

EXHIBIT C
BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT

SITE PLAN NO. PLAN 19-00029

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT

IN THE CITY OF VICTORVILLE, SAN BERNARDINO COUNTY

ASSESSOR'S PARCEL NUMBERS: 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16

REPORT #: 1 OF 2 - FOR CITY OF VICTORVILLE PLANNING DEPT. & PDF
REPORT #: 2 OF 2 - FOR CITY OF VICTORVILLE CLIENT

**PROJECT SITE: THE NORTHERLY 17± ACRES OF THE
SITE AREA: 52± ACRES IN THE SOUTHEAST ¼ OF SECTION 32,
TOWNSHIP 6 NORTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN,
IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA**

PREPARED FOR:

COOLEY FAMILY TRUST
C/O ROBERT MARTINEZ, AIA
19987 BOOTHILL ROAD
APPLE VALLEY, CA 92307

PREPARED BY:

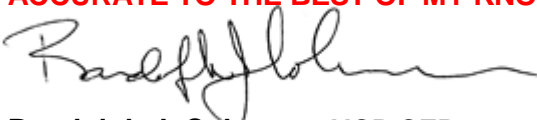
ALTEC LAND PLANNING
19531 HIGHWAY 18
APPLE VALLEY, CA 92307

©JUNE 2019

REPORT PREPARATION DATE: JUNE 7, 2019
EFFECTIVE DATE OF REPORT: JUNE 4, 2019
EXPIRATION DATE OF REPORT: JUNE 7, 2020 (REPTILE & MAMMAL SPECIES ONLY)
EXPIRATION DATE OF REPORT: FEBRUARY 1, 2020 (ALL APPLICABLE BIRD SPECIES)

DISTRIBUTION: TWO (2) ORIGINALS TO CLIENT

**I HEREBY CERTIFY THAT THE FINDINGS AND
CONCLUSIONS PRESENTED IN THIS REPORT ARE
ACCURATE TO THE BEST OF MY KNOWLEDGE.**



Randolph J. Coleman, AICP CEP
CDFW Scientific Collecting Permit #11586
Certified Wildlife Biologist #43090
Certified Arborist & Tree Risk Assessment Qualified WE#8024A
Qualified Stormwater Developer/Planner #21595

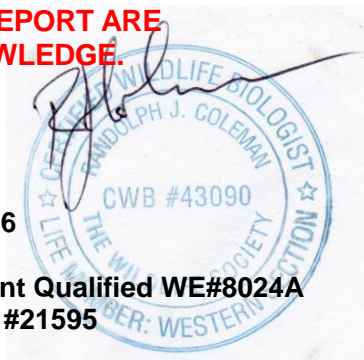


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COOLEY FAMILY TRUST
19987 Boot hill Road
APPLE VALLEY, CA 92307

JUNE 7, 2019

**RE: BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT
- [APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16]**

COOLEY FAMILY TRUST has requested a Native Desert Plant and Biological Baseline Assessment (Report) to analyze the significant impacts that may occur to the biological resources on the “Project Site being the northerly 17± acres” of the “Project Area of 52± Gross Acre Site”, lying west of National Trails Highway (ROUTE 66) and east of the Los Angeles Department of Water and Power (LADWP) LUGO Switching Station, as mapped on the Victorville-CA 7.5’ Quad USGS.

The purpose of this Report is to provide a current Site Review to be on file with the City and made a part herewith ALTEC, pursuant to your authorization, has made investigations and analyses consistent with the property type and has analyzed the existing information and prepared an Assessment for numerous biological resources (presence and/or absence). Focused surveys completed for Desert Tortoise (*Gopherus agassizii*) and Burrowing Owls (*Athene cunicularia*). Site review for Mohave Ground Squirrels (*Spermophilus mohavensis*), Sharp-shinned Hawk (*Accipiter striatus*), all Owls and Hawks, Loggerhead Shrike (*Lanius ludovicianus*), LeConte’s Thrasher (*Toxostoma LeContei*) and other delineated birds. Also, a “Protected Native Desert Plant Report” is inclusive and performed using accepted protocols, practices and procedures, including the following:

- Pedestrian field protocol surveys of the Project Site and Area were conducted (inspections of the Site were conducted from April 2 to June 4, 2019 with numerous visits to the Site for other purposes.
 - The Site personally walked by Randolph J. Coleman;
 - **Certified Wildlife Biologist, #43090;**
 - **Certified Arborist & Tree Risk Assessment Qualified, WE #8024A;**
 - **Scientific Collecting Permit from California Department of Fish & Wildlife, #11586;**
 - **Qualified Storm Water Developer/Planner – QSD/P #21595 (by CASQA);**
 - A pedestrian field survey of the project Site, Zones of Influence, buffer and adjacent properties was conducted following established protocols, as applicable or as described;
 - There has been some recent scattered rainfall prior to the field survey. If recent rains occur, regardless of the time of year, is a prime timeframe for various native (and potentially rare) desert annual plants, Tortoise, owls and all desert species to be looking for precious water resources;
- Review of California Environmental Quality & Endangered Species Acts (CEQA/CESA) information;
- Review of recent CDFW correspondence with the local jurisdiction;
- Review of the California Department of Fish & Wildlife (CDFW) and California Natural Diversity Data Base (CNDDDB-RareFind3) for sensitive species, excluding riparian species;
- Review of recent EA/EIS/EIR/IS’s, Environmental/Biological Reports from ALTEC’s offices; and
- Review of the City of Victorville General Plan.
- A Review of the California Natural Diversity Data Base (CNDDDB-RareFind3) for sensitive species, excluding riparian species since this Site is not within the Mojave River riparian habitat or manmade riparian habitat (i.e. city parks, school sites, golf course);

If there are significant delays with processing any entitlement applications or any clarifications, an update would be appropriate prior to the completing the CEQA Initial Study and sending it to the State Clearing House for CEQA processing (i.e. Dept. of Fish & Wildlife review for Biological issues). The Consulting Arborist and Certified Wildlife Biologist would like to have the opportunity, at a minimum, to provide an Addenda Letter to the Local Agency within six (6) month prior to report expiration dates for the Clearance Letter. This has been discussed previously with staff to avoid future issues relative to the preparation of the CEQA Initial Study being sent to CDFW review process after expiration, near expiration or prior to final approval.

Consultant has completed the following education, workshops, designations and California Licenses:

- 2019 - **Joshua Tree Master Naturalist:** Joshua Tree National Park Desert Institute & UC Riverside (8 courses)
- - **Desert Plant Phenology of Joshua Tree National Park:** UC Riverside and JTNP Desert Institute
- - **Desert Tortoise Biology & Conservation:** CDFW/BLM/UC Riverside and JTNP Desert Institute
- - **Fugitive Dust Control (CV1903-007751-7796):** South Coast Air Quality Management District
- 2018 - **Tree Risk Assessment Qualified** (International Society of Arboriculture – Certified Arborist WE#-8024A)
- - **Large Branchiopods of California Workshop:** TWS-SoCal and USF&WS @ San Diego Botanic Garden
- - Sea Turtle Workshop: NMFS Protected Res. Div., West Coast Region/NOAA @ Long Beach Aquarium
- 2010-15 - **San Bernardino County Planning/Airport Commissioner** - Review & Approval of CEQA Studies & Projects
- 2014 - **Arroyo Toad (*Anaxyrus californicus*) Workshop** (The Wildlife Society San Diego Chapter)
- - Sustainable Communities @ APA-PTS Conference: Feb. 7-8, 2014 in San Diego
- - American Planning Association California Annual Conference (4 Days - Anaheim) [& 2013-4 Days – Visalia]
- 2013 - **Yellow Billed Cuckoo (*Coccyzus americanus*) Workshop** (Kern River Valley – KRV Audubon Facility)
- - **Southwestern Willow Flycatcher (*Empidonax traillii extimus*) Workshop** (KRV Audubon Facility)
- - National Innovative Communities Conference: 2013 (Ontario CA – San Diego mention as a leader may times)
- - **Tree Risk Assessment Qualified** International Society of Arboriculture (WE#-8024A – Renewed in 2018)
- 2012 - **Environmental Leadership Certificate:** CSU San Marcos (Matt Rahm, PhD., Esq.)
- 1998-12 - **UC Riverside Field & Other Certificates:**
 - Desert Ecology ■ Field Ecology ■ Botany ■ Ornithology ■ Geology
 - Geographic Information Systems ■ Geographical Positioning Systems ■ Educational Facility Planning
- - American Planning Association Annual Conference (4 Days - Los Angeles)
- - California County Planning Commissioners Association (2 Days - Suisun City)
- 2011 - **Scientific Collecting Permit #11586** by California Department of Fish and Wildlife
- - **Legends of the Fall: Exploring the Clandestine Flora of early fall in the Eastern Mojave Desert**
Rare Autumn Annuals – Dr. James Andre & Dr. Tasha La Doux - Calif. Native Plant Society @ UC- DRC
- - **Certified Environmental Planner** - Advanced Specialty Certification for AICP (1 of 33 in U.S.)
- - **Qualified Storm Water Developer & Planner (QSD/P #21595)** by CASQA
- 2010 - **Certified Wildlife Biologist #43090** - by The Wildlife Society - Life Member (2006)-Western Sec.
- 2009 - **Western Pond Turtle, California Tiger Salamander & Red-legged Frog Workshop** (CSU Sonoma)
- - **Wildlife Management & Ecosystem Management** – (Dr. Barrow, UC Riverside Research Center/3-unit course)
- - **Bird Biology** - Cornell University/3-unit course
- 2008 - **Palms Culture in the Southwest** (2 days - International Society of Arboriculture (ISA) in Las Vegas)
- 2007 - **Certified Arborist/[Tree Risk Assessment Qualified]** WE#-8024A – Int. Society of Arboriculture (+60hours C.E.)
- - **Riparian Ecology & Plant Identification Workshop** (CNPS - Ventura River)
- - **Jurisdictional Delineation of Wetlands** (38-hours of Army Corps of Engineering training in San Diego)
- - **Protocols for Botanical Reports** (2 day - U.C. Davis – Bodega Bay Marine Research Lab)
- 2006 - **Vegetation Mapping** in Redlands (4 day – Dr. Todd Keeler-Wolf, Senior Vegetation Ecologist, CDFW & Dir. California Native Plant Society's (CNPS) Vegetation Program. Author of Manual of California Vegetation and Terrestrial Vegetation of California, among other books and resources)
- 2005 - **Mojave Ground Squirrel Workshop** - Wildlife Society, CDFG & USFW
- 2003 - **California Burrowing Owl Symposium** – The Wildlife Society/Western Section in Sacramento
- 2002 - **Tortoise Workshop by Desert Tortoise Council** (Life Member), CDFG & USF&W
- 1994 - Registered Environmental Assessor #05791; Calif. Environmental Protection Agency (DTSC/ended in 2012)
- 1993 - American Institute Certified Planners #9892 & Certified Environmental Professional (2011 [1 of 33 in U.S.])
- 1982-84 - Licensed Land Surveyor #5413 (1984); Civil Engineer #36293 (1983); Licensed Broker #836955 (1982)
- 1976 - Personally familiar with the general area; have completed various land surveys, soils testing, civil engineering Construction/Project Management, Environmental Reports, Land Planning, Real Estate Brokerage & Appraisals

California Department of Fish & Wildlife: The responding “Trustee Agency” for fish and wildlife resources (CDFW Code §711.7, §1802 & CEQA Guidelines §15386(a)) of the state, to designated rare or endangered native plants, and to game refuges, ecological reserves, and other administered areas. Also, a “Responsible Agency” regarding any discretionary actions (CEQA Guidelines §15381), include the following:

- **State Lands Commission:** Regards to state owned “sovereign” land such as the beds of navigable waters and state school lands.
- **State Department of Parks and Recreation:** Regard to units of State Park System.
- **University of California:** Regards to Sites within the Natural Land and Water Reserves System.

Native Desert Plants – Federal, California and Local: The Endangered Species Act (ESA), California Endangered Species Act (CESA) and Local Agency laws cover native species and subspecies of plants (Cal. Fish & Game Code §2050 et seq.). Listings are based solely on science and the law requires recovery plans and designation of critical habitat, although critical habitat has never been designated. State agency consultation on projects affecting endangered species is required. Penalties for violation are \$5,000 and/or a jail term of up to one year. The Native Plant Protection Act provides some protection for endangered or rare native plants of the state (Cal. Fish & Game Code §§1900-1913) and subject to review are the following:

The State and Local Agency applicable Codes have the following desert plants subject to review and other less common and annual plants are delineated in the body of this report:

- (1) Desert native plants (stems two (2) inches or greater in diameter or six (6) feet or greater in height)
 - Mesquite var. (*Prosopis* var.)
 - Dalea/Smoketree var. (*Parosela spinosa* and var.)
- (2) All species of the family Agavaceae
 - Century Plant (*Agave deserti*)
 - Mojave Yucca (*Yucca schidigera*)
 - Parry Nolina/Nolina/Beargrass (*Nolina parryi*)
- (3) • Creosote Bush [10-ft min. rings] (*Larrea tridentata*) (South American is *Larrea divaricata*)
- (4) • Joshua Trees (*Yucca brevifolia*)
- (5) • Beavertail Cactus (*Opuntia basilaris* var. *brachyclada*) [by California Native Plant Society]

The Site and general area had a variety of perennials [scattered Linear-leaved goldenbush (*Ericameria linearifolia*), Common Sagebrush (*Artemisia tridentata*), Rabbitbrush (*Chrysothamnus nauseosus*), Creosote Bush (*Larrea tridentata*), Mormon Tea (*Ephedra nevadensis*), Cutleaf Filaree (*Erodium cicutarium*), Boxthorn (*Lycium andersonii*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), and various annuals [i.e. Wildflowers and Filaree (*Erodium* sp.) and Invasive Plants are Schimus (*Schimus barbatus*), Bromus (*Brome* sp.), Russian thistle (*Salsola* sp.), Saharan Mustard (*Brassica tournefortii*)] that have been locally observed during any rainy season. All desert annuals are highly dependent upon local rainfall and autumnal annuals can be very rare events due to the combination of required timing of summer heat and rainfall.

Pursuant to CDFW information (discussions from 2002-2014 with Ms. Jones and staff during other Victorville projects) indicates that five listed or sensitive species occur in the project vicinity, excluding riparian species (Site not within the Mojave River riparian habitat corridor); and may be affected by the proposed project (Endangered, Threatened, or are considered Rare and maybe listed in the future [CESA & CEQA Guidelines §15065 and §15380]). [Impacts to rare species, regardless of listing status (Federal or State) may be considered significant under CEQA and require appropriate avoidance, minimization, and compensation measures (land, monetary or both).] The following species have been identified as “Species of Special Concern”, requiring identification and protection, including all Raptors (Hawks and Owls) as requested pursuant to discussions with CDFW and other public agency staff since 1989 with the Desert Tortoise listing.

West Mojave Plan (WMP) and the **Record of Decision (ROD)** – March 13, 2006), **Biological Opinion (BO)** – January 9, 2006) and **Amended Biological Opinion (ABO)** – Dec. 2007) and **EIR/EIS, Habitat Conservation Plans (HCP), Areas of Critical Environmental Concern (ACEC), Desert Wildlife Management Areas (DWMA), Off-Highway Vehicle, Alternative Energy Executive Orders and other issues:** All of these planning efforts by the US Department of Interior, Fish and Wildlife Service (USF&WS), California District Manager of the Bureau of Land Management (BLM) operational issues and any associated “Payment of Environmental Development Fees” may alter the requirements and mitigation outlined in this Assessment for potential compliance with all future laws and interpretations, guidelines and any subsequent judicial decisions regarding the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). Attempts to be current with the relative issues of these ongoing and evolving planning efforts are made regarding endangered species and issues within Southern California, San Bernardino County, Desert regions, West Mojave Plan and various Sub-Planning Areas and specifically issues in the Victor Valley area.

Desert Tortoise: The Desert Tortoise, which is a Federal and California listed threatened species is known to occur throughout the region. This Tortoise is the largest reptile in the arid southwest and historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinaloa, Mexico. Today, populations are largely fragmented, and studies indicate a steady and dramatic decline over most of its former range. Tortoises have long been prized as pets. Wildlife biologists estimate 5-8 million Tortoises were taken from the desert by collectors between 1880 and 1970. In the early 1990’s, an extended drought and a highly contagious respiratory disease infected Tortoise populations, primarily in the western Mojave Desert region. This disease has had a significant adverse impact on Tortoise populations throughout the Mojave Desert. Coleman has not personally seen wild tortoises in this area since (began in 1965) mid 1980’s; typically, distant northerly of the Site.

Mohave Ground Squirrel (MGS): The MGS is known to have historically occupied areas in the northwestern Victor Valley region; information on current population levels for the species has increasing documentation (due to \$1M± of MGS Trapping Surveys) indicating the lack of presence in the Victor Valley and the Site. The MGS is listed by CDFW as “Threatened”, thereby giving species protection under the CESA. The species is known to occur in the western Mojave Desert in portions of four counties including Inyo, Kern, San Bernardino, and Los Angeles. The distribution of the MGS is quite limited as compared to the distributions of other species {White-tailed Antelope Squirrel [WTAG] (*Ammospermophilus leucurus*) and Round-tailed Ground Squirrel [RTGS] (*Spermophilus tereticaudus*)}.

The MGS is found in several habitat types in the Mojave Desert including creosote bush scrub, saltbush scrub, and Joshua tree woodland communities. The MGS carries its tail over its back when running; the white underside helps reflect the sun’s rays. It is preyed upon by American Badgers, foxes, snakes, Coyotes and Raptors. Long-term drought conditions, degradation and destruction of the species’ habitat and isolation of populations appear to be the primary factors in the species’ decline. Coleman has never personally seen MGS in this general area since the 1970’s but to the north of Adelanto along Highway 395 and Helendale area.

Burrowing Owl (*Athene cunicularia*) and other Owls: The Burrowing Owl and other Owls occur throughout the Victor Valley region; although, information on current population levels for these species is not well documented for the general region or the Site. These are migratory bird species protected by the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §703-711). The burrowing owl, specifically, is considered a “Species of Special Concern” by the CDFW, thereby giving the animal protection under the CESA. The CDFW Code §3503, §3503.5 and §3800 prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (Feb. 1 thru Aug. 31 annually).

Sharp-shinned Hawk (*Accipiter striatus*) and **other Hawks**: The Sharp-shinned Hawk is considered rare and a “Species of Special Concern” and all other Hawks are considered rare by CDFW

Loggerhead Shrike (*Lanius ludovicianus*): The Loggerhead Shrike is considered rare and a “Species of Special Concern” by CDFW;

LeConte’s Thrasher (*Toxostoma LeContei*): LeConte’s Thrasher is considered rare and a “Species of Special Concern” by CDFW;

All of the three –(3) above species are considered to be migratory bird species protected by the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §703-711); although, information on current population levels for these species is not well documented for the general region or the Site. Thereby giving each species protection under the CESA. The CDFW Code §3503, §3503.5 and §3800 prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (Feb. 1 thru Aug. 31 annually).

GRANT RESEARCH INFORMATION:

San Bernardino County received a \$400,000.00 Grant (March 2014) to study the environmental effects of Alternative Energy projects and issues brought up at Planning Commission are the following:

- Photovoltaic Panels and their “Lake Effect” for Bird Impacts Mortality and Injury
- Wind projects blades impacting birds (i.e. Vultures, Golden Eagles and threatened bat species)
- Thermal projects (i.e. Brightsource’s Power-Tower literally burning birds at new projects at Ivanpah)
- Alluvial & Aeolian - Erosion from altered natural stormwater courses and wind-blown dust issues
- Carbon Sequestration - Soil-surface disturbances issues releasing greenhouses gases
- Fluvial –The delicate combination of soils and water movement (Sand Dunes type issues)
- Wildlife Linkages for species movement and diversity of genetic issues

SUMMARY INFORMATION

Assessments are completed to adequately determine the biological impacts of the project prior to preparation of environmental documentation (CEQA-IS Mitigated Negative Declaration, NOD, EIR, etc.) for the Site and according to protocols, shall be conducted and shall be specifically as Mitigations and Recommendations as part of the CEQA Initial Study during the jurisdictional approval process by the local agency. CDFW may then inform the local jurisdiction with legal entitlement authority of additional mitigation measures or information that should be incorporated into the documents (i.e. Conditions of Approval by the Planning Dept.) to address systematically biological issues. The Biological Assessment and Native Plant Report may be submitted to CDFW for separate review. The future CEQA Court Decisions and interpretations and implementations by CDFW, local agencies and current and subsequent Department of Interior Federal Register (i.e. “Petition to Down List” of the Arroyo Toad from Endangered to Threatened – March 27, 2014) and other related issues of the West Mojave Plan may or will continue to cause unknown changes to all environmental review processes.

Wildland Fire has a long history in this general area because of the higher density of vegetation and increases in invasive grasses and other non-native plant species have historically and will continue to impact native desert adversely. The Mojave River corridor (and throughout the greater Victor Valley) has a continued increase in homeless issues that create trash, biohazards and use of fire that has started wildland fires in the Mojave Riparian area. The site has not had a historical wildland fire based upon the existing mosaic of native vegetation.

SUMMARY INFORMATION – continued

Discussion of Streambed Alteration, Blue-Line Stream on USGS Maps and Upstream Stormwaters: "A Review of Stream Processes and Forms in Dryland Watersheds: CDFG - December 2010". The Site has the following attributes which any one item would be relative for the requirement of a Streambed Alteration Permit:

- **Site:** Does not have a USGS delineated "Blue Line Stream" and ultimate drains into the Mojave River.
- **USGS Blue-Line Stream:** The nearest is the Mojave River about 2,000 feet east. This River's hydrology does not have the required volume of storm water discharge to affect this Site in a 100-year event.
- **100-Year-Flood Plain Designation:** The Site is not within a "Designated Flood Plain".
- **Dominate Upstream Desert Alluvial Fan Channel:** The Site does not have a "Dominate upstream desert alluvial fan channel" that has become undefined due to lower slope and braiding of typical desert type alluvial fan morphology, therefore no potentially significant upstream off-site concentrated or sheet flows are formed from an alluvial fan that would be of an issue impacting the Site.
- **Mojave River & Riparian Corridor:** The Mojave River is the dominate blue-line stream of the Western Mojave Desert (tributary drainage area from the northerly sides of both the San Bernardino and San Gabriel Mountain ranges) and ending at Soda and Silver Dry Lakes, over 100 miles from the Site.
- **Discussion of Ephemeral Natural Drainage Course(s):** The Site does not have any "Significant Native or Altered Ephemeral" drainage course(s) bisecting the Site. The City of Victorville (Upstream Development or Road improvements) typically concentrates the flows of these natural "Ephemeral Drainage Courses".
- **OTHER**
 - **Aspect & Topography Issues:** The topography varies from flat to 2:1 natural and manufactured slopes and a local customary aspect (northeast) and ultimate drains into the Mojave River. The local customary aspect (northeast) has a higher level of erosivity potential, sedimentary transport and debris deposition during storm events in the higher slope areas.
 - **Road Issues:** Typically, north-south roads bisect sheet flows and natural drainage courses and re-route stormwater flows along these roads until the water surface is no longer contained and breaks free of the road improvements (paved roads, graded dirt and unimproved dirt roads) and then continue in a newer location in the local customary (north-northeast) aspect to the Mojave River.
 - **Hydrology Report & Issues:** A Hydrology Report has not been prepared or reviewed.
 - **Observable Upstream diversions:** Observable Diversions from upstream suburban development; public infrastructure and specifically the California Aqueduct in some areas have permanently altered the areas upstream hydrology and have no existing or future potential effect of the Site.

