*
Common raven	*Corvus corax*
Dragonfly	Order: Odonata
Spider	Order: Araneida
Harvester ants	Order: Hymenoptera

Small amounts of debris and scattered litter were observed within the study site. Vehicle tracks were observed within the study site. Evidence was present that two small spot fires had occurred recently within the study site.

Discussion

It is likely that most annual species were visible during the time the field survey was performed. Greater than 90% of the annual biomass represented within the project site consisted of weedy species (Table 1). Based on the lack of habitat, no sensitive plant species are expected to exist within the study site. Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 3).

Human impacts are expected to increase as urban development continues to occur in the area. Habitat in the general area is already developed and what is left is severely degraded and fragmented. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as lagomorphs (rabbits and hares), and birds are expected to survive, but they will have less cover and foraging habitat available.

The desert tortoise is a state endangered and federally threatened listed species. The proposed project area was located within the geographic range of the desert tortoise. The proposed project site was not located in critical habitat designated for the Mojave population of the desert tortoise. No desert tortoise habitat is present within, adjacent, or in close proximity to the project site. Based on field observations, desert tortoises are not present within the study area. No protection measures are recommended for desert tortoises.

The MGS is a state listed threatened species. The study area was located within the geographic range of MGS. MGS habitat is recognized to consist of a variety of desert scrub habitats, none of which occur any longer within, adjacent, or in close proximity to the project site. A table listing MGS habitats and a discussion of required shrubs and annuals can be found in the publication titled “A Conservation Strategy for the Mohave Ground Squirrel” (CDFW 2019). No suitable habitat is present to support MGS within or around this study site. No protection measures are recommended for the MGS.

Desert kit foxes are a fully protected species by California Department of Fish and Wildlife (CDFW). No sign of desert kit fox activity was observed within the study site. Based on this field survey desert kit foxes are not resident within this study site. No protection measures are recommended for desert kit foxes.

Burrowing owls are considered a species of special concern by the CDFW. The California ground squirrel burrows within the project site could provide potential future cover sites for burrowing owls. No recent observations of burrowing owls have been documented in close proximity to the study site (CNDDB 2018, eBird 2020).

Table 3. List of wildlife species that may occur within the study area, TTM 62484 Lancaster, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Desert cottontail	*Sylvilagus auduboni*
Side blotched lizard	*Uta stansburiana*
Mourning dove	*Zenaida macroura*
Northern mockingbird	*Mimus polyglottos*
House finch	*Carpodacus mexicanus*
Horned lark	*Eremophila alpestris*
House sparrow	*Passer domesticus*
Ants, small, black	Order: Hymenoptera
Fly	Order: Diptera

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. A salt cedar (*Tamarix aphylla*) is present just within the north boundary of the study site and provides potential habitat for smaller migratory birds. Swainson's hawk is a state listed threatened species. Swainson's hawks have been observed at 50th Street East and Avenue L and at 50th Street East and Avenue N in April 2020 both in active agricultural fields (eBird 2020). Swainson's hawk observations within Lancaster have been strongly correlated to active agricultural fields (eBird 2020, CNDDB 2018). The study site is not adjacent or in close proximity to any active agricultural fields. The study site does not appear to have potential nesting or foraging habitat for Swainson's hawks. Data already exists on the recent presence of breeding Swainson's hawks within 5 miles of the study site. No additional surveys for Swainson's hawk are recommended. No minimization measures for Swainson's hawk are recommended.

No suitable habitat for alkali mariposa lily, Barstow woolly sunflower or desert cymopterus was observed within the study site. No Joshua trees were present within or adjacent to the study site. Based on the results of the field survey these species are not expected to occur within the study area and no protection measures are recommended. No other state or federally listed threatened or endangered species are expected to occur within the proposed project area (California Department of Fish and Wildlife 2015, U.S. Fish & Wildlife Service 2016).

Landscape design should incorporate the use of native plants to the maximum extent feasible. Native plants that have food and cover value to wildlife should be used in landscape design (Adams and Dove 1989). Diversity of native plants should be maximized in landscape design (Adams and Dove 1989).

Recommended Protection Measures:

Consistent with the "Staff Report on Burrowing Owl Mitigation" a take avoidance (pre-construction) survey should be accomplished within 14 days of ground disturbing activities (CDFG 2012). If burrowing owls or their sign are detected during the take avoidance (pre-construction) survey further surveys based on the Staff Report will be applied as appropriate.

If possible, removal of the salt cedar will occur outside the breeding season for migratory birds. Breeding generally lasts from February to July but may extend beyond this time frame. If tree removal will occur during or close to the nesting season, a qualified biologist will survey all potential nesting areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found, impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 50 feet around active migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Based on the condition of the habitat, surrounding land use, and lack of wildlife sign, no other protection measures are recommended.

Significance: This project would not result in a significant adverse impact to biological resources.