Habitat Fragmentation has both natural (i.e. Mojave River Riparian, Wildland Fires and Intermontane Sky Island issues) and anthropogenic barriers and boundaries affecting regional desert habitat zone fragmentation for various species, (i.e. U.S. Route 66, Highways 18, 58, 66, 247 and 395, Interstates 15 and 40, California Aqueduct, Railroad and Utility Corridors, all types of military, public facilities, agriculture, residential, industrial, commercial development) that limit overall terrestrial migration and gene pool diversity in the Palmdale/Lancaster, Greater Victor Valley (Apple Valley, Adelanto, Hesperia, Victorville and surrounding communities Spring Valley Lake, Helendale, Silver Lakes, Oak Hills, Pinion Hills, and Phelan) since the "Post World War II Era".

SUMMARY INFORMATION – continued

Special Status for Federal, State of California and Local species are now legally identified, as following:

- **Federal Endangered** consists of animal or plant species, subspecies or varieties in danger of extinction throughout all or a significant portion of their range. These are considered "Federally-listed" or "listed" because a final rule has been published in the *Federal Register*.
- **Federal Threatened** consists of species, subspecies or varieties likely to become endangered within the foreseeable future throughout all or a significant portion of their range. These are considered "Federally-listed" or "listed" because a final rule has been published in the *Federal Register*.
- **Federal Proposed** endangered or threatened are those species, subspecies or varieties for which a proposed regulation, but not a final rule, has been published in the *Federal Register*.
- **Federal Candidate** species, subspecies or varieties are being considered for listing as endangered or threatened, but a proposed regulation has not yet been published in the *Federal Register*.
- **California State Endangered** animals or plants are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, over-exploitation, competition or disease.
- **California State Threatened** animals or plants, although not presently threatened with extinction, are likely to become endangered in the foreseeable future without special protection and management efforts.
- **California State Rare** plants or animals, although not presently threatened with extinction, are in small numbers throughout their range that they may become endangered if their present environment worsens.
- **Bureau of Land Management Sensitive** animals or plants are not on federal or state lists as endangered or threatened but are designated by the BLM State Director for special management consideration.

Desert Tortoise (*Gopherus agassizii*): No Tortoises or active/potentially active burrows were encountered on the Site during the field survey. Also, no other signs (e.g. scats, tracks, shell fragments) were found, which would indicate habitat or utilization of the Site. The “take” of this species, which also includes “to harass, harm, pursue, etc.”, is prohibited. Additionally, Tortoises aren’t typically found at elevation above 3,300 feet and the elevation at this Site is 2,725+/- to 2,856+/- feet. Coleman has not personally seen tortoises in this area since the mid-1980’s and required planning projects and biological assessments on many nearby projects. The Addenda includes Table 1 - Site Survey Summary for the Desert Tortoise (modified for other relative species per CDFW)

MITIGATION AND RECOMMENDATION: Prior to any grading activities after JUNE 7, 2020 and if there is a lapse of 30 days of construction activities on the Site thereafter, an assessment “Only On-Site and 500-foot buffer” shall be completed and a **Clearance Letter** shall be provided to the Local Agency prior to any land disturbance. [This Site has no legal jurisdictional approvals for development, at this time, and another Site review will be required prior to development.]

OTHER INFORMATION: If Tortoises are observed on the Site in the future, all activities shall be stopped and CDFW contacted to discuss potential mitigation measures.

SUMMARY INFORMATION – continued

Mohave Ground Squirrels (*Spermophilus mohavensis*): MGS were not encountered on the Site during the field survey. Coleman has never personally seen MGS in this specific area since the 1970's. Typically, the mainly solitary MGS aestivates and hibernates when the weather is at the extremes and when food is scarce. (The White-tailed Antelope Squirrel [WTAG], which occurs within its range, remains active during these periods.) Although, the MGS is also known to occur in the northern Victor Valley region, it is not known to have ever inhabited this Site. [The closest long-term sightings of MGS are northeasterly in T6North, R5West, Section#11, just north of the Southern California Logistics Airport (George AFB in continuous use since the 1940's). The recent sighting of an MGS was from a trapping in 2004 by CalTrans at Colusa and Highway 395 (T6N, R5W, Section#8; as reported by Becky Jones on 09-17-04)] but little new local approval activity since 2007.

MITIGATION AND RECOMMENDATION: No Mitigation is required based upon current Site conditions.

OTHER INFORMATION: If MGS are observed on the Site in the future, all activities shall be stopped and CDFW contacted to discuss potential mitigation measures. [If CDFW considers the Site as critical habitat, a focused trapping study costing about \$25,000 (\$25,000+/- for each grid and a maximum area of 80 acres per grid) between the various costs related with process could be required.

The MGS trapping is during the spring season with numerous protocols (starting in April with the first of three –(3) trappings lasting one week each) and the timeframe to satisfy all responsible agencies is late August for CDFW response at a minimum. Also, a 2081 Permit [incidental take permit under the CESA] would have to be obtained. Mitigation for a 2081 Permit could include acquisition of compensatory habitat at a minimum 1:1 ratio. Assuming the associated costs are \$2,000 per acre; plus, associated costs of Habitat Management Endowment (\$200/acre) and Enhancement (\$95/acre) for fencing and other potential Site improvements, or a minimum of \$2,500 per acre for estimating. The estimate to obtain a 2081 Permit is up to six- (6) months.

Burrowing Owl (*Athene cunicularia*) **or other owls:** No owls or active/potentially active burrows or nests were encountered on the Site and 500-foot buffer during the field survey. Also, no other signs (e.g. white-wash scats, feathers, cough pellets, fossorial bones or fragments) were found, which would indicate habitat or other utilization of the Site. The CDFW Code §3503, §3503.5 and §3800 prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (February 1st through August 31st annually).

Coleman has observed numerous (300+) Burrowing Owls in the Victor Valley during the last 40 years and no effort specifically were made to locate the burrows at that time. This Site has lower density vegetation and no significant adjacent supplemental water and therefore less potential for habitat. Burrowing Owls can be seen at dawn and dusk while driving local dirt roads in areas having the following characteristics: Specifically, near valley perimeter schools and parks, near nuisance water runoff, golf courses, near horse and agricultural areas and nearby native vegetation with lower density groundcover or graded suburban parcels near existing agricultural or residential subdivisions (Daily observations at Granite Hills High School from 2005-08 when I drove my son and Year-long Rotary Exchange students to school daily and observed multiple burrows and at a minimum temperature of 38°F and dependent upon wind conditions).

MITIGATION & RECOMMENDATION: Prior to any grading activities after FEBRUARY 1, 2020 and if there is a lapse of 30 days of construction activities on the Site thereafter, an assessment "Only On-Site and 500-foot buffer" shall be completed and a **Clearance Letter** shall be provided to the Local Agency prior to any land disturbance. [This Site has no Local Agency approvals and another review will be probably be required.]

OTHER INFORMATION: Potential \$10,000 between the various associated costs and three months.

SUMMARY INFORMATION – continued**OTHER BIRD SPECIES OF CONCERN, INCLUDING ALL OTHER HAWKS & RAPTORS:**

No Greater Roadrunners (*Geococcyx californianus*) or active or potentially active nests were observed in native plants on the Site during the field survey.

No Sharp-shinned Hawk (*Accipiter striatus*) or **other Hawks** or active/potentially active nests were observed in native plants on the Site during the field survey and the Site has limited habitat potential.

No LeConte's Thrasher (*Toxostoma LeContei*) or active/potentially active nests were observed in native plants on the Site during the field survey and the Site has limited habitat potential.

No Loggerhead Shrikes (*Lanius ludovicianus*) or active/potentially active nests were observed in native plants on the Site during the field survey and the Site has limited habitat potential.

MITIGATION AND RECOMMENDATION:

No other signs (e.g. white-wash scats, feathers, scattered bones or fragments) were found, which would indicate habitat or other utilization. The CDFW Code §3503, §3503.5 and §3800 prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle.

Population levels for these species area expected to be relatively low in the Victor Valley based upon current data and the project is not expected to have any effect on these species. However, the mobility of these species does not preclude these species from occurring on the Site in the future. If these species are detected on the Site in the future, all activities shall be stopped and USFWS and CDFW contacted to discuss potential mitigation measures.

OTHER BIRD INFORMATION:

Other Hawks, Owls and Raptors species are widespread in the Mojave Desert region and many live year-round in the Victor Valley and many other species migrate through and some now spend winters in the Victor Valley due to available food, shelter, nesting and water resources provided historically only by the Mojave River Riparian and specifically more recently by manmade riparian alternatives (recreational facilities, golf courses, California Aqueduct and Lakes, county regional, city parks, schools, agricultural and equestrian areas), of the Mohave Desert and can be observed almost daily where food, water, shelter and nesting opportunities are provided:

YEAR-ROUND RESIDENT SPECIES:

Accipitridae:	Red-tail hawk (<i>Buteo jamaicensis</i>)	Cooper's hawk (<i>Accipiter cooperii</i>)
Falconidae	American kestrel (<i>Falco sparverius sparverius</i>)	
Strigidae	Great Horned owl (<i>Bubo virginianus</i>)	
Tytonida	Barn owl (<i>Tyto alba</i>)	

Other species migrate through for food, rest and water, and a few errant species follow winter and summer storms, and a few get lost occasionally from typical migratory paths (i.e. a windfall for local birders - Scissor-tail Flycatcher at Lucky Park in 29 Palms). The overall population levels for these species are expected to be and remain relatively low in the Victor Valley based upon current data. It is noted that these species have been observed on an irregular basis along the Mojave River, "Local Mountain or Manmade Riparian", Mojave Desert Intermontane, and specifically during wildland fires in the local San Bernardino or San Gabriel Mountain ranges.

SUMMARY INFORMATION – continued**LOCAL AREA MIGRANT SPECIES:**

Accipitridae:	Osprey (<i>Pandion haliaetus</i>)	Northern harrier (<i>Circus cyaneus</i>)
	Swainson's hawk (<i>Buteo swainsoni</i>)	Rough-legged hawk (<i>Buteo lagopus</i>)
	Golden eagle (<i>Aquila chrysaetos canadensis</i>)	
	Bald eagle (<i>Haliaeetus leucocephalus</i>)	NOTE: observed during local mountain fires
Falconidae	Prairie falcon (<i>Falco mexicanus</i>)	
Strigidae	Long-Eared owl (<i>Bubo otus tufts</i>)	Western Screech owl (<i>Otus kennicottii</i>)
	Flammulated owl (<i>Otus flammeolus</i>)	Northern saw-whet owl (<i>Aegolius acadicus</i>)

The mobility of these species does not preclude them from occurring on a site, in the future, if resource opportunities (water, food, shelter, and nesting) are available; typically, along the Mojave River and manmade riparian. This Site does not have any of these characteristics; therefore, this Site is not expected to have any effect on these species.

MITIGATION & RECOMMENDATION: Prior to any grading activities after FEBRUARY 1, 2020 and if there is a lapse of 30 days of construction activities on the Site thereafter, an assessment “Only On-Site and 500-foot buffer” shall be completed and a **Clearance Letter** shall be provided to the Local Agency prior to any land disturbance. [This Site has no legal jurisdictional approvals for development, at this time, and another Site review will be required prior to development.] If these species are occupying the Site in the future, all activities shall be stopped and CDFW contacted to discuss potential mitigation measures.

FEDERAL, CALIFORNIA and LOCAL PROTECTED NATIVE PLANTS:

The Site is in a single ecotonal zone and has a relatively low, but typical mix of vegetation and no mosaic of historical wildland fires on the Site. The Site has no “Blue Line” or significant natural drainage courses and the site generally has flat to 2:1 natural and manufactured slopes which ultimately drain into the Mojave River. The nearest Blue-Line Stream is the Mojave River approximately 2,000-feet to the east of the Project Area and Project Site.

The Project Site is in the northeastern portion of the City of Victorville and has a mix of vacant, industrial and commercial, along with U.S. Route 66, Interstate 15, Highway 395, LADWP Lugo Station and high voltage transmission lines along the west and northern boundary. The Site is impacted by prior uses (early 1950's mobile home park), cement dust from the nearby cement plant has created a soil crust over major portions of the native desert, current and historic borrow activities, asphalt and construction debris storage, numerous dirt roads and trails used by HOV, a few large dogs (scat, digging holes and tracks) were also observed in the general area.

All Joshua's, all species of the Agavaceae family (Century Plants, Nolinias and Yuccas), Creosote Rings [with a diameter of ten feet or greater], Dalea and Spinosa (smoke tree), all species of the genus Prosopis (mesquites) and Beavertail Cactus “short-Joint” are searched for and located. (See Native Plant Map for more information.)

Mojave Yucca Note: Due to dangers to customers, vendors, employees, pets and children (i.e. blind, bleeding) and the difficulty of these plants being clones (dead to healthy) with various levels of fungus damage and beetle damage increased from relocation activities and having intertwined root corms with dead, dying and healthy plants, no relocation activities are typically planned.

Cholla var. Note: Due to the danger to pets and children (e.g. bleeding and blind) of these plants continuously dropping cactus spiky joints, no relocation activities are typically planned.

SUMMARY INFORMATION – continued**NATIVE DESERT PLANTS ENCOUNTERED WITHIN THE LIMITS OF THE PROPOSED PROJECT.**

{ 12 }	Joshua Tree (<i>Yucca brevifolia</i>) [2 feet or higher in height]
[0]	Beavertail Cactus (<i>Opuntia basilaris</i> “short-joint” var. <i>brachyclada</i>)
	Two –(2) Beavertail Cactus (<i>Opuntia basilaris</i>) were located and will be relocated
/0/	Creosote Rings [with a diameter of ten feet or greater]

POTENTIAL NATIVE DESERT PLANTS PROPOSED FOR RELOCATION (LOCATED IN TABLE 2):

{ -6- }	Joshua Trees are proposed to be “Protected-In-Place” or “Relocated” along perimeter roads and Retention areas and selected areas at the time of site development. Due to the available amount of healthy and younger Joshua Trees – only Joshua’s with a range in height from 3 feet to 10 feet are proposed to be relocated at this time and ALTEC reserves the right to review the Site with Final Engineering Plans for Street Improvements and Grading Plans for the Site’s development prior to development [small Joshua’s with a height up to 2 feet and 12 feet or taller and additional fire damaged and the Dying to Dead Standing Joshua’s are not proposed to be relocated].
{ -0- }	Beavertail Cactus (<i>Opuntia basilaris</i>) [No found “short-joint” var. <i>brachyclada</i>]
/-0-/	Creosote Rings (<i>Larrea tridentata</i>), [with a diameter of ten feet or greater]

There was no evidence of any other young and healthy Joshua Trees or other protected native desert plants meeting the parameters of the Local Agency and this Site appears to be in compliance with Federal, State and County Standards. See future Design Plans for further locational information and proposed site layout areas.

TRANSPLANTING AND OTHER INFORMATION:

- An estimate of 90 days is required prior to any grading and grubbing activities.
 - Proper “Native Plant Permit” and current requirements shall be attained from the Local Agency.
 - ALTEC shall be contacted for latest requirements, payment of consulting fees, scheduling of temporary water meter and scheduling with subcontractors and other personnel.
- Relocation activities for designated native desert plants are shown in Table 2 and attached Maps.
- Relocation activities for designated native desert plants shall be on-Site in designated areas and landscaping planters along the perimeter of the Site, as shown on the improvement plans, if available.
- See Landscaping and Grading Plans at the time of development for further details, if available.
- A Tree Spade (e.g. min. of GS44) shall be used for all trees over 8-feet and up to the maximum size of tree that can be transplanted without damaging the tree or the corm or as directed by consultant.
- Bonding Requirements for Subdivision Tract Recording is currently estimated to be \$500 per proposed relocated Joshua Tree and \$100 per proposed relocated Beavertail Cactus, as applicable and other costs associated with other requirements.
- Potential mitigation for Joshua trees or other native plants is estimated at \$500 per specified individual specimen considering the various lump sum costs associated with this process per Site.
 - Preparation of Final Native Plant Transplanting Report
 - Tree Spade and operator costs
 - On-Site Special Inspector during all transplanting activities
 - Water meter rental and water usage
 - Field Inspector, Supervisor and Technician(s) for assisting transplanting activities
 - Renting other equipment, as required, to complete the “Relocation Activities”, etc.)
 - Interim Relocation issues and challenges.

FINAL CONCLUSIONS

SUMMARY:

- Large piles of vegetation shall be avoided due to potential-hazardous conditions and shall be properly and immediately disposed of or prior to the end of each workday unless specifically being used as part of a “Restoration Project.”
- Due to Site grading requirements (cut and fill) and development and phasing, an interim transplanting location may be needed prior to final relocation area (e.g. Retention Basin, Landscaped or Open-Space areas) and this requires the native plants to be relocated twice and essentially doubles the total cost.
- The plants shall be monitored over a three – (3) year period and additional measures implemented (e.g., monthly irrigation) by a contract with the property owner to ensure the best-survival of the plants.
- All relocated plants shall be relocated and placed in the ground immediately upon relocation activities and shall not be left in a pile, boxed or any other manner.

The site is generally within in the Joshua Tree Woodland ecotonal zone and has no significant natural drainage courses. The Site perimeter and interior dirt trails are used by vehicles, HOV, dogs and horses and cumulatively cause localized and regional habitat fragmentation due to ongoing fast-growth development in the Victor Valley.

Based on the best available information, ALTEC asserts that no further investigation of the site is warranted at this time and the implementation of the proposed improvements on the site would result in a zero - (0) % removal for the Desert Tortoise, Mojave Ground Squirrel, Burrowing Owl and all other Owls, Sharp-shinned Hawk and all other Hawks, LeConte’s Thrasher, Loggerhead Shrike or associated critical habitat.

MITIGATION AND RECOMMENDATION:

- Site Assessment after JUNE 7, 2020 for all reptile and mammal species.
- Site Assessment after FEBRUARY 1, 2020 for Burrowing Owls and all other referenced bird species and if there is a lapse of 30+/- days of construction activities on the Site thereafter.

MITIGATION & RECOMMENDATION: Prior to any grading activities after FEBRUARY 1, 2020 and if there is a lapse of 30 days of construction activities on the Site thereafter, an assessment “Only On-Site and 500-foot buffer” shall be completed for Burrowing Owls and other Bird Species and a **Clearance Letter** shall be provided to the Local Agency prior to any land disturbance. [This Site has no legal jurisdictional approvals for development, at this time, and another Site review will be probably be required prior to development.] If these species are occupying the Site in the future, all activities shall be stopped and ALTEC shall be contacted to discuss potential mitigation measures.

NATIVE DESERT PLANTS PROPOSED FOR RELOCATION:

{-6-} **Joshua Trees** are designated for potential relocation and ALTEC reserves the right to review the Final Design Plans for Street Improvements, Landscaping Plans and Grading Plans prior to development and ALTEC will designate the healthiest proposed relocation of available Joshua’s.

BONDING MITIGATION RECOMMENDATION IS \$3,500: The Site only has {-6-} proposed Joshua Trees for relocation activities and the associated costs and time to provide Supervision, On-Site Inspector, field technicians, tree spade services, water meter usage costs, other potential rental equipment or subcontracting costs is estimated to be a total of \$2,000 plus \$250 per tree for a total estimate **BONDING of \$3,500.**

OWNER RESPONSIBILITY: The owner has total (civil and financial) responsibility to comply with all Local Native Plant Ordinance and applicable State and Federal Agency requirements.

The owner shall water these plants once per month for a minimum of three (3) years after relocation and may be part of a Landscaping Maintenance Assessment District or other maintenance mechanism by the local agency.

OTHER INFORMATION:

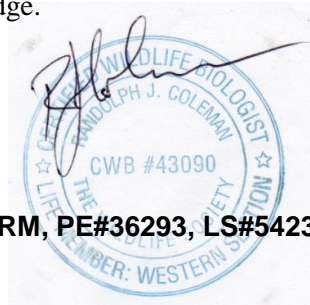
- The Site has no current legal entitlements for development and a Site Plan for an industrially oriented development is in process for submittal to the City of Victorville. Due to the lack of current City Approvals and timeframe for approvals, it is probable, no permitting or grading activities shall commence prior to another Site review for all bird species and animal species.
- Bird species may have project-related disturbance of active nesting territories during critical phases of the nesting cycle (February 1st through August 31st annually).
- A future Site review will be required prior to any grubbing, borrow pit, stockpiling or any other grading or construction activities (or 60+/- days from field survey update, pursuant with previous conversations with CDFW staff).
- ALTEC and staff have no personal or financial responsibility for the relocation or long-term maintenance of any Native Plants (i.e. Joshua Trees, Yucca, or Beavertail ["short-Joint"]), etc.; nor personal or financial responsibility if these native plants are destroyed inadvertently, purposely, by unintended consequences or damaged in any other manner.

The "Cover Page" must have a wet signature and stamp(s) in original ink, non-copied, to be an authorized copy of this report. Any attached "Full Size Maps" shall also require a wet signature and stamp. Any additional copies of this report are an additional fee for preparation and original signature if ordered and prepaid within 30 days. Any attempt for assignment of this Assessment to any different person or entity shall make this Assessment void and will require a separate negotiated fee. Current practices required by the Local Agency and CDFW for the preparation and field survey requirements and monitoring are subject to change at any time.

Please review the complete Biological Baseline Assessment in its entirety to better understand the conclusions presented. ALTEC appreciates the opportunity to furnish this Biological Baseline Assessment and Native Plant Report. Please do not hesitate to contact us if you have any questions or request additional services. It is your responsibility to read the report and inform the consultant of any errors or omissions you are aware of prior to utilizing the report or making it available to any third party.

If this is not signed in original ink, stamped, dated and numbered (e.g. #1 of 2 –City Planning and #2 of 2-Client) original, this copy is unauthorized. I hereby certify that the findings and conclusions presented in this assessment are accurate to the best of my knowledge.

Respectfully submitted,



Randolph J. Coleman, AICP CEP, CCIM, MIRM, PE#36293, LS#5423
CDFW Scientific Collecting Permit #11586
Certified Wildlife Biologist #43090
Certified Arborist & Tree Risk Assessment Qualified WE#8024A
Qualified Stormwater Developer/Planner #21595

EXECUTIVE SUMMARY

PROJECT DESCRIPTION:	The Assessment and Report was to assess the biological resources of the Site for the Client and Local & Regulatory Agency(s) review.
ASSESSOR'S PARCEL:	APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16
LEGAL DESCRIPTION:	Portion of Southeast ¼ of Section 32, Township 6 North, Range 4 West, San Bernardino Meridian, in the City of Victorville.
SOILS & TOPOGRAPHY:	#107 Bryman Loamy Fine Sand 5-9% slopes, #108 Bryman Loamy Find Sand 9-15% slopes, and #130 Haplargids-Calciorthids Complex 15-50% slopes - Soils consists of older alluvial fan remnants. Unconsolidated to moderate consolidated. Low to moderate permeability and drains to the Mojave River.
SPECIAL ZONES:	The Site is not within a California Coastal Zone, Critical Habitat Zone, Alquist-Priolo Seismic Zone. NOTE: The site is 40+ Km from the San Andreas Fault, which also runs in the Cajon Pass area to the south.
FLOOD HAZARD:	No "Blue Line" is located on Site based upon the USGS Quad Map and the site drains naturally east to the Mojave River.
MOJAVE GROUND SQUIRREL:	None - No Mitigation is required based upon current Site conditions.
DESERT TORTOISE, BURROWING OWL, SHARP-SHINNED HAWK, LECONTE'S THRASHER, LOGGERHEAD SHRIKE & OTHER RAPTORS (HAWKS & OWLS):	
MITIGATION & RECOMMENDATION:	Prior to any grading activities after FEBRUARY 1, 2020 for Burrowing Owls and all other referenced bird species and JUNE 7, 2020 for Tortoises and other referenced animal species, a Site Review shall be completed and if there is a lapse of 30+/- days of construction activities on the Site thereafter. A Clearance Letter shall be prepared (by the Project Wildlife Biologist and Project Arborist) for the City.
NATIVE DESERT PLANTS:	Relocation Required: {-6-} Joshua Trees and will be relocated to an on-site Retention and Landscaping areas - Beavertail cactus (not short-joint) are also recommended to be relocated to these same locations.
LOCAL AGENCY:	The City of Victorville has the Local Jurisdictional Authority for the Legal Entitlement planning and building processes. The City also shall have the applicable reviewing authority for any transplanting activities or commercial harvesting of desert native plants and all transplanting activities shall conform to all applicable codes, laws and field procedures from the local jurisdiction. At the time of transplanting the local jurisdiction shall be contacted for the latest requirements.
REPORT EXPIRATION:	JUNE 7, 2020 for all reptile and mammal species. FEBRUARY 1, 2020 and if there is a lapse of 30 days of construction activities on the Site thereafter, an assessment for Burrowing Owls and all referenced bird species.

INTRODUCTION

Biological surveys were conducted on a site located in City of Victorville, San Bernardino County, California to evaluate the site for the presence of Desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Spermophilus mohavensis*), Burrowing owl (*Athene cunicularia*), Sharp-shinned hawk (*Accipiter striatus*), LeConte's Thrasher (*Toxostoma LeContei*), Loggerhead Shrike (*Lanius ludovicianus*) and all other Raptors (Hawks and Owls). Surveys for these species were conducted as per guidelines established by U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFW). This report provides a summary of the results of the surveys. The results are part of the baseline data necessary for consideration of the proposed project by the County and other regulatory agencies.

PROJECT LOCATION AND DESCRIPTION

The Property Site is the northerly 17± acres of the Project Area of 52 ± acres to allow for the an industrially oriented development on approximately 52+/- acres in size and is located between National Trails Highway (ROUTE 66) and the Los Angeles Department of Water and Power (LADWP) LUGO Switching Station in the City of Victorville in San Bernardino County. Portions of the Site are disturbed by a previously removed mobile home park (from early 1950s), cement dust from the nearby cement plant, dirt, asphalt and construction debris storage, off-road vehicle use, and the dumping of trash on the property by residents of the surrounding area. The property is located east of a LADWP transmission corridor. This area is in the northeastern portion of the City of Victorville with surrounding vacant properties, and residential, commercial and industrial uses in the general area. The elevation of the site is about 2,725+/- to 2,856+/- feet and the site is relatively flat to a 2:1± natural and manufactured slope to the north-northeast and ultimately drains into the Mojave River. There are no significant or prominent ridges or washes on the site.

SITE OVERVIEW, AREAL GEOLOGY AND RESUME SUMMARY INFORMATION

The Site is located in a single ecotonal zone and has a relatively limited, but typical mix of vegetation in the general areas. The Site has no "Blue Line" but does drain to the Mojave River. The site generally has flat to 2:1± natural and manufactured slopes and aspect to the northeast and ultimately drains into the Mojave River. The Site is 40+/- km from San Andreas Fault to the south.

The Site is in the northeastern portion of Victorville and has a mix of vacant properties, commercial and industrial uses, along with U.S. Route 66, and high voltage transmission lines. The Site is impacted by an early-1950's mobile home park which has been removed, cement dust from the nearby cement plant, construction debris storage, numerous dirt roads and trails used by OHV, scattered debris and trash along dirt roads, along with recent canine/coyote holes (scat, digging holes and tracks) were observed in the general area. The Site is between National Trails Highway (ROUTE 66) and the Los Angeles Department of Water and Power (LADWP) LUGO Switching Station, and at the just northerly of the semi-alpine transition zone of the San Bernardino and San Gabriel Mountains and the Mojave Desert. Victorville and Hesperia were originally divided into parcels in the 1880's along the Railroad and Mojave River, following historical wagon trails and east of Interstate 15 (Route 66 - Old Trails Highway), further developed into a military community in 1940's through 1980's. Subsequently, since the 1980's, numerous national, regional and local builders bought raw acreage and developed housing, particularly along Interstate 15 and Highway 395 and other areas in the Victor Valley.

The "Areal Geology", (Mojave River Ground Water Basins Investigations, by the Dept. of Water Resources states: Soils consist of #107 Bryman Loamy Fine Sand 5-9% slopes, #108 Bryman Loamy Find Sand 9-15% slopes, and #130 Haplargids-Calciorthids Complex 15-50% slopes - Soils consists of older alluvial fan remnants. Unconsolidated to moderate consolidated. Low to moderate permeability and ultimately drains to the Mojave River.

METHODOLOGIES AND PROTOCOLS

Pedestrian surveys were conducted during numerous days and times between April 2 through June 4, 2019 by R.J. Coleman (Certified Wildlife Biologist #43090, Certified Arborist /Tree Risk Assessment Qualified WE#8024A, and Scientific Collecting Permit #11586 from CDFW) to verify the absence or presence of the various identified species.

It should be noted that although none of the identified bird species were located during surveys, the proposed project is not within the Mojave River riparian corridor or a significant ephemeral riparian corridor like the Ore Grande Wash and other larger washes in the Mojave Desert. Therefore, this Site has no potential habitat for nesting birds during the breeding season for riparian corridor species of concern. Regardless of the site status, mitigation measures have been included to require additional site surveys to address construction activities after February 1, 2020 (beginning of the nesting season is designated as February 1st and ending August 15th), or being delayed 30 days or more, after construction activities begin to verify site conditions have not changed.

ON-SITE SURVEY

Recent documentation from the U. S. Bureau of Land Management, USFWS, and CDFW were consulted to determine to what extent Desert Tortoises and all referenced species (e.g. MGS, Burrowing Owls) have been observed in the area. In addition, Biological Baseline Assessments prepared by ALTEC for other projects in the area were reviewed prior to commencement of the field surveys. Following the literature review, the Site was visited by consultant. The field survey of the Site is inclusive of the right-of-ways and consists of a series of traverses that are walked in a north-south direction until the entire Site had been thoroughly checked for Tortoise sign (e.g. Tortoises, burrows, tracks, scats) and other referenced species at 30 (10+/- meter) foot intervals and a closer, more detailed examination is given to areas of irregular topographical features such as localized high-points, washes and other localized low-points, erosion channels, elevated clumps or rings of vegetation, bases of bushes and other perennial plants, since tortoises tend to burrow into small hills and banks such as those at the base of woody plants, Creosote and Junipers or other manmade topographical considerations. The Site survey is designed to provide one hundred percent (100%) coverage within the internal boundaries of the proposed project in order to locate the following:

OFF-SITE SURVEY

The zone of influence (**ZOI**) includes parallel transects of 100, 300, 600, 1200 and 2400-feet for Tortoises and transects in 100-foot increments and up to 500 feet for Burrowing Owls and all other species. The zone of influence was completed until being bisected by development and the property boundaries were not available prior to the surveys. This Site has not been previously reviewed for biological resources or within Zone of Influence/Buffer areas for nearby Sites (all directions) previously reviewed by Coleman at the time of planning approvals in 1989-2019 timeframe, along with numerous surveying and engineering projects since 1973.

RESULTS-LITERATURE REVIEW

ANIMAL PROTECTION

This Assessment was prepared pursuant to the California Environmental Quality Act of 1970 (California Public Resources Code §21000-21178 and Title 14 CCR, §753, and Chapter 3, §15000-15387) and the conclusions of this report represent the results of a Site assessment from a field survey to determine the biological baseline required for potential remediation of the proposed project on the Site by the local jurisdiction and additional governmental agencies. Literature was reviewed to identify the species that would require a site assessment in order to prepare this Report.

The City of Victorville General Plan Resources Section (pp 10-11) identifies species to be evaluated for biological resources reports. It is noted many of these species are riparian species, bird migration paths along riparian corridors (i.e. Mojave River Riparian is the dominant local corridor), and these species include:

Amphibian

- Arroyo Toad *Bufo microscaphus californicus*

Gastropod

- Victorville Shoulderband *Helminthoglypta mohaveana*

Reptile

- Coast Horned Lizard *Phrynosoma coronatum*
- Desert Tortoise *Gopherus agassizii*
- Western Pond Turtle *Clemmys marmorata*

Mammal

- Mojave Ground Squirrel *Spemophilus mohavenses*
- Mojave River Vole *Microtus californicus mohavensis*
- Pallid Bat *Antrozous pallidus*

Bird

- Bald Eagle *Haliaeetus leucocephalus*
- Bendire's Thrasher *Toxostoma Bendirei*
- Brown-crested Flycatcher *Myiarchus tyrannulus*

- Burrowing Owl *Athene cunicularia*
- Cooper's Hawk *Accipiter cooperii*
- Ferruginous Hawk *Buteo Regalis*
- Golden Eagle *Aquila chrysaetos*
- Least Bell's Vireo *Vireo bellii pusillus*
- Le Conte's Thrasher *Toxostoma lecontei*
- Long-eared Owl *Asio otus*
- Loggerhead Shrike *Lanius ludovicianus*
- Northern Harrier *Circus cyaneus*
- Prairie Falcon *Falco mexicanus*
- Sharp-shinned Hawk *Accipiter striatus*
- Summer Tanager *Piranga rubra*
- Tricolored Blackbird *Agelaius tricolor*
- Willow Flycatcher *Empidonax traillii*
- Yellow-billed Cuckoo *Coccyzus americana*
- Yellow-breasted Chat *Icteria virens*
- Yellow Warbler *Dendroica petechia*

There are numerous additional species identified by the CNDDDB as occurring in the general region. A review of the locations and habitats of these species revealed that many of them require water, riparian areas, consistent seasonal drainage, woodlands, forests, mountains, Sonoran Desert habitat, or are located in very small numbers in very specific areas of the State. These species are not included within the Report but are included for discussion purposes. The remaining additional species evaluated in this report include:

Birds

- American peregrine falcon *Falco peregrinus anatum*
- Arizona bell's vireo *Vireo bellii arizonae*
- Bell's sage sparrow *Artemisiospiza belli belli*
- Black-tailed gnatcatcher *Poliophtila melanura*
- California gull *Larus californicus*
- Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*
- Crissal thrasher *Toxostoma crissale*
- Gila woodpecker *Melanerpes uropygialis*
- Gray vireo *Vireo vicinior*
- Harris' hawk *Parabuteo unicinctus*
- Lucy's warbler *Oreothlypis luciae*
- Southwestern willow flycatcher *Empidonax traillii extimus*
- Vermilion flycatcher *Pyrocephalus rubinus*

Reptiles

- California glossy snake *Arizona elegans occidentalis*
- Coastal whiptail *Aspidoscelis tigris stejnegeri*
- Orange-throated whiptail *Aspidoscelis hyperythra*
- Red-diamond rattlesnake *Crotalus ruber*

Mammals

- California leaf-nosed bat *Macrotus californicus*
- Dulzura pocket mouse *Chaetodipus californicus femoralis*
- Pocketed free-tailed bat *Nyctinomops femorosaccus*
- Southern grasshopper mouse *Onychomys torridus ramona*
- Townsend's big-eared bat *Corynorhinus townsendii*
- Western mastiff bat *Eumops perotis californicus*
- Western yellow bat *Lasiurus xanthinus*

PLANT PROTECTION

This Assessment was prepared pursuant to the California Native Plant Protection Act of 1977 (§1904) and the conclusions of this report represent the results of a Site assessment from a field survey to determine the biological baseline required for potential remediation of the proposed project on the Site by the local jurisdiction and additional governmental agencies.

CNPS LISTS

List 1B: Plants are rare or threatened or endangered in California or elsewhere.

THE CNPS R-E-D CODE

R (Rarity)	3 -	Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.
E (Endangered)	2 -	Endangered in a portion of its range
D (Distribution)	3 -	Endemic to California

FEDERALLY LISTED PLANTS

C2	Threat and/or distribution data are insufficient to support federal listing.
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Beavertail Cactus “short-joint” (*Opuntia basilaris* var. *brachyclada*) was not observed and two-(2) regular Beavertail Cactus (*Opuntia basilaris*) are on the Site and actus are proposed to be relocated.

Management Status:	Federal:	C2 (USFWS Species of Concern)
	California:	S1.2, G5T1 (CDFG, 1998)
	CNPS:	List 1B, R-E-D code 3-2-3 (Skinner/Pavlik, 1994)

Joshua Tree and Desert Trees can have a variety of issues that create difficulties with relocation alternatives.

NOTE: Coleman’s personal opinion is that the slopes of retention basins, or any manufactured earthen slopes or high compaction rates (over 85%) are not the proper long-term solution for relocation and this is based upon numerous observations in the Victor Valley requiring this on subdivision and commercial projects in all cities and then observing (400+) all or almost all Joshua tree dying when many of these healthy trees were of a size that should have had an excellent chance for long-term survival. The following is a list of these common issues:

AF	Annual Fern/Fern Ally	DL	Down Live	MC	Multiple Clones
AG	Annual Grass/Graminoid	Dleg	Dogleg	Mq	Mesquite var.
AH	Annual Herb	DS	Dead Standing	N	Parry Nolina
Binj	Basal Injury	Du	Dusty	OB	Over Balanced
B/I	Beetle and insect damage	F	Fungus damage	OM	Over Mature
BH	Biennial Herb	Gr	Grainery Tree	OT	Over Tall
BT	Beavertail Cactus	Gt	Girdled tree trunk	PF	Perennial Fern/Ally
CP	Century Plant var.	Hf	Health-Fair	PG	Perennial Grass
Ch	Cholla var.	Hok	Health-OK	PH	Perennial Herb
Cls	Clones	Hp	Health-Poor	PV	Perennial Vine
CoD	CoDominate Trunk(s)	IB	Included Bark	S	JT Seedling (<3')
Cr	Creosote Bush (10' Ring)	InjO	Injury - Old	Sh	Shrub
Crd	Crowded	InjN	Injury - New	ST	Smoketree var.
DB	Die-Back	JT	Joshua Tree	T	Tree (2”dia/6’ht)
Dbh	Diameter at 4.5'	L	Lean/Leaning	Tcrk	Torsional Crack

PROTECTED NATIVE DESERT PLANTS:

Native Desert Plants searched for On-Site and reviewed in this report are the following:

- Joshua Trees (*Yucca brevifolia*)
- Beavertail Cactus (*Opuntia basilaris* var. *brachyclada*)
- Creosote Bush [10-ft min. rings] (*Larrea tridentata*)
- Parry Nolina/Beargrass (*Nolina parryi*)
- Mojave Yucca (*Yucca schidigera*)
- Century Plant (*Agave deserti*)
- Dalea/Smoke Tree (*Parosela spinosa*, var.)
- Mesquite Tree (*Prosopis* var.)

PERSONAL OBSERVATION BY RANDY COLEMAN:

WILDLAND FIRE AREAS Historical (5 to 50+/- years) fires typically have clone Joshua's and do not have Beavertail (*Opuntia* var.) Cactus and areas that have had an older historical (50+/- to 150+/- years) fire typically have clone Joshua's and Junipers (if Juniper Woodland ecotonal zone). Recent (last 50 years) fires have substantially and permanently altered vegetation and ecosystems and several species, specifically the Junipers and Beavertail do not survive and other native species [Sages and Rabbit Brush (*Chrysothamnus nauseosus*)] and invasive grass species [*Bromus*, *Schismus*, and other exotics that have been introduced (purposely, unintended consequences or accidentally) during the last 100+ years due to grazing and a variety of other manmade impacts], then dominate the Site and permanently alter the fire cycle. Specifically, with the ecosystem having invasive grass species having a larger fuel load and higher heat intensity (wildland fires already occurred as early as April/04 and September/04 in Cajon Pass), most native plant species are permanently removed from the Site by dominant native and numerous invasive species. The typical animal species are also excluded from this habitat. Rocky hillsides in the Victor Valley can also have wildland fires (Rock Fires) as have occurred several times in the last 25 years (twice at Bass Hill within 5 years). Also, adjacent development and altered/existing conditions upstream typically diverted natural sheet flows from entering the Site and providing needed moisture for the native vegetation required for long-term survival of the native plants and reducing the native vegetative structure, thereby providing inadequate habitat (shelter and food) for various species (Owls, birds, MGS, etc.).

JOSHUA'S UNDER 3 FEET (SEEDLINGS) have been observed during the last 40 years to grow in abundance on local Wildland Fire Sites due to the much higher and consistent moisture events, lack of squirrels eating the seeds and competing native vegetation for rainfall, other than the dominant and invasive plant species. Also, the Victor Valley receives annual rainfall (also dew and snow), and twice the average rainfall than most other areas of the Mojave Desert and this allows the Joshua's to grow at more than twice the rate. Therefore a 3-foot Joshua will likely be at less than half of the age, or younger, than another Joshua's located farther into the Mojave Desert. These extant Joshua Tree locations have to survive and experience multi-year droughts and half the moisture on an average and normalized basis. Therefore, most of these Victor Valley Joshua seedlings will not survive the stress of the relocation process during the first 5 years of relocation without substantial efforts.

The **Beavertail Cactus - "Short-Joint"** (*Opuntia basilaris* var. *brachyclada*) is determined to be sensitive by the California Native Plant Society (CNPS) (Smith and Berg, 1988), is typically found in some areas of the Victor Valley. The extent of the possible regional loss of this rare plant species can only be speculated. Before any areas are graded for development, all "short-joint" Beavertail specimens should be salvaged, if encountered during any grading process. Salvaging shall be primarily by transplanting in a suitable native habitat on-Site, or preserved in a Botanical Garden, similar to University of California at Riverside, Rancho Santa Ana in Claremont or other similar facilities. This Beavertail (var. *brachyclada*) is listed by CNPS and typically found on dry desert slopes of the San Gabriel and San Bernardino Mountains. Typically bloom April thru June, subject to warm ambient temperatures coupled with the required timing and amount of rainfall. Long-term drought condition and the effects of the El Nino years alter any ordinary conditions.

Literature was reviewed to identify the species that would require a site assessment to prepare this Biological Baseline and Protected Native Desert Plant Report.

The City of Victorville General Plan Resources Section (pp 10-11), and Municipal Code Chapter 13.33, entitled *Preservation and Removal of Joshua Trees*; identifies species to be evaluated for biological resources reports:

- Small-flowered Androstephium *Androstephium breviflorum*
- Booth's Evening-Primrose *Camissonia boothii* ssp. *Boothii*
- Desert Cymopterus *Cymopterus deserticola*
- Short-jointed Beavertail *Opuntia basilaris* var. *brachyciada*
- San Bernardino Aster *Symphyotrichum defoliatum*
- Joshua Tree *Yucca brevifolia*

- Mojave Monkeyflower *Mimulus mohavensis*

There are numerous additional species identified by the CNDDDB as occurring in the general region. A review of the locations and habitats of these species revealed that many of them require water, riparian areas, consistent seasonal drainage, woodlands, forests, mountains, Sonoran Desert habitat, or are located in very small numbers in very specific areas of the State. These species are not included within the Report but are included for information purposes. The remaining additional species evaluated in this report include:

- Ash-gray paintbrush *Castilleja cinerea*
- Santa Ana River Woollystar *Eriastrum densifolium* ssp. *sanctorum*

RESULTS-FIELD SURVEYS

Field surveys were conducted on April 2 through June 4, 2019 and numerous other site visits for civil engineering, land surveying and/or land planning purposes, also for reviewing and identifying potential desert annuals, general wildlife identification, and specific surveys following appropriate protocols for the various species identified as protected from the literature review.

Vegetation: The site and general area supports a mixed shrub community typical of the area and the site is predominantly native vegetation with some disturbance from off-highway vehicles and the dumping of trash by residents in the area along trails and utility transmission corridors. Dominant species include Joshua Trees (*Yucca Brevifolia*), Creosote Bush (*Larrea tridentata*), Cholla (*Opuntia* var.), Burrobush (*Franseria dumosa*), Rabbit brush (*Chrysothamnus depressus*), Indian Rice Grass (*Oryzopsis hymenoides*), Buckwheat (*Eriogonum fasciculatum*). Invasive Plants [*i.e.* *Schimus* (*Schimus barbatus*), *Bromus* (*Brome sp.*), Russian thistle (*Salsola sp.*), Saharan Mustard (*Brassica tournefortii*)] are locally observed almost year-round with rain. All desert annuals flowers are highly dependent upon local rainfall and autumnal annuals can be very rare events due to the combination of required timing of rainfall and summer heat. fiddleneck (*Amsinckia sp.*)

The plant community within the Site's general area is a single ecotonal zone, the Joshua Tree Woodland and has typical impacts from historical uses. There are five (5) primary native plant communities found within the Victor Valley [Joshua Tree-Juniper Woodland, Joshua Tree Woodland, Creosote Bush Scrub, Alkali Sink and Desert Riparian] and the association of certain species characterizes each of the communities and overlapping ecotonal zones typically have overlapping species. Representative species typifying each plant community are listed in the Addenda referred to as "Native Plant Communities". Wildland Fires affect all habitats, species and food sources whether in a single ecotonal zone, modified zone (e.g. fire) or transitional (overlapping) zones.

FLOODING, BRUSH FIRES AND OTHER NATURAL IMPACTS

The Site shows no major evidence of significant flooding and no Hydrology Study has been reviewed for the theoretical 100-year storm event impacting the Site. The Site has not been affected by historical wildland fire mosaics like many sites southerly in the transition zone of the Mojave Desert. Nearby sites to the south have a combination of recent to historical estimated to be about 150 years ago (estimated in 1850's based upon Joshua Tree sizes) and other properties had recent fires (2000/03 and fires in Cajon Pass in September 2004/15/19).

Probable wildland fires grow on Sites such as these due to higher mass loading of vegetation (both native and specifically invasive grass species and the high/record rainfall of 2004-05, 10-11, 18-19) connecting the native desert clumps of vegetation (i.e. Creosote bushes). At the time development occurs, new driveways, streets and infrastructure (manmade fire breaks) and fire suppression services are required reducing the wildland fire probability. Recent historic fires have occurred in the southern Apple Valley, Hesperia, Oak Hills, Phelan and Cajon Pass. However, all foothills from the San Bernardino and San Gabriel Mountain ranges and Mojave Desert are impacted by natural and manmade wildfires (i.e. “Willow Fire” in Apple Valley, Sawtooth in Yucca Valley, Cajon Pass and Louisiana Fires in 2002 and similar wildfires occurred in 1980’s.). These impacts are naturally occurring and greater during drought years and subsequent to El Nino years and affected by high winds during a dry spring, summer or fall. Rocky hillsides can also have wildland fires (Rock Fires) as have occurred in the early 1980’s and 1990’s. Invasive grass species are increasing these occurrences of both “Wildland and Rock Fires” and changing the fire intensity, flame height and cycle duration (increasing) and permanently altering the desert ecosystems.

HUMAN IMPACTS

The entire Site and general area are significantly affected by an early-1950s mobile home park which was removed during the 1980s, cement dust from the nearby cement plant, dirt and asphalt storage, canine/coyotes, invasive plant species, historical cattle and sheep grazing, scattered junk, residential construction, yard and house debris, vehicle parts, dirt roads, HOV use, upstream drainage alterations and scattered sites had dry-farming that have become fallow and re-grown with native vegetation during the last 152± years. Also, shotgun shells have been encountered throughout the general area. The unusual high numbers of Ravens in the Victor Valley and Raven concentrations in the immediate vicinity are creating other negative issues for many native wildlife species, [NOTE: personally observed about 30 dead hatchling Tortoises in the early 1990’s under a Raven nest in a larger Joshua Tree north of Mojave Drive and east of Highway 395] (e.g. Tortoises, MGS, Mojave Voles, and Horned Lizards) and regularly seen “Mobbing” Red-Tailed Hawks.