Literature Cited

Adams, L.W. and L.E. Dove. 1989. Wildlife reserves and corridors in the urban environment. National Institute for Urban Wildlife, Columbia, MD. 91pp.

Arnett, R.H., Jr. and R.L. Jacques, Jr. 1981. Simon and Schuster's guide to insects. Simon and Schuster, Inc. New York. 511pp.

Borror, D.J. and R.E. White. 1970. A field guide to insects. Houghton Mifflin Company, Boston. 404pp.

Burt, W.H. and R.P Grossenheider. 1976. A field guide to the mammals. Houghton Mifflin Company, Boston. 289pp.

California Department of Fish and Game. 2012. Staff report on burrowing owl mitigation. Calif. Dept. of Fish and Wildlife, Wildlife Branch, Sacramento, CA. 36pp.

California Department of Fish and Wildlife. 2019. A conservation strategy for the mohave ground squirrel, *xerospermophilus mohavensis*. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=171301&inline . 29pp.

California Department of Fish and Wildlife. 2015. State and federally listed endangered and threatened animals of california. Calif. Dept. of Fish and Wildlife, Sacramento, CA. 14pp.

California Department of Fish and Wildlife, Natural Diversity Database. March 2015. Special Animals List. Periodic publication. 51 pp.

California Department of Fish and Wildlife, Natural Diversity Database. April 2015. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 125 pp.

California Natural Diversity Database (CNDDB). 2018. Lancaster east quadrangle. Calif. Dept. of Fish and Wildlife California Natural Diversity Database, Sacramento, CA. 28pp.

Cooperrider, A.L., Boyd, R.J. and H.R. Stuart, Eds. 1986. Inventory and monitoring of wildlife habitat. U.S. Dept. of Inter., Bur. Land Manage. Service Center, CO. 858pp.

Davis, D.E. 1990. Handbook of census methods for terrestrial vertebrates. CRC Press, Boca Raton, FL. 397pp.

eBird. 2020. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. (Accessed: September 23, 2020)

Gilbert, F.F. and D.G. Dodds. 1987. The philosophy and practice of wildlife management. Krieger Publishing Company, Malabar, FL. 279pp.

Gould, F.W. 1981. Grasses of southwestern united states. Univ. of Arizona Press, Tucson, AZ. 343pp.

Hagan, M. 2005a. Biological resource assessment of tentative tract number 62484, lancaster, california. Mark Hagan, 44715 17th Street East, Lancaster, CA. 9pp.

Hagan, M. 2005b. Biological resource assessment of tentative tract number 62485, lancaster, california. Mark Hagan, 44715 17th Street East, Lancaster, CA. 9pp.

Hagan, M. 2020a. Biological resource assessment of apns 3150-013-032, 039, lancaster, california. Mark Hagan, 44715 17th Street East, Lancaster, CA. 15pp.

Hagan, M. 2020b. Biological resource assessment of ttm 60367, lancaster, california. Mark Hagan, 44715 17th Street East, Lancaster, CA. 13pp.

Halfpenny, J. 1986. A field guide to mammal tracking in western america. Johnson Publishing Company, Boulder, CO. 161pp.

Jaeger, E.C. 1969. Desert wild flowers. Stanford Univ. Press, Stanford, CA. 322pp.
Knobel, E. 1980. Field guide to the grasses, sedges and rushes of the united states. Dover Publications Inc. New York, NY 83pp.
Leitner, B.M. and P. Leitner 2017. Diet of the mohave ground squirrel (xerospermophilus mohavensis) in relation to season and rainfall. Western North American Naturalist 77(1):1-13. Barbara M. Leitner, 2 Parkway Court, Orinda, CA 94563.
Lowery, J.C. 2006. The tracker's field guide. The Globe Pequot Press, Gilford, CT 408pp.
Murie, O.J. 1974. A field guide to animal tracks. Houghton Mifflin Company, Boston. 375pp.
Robbins, C.S., Bruun, B. and H.S. Zim. 1983. A field guide to identification: birds of north america. Golden Press, NY. 360pp.
Smith, J.P., Jr. and K. Berg, Eds. 1988. Inventory of rare and endangered plants vascular plants of california. Calif. Native Plant Society, Special Publication No. 1. Fourth Edition, Sacramento, CA. 168pp.
Stark, M. 2000. A flower-watchers guide to wildflowers of the western mojave desert Published by Milt Stark. Lancaster, CA 160pp.
U.S. Fish & Wildlife Service. 2016. Listed species believed to or known to occur in California. 8pp. http://ecos.fws.gov/tess_public/reports/species-listed-by-state-report?state=CA&status=listed , accessed 1 March 2016.
U.S. Fish & Wildlife Service. 2010. Preparing for any action that may occur within the range of the Mojave desert tortoise (gopherus agassizii), 2010 field season. U.S. Fish & Wildl. Serv. 16pp.