General Wildlife: Mammals observed from the pedestrian and nighttime driving surveys included jackrabbit (*Lepus californicus*), Antelope ground squirrels (*Ammospermophilus leucurus*), Merriam’s kangaroo rats (*Dipodomys merriami*) and one Coyote (*Canis latrans*) was seen on the Site (regularly seen in the area) and several large holes were observed in the general area. Other mammals previously observed during the night-time are deer mice (*Peromyscus maniculatus*). Ravens (*Corvus corax*) were observed in the general area, morning doves (*Zenaida macroura*) and sage sparrows (*Amphispiza belli*) were the only birds observed during the field surveys. Numerous lizards [Side-blotch (*Uta stansburiana*), Desert Spiny (*Sceloporus magister*), Western Whiptails (*Cnemidophorus tigris*) and Desert Night Lizard (*Xantusia vigilis*) under fallen Joshua tree branches] were observed in the general area.

Field observations were from pedestrian surveys [e.g. Binoculars – “Regular and Night Vision”, indirect signs (scat, tracks, calls, nests, burrows, tail drags)]. Numerous lizards [Side-blotch (*Uta stansburiana*), Desert Spiny (*Sceloporus magister*), Western Whiptails (*Cnemidophorus tigris*)], California Quail (*Callipepla californica*), Morning doves (*Zenaida macroura*), Northern Mockingbird (*Mimus polyglottos*), Sage sparrows (*Amphispiza belli*), Antelope ground squirrels (*Ammospermophilus leucurus*), several Black-tailed Jack Rabbit (*Lepus californicus*), one Coyote (*Canis latrans*), and Ravens (*Corvus corax*) were observed at or near the Site. NOTE: No Woodrat (*Neotoma lepida*) middens were found on the Site but were observed in the general area. No large amount of bird whitewash was observed on the Site or within the buffer zones.

Specific Wildlife: The specific wildlife identified during the literature review are discussed in detail below.

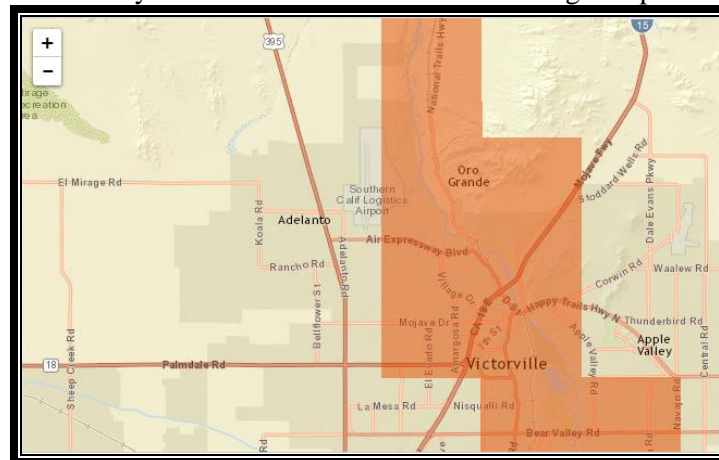
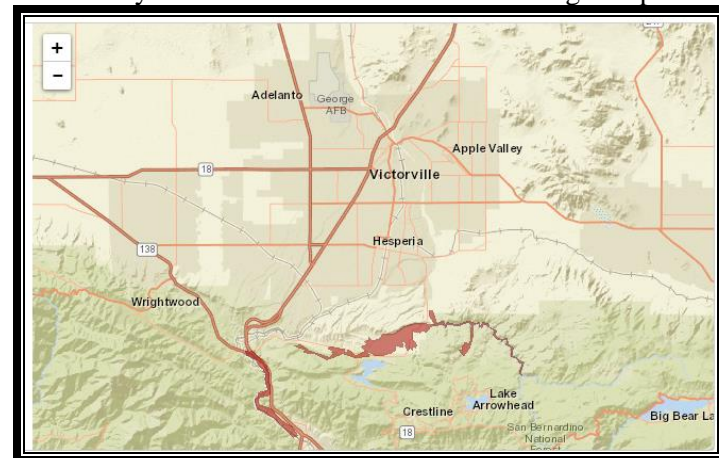
For example, the project site contains no riparian corridor like the Mojave River, significant ephemeral streams, pools, or other water bodies required by Arroyo Toads and riparian oriented birds and migrating birds. Therefore, no additional surveys for Arroyo Toads were performed. The following has the USF&WS Maps that have a hyper-link, as delineated in the footnotes

AMPHIBIANS**Arroyo Toad (*Bufo microscaphus californicus*)¹**

Federal Status - Endangered; State Status – Species of Special Concern

Distribution – Southern part of the Coast Ranges from northern San Luis Obispo Co. south to Baja California.

Habitat – Feed on snails, Jerusalem crickets, beetles, ants, caterpillars, moths, and occasionally they cannibalize newly metamorphosed individuals. Often found near exposed sandy stream sides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. Inhabits washes, arroyos, sandy riverbanks, riparian areas with willows, sycamores, oaks, cottonwoods.

Arroyo Toad – US Fish and Wildlife Range Map²Arroyo Toad – US Fish and Wildlife Range Map³**Discussion and Recommendation**

The site is not located in proximity to the Mojave River riparian corridor or any other major water bodies; Therefore, no site surveys were conducted for this species.

¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1484&inline=1>² <https://ecos.fws.gov/ecp0/profile/speciesProfile;jsessionid=C8D11C09592C3ED32AD5215203F92F5C?spcode=D020>³ <https://ecos.fws.gov/ecp0/profile/speciesProfile;jsessionid=C8D11C09592C3ED32AD5215203F92F5C?spcode=D020>

GASTROPOD

Victorville Shoulderband *Helminthoglypta mohaveana*⁴

Federal Status – Federal Species of Concern (FSC); State Status – None

Distribution – Found along the Mojave River in areas with riparian habitat and rock outcroppings.

Habitat – Requires an aquatic environment with nearby rock outcroppings.

Discussion and Recommendation

The site is not located in proximity to the Mojave River riparian corridor with rocky outcropping or any other major water bodies with rocky outcroppings; Therefore, no site surveys were conducted for this species.

REPTILES

Desert tortoise *Gopherus agassizii*⁵

Federal Status – Threatened; State Status – Threatened.

Distribution – Widely distributed in the Mojave Desert from below sea level to 7,220 feet above sea level.

Habitat – Most common in desert scrub, desert wash and Joshua tree habitats, but also found in other desert habitats. Tortoises are herbivores, preferring forbs over grasses and green vegetation over dry. Desert tortoises excavate burrows and nests in friable, sandy, well-drained soil under bushes, rock formations, or open areas to protect from cold in the northern ranges and from the heat in the southern ranges.

Discussion and Recommendation

This species is known to occur throughout this region and was under emergency listing as an “endangered species” and has now been given permanent classification as a “threatened species” by the U.S. Fish and Wildlife Service (USF&WS) and the CDFW. This species inhabits a variety of vegetative communities, which in the west Mojave contain Creosote Scrub, Mojave Scrub (Allscale, Hopsage and Big Galleta and Indian Ricegrass), among other vegetative communities. Communities of significant concern, such as creosote bush, saltbush, Joshua tree, Mojave yucca and cacti, are often present in the habitat along with other grasses and wildflowers. Those areas used by the tortoise are as varied as the west Mojave landscape and include such areas as level flats, fans, and mountainous slopes, rolling hills, sand dunes and lava flows (USFWS, 1994). The Bureau of Land Management (BLM) maps have designated the desert into four class zones (1, 2, 3 and 0) depending on the probability of encountering Tortoises. Class 1 Zones are designated the highest probability of encountering Tortoises. Class 0 Zones are considered outside of the normal and historical range. These maps are not based on extensive population studies and are no longer utilized for planning purposes. Conclusions of this report represent the results of a Site assessment from a field survey to determine the biological baseline.

The Tortoise is the largest reptile in the arid southwest United States and historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinaloa, Mexico. Today, populations are largely fragmented, and studies indicate a steady and dramatic decline over most of its former range. Additionally, because Tortoises have long been prized as pets, collecting of wild Tortoises further reduced the population. Wildlife biologists estimate five to eight million Tortoises were taken from the desert by collectors between 1880 and 1970. In the early 1990’s, an extended drought and a highly contagious respiratory disease infected Tortoise populations, primarily in the western Mojave Desert region. This disease has had an adverse impact on Tortoise populations throughout the Mojave Desert reducing Tortoise populations by 90% in localized areas.

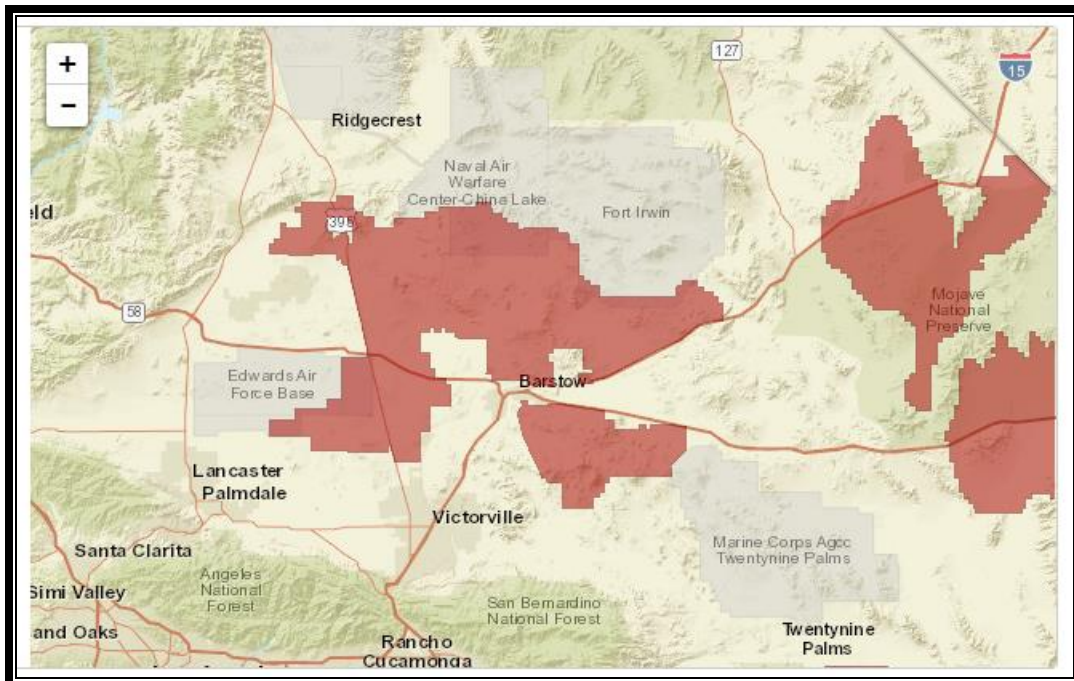
⁴ <http://www.victorvilleca.gov/uploadedFiles/CityDepartments/Development/GeneralPlan.pdf> and https://www.blm.gov/ca/pdfs/cdd_pdfs/wemo_pdfs/plan/wemo/Vol-1-Chapter3_Bookmarks.pdf

⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2659&inline=1>

FIGURE 6A – DESERT TORTOISE FEDERALLY IDENTIFIED RANGE⁶



FIGURE 6B – DESERT TORTOISE FEDERALLY IDENTIFIED CRITICAL HABITAT⁷



⁶ <http://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=C04L#crithab>

⁷ <http://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=C04L#crithab>

Desert tortoise *Gopherus agassizii***DURING WINTER MONTHS**

It should be noted that live Tortoises or tracks are seldom seen between mid-November and March, as temperatures force them to remain deep in their dens. However, we have seen Tortoises during this time of year (first week of February 2000/02/05 and temperature at mid-80°F) when the weather is extremely warm. Also, I have observed small reptiles and the budding of trees during the preparation of Biological and Protected Plant Reports in the winter/spring of 2000/02/04/05. Winter winds, frost, ice, snow and rain usually obliterate tracks and fresh signs of excavation. Potential active dens or burrows are noted and plotted for future review.

The site is located within the range but not the critical habitat of the Desert Tortoise according to the US Fish and Wildlife Service (USFWS) as shown on the following.

No Tortoises or active/potentially active burrows were encountered on the site or in the surrounding area (Table 1, Appendix A) during the field survey and no other signs (e.g. shells, bones, scutes, limbs, burrows, pallets, scats, egg shell fragments, tracks, courtship rings, drinking sites.) were found, which would indicate habitat or utilization of the Site.

Tortoise populations levels are relatively low in the area; however, occupied habitat does exist in the general area however are at higher densities to the north of Adelanto [specifically seen three tortoises hit by automobiles along Highway 395 going to Ridgecrest to the Mojave Ground Squirrel Workshop in April 2005 and numerous tortoises in the 1965 to mid-1980's] (NDDB2003).

Based on the lack of critical habitat, burrows, or other desert tortoise sign observed on site or in proximity, and no sightings of desert tortoise, long-term adjacent high impact uses, no additional surveys are required.

However, the following mitigation measure shall be included with environmental documents and project approvals:

1. If desert tortoises are observed on the Site in the future, all construction activities shall cease immediately and ALTEC Land Planning shall be contacted immediately (ALTEC will contact USFWS and/or CDFW to discuss potential mitigation measures, if necessary).

CONCLUSION: No Desert Tortoises or active/potentially active burrows were encountered on the Site during the field survey. Additionally, no other sign (e.g. scats, tracks, shell fragments) of Tortoises were found which would indicate habitat or other utilization of the Site.

If Tortoises are observed on the Site in the future, all activities shall be stopped and USFWS and CDFW contacted to discuss potential mitigation measures

NOTE: Coleman specifically recalls observing numerous Tortoise in this general area (north of Highway 18) in the 1965 until mid-1980's, since that time Tortoises are fairly rare to encounter and no Mojave Ground Squirrels (also an issue at these earlier times.) being observed in the general area. Also, Coleman has completed a variety of consulting services (Environmental, HazMat, Civil Engineering, Surveying and Real Estate Brokerage and Appraisals) for numerous parcels within the general area during the last 40+ years. Burrowing Owls have been observed in the general area but due to the high disturbance of the general site, historical cement dust on the topsoils, historical and active use of the site, generally unhealthy native vegetation and low resources availability, burrowing owls are not using the Site and have a low probability of use in the foreseeable future.

Western Pond Turtle *Clemmys marmorata*⁸

Federal Status – Federal Species of Concern (FSC); State Status – Species of Special Concern

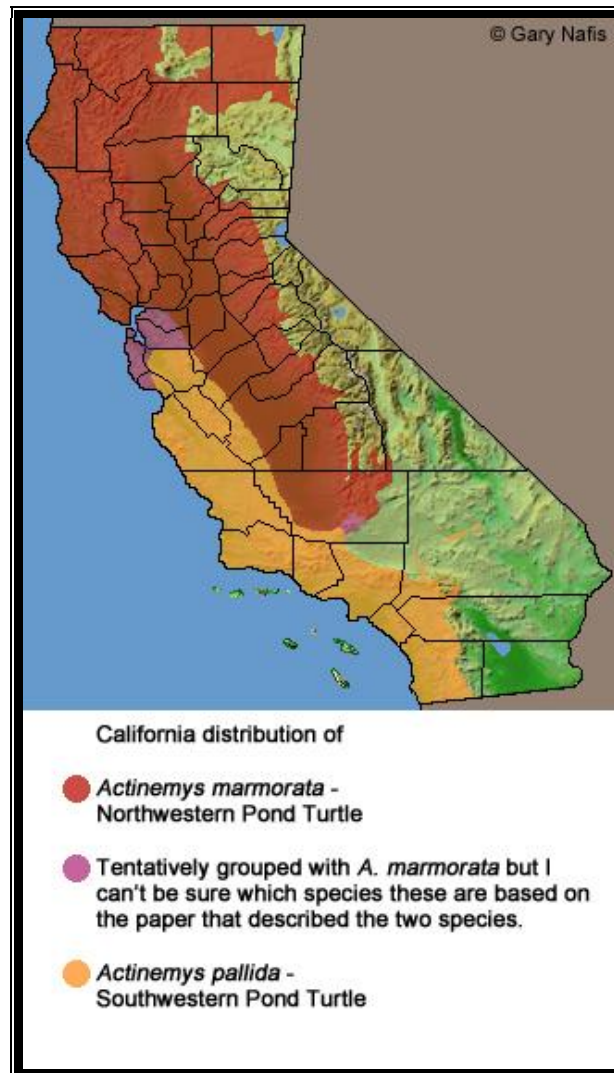
Distribution – uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries.

Habitat – Permanent or nearly permanent water in a wide variety of habitats.

NOTE: Personally, observed Western Pond Turtles and Beavers in the 1970/80s along the riparian corridor from the Upper to Lower Narrows and Beaver still near the lower Narrows at this time. Helendale and Afton Canyon area have year-round surface waters and provide critical habitat).

Discussion and Recommendation

The site is not located in proximity to the Mojave River riparian corridor or any other water bodies; Therefore, no site surveys were conducted for this species.



⁸ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2657&inline=1>

Coast Horned Lizard *Phrynosoma coronatum*

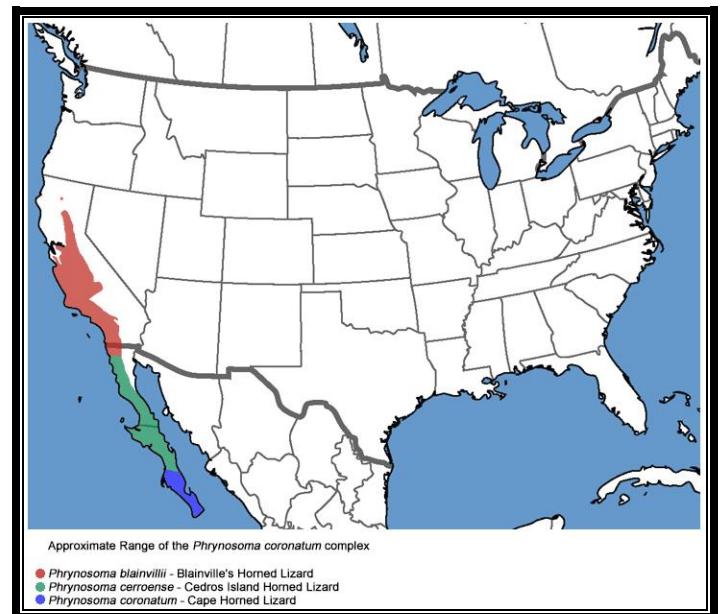
Federal Status – Federal Species of Concern (FSC); State Status – Species of Special Concern

Distribution – Historically found in California along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California. Ranges up onto the Kern Plateau east of the crest of the Sierra Nevada. The range has now been severely fragmented due to land alteration

Habitat – open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills.

Discussion and Recommendation

The CDFW and USFW websites do not identify a Coast Horned Lizard, and CaliforniaHerp.com identifies it as a Blainville's Horned Lizard. However, the scientific name for the Blainville's Horned Lizard is *Phrynosoma blainvillii*, but identifies *Phrynosoma coronatum* as the Cape Horned Lizard. In either case, the site is not located in the range of either species.



California glossy snake *Arizona elegans occidentalis*⁹

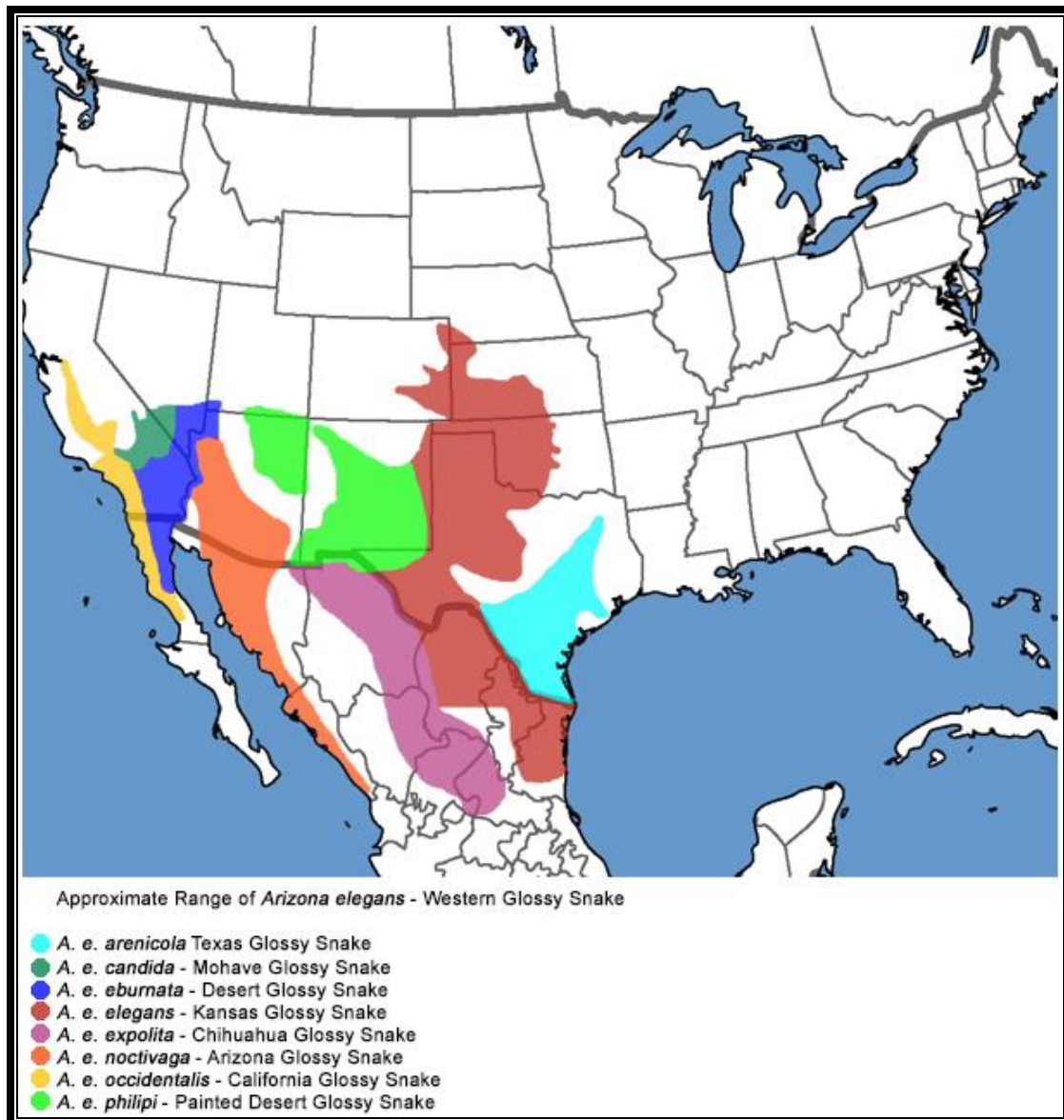
Federal Status - None; State Status – Species of Special Concern

Distribution – Occurs from the eastern part of the San Francisco Bay Area south to northwestern Baja California. Absent along the central coast.

Habitat – Inhabits arid scrub, rocky washes, grasslands, and chaparral.

Discussion and Recommendation

This site is within and has been found in this specific area by Coleman since the mid-1960's. The habitat is identified by CaliforniaHerps.com.



⁹ <http://www.californiaherps.com/snakes/pages/a.e.occidentalis.html>

Coastal whiptail *Aspidoscelis tigris stejnegeri*¹⁰

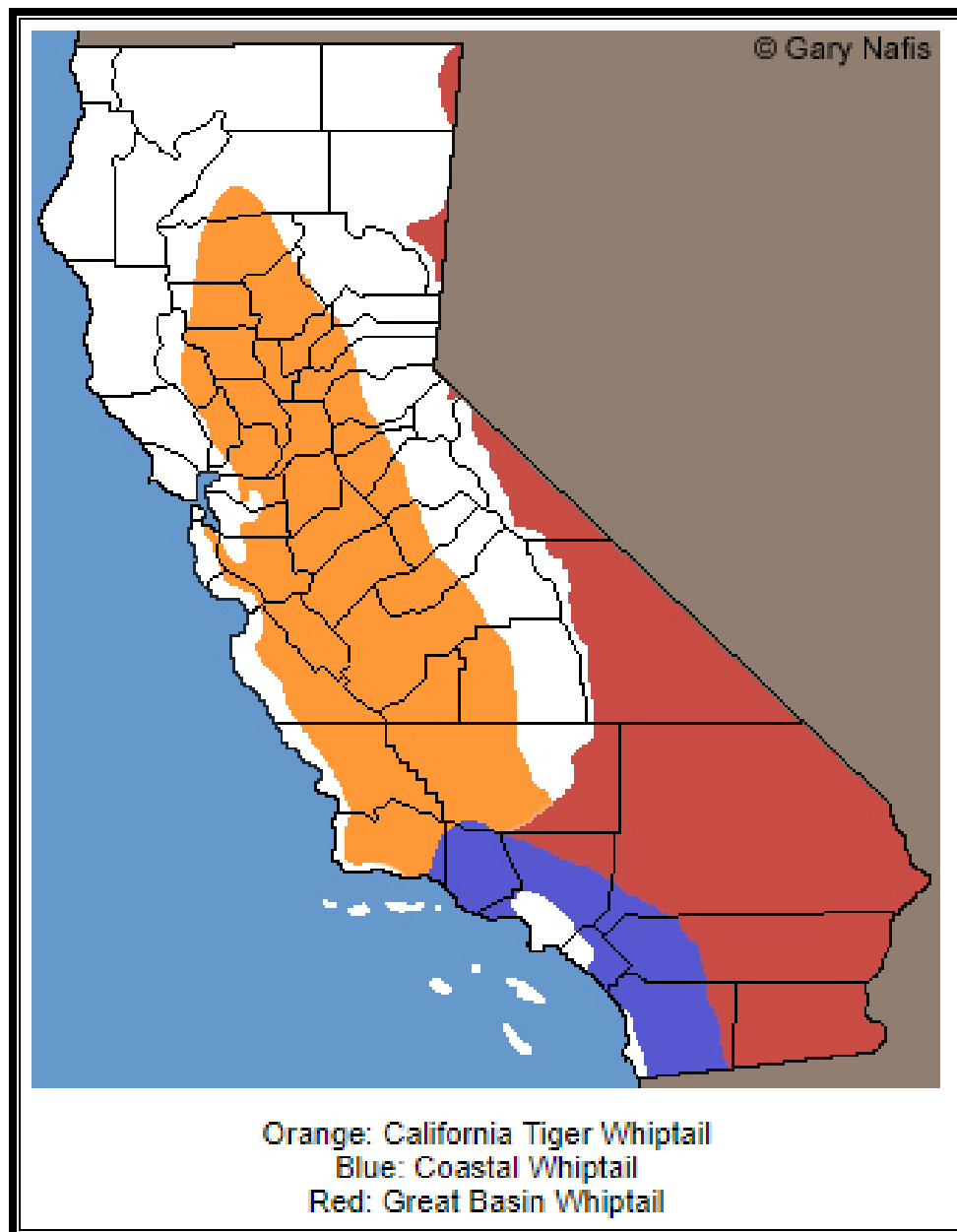
Federal Status - None; State Status – Species of Special Concern

Distribution – mostly west of the Peninsular Ranges and south of the Transverse Ranges, and north into Ventura County. Ranges south into Baja California.

Habitat – Typically found in hot, dry, flat open spaces in deserts or semi-arid areas.

Discussion and Recommendation

The Coastal Whiptail is also known as the San Diego Tiger Whiptail. The site is not located within the range of the San Diego Tiger Whiptail according to CaliforniaHerps.com (blue color).



¹⁰ <http://www.californiaherps.com/lizards/pages/a.t.stejnegeri.html>

Orange-throated whiptail *Aspidoscelis hyperythra*¹¹

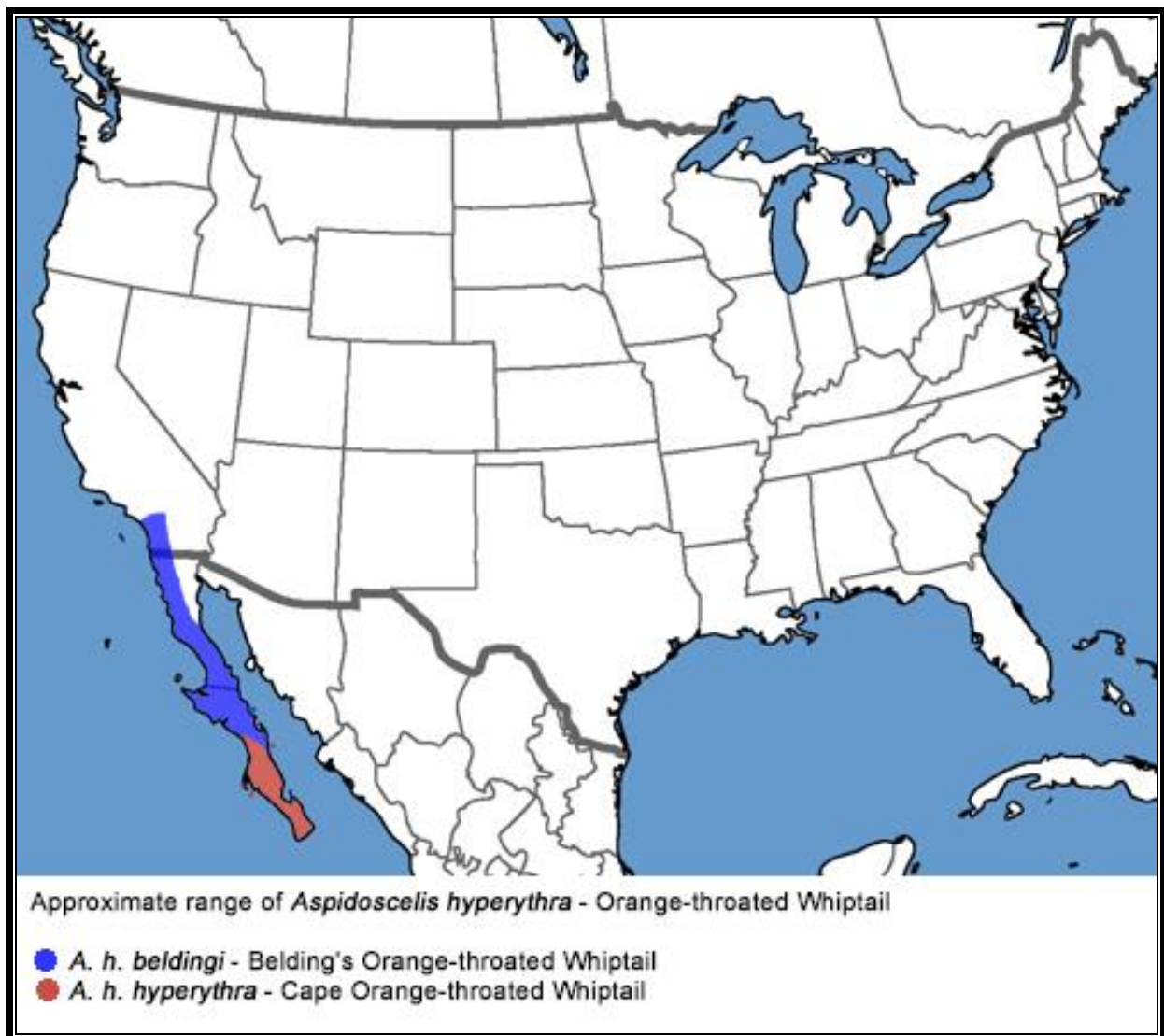
Federal Status - None; State Status – Watch List

Distribution – Uncommon to fairly common over much of its range in Orange, Riverside, and San Diego counties, west of the crest of the Peninsular Ranges, especially in areas with summer morning fog. Also occurs in southwestern San Bernardino County, near Colton.

Habitat – Prefers washes and other sandy areas with patches of brush and rocks.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino County but is approximately 40 miles north of Colton, which is not within the range of the Orange-Throated Whiptail. Therefore, no site surveys were conducted for this species.



¹¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2723&inline=1>

Red-diamond rattlesnake *Crotalus ruber*¹²

Federal Status - None; State Status – Species of Special Concern

Distribution – Coastal San Diego County to the eastern slopes of the mountains and north through western Riverside County into southernmost San Bernardino County.

Habitat – occurs in a wide variety of arid and semiarid habitats that provide dense vegetation or rocky cover.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and is not within the range of the Red-diamond rattlesnake. Therefore, no site surveys were conducted for this species and has never been observed by Coleman since the mid-1960s in the Victor Valley. Have been observed numerous times in Riverside County/Coachella Valley areas.



¹² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2797&inline=1>

MAMMALS

Mojave Ground Squirrel *Spemophilus mohavenses*¹³

Federal Status – Federal Species of Concern (FSC); State Status – Threatened

Distribution – Restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo counties. This species is rare throughout its range.

Habitat – Optimal habitats are open desert scrub, alkali desert scrub, and Joshua tree. Also feeds in annual grasslands. Prefers sandy to gravelly soils; avoids rocky areas.

Discussion and Recommendation

This species is known to have historically occupied areas in the northwest Victor Valley region; although, information from about 50± MGS Trappings started in 2003 has yielded little information in the local region. The MGS is listed by the CDFW as a threatened species, thereby giving the animal protection under the CESA. The species is known to occur in the western Mojave Desert in portions of four counties including Inyo, Kern, San Bernardino, and Los Angeles.

Typically, the mainly solitary MGS aestivates and hibernates when the weather is at the extremes and when food is scarce. The distribution is quite limited as compared to the other ground squirrel species [White-tailed Antelope Squirrel [WTAS] (*Ammospermophilus leucurus*) and Round-tailed Ground Squirrel [RTGS] (*Spermophilus tereticaudus*)]. The Round-tailed Squirrel and the Mojave Ground Squirrel are similar in appearance but wholly unrelated *Citellus*.

The MGS is found in several habitat types throughout the Mojave Desert including creosote bush scrub, saltbush scrub, and Joshua tree woodland communities. Long-term drought conditions, habitat fragmentation and degradation, destruction of the species' habitat and isolation of individual populations appear to be the primary factors in the species' decline. [The closest long-term sightings of MGS are at T6North, R5West, Section#11, just north of the Southern California Logistics Airport. The most recent sighting of an MGS was trapped in 2004 by CalTrans at Colusa and Highway 395 (T6North, R5West, Section#8; as reported by Becky Jones on 09-17-04).] [Coleman has observed MGS, to the north of Adelanto and Helendale area, both northerly in the 1970's and 1980's and near Ridgecrest area.]

Two important plants critical to the Mohave Ground Squirrels are winterfat and spiny hop-sage. These two plants were rarely observed in the general area and are significant food sources for the species and are associated with preferred habitat (critical) for this species long term survival due to drought conditions. Based on the lack of significant presence of winterfat and spiny hop-sage, and the existing conditions of the site, the site does not support critical habitat for the species. In addition, the site is at the southern edge of the known historical "Geographical Range", see following pages for information regarding the "Petition to List" in 2005.

There have been numerous MGS trappings completed in this area since 2003 when the first MGS Trapping was completed on a Site ALTEC completed a Biological Baseline Assessment to the north along Mojave Drive and no MGS were located and this specific site is further away from the historical core habitat of the MGS. If the species is observed on the site in the future, various mitigations will need to be implemented as per CDFW guidelines and these are provided in the following section.

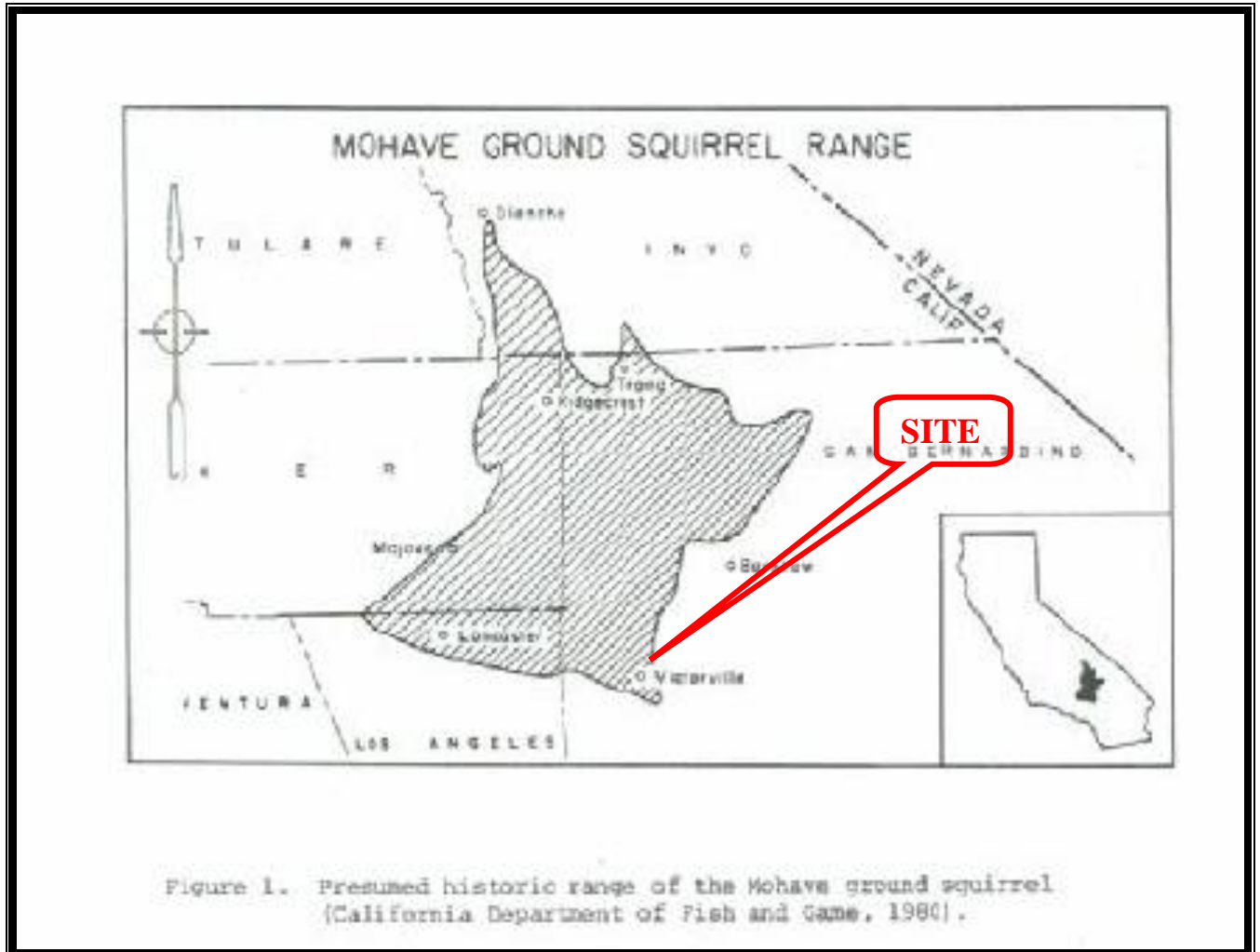
During the survey, any visual signs of Mohave Ground Squirrels (*Spermophilus mohavensis*) (MGS) activity are noted. This includes noting of any live specimens, tracks, fecal droppings (scats), remains or any aspect or suspected burrows. An evaluation is also made on each burrow, if found, to determine if active or inactive.

¹³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2419&inline=1>

PRESUMED HISTORIC RANGE OF THE MOHAVE GROUND SQUIRREL

N.T.S.

(Source: Petition to List the Mohave Ground Squirrel, September 12, 2005)




CURRENT MOHAVE GROUND SQUIRREL STATUS MAP

Figure 5. Current Mohave Ground Squirrel Status.

Status coverages from Leitner (2005b). Please note that the colored areas on Figure 5 are meant to be approximate and do not represent hard boundaries or even necessarily proportional areas inhabited by Mohave ground squirrels.


Legend


 Department of Defense

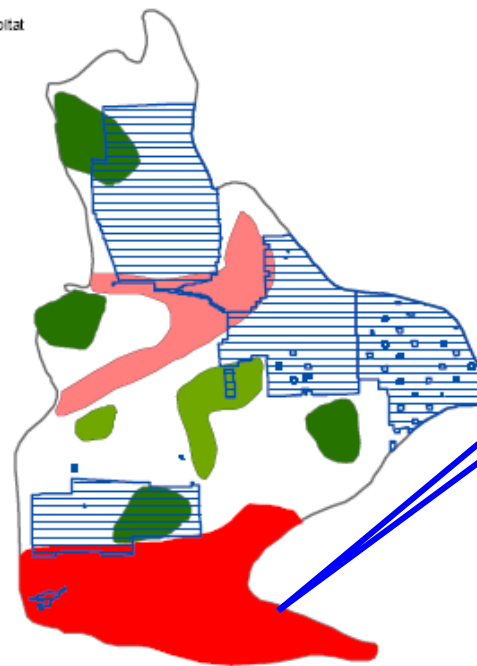
 Core area

 Virtually absent

 Possible barriers/Unsuitable habitat

 Present, low density

 MGS 2005 Range



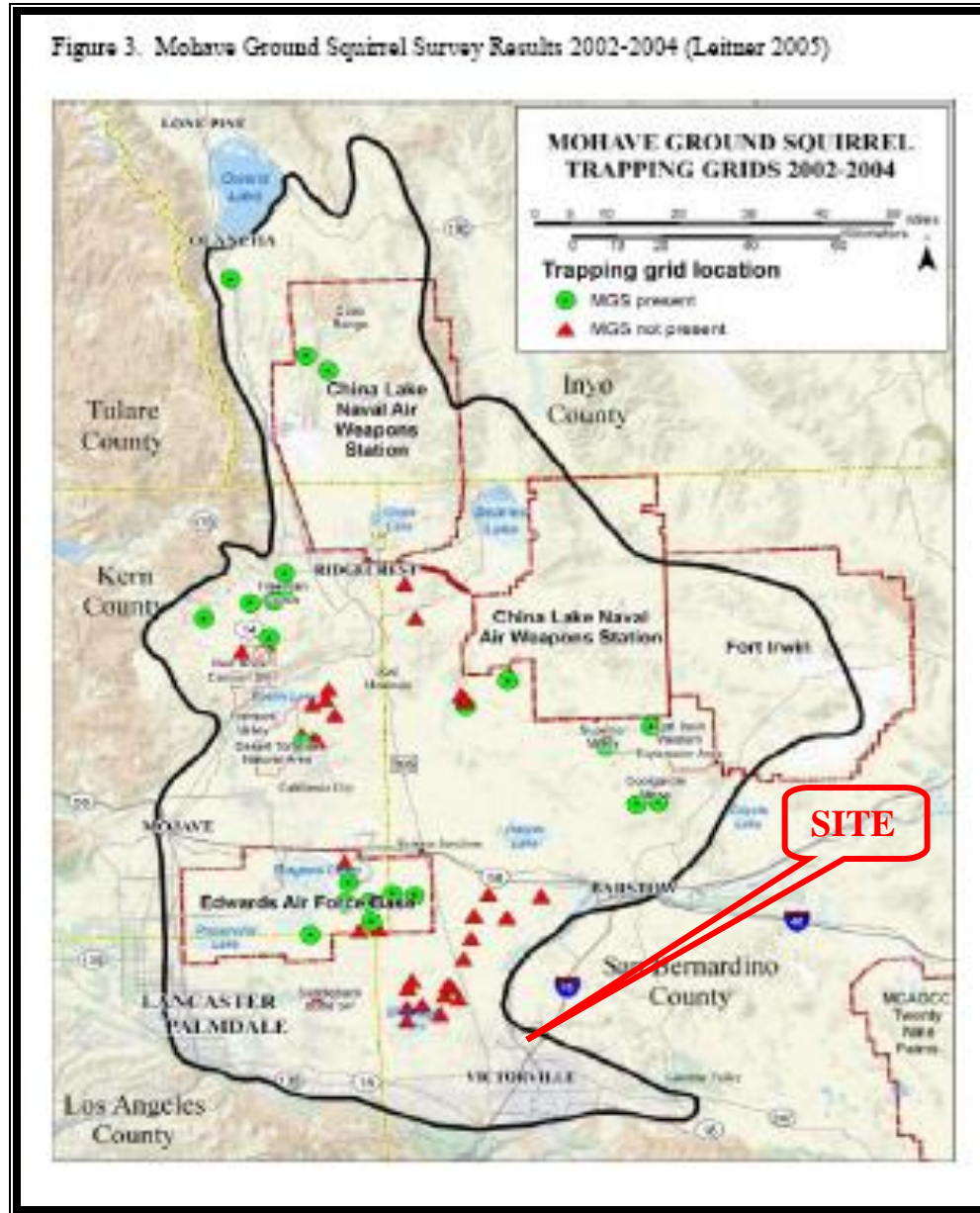
0 23,000 46,000 92,000 Meters



MOHAVE GROUND SQUIRREL SURVEY RESULTS 2002-2004

N.T.S.

(Source: Petition to List the Mohave Ground Squirrel, September 12, 2005)



CONCLUSION: No Mohave Ground Squirrels or active/potentially active burrows were found on the Site during the field surveys. Additionally, no other sign of MGS was found, which would indicate habitat or other utilization of the Site. If MGS are observed on the Site in the future, all activities shall be stopped and ALTEC Land Planning shall be contacted to consult with USFWS and CDFW to discuss potential mitigation measures

Mojave River Vole *Microtus californicus mohavensis*¹⁴

Federal Status - Federal Species of Concern (FSC); State Status – Species of Special Concern

Distribution – Occupies moist habitats along the Mojave River.

Habitat – Found in moist habitats including meadows, freshwater marshes and irrigated pastures in the vicinity of the Mojave River. Suitable habitat is associated with ponds and irrigation canals along with the Mojave River proper.

Discussion and Recommendation

The site is not located in proximity to the Mojave River riparian corridor or any other water bodies; Therefore, no site surveys were conducted for this species.

Pallid Bat *Antrozous pallidus*¹⁵

Federal Status - Federal Species of Concern (FSC); State Status – Species of Special Concern

Distribution – A locally common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County.

Habitat – A wide variety of habitats is occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. A yearlong resident in most of the range. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

California leaf-nosed bat *Macrotus californicus*¹⁶

Federal Status - None; State Status – Species of Special Concern

Distribution – Found from Riverside, Imperial, San Diego, and San Bernardino counties south to the Mexican border and portions of southern Nevada and Arizona. Former populations have disappeared from coastal basins, from Los Angeles to San Diego. Desert populations have declined, but this species is fairly common in some areas along the Colorado River.

Habitat – Habitats occupied include desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. Roosts in rocky, rugged terrain with mines and caves.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

Dulzura pocket mouse *Chaetodipus californicus femoralis*

Federal Status - None; State Status – Species of Special Concern

Distribution –

Habitat – None specifically found

¹⁴ https://www.blm.gov/ca/pdfs/cdd_pdfs/mvole1.PDF

¹⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2349&inline=1>

¹⁶ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2311&inline=1>

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not within San Diego County and northern Baja California which are the typical locations where this species has been regularly observed and reported; Therefore, no site surveys were conducted for this species.

Pocketed free-tailed bat *Nyctinomops femorosaccus*¹⁷

Federal Status - None; State Status – Species of Special Concern

Distribution – Found in Riverside, San Diego, and Imperial counties. This species is rare in California, but is more common in Mexico

Habitat –Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Prefers rocky desert areas with high cliffs or rock outcrops.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

Western yellow bat *Lasiurus xanthinus*¹⁸

Federal Status - None; State Status – Species of Special Concern

Distribution –Uncommon in California, known only in Los Angeles and San Bernardino counties south to the Mexican border.

Habitat –Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Occurs year-round in California. Roosts and feeds in, and near, palm oases and riparian habitats.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

Southern grasshopper mouse *Onychomys torridus ramona*¹⁹

Federal Status - None; State Status – Species of Special Concern

Distribution – Common in arid desert habitats of the Mojave Desert and southern Central Valley of California.

Habitat –Alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and Coleman lived relatively nearby this Site (1964-1971 and road motorcycles on this site in 1972-73) and has worked on numerous residential subdivisions (large projects to the southwest on 440 acres) and commercial projects nearby since 1973 and biological baseline assessments and survey protocol surveys for Tortoises and Burrowing Owls starting with the listing of Tortoises in 1989 and during night-time driving on nearby dirt roads since 1975 and do not recall seeing this specific species in this general area; Therefore, no site surveys were conducted for this species.

¹⁷ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2353&inline=1>

¹⁸ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2343&inline=1>

¹⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2513&inline=1>

Townsend's big-eared bat *Corynorhinus townsendii*²⁰

Federal Status - None; State Status – Species of Special Concern

Distribution – Found throughout California, but the details of its distribution are not well known.

Habitat – Found in all but subalpine and alpine habitats and may be found at any season throughout its range. It is most abundant in mesic habitats (moderate or well-balanced supply of moisture).

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

Western mastiff bat *Eumops perotis californicus*²¹

Federal Status - None; State Status – Species of Special Concern

Distribution – Uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey Co. southward through southern California, from the coast eastward to the Colorado Desert.

Habitat – Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, tall buildings, trees, and tunnels are required for roosting.

Discussion and Recommendation

The site is located in the southwestern portion of San Bernardino and not in a riparian area or have rocky outcroppings which are the typical locations where bats have been regularly observed in the Victor Valley area since the 1960's; Therefore, no site surveys were conducted for this species.

BIRDS**American peregrine falcon *Falco peregrinus anatum*²²**

Federal Status - Delisted; State Status – Fully Protect (FP)

Distribution – Peregrines can be seen all over North America, but they are more common along coasts.

Habitat – In North America they breed in open landscapes with cliffs (or skyscrapers) for nest sites. They can be found nesting at elevations up to about 12,000 feet, as well as along rivers and coastlines or in cities, where the local Rock Pigeon populations offer a reliable food supply. In migration and winter, you can find Peregrine Falcons in nearly any open habitat, but with a greater likelihood along barrier islands, mudflats, coastlines, lake edges, and mountain chains.

Discussion and Recommendations

No mitigation is recommended as it is unlikely American Peregrine falcons will be found nesting on or near the site due to the lack of appropriate habitat. During the survey, any visual signs of activity are noted, and this includes noting of any live/dead American peregrine falcons or other bird species or nesting locations.

No American peregrine falcons or their nests or appropriate habitat were observed on the Site or within the (500- foot zone) boundaries of the habitat. The surrounding area contains no cliffs or skyscrapers for nesting, and no rivers or coastlines are located near the site.

²⁰ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2347&inline=1>

²¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2357&inline=1>

²² https://www.allaboutbirds.org/guide/Peregrine_Falcon/id

Arizona bell's vireo *Vireo bellii arizonae*²³

Federal Status – none; State Status – Endangered

Distribution – A rare summer resident along the Colorado River from Needles, San Bernardino County, south to Blythe, Riverside County.

Habitat – Inhabits low, dense riparian growth along water or along dry parts of intermittent streams. Typically associated with willow, cottonwood, baccharis, wild blackberry, or mesquite in desert localities.

Discussion and Recommendation

The site does not contain nor is it located near dense riparian growth along water or intermittent streams. Therefore, no surveys were conducted for Arizona bell's vireo.

Bald Eagle *Haliaeetus leucocephalus*²⁴

Federal Status – Threatened; State Status – Endangered

Distribution – Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties. About half of the wintering population is in the Klamath Basin. More common at lower elevations; not found in the high Sierra Nevada. Fairly common as a local winter migrant at a few favored inland waters in southern California. Largest numbers occur at Big Bear Lake, Cachuma Lake, Lake Mathews, Nacimiento Reservoir, San Antonio Reservoir, and along the Colorado River.

Habitat – Requires large, old-growth trees or snags in remote, mixed stands near water.

Discussion and Recommendations

No Bald Eagles or their nests or appropriate habitat were observed on the Site or within the (500-foot zone) boundaries of the habitat. The surrounding area contains old-growth trees or snags in remote mixed stands near water.

The site does not contain nor is it located near old-growth trees or snags in remote mixed stands near water. Therefore, no surveys were conducted for Bald Eagles. It should be noted that Bald Eagles have been seen in the High Desert area when there are forest fires in the Big Bear Lake area. Once the fires are extinguished, Bald Eagles are no longer seen in the High Desert.

Bell's sage sparrow *Artemisiospiza belli belli*

Federal Status – None; State Status – Watch List

Distribution – Not migratory in many areas, but mostly withdraws from higher elevations and northern Great Basin in winter and moves to southern deserts. Frequents low, fairly dense stands of shrubs. In transmontane California, occupies sagebrush, alkali desert scrub, desert scrub, and similar habitats. Most common from western edge of Owens Valley, Inyo County, south through southern Sierra Nevada and western edge of Mojave Desert to desert slopes of Transverse Ranges.

Habitat – Shrubby areas of California and Baja California, including coastal sagebrush and chaparral, as well as the Mojave Desert and California's San Clemente Island. Many are year-round residents, but some migrate to southern California and western Arizona for winter, where they mix with the very similar Sagebrush Sparrow and other species in open, dry habitats.

²³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2091&inline=1>

²⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1661&inline=1>

Discussion and Recommendations

The site is located in the western portion of the Mojave Desert and contains numerous shrubs appropriate for Bell's sage sparrows. During the survey, any visual or audible signs or activity are noted. This includes any bird species, whitewash (scats) excrement on perching locations, feathers or nesting locations. An evaluation is also made on each nest, if found, to determine if the nest is active or inactive.

No Bell's sage sparrows or nests were observed on the Site or within the (500-foot zone) boundaries of the habitat.

No Bell's sage sparrows or their nests were located during the site surveys; however, the site and vicinity contain habitat potentially suitable for them and other nesting birds. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Bendire's Thrasher *Toxostoma Bendirei*²⁵

Federal Status – none; State Status – Species of Special Concern

Distribution – A local spring and summer resident and breeder in flat areas of desert succulent shrub and Joshua tree habitats in the Mojave Desert. Occurs primarily in San Bernardino and western Kern counties.

Habitat – forages on the flat desert floor with clumps of cactus, yucca and thorny scrub. Feeds on caterpillars, beetles and other insects. Seeks cover in stands of thorny shrubs and cactus. Nests in cholla, yucca, paloverde, thorny shrub or small trees.

Discussion and Recommendations

While the site is relatively flat, a survey found no appropriate habitat (desert succulent shrub, Joshua tree habitat, no clumps of cactus or thorny shrubs). for the Bendire's Thrasher, and no evidence of nesting. However, there is some potentially suitable habitat (on- and off-site vegetation and structures) for other nesting birds.

No Bendire's Thrashers or their nests were located during the site surveys; however, the site and vicinity contain habitat potentially suitable for other nesting birds. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Black-tailed gnatcatcher *Poliophtila melanura*²⁶

Federal Status - None; State Status – Watch List -

Distribution – A fairly common resident below about 300 m (1,000 ft) in desert wash habitat from Palm Springs and Joshua Tree National Monument south, and common along the Colorado River. Now rare in eastern Mojave

²⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2071&inline=1>

²⁶ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2049&inline=1>

Desert north to the Amargosa River, Inyo County.

Habitat – Most numerous in desert wash habitat with dense mesquite, paloverde, ironwood, acacia. Absent from areas where introduced saltcedar or other exotic vegetation dominates.

Discussion and Recommendations

The site is in the southwestern portion of San Bernardino County, and does not contain a desert wash, or dense mesquite, paloverde, ironwood or acacia. NOTED: Regularly observed at the Apple Valley Golf Course.

No Black-Tailed Gnatcatcher's or their nests were located during the site surveys; however, the site and vicinity contain habitat potentially suitable for other nesting birds. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Brown-crested Flycatcher *Myiarchus tyrannulus*²⁷

Federal Status – None; State Status – Watch List

Distribution – A fairly common summer resident (May to July) in desert riparian habitat along the Colorado River. A few nests at Morongo Valley, San Bernardino County. May nest very locally at other desert oases and riparian habitats northwest to Mojave River near Victorville, San Bernardino County.

Habitat – Most numerous in riparian groves of cottonwood, mesquite, willow, which afford suitable nest sites, but often forages in adjacent desert scrub or plantings of saltcedar.

Discussion and Recommendations

The site contains no desert riparian habitat or desert oasis and is not located along the Colorado or Mojave Rivers.

No Brown-Crested Flycatchers, appropriate habitat or nests were located during the site surveys. The following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

²⁷ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1963&inline=1>

Burrowing Owl *Athene cunicularia*²⁸

Federal Status – none; State Status – Species of Special Concern

Distribution – yearlong resident in open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats.

Habitat – feed on small insects, small mammals, reptiles, birds and carrion. Use rodent or other burrows for roosting and nesting when burrows are scarce (pipes, culverts, nest boxes, and other protected “burrows”).

Discussion and Recommendations

During the survey, any visual signs of activity are noted. This includes noting of any live/dead owls or other bird species, whitewash (scats) excrement on perching locations, rodent bones, feathers or remains of scattered bones or fragments and any aspect or suspected Burrowing Owl burrows or nesting locations. An evaluation is also made on each burrow or group of burrows or nesting site, if found, to determine if the nesting site(s) is active or inactive. The burrow(s) or nest(s) will be considered as active unless the structure has collapsed or is blocked due to natural causes. Existing Site conditions are highly disturbed desert sandy soil and easy to create extensive burrow systems however the density and the height of the vegetation are not common for Burrowing Owls. Numerous natural and manmade impacts as previously described, further negatively impact the soils and Site.

No Burrowing Owls (*Athene cunicularia*), other Raptors or active/potentially active burrows or nests were encountered during the field survey, and no other signs (e.g. shells, bones, or burrows, tracks,) were found, which would indicate no habitat or utilization of the site. In addition, no pipes, culverts, nest boxes or other protected “burrows” were located on site, and no rodent or small animal burrows were located. A berm is located along portions of the Site near I-40 and the adjacent development. A thorough pedestrian review was completed along all berms on the Site and within the 500-foot Buffer area, in addition to transects of the site, and no evidence of present or past use of Burrowing Owls were found. It is noted that the loose nature of the alluvial soils at the Site and general area are not generally suitable for burrows due to collapse, although small animal burrows may be more stable and used. However, there is some potentially suitable habitat (on- and off-site vegetation and structures) for nesting birds.

No Burrowing Owls or other sign were located during the site surveys; however, the site and vicinity contain potentially suitable habitat. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for Burrowing Owls shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

The Burrowing Owl is a California Species of Special Concern (CSSC), thereby giving the animal protection under the CESA and is protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). This Owl is found in western North America from Canada to Mexico, and east to Texas and Louisiana. In areas of its range, it is migratory; the northern areas of the Great Plains and Great Basin. Although the owls in northern California are thought to migrate, owls within central and southern California are predominantly non-migratory due to the mild winter season, although, information on current population levels is not well documented for the general region.

Burrowing owls are primarily crepuscular (active at dusk and dawn) but will hunt throughout a 24-hour period. As their name suggests, burrowing owl nest in burrows in the ground, often in old rodent or Badger burrows.

²⁸ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1871&inline=1>

They can dig their own burrows but prefer deserted excavations of other animals. I have observed owls using burrows (typically squirrels in the Victor Valley) of tortoises, kit fox, coyote/dog holes, Joshua Trees trunks, and broken concrete and asphalt, concrete slabs and other construction or mining debris/materials.

This is a small ground-dwelling owl with a round head that lacks the tufts of feathers, which are often referred to as ear tufts. It has white eyebrows, yellow eyes, long stilt-like legs and a stubby tail. The owl is sandy colored on the head, back, and upper parts of the wings and white-to-cream with barring on the breast and belly. Unlike most owls, the male is a lighter color and slightly larger than the female. The Owl normal voice can be a rolling *coo-c-o-o* to a *cackle* to alert others when it is alarmed by nearby threats but is normally quite locally.

Burrowing owls are found in open country such as salt brush flats, greasewood woodlands, pinyon-juniper woodlands, dry grasslands, agricultural and range lands, and desert habitats often associated with numerous rodent burrowing animals. They can also inhabit grass and shrub stages of pinyon and ponderosa pine habitats. The owl typically stands upright whether perching commonly on any available high point, including Joshua's, fence posts, construction debris, on top of mounds outside its burrow or just in the middle of dirt roads at night.

The Owl nesting season begins between February and April and may last until the end of August if conditions are favorable. The peak of the nesting season is from April 15 to July 15. The owls often line their nest with an assortment of dry materials and the average number of eggs laid is between seven and nine. Incubation lasts 28 to 30 days and is performed only by the female. While still in the nest, the care of the young is performed by the male. At 14 days of age, the young may be seen roosting at the entrance to the burrow, waiting for the adults and food. The young leave the nest at about 44 days and begin chasing living insects when 49 to 56 days old. They are mostly crepuscular (morning and evening) and are less active in the peak heat of summer days. The Burrowing Owl home range, or geographic area over which the owls habitually wander, has been documented in the range of 0.1 to 4 acres per nesting pair, with greater variations found elsewhere (Thomsen, 1971). Consumption of insects increases during the breeding season (Zeiner, 1990).

Burrowing owls tend to be opportunistic feeders. Large arthropods, mainly beetles and grasshoppers, comprise a substantial portion of their diet. Small mammals, especially mice, voles (Mojave Voles – CSSC), rats, gophers, and infant ground squirrels (MGS, WTAS & RTGS), are also important food items. Other prey animals include reptiles and amphibians, scorpions, young cottontail rabbits, bats, and birds, such as sparrows and horned larks.

Owls have not been documented during earlier Edward AFB surveys (Paiute Ponds area, December 2000 and August 2001 reconnaissance surveys indicate that burrow availability may be limited in areas located west of SR-14 near agricultural lands and owls may occasionally forage and potentially nest in undiscovered burrows. Coleman has historically observed owls and other raptors near the agricultural areas from Lake Los Angeles to the Mojave River since the 1970's during land surveys and new home construction activities.

Prior to the pedestrian field surveys, a review of the most current Burrowing Owl literature was conducted by researching available Internet literature and current local procedures (Cities of Adelanto, Apple Valley, Hesperia and Victorville). Owl surveys were conducted according to the California Burrowing Owl Consortium, Santa Cruz Predatory Bird Research Group Burrowing Owl Survey Protocol (1993). The protocol included 3 phases:

- Habitat Assessment
- Burrow Survey
- Three days of Burrowing Owl surveys

The Habitat Assessment was conducted to determine locations of fossorial mammal burrows with Burrowing Owl evidence. The survey included area within 500 feet of the Site. The surveys were conducted by walking transects spaced at approximate 30-foot (10 meter) intervals on-Site and 100-foot (30 meter) intervals off-Site (excluding developed properties), allowing for 100 percent visual coverage of the ground surface.

No Burrowing Owls or burrows were located during the habitat assessment during the early mornings (1 hour prior to sunrise to 2 hours after sunrise). Additionally, no Burrowing Owls were seen on adjacent or nearby dirt

roads in the evening (dusk plus 2 hours). Therefore, no focused burrow or Burrowing Owl surveys were conducted. However, if burrows or burrowing owls were located during the habitat assessment, these surveys would have been completed. According to protocol, observations are to be made from fixed locations on Site and within binocular range of large concentrations of burrows and known Burrowing Owl locations. Surveys would be conducted to determine the following information:

- If the Burrowing Owls used the on-Site burrows
- How many owls are present
- Nesting activity or sign of young owls' present

PERSONAL OBSERVATIONS (40 YEARS) IN THE VICTOR VALLEY BY RANDY COLEMAN

Burrowing Owl populations are non-migratory in the Victor Valley and have significantly increased in population and area inhabited due to the expansion of excellent food sources (margins of golf courses, large developed lots with yards and/or horses, especially neighborhood parks and schools located along the perimeter of the Victor Valley, manmade burrow alternatives near potential food sources) in historical areas that previously had no Owls, however Juniper Woodland and larger and higher density Creosote scrub areas are not a safe alternative for owls due to the higher density groundcover. While the historical locations along the Mojave River and agricultural corridors remain essentially the same, other areas currently provide suitable food sources and adjacent native habitat for Owls. Three (-3) nesting cycles (observed in 2003-05) for many bird species is now common due to excellent food sources throughout summer from an assortment of manmade conditions in the Victor Valley. Numerous other bird and animal species have also expanded their range from the Mojave River Riparian corridor. Burrowing Owls can be seen at night while driving local dirt roads in areas having the following characteristics: Specifically, near valley perimeter schools and parks, near nuisance water runoff, golf courses, near horse and agricultural areas and nearby native vegetation with lower density groundcover or graded suburban parcels near existing residential subdivisions.

The Burrowing Owls in the Victor Valley will typically fly away from the burrow when threatened or when people are within about 15 to 60 feet from the burrow (other side of a fence, within fenced yards with homes and horses, graded road or brush), except prior to and during the nesting season where they may be easily agitated, they will bob and bow while perching at the burrow. If prior to actual fledglings in the nest, they will fly away from the burrow when people are at a distance of 30+/- feet and will fly away about another 150 feet. If fledglings are in the burrow they will watch and slowly retreat into and defend the burrow when approached at a distance of 60+/- feet.

Coleman has observed Burrowing Owls in the general area since 1965 near Hook Jr. High and Village School near Mojave Drive and Highway 395 due to water and food resource availability near development. Also, Coleman has completed a variety of consulting services (Environmental, HazMat, Civil Engineering, Surveying and Real Estate Brokerage, Arborist services, Wildlife Biologist Assessments and various Real Estate Appraisals) for numerous projects within Southern California Counties and the general area between Highway 18 to the south and Southern California Logistics Airport (George Air Force Base) and City of Adelanto to the west, areas north to Helendale and Barstow and continuing to northerly to Ridgecrest and east to Apple Valley and continuing through the Yucca Valley, 29 Palms, Joshua Tree, Morongo Valley, Coachella Valley Cities and along some portions of the Colorado River during the last 50+ years.

California gull *Larus californicus*²⁹

Federal Status - None; State Status – Watch List

Distribution – common nester at alkali and freshwater lacustrine habitats east of the Sierra Nevada and Cascades, and an abundant visitor to coastal and interior lowlands in nonbreeding season. California's nesting population is scattered across the northeastern plateau region and at Mono Lake.

Habitat – Needs undisturbed, isolated islands for nesting. Feeds on garbage, carrion, earthworms, adult insects, and larvae. It frequents landfill dumps, fields, and pastures. On breeding grounds, young fed larval insects, brine shrimp, young birds, garbage, earthworms, and insects

Discussion and Recommendations

California gulls may be blown into the greater Victor Valley area during winter storms and stay for variable time (weeks to months depending upon storm events). However, they do not reside here on a permanent basis due to the lack of appropriate habitat during the dry summer seasons. Therefore, no surveys were conducted, and no surveys are needed in the future.

Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*³⁰

Federal Status - None; State Status – Species of Special Concern

Distribution – Found in arid parts of westward-draining slopes of southern California; numbers reduced in recent decades. Frequents desert succulent shrub, Joshua tree, and desert wash habitats.

Habitat – Frequents deserts and other arid terrain with thickets, patches, or tracts of larger, branching cacti, stiff-twigged, thorny shrubs, and small trees.

Discussion and Recommendations

The site is located in the southwestern portion of San Bernardino and does not contain westward draining slopes. In addition, the site does not contain desert succulent scrubs, or a desert wash habitat. No Coastal Cactus Wrens, habitat or nests were located during surveys. Therefore, no additional surveys are necessary.

Cooper's Hawk *Accipiter cooperii*³¹

Federal Status - None; State Status – CSC

Distribution – A breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mountains, Owens Valley, and other local areas in southern California. Ranges from sea level to above 9000 ft.

Habitat – Frequents landscapes where wooded areas occur in patches and groves. Often uses patchy woodlands and edges with snags for perching. Dense stands with moderate crown-depths used for nesting

Discussion and Recommendations

The site does not contain nor is it located near old-growth trees or snags in remote mixed stands near water, however the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

²⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1793&inline=1>

³⁰ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2027&inline=1>

³¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1667&inline=1>

Crissal thrasher *Toxostoma crissale*³²

Federal Status – none; State Status – Species of Special Concern

Distribution – Resides in southeastern deserts and is fairly common in the Colorado River Valley. Occupies dense thickets or shrubs or low trees in desert riparian and desert wash habitats. In the Eastern Mojave Desert, it also occurs in dense sagebrush and other shrubs in washes within juniper and pinyon juniper habitats.

Habitat – Forages on the ground, between and under shrubs by digging in friable soil and probing litter. Eats insects, other invertebrates, berries and small fruit, seeds and small lizards. Takes cover in thickets of dense, shrubby vegetation along streams and in washes (i.e., mesquite, screwbean mesquite, ironwood, catclaw acacia, and arrowweed willow). Builds nests in tickets of desert shrubs and low trees.

Discussion and Recommendations

The site does not contain nor is it locate near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Ferruginous Hawk *Buteo Regalis*³³

Federal Status – Federal Species of Concern (FSC); State Status – CSC (Watch List)

Distribution – Uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges. Fairly common winter resident of grasslands and agricultural areas in southwestern California. Casual in northeast in summer. Frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats.

Habitat – Requires large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures for nesting.

Discussion and Recommendations

The site does not contain nor is it locate near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Gila woodpecker *Melanerpes uropygialis*³⁴

Federal Status – none; State Status – endangered.

Distribution – An uncommon to fairly common resident in southern California along the Colorado River, and locally near Brawley, Imperial County. Occurs mostly in desert riparian and desert wash habitats, but also found

³² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2075&inline=1>

³³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1677&inline=1>

³⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1917&inline=1>

in orchard-vineyard and urban habitats, particularly in shade trees and date palm groves. Formerly found in farm and ranch yards throughout the Imperial Valley, but most regularly now near Brawley. Numbers have declined greatly in southern California in recent decades.

Habitat – Mostly in desert riparian and desert wash habitats, but also orchard-vineyard and urban habitats. Cover consists of cottonwoods and other desert riparian trees, shade trees, and date palms.

Discussion and Recommendations

No cottonwoods, other riparian trees, native shade trees or palms were found near or on the site. No Gila Woodpecker or active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The disturbed site has very small and young scattered native desert plants and invasive grasses, bushes and weeds (including small cactus and creosote) which are not part of the desert riparian and desert wash habitats. No cottonwoods, other riparian trees, shade trees or date palms were found near or on the site. While no Gila Woodpeckers or active/potentially active nests were located during the site surveys, the site and vicinity contain habitat potentially suitable for nesting birds. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Golden Eagle *Aquila chrysaetos*³⁵

Federal Status - None; State Status – CSC (FP; Watch List)

Distribution – Uncommon permanent resident and migrant throughout California, except the center of Central Valley. Perhaps more common in southern California than in north. Ranges from sea level up to 11,500 ft.

Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.

Habitat – Rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops.

Discussion and Recommendations

No Golden Eagles were located during site surveys. The site is relatively flat desert and no rocky-foothills, mountains, streams, canyons or cliffs and/or significant rock outcroppings. Golden Eagles can be found foraging and nesting throughout the greater Mojave Desert, mostly in the Rocky Mountains, including those specifically known/located in the northeast Apple Valley area. Additionally, they have been personally observed nesting in Joshua Trees between Baker, Kelso and Cima Dome area within the Joshua Tree Woodland areas. In addition, they may be found foraging along the Mojave River, golf courses, and other areas of the High Desert. However, these areas are not in close proximity to this site. Regardless, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

³⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1681&inline=1>

Gray vireo *Vireo vicinior*³⁶

Federal Status - None; State Status – Species of Special Concern

Distribution – An uncommon, local, summer resident in arid pinyon-juniper, juniper, and chamise-redshank chaparral habitats from 2000-6500 ft in mountains of Southern California. Formerly more widespread, breeding west to Walker Pass, Kern County., in northern and western foothills of the San Gabriel Mts., and at many additional localities in San Bernardino, Riverside and San Diego counties.

Habitat – Breeders frequent arid, shrub-covered slopes with sparse to moderate cover and scattered small trees. In San Diego Co., usually used oaks; elsewhere commonly junipers, pinyon pines, chamise, and chaparral.

Discussion and Recommendations

This site does not have arid pinyon-juniper, juniper, pinyon pines, and chamise-redshank chaparral habitats were found near or on the site. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat however the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Harris' hawk *Parabuteo unicinctus*³⁷

Federal Status - None; State Status – Watch List

Distribution – Historically occurred year-round in the Lower Colorado River Valley from near Needles to the Imperial National Wildlife Refuge, with a small disjunct breeding population at the south end of the Salton Sea (Small 1994, Bednarz 1995). Extirpated in the 1960's. Now is a rare yearlong resident of southern Salton Sea and Imperial valley.

Habitat – Inhabits desert scrub and desert wash habitats with scattered trees for hunting perches and nest structures.

Discussion and Recommendations

This site does not have desert wash habitats with scattered trees for hunting perches and nest structures found near or on the site. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

³⁶ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2093&inline=1>

³⁷ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2249&inline=1>

Le Conte's Thrasher *Toxostoma lecontei*³⁸

Federal Status - None; State Status – Species of Special Concern

Distribution – An uncommon to rare, local resident in southern California deserts from southern Mono County south to the Mexican border, and in western and southern San Joaquin Valley.

Habitat – Open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs

Discussion and Recommendations

LeConte's Thrasher were not observed on the site or within the general area ("Zone of Influence"), and there are no documented sightings of these species (NDDDB 2003).

LeConte's thrasher (*Toxostoma LeContei*) is a federal Species of Concern and California Species of Special Concern. This species is widespread throughout the West Mohave Desert, favoring areas with cacti, Joshua trees and large wide desert washes, especially those with creosote bush (West Mohave Plan, 1999; Ehrlich et al., 1988). This species has been observed by Coleman north of Adelanto in the 1970's and 1980's, preferring wide natural drainage courses with smaller low density Creosote in the Mojave scrub habitat, while the California Thrasher prefers natural or manmade riparian corridors (Mojave River corridor and Apple Valley Country Club). Also, two species occurrences are reported from the Rosamond Hills; surveys at Edwards AFB conducted in 1992 and 1993 confirmed the presence of Le Conte's thrasher in three of sixty wildlife transects (EAFB, 1993a; 1993b). The West Mohave Plan (1999) notes the conservation of large contiguous land areas should be a primary goal for species conservation planning. The absence of Le Conte's thrasher sightings in the project area, while not an indicator of species absence, provides a relative indication of the value of the Site to this species. The ecotonal habitat that occurs at the Site is not considered to meet the habitat requirements for Le Conte's thrasher.

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Least Bell's Vireo *Vireo bellii pusillus*³⁹

Federal Status - Endangered; State Status – Endangered

Distribution – endemic to California and northern Baja California. Now a rare, local, summer resident below about 2000 ft in willows and other low, dense valley foothill riparian habitat and lower portions of canyons mostly in San Benito and Monterey counties.; in coastal southern California from Santa Barbara County south; and along the western edge of the deserts in desert riparian habitat.

Habitat – Low, dense riparian growth along water or along dry parts of intermittent streams. Typically associated with willow, cottonwood, baccharis, wild blackberry, or mesquite in desert localities.

Discussion and Recommendation

The site does not contain and is not near riparian habitat or intermittent streams. Therefore, no surveys are required.

³⁸ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2077&inline=1>

³⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2091&inline=1>

Loggerhead Shrike *Lanius ludovicianus*⁴⁰

Federal Status – Federal Species of Concern (FSC); State Status – Species of Special Concern

Distribution – A common resident and winter visitor in lowlands and foothills throughout California.

Habitat – Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats.

Discussion and Recommendation

The site does not contain the type of habitat required; therefore, no surveys are required.

Loggerhead shrike (*Lanius ludovicianus*) is a California Species of Special Concern. This bird is common year-round throughout California lowlands where resident birds are augmented by winter migrants. The loggerhead shrike prefers open habitats with scattered perches such as fences, posts, utility lines, shrubs, and trees. Two loggerhead shrikes were observed at Edwards AFB in December 2000; their breeding status on the Site and whether or not these birds were migrants is not known. The shadscale scrub vegetation community and abundant fences in the project area would likely provide suitable nesting habitat for loggerhead shrike. East of SR-14, the patchwork of agricultural fields and shadscale scrub habitats are highly suitable for this species.

Long-eared Owl *Asio otus*⁴¹

Federal Status - None; State Status – Species of Special Concern

Distribution – Uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor.

Habitat – Riparian habitat required; also uses live oak thickets and other dense stands of trees.

Discussion and Recommendation

The site does not contain riparian habitat, or live oak thickets or other dense stands of trees. Therefore, no surveys are necessary.

Lucy's warbler *Oreothlypis luciae*⁴²

Federal Status - None; State Status – Species of Special Concern

Distribution – An uncommon to common, summer resident and breeder along the Colorado River, fairly common locally in a few other desert areas, and rare near Salton Sea.

Habitat – Desert wash and desert riparian habitats, especially those dominated by mesquite; also ranges into saltcedar and other thickets. I

Discussion and Recommendation

The site does not contain desert wash or riparian habitat. Therefore, no survey is necessary.

Northern Harrier *Circus cyaneus*⁴³

Federal Status - None; State Status – Species of Special Concern

Distribution – Occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 10,000 ft. Breeds from sea level to 5700 ft in the Central Valley and Sierra Nevada, and up to 3600 ft in northeastern California. Permanent resident of the northeastern plateau and coastal areas; less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat.

⁴⁰ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2087&inline=1>

⁴¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1877&inline=1>

⁴² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2107&inline=1>

⁴³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1663&inline=1>

Habitat – Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas.

Discussion and Recommendation

The site does not contain desert sink or another appropriate habitat. Therefore, no surveys are necessary.

Prairie Falcon *Falco mexicanus*⁴⁴

Federal Status - None; State Status – Species of Special Concern

Distribution – Uncommon permanent resident that ranges from southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada.

Habitat – Uses open annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub. Requires sheltered canyons, cliff ledges, escarpments, and rock outcrops for cover.
areas

Discussion and Recommendation

The site does not contain and not near sheltered canyons, cliff ledges, escarpments or rock outcrops. Therefore, no surveys are necessary.

Sharp-shinned Hawk *Accipiter striatus*⁴⁵

Federal Status - None; State Status – Watch List

Distribution – Fairly common migrant and winter resident throughout California, except in areas with deep snow. Uncommon winter migrant to Channel Islands. Uncommon permanent resident and breeder in mid-elevation habitats.

Habitat – Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter.

Discussion and Recommendation

Suitable riparian habitat was not found to be present on or in the vicinity of the site. No Sharp-shinned hawks or active/potentially active nests were located on site or in the vicinity during transect walks, but there is some potentially suitable habitat (on- and off-site vegetation and structures) for nesting birds.

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Southwestern willow flycatcher *Empidonax traillii extimus*⁴⁶

Federal Status – Endangered; State Status - Endangered

Distribution – Rare and local breeder in the southwestern U.S. and northwestern Mexico. Winters in Central and South America. Below 6,000 feet elevation.

Habitat – Extensive riparian areas of dense cottonwood, willow or tamarisk vegetation. Saturated soils, standing water or nearby streams or pools are a nesting habitat component.

⁴⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1689&inline=1>

⁴⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1665&inline=1>

⁴⁶ <http://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=B094>

Migration – United States during summer; Central America during winter.

Site/Nest Fidelity – Some site fidelity to nest territories.

Discussion and Recommendation

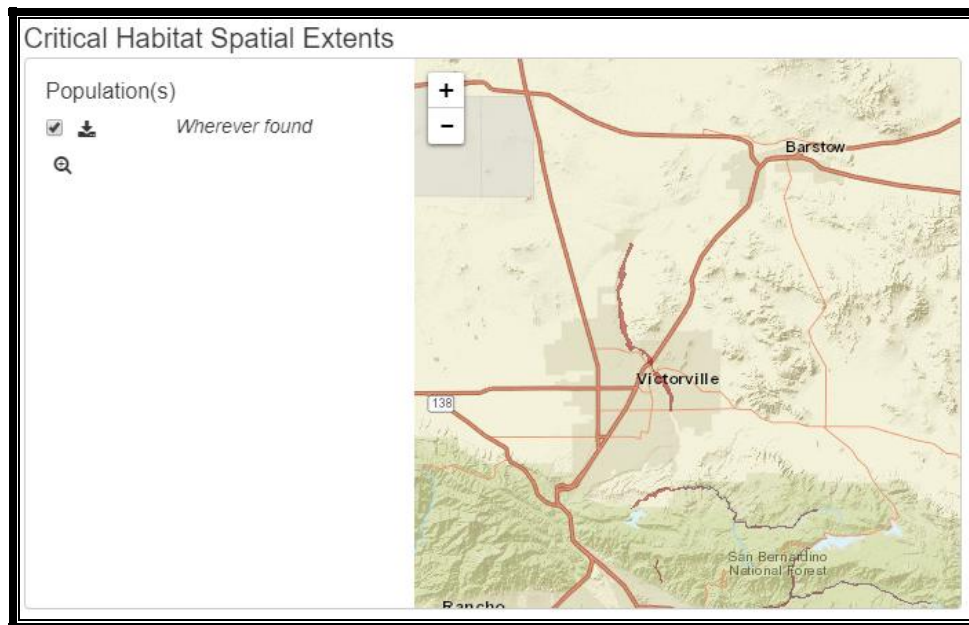
Suitable riparian habitat was not found to be present on or in the vicinity of the site. No Southwestern Willow Flycatchers or active/potentially active nests were located on site or in the vicinity during transect walks, but there is some potentially suitable habitat (on- and off-site vegetation and structures) for nesting birds.

The San Bernardino County Biotic Map indicates this species is located approximately 3 miles east of the site. According to the US Fish and Wildlife Service (USFWS), no critical habitat is identified in the region (see Figure 7 – *Southwest Willow Flycatcher Federally Identified Critical Habitat*).

No Southwestern Willow Flycatchers or suitable habitat were located during the site surveys; however, the site and vicinity contain habitat potentially suitable for nesting birds. Therefore, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to **FEBRUARY 1, 2020**.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

FIGURE 7 – SOUTHWESTERN WILLOW FLYCATCHER FEDERALLY IDENTIFIED CRITICAL HABITAT⁴⁷



NOTE: This is a migratory bird species protected by the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §703-711) and under protection of the CESA.⁴⁸ The CDFW Code §3503, §3503.5 and §3800 prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting be reduced or eliminated during critical phases of the nesting cycle.

⁴⁷ <http://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=B094>

⁴⁸ <https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php>

Summer Tanager *Piranga rubra*⁴⁹

Federal Status - None; State Status – Species of Special Concern

Distribution – An uncommon (formerly common) summer resident and breeder in desert riparian habitat along lower Colorado River; also occurs very locally elsewhere in southern California deserts.

Habitat – Breeds, feeds, and covers in mature, desert riparian habitat dominated by cottonwoods and willows.

Discussion and Recommendation

This site does not have preferred habitat of mature, desert riparian habitat dominated by cottonwoods and willows for breeding and foraging or migration purposes. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Tricolored Blackbird *Agelaius tricolor*⁵⁰

Federal Status – Federal Species of Concern (FSC); State Status – Species of Special Concern

Distribution – Common locally throughout Central Valley and in coastal districts from Sonoma Co. south. In winter, becomes more widespread along central coast and San Francisco Bay area and is found in portions of the Colorado Desert.

Habitat – Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats. Breeds locally in northeastern California.

Discussion and Recommendation

This site does not have preferred habitat of fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats for breeding and foraging or migration purposes. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

⁴⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2127&inline=1>

⁵⁰ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2181&inline=1>

Vermilion flycatcher *Pyrocephalus rubinus*⁵¹

Federal Status - None; State Status – Species of Special Concern

Distribution – A rare, local, yearlong resident along the Colorado River, especially in vicinity of Blythe, Riverside Co.

Habitat – Most numerous where riparian thickets edge on open, mesic habitats. Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches throughout central southern California.

Discussion and Recommendation

This site does not have preferred habitat of where riparian thickets edge on open, mesic habitats. Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches throughout central southern California for breeding and foraging or migration purposes. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Willow Flycatcher *Empidonax traillii*⁵²

Federal Status - None; State Status – Endangered

Distribution – A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats at 2000-8000 ft in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Has been observed breeding along the Santa Ynez river in Santa Barbara County, and along the Santa Clara river in Ventura County. May still nest elsewhere in lowland California, as in San Diego County, but records are lacking. Common spring (mid-May to early June) and fall (mid-August to early September) migrant at lower elevations, primarily in riparian habitats throughout the state exclusive of the North Coast

Habitat – Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters.

Discussion and Recommendation

This site does not have preferred habitat of dense and numerous extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters for breeding and foraging or migration purposes. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

⁵¹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1959&inline=1>

⁵² <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1945&inline=1>

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Yellow-billed Cuckoo *Coccyzus americana*⁵³

Federal Status - None; State Status – Endangered

Distribution – An uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Along the Colorado River, breeding population on California side was estimated at 180 pairs in 1977. Additional pairs reside in the Sacramento and Owens valleys; along the South Fork of the Kern River, Kern County; along the Santa Ana River, Riverside County; and along the Amargosa River, Inyo and San Bernardino counties. Also, may nest along San Luis Rey River, San Diego County.

Habitat – Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation. In Sacramento Valley, also utilizes adjacent orchards, especially of walnut. Along Colorado River, may inhabit mesquite thickets where willow is absent.

Discussion and Recommendation

This site does not have preferred habitat of dense, extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation.

No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat however the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Yellow-breasted Chat *Icteria virens*⁵⁴

Federal Status - None; State Status – Species of Special Concern

Distribution – Uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. Found up to about 4800 ft in valley foothill riparian, and up to 6500 ft east of the Sierra Nevada in desert riparian habitats. Uncommon along coast of northern California east to Cascades and occurs only locally south of Mendocino County. In southern California, breeds locally on the coast and very locally inland in migration, may be found in lower elevations of mountains in riparian habitat.

Habitat – Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland. Requires riparian thickets of willow and other brushy tangles near watercourses for cover.

⁵³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1855&inline=1>

⁵⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2125&inline=1>

Discussion and Recommendation

This site does not have preferred habitat of dense, brushy thickets and tangles near water, and thick understory in riparian woodland. Requires riparian thickets of willow and other brushy tangles near watercourses for cover riparian deciduous habitats in summer: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open conifer forests. In migration, visits woodland, forest, and shrub habitats. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

Yellow Warbler *Dendroica petechia*⁵⁵

Federal Status – None; State Status – CSC

Distribution – Breeding distribution includes from the coast range in Del Norte county, east to Modoc plateau, south along coast range to Santa Barbara and Ventura counties and along western slope of Sierra Nevada south to Kern county. Also breeds along eastern side of California from the Lake Tahoe area south through Inyo county. Also breeds in several southern California mountain ranges and throughout most of San Diego county. Winters in Imperial and Colorado river valleys. Breeds in riparian woodlands from coastal and desert lowlands up to 8000 ft in Sierra Nevada. Also breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush.

Habitat – Found in riparian deciduous habitats in summer: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open conifer forests. In migration, visits woodland, forest, and shrub habitats.

Discussion and Recommendation

This site does not have preferred habitat of riparian deciduous habitats in summer: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open conifer forests. In migration, visits woodland, forest, and shrub habitats. No active/potentially active nests were located on site or in the vicinity during transect walks. However, there is some potentially suitable habitat for other nesting birds.

The site does not contain nor is it located near appropriate habitat; however, the following mitigation measures shall be included with environmental documents and project approvals:

1. An additional survey for nesting birds shall be required if construction activities do not begin prior to FEBRUARY 1, 2020.
2. An additional survey for nesting birds shall be required if there is a lapse of construction activities for 30 continuous working days thereafter.

⁵⁵ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2109&inline=1>

NATIVE AND NATIVE DESERT PLANTS

Specific Wildlife: The specific plants identified during the literature review are discussed in detail below.

The field survey of the Site consists of a series of traverses that are walked at 30 (10+/- meter) foot intervals through the Site and perimeter property lines in order to locate native desert plants existing on the Site. A closer, more detailed examination is given to areas of irregular topographical features such as washes, erosion channels, manmade alterations and debris, and elevated clumps, Junipers or rings of vegetation.

EVIDENCE

During the survey any visual signs of Native Desert Plants are noted. In California there are nine- (9) main genera (groups) of cacti and the phenomenon involved with soil mineral variations, inter-gradation, hybridization, elevation and inter-varietal hybrids create a difference of opinion from botanists and classifications. The NATIVE PLANT LOCATION MAP has been enhanced with number (#'s) located near the Joshua Trees, Beavertail, Yucca, etc. for reference.

JT	Joshua Tree	BT	Beavertail
L	Our Lord's Candle [Candlewood]	M	Mesquite
CP	Century Plant	N	Parry Nolina
D/S	Dalea/Smoke Tree	Y	Mojave Yucca
G	Creosote bush - 10' Ring min. – [Greasewood]		

AGAVACEAE – AGAVE FAMILY:

Joshua Trees: { 12 } – Joshua Trees (*Yucca brevifolia*) were found within the Site.

Joshua's under 3 feet (Seedlings) have been observed during the last 40 years to grow in abundance on fire Sites due to the lack of squirrels eating the seeds and competing vegetation for rainfall, other than the dominate and invasive plant species. Also, this area of the Mojave Desert typically receives annual rainfall (also dew and snow), and twice the average rainfall than most other areas of the Mojave Desert and this allows the Joshua's to grow at least twice the rate. Therefore a 3-foot Joshua will likely be at least half of the age, or younger than other Joshua's located farther into the Mojave Desert that also have to survive and experience multi-year droughts and half the moisture on an average and normalized basis. Therefore, most of these Victor Valley Joshua seedlings will not survive the stress of the relocation process during the first 5 years of relocation and are not designated for relocation.

Mojave Yucca: 1 – Mojave Yucca/Spanish Dagger (*Yucca schidigera*)

Our Lord's Candle: 0 – Our Lord's Candle/Candlewood (*Yucca whippleii*)

Century Plant: 0 – Century Plant (*Agave deserti*)

Parry Nolina: 0 – Parry Nolina/Nolina/Beargrass (*Nolina parryi*)

CACTACEAE – CACTUS FAMILY:

Beavertail Cactus "short-joint" [0] – Beavertail Cactus (*Opuntia basilaris* var. *brachyclada*)

2 – Beavertail Cactus (*Opuntia basilaris*) found and will be personally relocated to a safe location at a future date prior to construction

LEGUMINOSAE – PEA FAMILY:

Dalea/Smoke Tree: 0 – Dalea/Smoke Tree (*Parosela spinosa* and other var.)

Mesquite: 0 – Mesquite (*Prosopis* var.)

ZYGOPHYLLACEAE – CALTROP FAMILY:

Creosote Bush: /0/ – Creosote bushes (*Larrea tridentata*) with 10-foot minimum rings were found within the project Site and Right-of-Ways.

OTHER PLANTS OF CONCERN AND GRAPHICS**Ash-gray paintbrush *Castilleja cinerea*⁵⁶**

Federal Status - Threatened; State Status – None

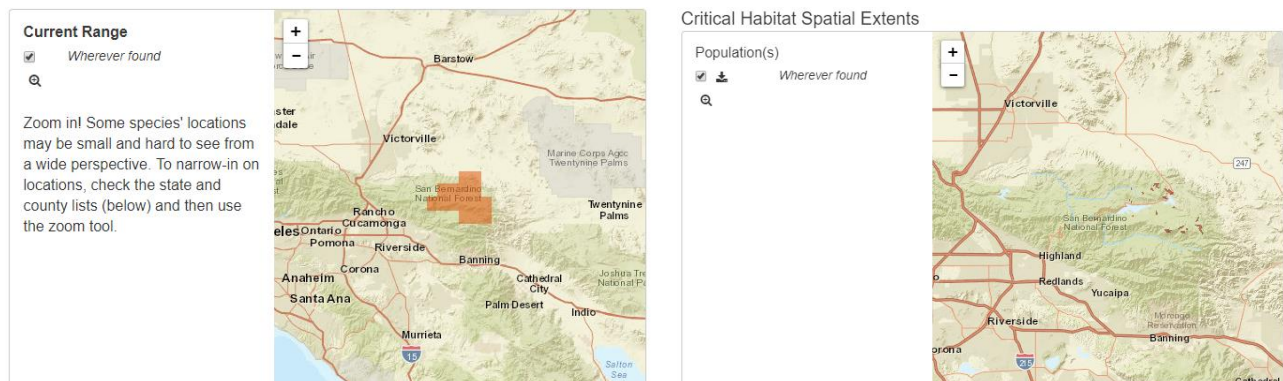
State Rare Plant Rank – 1B.2 (Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California.)

Distribution – Endemic to San Bernardino County, where it is known only from the San Bernardino Mountains.

Habitat – Grows in several habitat types, including Mojavean desert scrub, meadows and seeps, pebble (pavement) plain, pinyon and juniper woodland and upper montane coniferous forest (clay openings).

Discussion and Recommendation

No ash-gray paintbrush was located during site surveys and the site is not in the San Bernardino Mountains.



⁵⁶ <https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3702> and <http://www.rareplants.cnps.org/detail/419.html>

Booth's Evening-Primrose *Camissonia boothii* ssp. *Boothii*⁵⁷

Federal Status - None; State Status – None

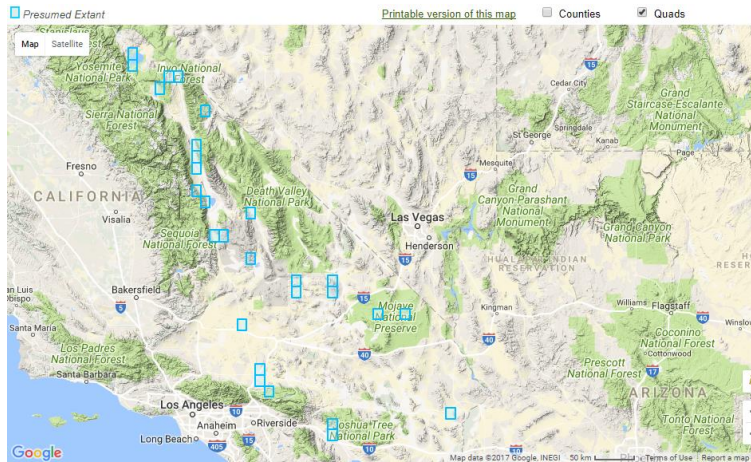
State Rare Plant Rank – 2B.3 (Plants rare, threatened, or endangered in California; more common elsewhere.)

Distribution – Found in Inyo, Mono, Riverside and San Bernardino counties in California.

Habitat – Annual herb found in Joshua tree woodland; pinyon and juniper woodland habitats.

Discussion and Recommendation

No Booth's evening primrose were located during site surveys and the site does not contain woodland habitats.

**Desert Cymopterus *Cymopterus deserticola*⁵⁸**

Federal Status – Federal Species of Concern (FSC); State Status – None

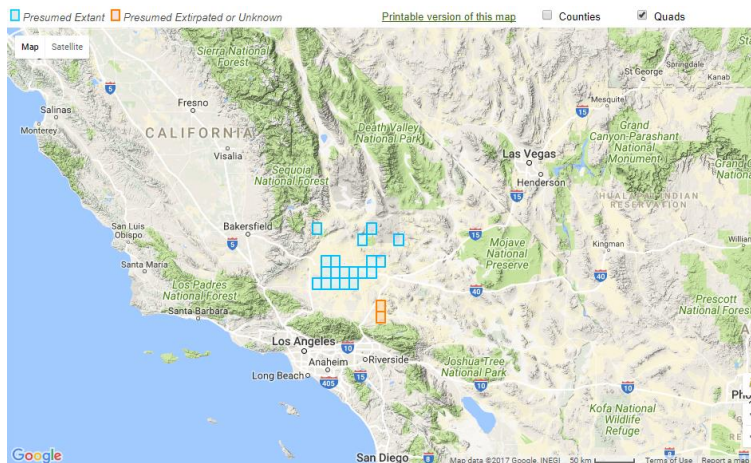
State Rare Plant Rank – 1B.2 (Plants rare, threatened, or endangered in California and elsewhere.)

Distribution – Endemic in California. Found in Kern, Los Angeles and San Bernardino counties in California.

Habitat – Perennial herb found in Joshua tree woodland and Mojavean desert scrub.

Discussion and Recommendation

No Desert Cymopterus were located during site surveys

⁵⁷ <http://www.rareplants.cnps.org/detail/378.html>⁵⁸ <http://www.rareplants.cnps.org/detail/540.html>

Mojave Monkeyflower *Mimulus mohavensis*⁵⁹

Federal Status – Federal Species of Concern (FSC); State Status – None

State Rare Plant Rank – 1B.2 (Plants rare, threatened, or endangered in California and elsewhere.)

Distribution – Endemic in California and located in San Bernardino County.

Habitat – Annual herb in sandy or gravelly, often in washes in Joshua tree woodland and Mojavean desert scrub. Most historical occurrences in the Barstow area have been extirpated or impacted.

Discussion and Recommendation

No Mojave monkeyflower were located during site surveys.

**San Bernardino Aster *Symphotrichum defoliatum*⁶⁰**

Federal Status - None; State Status – None

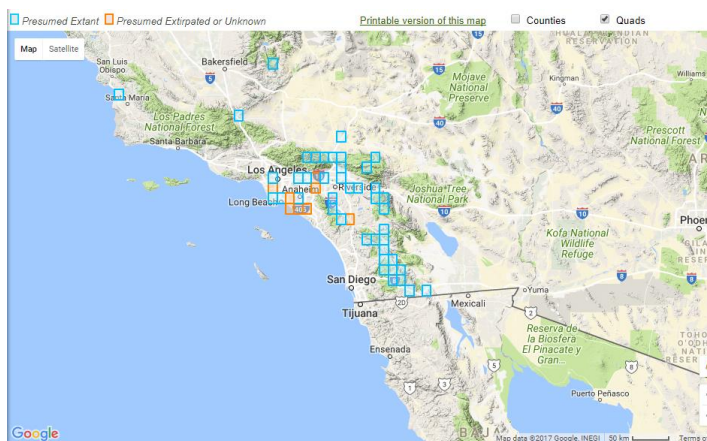
State Rare Plant Rank – 1B.2 (Plants rare, threatened, or endangered in California and elsewhere.)

Distribution – Endemic to California; found in Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego and San Luis Obispo counties.

Habitat – Perennial rhizomatous herb found near ditches, steams, and springs in Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows & seeps, marshes & swamps, and valley & foothill grassland.

Discussion and Recommendation

No San Bernardino Aster were located during site surveys and no habitat is located on site.

⁵⁹ <http://www.rareplants.cnps.org/detail/1095.html>⁶⁰ <http://www.rareplants.cnps.org/detail/2088.html>

Santa Ana River woolly star *Eriastrum densifolium ssp. sanctorum*⁶¹

Federal Status - Endangered; State Status – Endangered

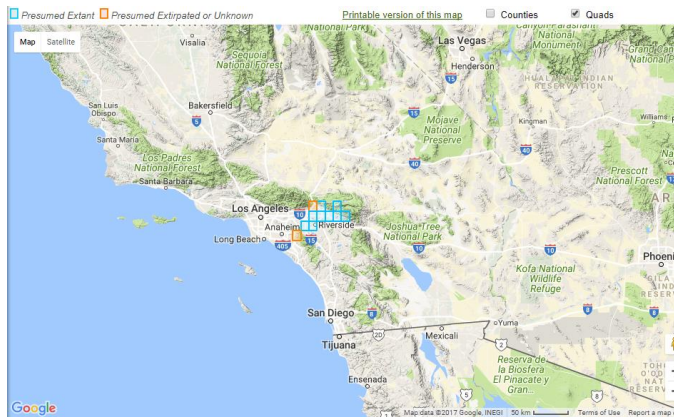
State Rare Plant Rank –1B.1 (Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California)

Distribution – Endemic to the Santa Ana River drainage in southern California.

Habitat –Perennial herb found in open areas with a lot of sun and infrequent floods that contribute to seed dispersal. Grows in sandy or gravelly areas in chaparral and coastal scrub. Pioneer species, taking over previously unutilized habitat. Requires periodic flooding along with scouring & sediment deposition to persist.

Discussion and Recommendation

No Santa Ana River woollystar were located during site surveys and no habitat is present.

**Small-flowered Androstephium *Androstephium breviflorum*⁶²**

Federal Status - None; State Status – None

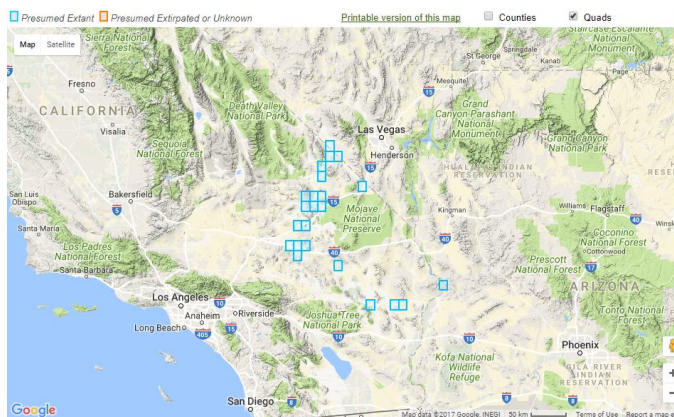
State Rare Plant Rank – 2B.2 (Plants rare, threatened, or endangered in California, more common elsewhere.)

Distribution – Found in Inyo, Riverside and San Bernardino counties in California.

Habitat – Perennial bulbiferous herb found in desert dunes & Mojavean desert scrub habitats.

Discussion and Recommendation

No small-flowered Androstephium located during site surveys.



⁶¹ <https://ecos.fws.gov/ecp0/profile/speciesProfile?sid=6575>,
<https://www.wildlife.ca.gov/Conservation/Plants/Endangered/Eriastrum-densifolium-ssp-sanctorum>, and
<http://www.rareplants.cnps.org/result.html?fulldata=Eriastrum+densifolium+ssp.+sanctorum>

⁶² <http://www.rareplants.cnps.org/detail/7.html>

FINDINGS AND CONCLUSIONS

LENGTH OF SURVEY

The site has received significant historical and recent disturbances; east with the cement plant and to the west with the Lugo Station, continued urbanization of the Victor Valley, I-15 Freeway and Highway 18, 66 and 395 improvements, HOV uses, scattered dirt roads and trails where a moderate amount of construction and yard debris have been dumped (due to cost of San Bernardino Dumps). The extended west with the Interstate 15 (Route 66) corridor since the 1920's, residential development since the 1950's, and California Aqueduct built in the 1960's. Also, fragmentation and isolation from areas which may support species of concern are caused by the continuing urbanization of the Victor Valley. This creates a situation where it is unlikely endangered or threatened species will move through existing development and to the site in the future.

Biological Baseline Assessments are typically reviewed, due to impacts from development or other manmade and natural (fire and/or flood) conditions; therefore, the following reviews will be required:

- Site Assessment after FEBRUARY 1, 2020 for all reptile and mammal species
- Site Assessment after JUNE 7, 2020 for Burrowing Owls and all other referenced bird species and if there is a lapse of 30 days of construction activities on the Site thereafter.
 - NOTE: This Site has no current legal entitlements for development and an Application is being submitted for approval to the City. Due to the lack of City Approvals and timeframe for approvals, no permitting or grading activities shall commence prior to an appropriate Site Review.
 - Bird species may have project-related disturbance of active nesting territories during critical phases of the nesting cycle (February 1st through August 31st annually).
 - The future Site review will be required prior to any grubbing, borrow pit, stockpiling or any other grading or construction activities (or 30+/- days from field survey update, pursuant with telephone conversations with CDFW).

SPECIAL INSPECTOR FOR TRANSPLANTING NATIVE DESERT PLANTS

In addition, this process requires a "Special Inspector" to be continuously present during all relocation activities of the native desert plants.

FINAL REPORT OF NATIVE DESERT SPECIES OR PLANTS

A "Final Report of Native Desert Species" or "Final Report of Native Desert Plants" will be prepared after all activities are completed, if required by the local jurisdiction.

OTHER ISSUES

INCIDENTAL TAKE

It is important to note that regardless of the result of this survey, Desert Tortoises, Mohave Ground Squirrels, Burrowing Owl and other bird species cannot be "taken". The survey report and the mitigation measures included, if any, do not constitute permission for "incidental take" of the Desert Tortoises, Mohave Ground Squirrels, Burrowing Owl and other bird species.

EXCLUSIVE USE OF REPORT

This report is for the **EXCLUSIVE USE ONLY of the COOLEY FAMILY TRUST** (Owner), as it applies to the Site. Any assignment of this Assessment to a third party shall be by a separate negotiated fee. The field survey standards of protocol used in this survey are based on current practices known to this assessor as required by the appropriate local jurisdiction. Its presentation has been in accordance with generally accepted professional principles and practice. No other warranty, either express or implied, including a change in standards or protocol, is made. Conclusions are based upon interpretations of the field survey findings.

FINDING AND CONCLUSIONS – continued

CONCLUSIONS

DESERT TORTOISE

No Desert Tortoises or active/potentially active burrows were encountered on the Site or within the buffer zone during the field survey. Additionally, no other sign (e.g. scats, tracks, shell fragments) of the Desert Tortoises were found which would indicate habitat or other utilization of the Site.

MOJAVE GROUND SQUIRREL

No Mohave Ground Squirrels were encountered on the Site or within the buffer zone during the field survey and no other sign of MGS were found which would indicate habitat or other utilization of the Site. This Site has significant habitat fragmentation due to numerous site and regional conditions as previously discussed.

BURROWING OWL AND OTHER OWLS

No Burrowing Owls or other owls or active/potentially active burrows or nests were encountered on the Site or within the 500-foot buffer zone during the field survey. Additionally, no other sign (e.g. rodent bones; white-wash scats at Joshua's, fence posts or other perching locations; tracks) of the Owls were found which would indicate habitat or other utilization of the Site. Great Horned Owls have been observed in the Cottonwood trees along the Jess Ranch Golf Course at sunset during the 1996-2000 timeframe. Great Horned Owls are located at the Apple Valley Country Club Golf Course (AVCC) and Mojave River area.

LECONTE'S THRASHER (*TOXOSTOMA LECONTEI*)

LOGGERHEAD SHRIKE (*LANIUS LUDOVICIANUS*)

SHARP-SHINNED HAWK (*ACCIPITER STRIATUS*) AND OTHER HAWKS

No LeCONTE'S Thrasher, Loggerhead Shrikes, Sharp-shinned Hawks nor other Hawks or active/potentially nest were encountered during the field survey. Additionally, no other sign (e.g. rodent bones; white-wash scats at Joshua's, fence posts or other perching locations; tracks) of these birds were found which would indicate habitat or other utilization of the Site. Sharp-shinned Hawks are located at the AVCC and Mojave River area.

NATIVE DESERT PLANTS AND NATIVE DESERT PLANT LOCATION MAP

0 – Creosote bushes (*Larrea tridentata*) with 10-foot minimum rings were found within the project Site.

No other protected Federal or State of California Native Desert Plants were encountered other than the Native Desert Plants in the limits of the Site. Any diseased, fire-damaged, dying or non-proposed relocation plants will be removed from the Site during the grading process and properly disposed immediately per local jurisdiction requirements. All transplanting procedures by the local agency jurisdiction authority will be followed during any and all relocation activities of all healthy Native and Protected Plants. Table No. 1 – "Site Survey Summary" is used as a Summary Form for Clearances and Pre-Construction Surveys. A "NATIVE PLANT LOCATION MAP" was prepared to approximately locate the native plant species present on the Site because of the type of proposed development as a "Senior Specific Plan". Native desert plants are to be protected in place, relocated or disposed of. It is recommended the designated relocated plants be tagged with orange flagging. Any diseased, fire-damaged, dying plants and designated larger Joshua's are not tagged with any additionally flagging. Populations of sensitive low-level plants are to be flagged (Orange Flagging on a 4' lath placed in the ground) in order to prevent impacts to the various plant species, if applicable (e.g. Beavertail Cactus).

The plants shall be monitored over a three – (3) year period and additional measures implemented (e.g., monthly irrigation) by the property owner to ensure the survival of the plants.

FINDING AND CONCLUSIONS – continued

CONCLUSIONS - NATIVE DESERT PLANTS INFORMATION REGARDING TRANSPLANTING ACTIVITIES

The goal of transplanting the native desert plants is to transplant specimens with the best chances of survival after transplanting. Transplanting should concentrate all efforts with the younger Joshua's, and up to the capability of the "Tree Spade with a minimum of 44 inches" that would not damage the tree's corm (The corm is the underground Bulb and roots of the tree), trunk and branches upon transplanting, including the stripping of bark from the tree. This Assessment is only a surface visual inspection and does not dig around the corm of the Joshua's to verify existing dead trunks, insect damage, fungus, size or shape of the corm because of the potential damage to the corm and roots by digging at the base of the trunk will cause the introduction of hazardous conditions (insect damage and fungus) to the tree, which will kill the tree.

At the time of relocation activities, soil at the base of trunk of the Joshua's will be removed and inspected and those Joshua's presently proposed for transplanting in this report will not be relocated because of several reasons. First, grave damage from the use of the tree spade to the corm (corm is below the surface of the ground and will be inspected at that time) because the corm is unusually large or odd shaped below the surface of the ground. Secondly, some Joshua's will have fungus and insect damage also not visually seen and are in the process of dying and the transplanting will increase the speed of the Joshua falling. This process allows the corm to be visually reviewed for proposed transplanting and potential damage assessment upon transplanting at the latest possible time. The primary reason is the size of the corm and the associated root bulb for larger trees and fungus or insects for smaller trees.

NOTE FOR HISTORIC FIRE AREAS:

Typically, in an historic burn area (50 years to 150 years), many of the existing living Joshua's in these historic burn areas are clones from the original Joshua's that was living during these less infrequent and less intense historic fires with only native plant species providing the fuel for the fire. These original Joshua's survived these historical fires but tend to be completely killed by the recent fires where the invasive grass species create a hotter, more intense and more frequent wildland fire pattern. The long-term effects from the historic fire create larger diameter trunks and corms (underground Bulb and roots of the tree), which cause a significantly wider trunk and wider diameter root system just underneath (one to two feet) the surface of the ground at the base of each Joshua's. The clones create the situation that the long-term prospects of survival after transplanting for some of these trees is negatively affected because the tree spade damages the corm and root ball or the weight of the remaining tree trunks damages or splits the corm allowing beetles to enter the tree and the tree will die.

During the transplanting activities, all of the healthy Joshua's that are not transplanted will have a corm too large or odd shaped or are too large of a tree for the Tree Spade to move. The historical fire ultimately creates larger diameter trunks and corms, while the actual height of the tree is not the deciding factor for transplanting. Transplanting young healthy Joshua's with an excellent chance of survival is the goal.

Joshua's under 3 feet (Seedlings) have been observed during the last 40 years to grow in abundance on fire Sites due to the lack of squirrels eating the seeds and competing vegetation for rainfall, other than the dominate and invasive plant species. Also, this area of the Mojave Desert typically receives twice the average annual rainfall (also dew and snow) than most other areas of the Mojave Desert and this allows the Joshua's to grow faster and at least twice the normal growth rate. Therefore a 3-foot Joshua will likely be at least half of the age or younger than other Joshua's located farther into the Mojave Desert that also have to survive and experience multi-year droughts and half the moisture on an average and normalized basis. Therefore, most of these Victor Valley Joshua seedlings will not survive the stress of the relocation process during the first 5 years of relocation.

ALTEC Land Planning

19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ADDENDA

TABLE 1**(Desert Tortoise, Mohave Ground Squirrel, Burrowing Owl and other Birds, and Protected Desert Plants)****“Summary Form for Clearances and Pre-Construction Surveys”**

in the Assessment Report is a “Summary” of both the Site and the Zone of Influence

and is “In-Lieu” of the original clearance form, created for “Tortoises Only” from the

“Form for Presence-or-Absence and Clearance Surveys”
Desert Tortoise Handbook 1992

This form was modified from the original Desert Tortoise Handbook 1992

“Form for Presence-or-Absence and Clearance Surveys”

to include additional CDFW requested species (e.g. Burrowing Owls, Sharp-shinned hawks, LeConte’s Thrasher and Loggerhead Shrikes and other raptors {owls and hawks}) and Protected Native Desert Plants per discussions and review of this “Modified Form” for all relevant CDFW species and plants with Rebecca Jones, Environmental Scientist, CDFW in 2000 era during the preparation of numerous CEQA Initial Studies and Biological Baseline Assessments being prepared for numerous new and expanding Victor Valley school sites [e.g. San Bernardino County Superintendent of Schools (SBCSS), Victor Elementary School District (VESD), Victor Valley Union High School District (VVUHSD) and Adelanto School District (ASD)]. The CEQA Initial Studies and Biological Assessments were being prepared and processed by ALTEC Land Planning, [Randy Coleman, AICP, CA, CWB, PE, PLS, REA] and reviewed and approved by the CDFW, reviewed and approved San Bernardino County Superintendent of Schools (Superintendent Herb Fischer era), California Department of Education (CDE), Office of Public School Construction (OPSC) and approved and funded by the State Allocation Board (SAB) [This included regular school students, charter school students and county special education student projects] and ultimately built and occupied by new students at all of these school sites throughout the greater Victor Valley.

Also, in this timeframe, two Federal Environmental Assessments, including Biological Baseline Assessments and Native Plants Reports for various “Endangered and Protected Native Desert Plant Species” were completed and approved for two Federally funded Water System Replacement Projects in “Economically Disadvantaged Communities” by the USDA – Rural Development in San Bernardino County area. This included all requirements for Conceptual Planning and Federal Approvals, Civil Engineering Design and Specifications, Mitigation and Recommendations for Biological and Protected Desert Plant issues and concerns, Project Management and Documentation, Construction Management (Surveying, Field Inspections, Monitoring for Biological issues and concerns, Requests for Information) and Close-Out Documentation requirements by USDA-Rural Development.

TABLE NO. 1 - SITE SURVEY SUMMARY

See Photographs attached.

Date: 04/02 – 06/07/2019Transect Nos. As describedRecorder: Randy Coleman, CA & CWBQuad Name/Scale: Victorville:24,000

N ½, SE ¼

Community Northeast - City of VictorvilleCounty & State: San Bernardino/CaliforniaProject Name: COOLEY FAMILY TRUSTAPN: 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16Township: 6 North Range: 4 West Section: 32**Desert Tortoise, Mojave Ground Squirrel, Burrowing Owl and other birds, and Protected Desert Plants
Summary Form for Clearances and Pre-Construction Surveys (Modified per CDFW – R. Jones in 2001)**Rainfall/30 days: 0.25/- in. Cloud Cover: 0-100% Wind Speed: 0-35mph % Slope High: 2° Low: 0° Aspect: Level NortheastElevation: 2725+/- to 2856+/- Land Form (e.g., mesa, bajada, wash): Mesa Soils: Sandy Loam - Older AlluviumVegetation: Dominant Perennials: Joshua Tree & SagebrushOther Species: Creosote California, California BuckwheatDominant Annuals: Desert Trumpet, Indian Ricegrass, Schismus and Filaree, Bladder SageOther Species: Bromus sp. Saharan Mustard and Russian Thistle near roadsAdjacent Land Use: Vacant Desert, commercial & industrial usesWithin 1 km.: US Route 66, Neighborhood commercial, industrial and residential uses and Vacant DesertSoil: Similar Vegetation: Similar Average Daily Min. /Max. Air Temp 12/38 °C 1cm 12/38 °C Surface 12/38 °C**TOTAL NUMBER FOUND ON-SITE, INCLUDING EASEMENTS AND RIGHT-OF-WAYS**

Desert Tortoise	Mojave Ground Squirrel	Burrowing Owl	Other Owls	LeConte's Thrasher	Sharp-shinned Hawk	Other Hawks	Loggerhead Shrike	Barrel Cactus	Beavertail "Short-Joint"
0	0	0[E]	0	0	0	0	0	0	0 [2]

Calico	Century Plant	Cholla var.	Creosote [10' ring]	Joshua Trees	Mesquite	Mojave Yucca	Lord's Candle	Parry Nolina	Prickly Pear	Smoke Tree
0	0	4	0	[12]	0	/1/	0	0	0	0

Total Number of Tortoise Cover Sites

Corrected Sign	Live Tortoises		Pallet or Burrow	Den		Scat	Shell Remains
	Adult	Juvenile		Active	Inactive		Adult/Juvenile/Unknown
0	0	0	0	0	0	0	A=0 J=0 M=0 F=0 Unknown = 0

Total Number of Tortoise Evidence

Tracks	Eggshell Fragments	Drinking Sites	Courtship Ring	Other	Total Number of Neotoma Middens
0	0	0	0	0	3 Found and 0 Remains

Evidence of Human Disturbance – Number Seen

HOV/Tire Tracks	Human	Dog or Coyote	Trash	Interior Trails	Shotgun Shells	Grading	Ravens	Other
[A]	[A]	[D]	[A]	[A]	[A]	[B]	20+[C]	SCATTERED RESIDENTIAL USES AND APPURTENT USES IN AREA

Comments: [A] DENOTES FOUND OR SCATTERED THROUGHOUT AREA
 [B] 20+/- FEET ALONG SOUTHERN BOUNDARY FOR SENECA ROAD
 [C] OBSERVED RAVENS ON SITE AND ON RECENT AND NEARBY CONSTRUCTION SITES.
 [D] OBSERVED LARGE DOGS NEARBY AT RESIDENCES, COYOTES IN GENERAL AREA
 NUMEROUS TIMES (1973-2018) AND TO THE NORTH DURING BUFFER TRANSECTS
 [E] BURROWING OWLS ARE SCATTERED THROUGHOUT THE VICTOR VALLEY
 [2] BEAVERTAIL CACTUS

PROTECTED AND NATIVE DESERT PLANT LOCATION MAP:

APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16

**SPECIAL INSPECTOR
IS REQUIRED**

The Special Inspector or a representative under the direction of the Special Inspector shall be on-Site continuously to oversee all transplanting activities.

A “Native Desert Plant Permit” for any and all transplanting activities shall be paid and completed prior to any transplanting activities, if applicable.

All Native Desert Plants (Joshua Trees Only) are shown on this map for identification.

AT THE TIME OF TRANSPLANTING ACTIVITIES,
A RELOCATION PLAN WILL BE COMPLETED.

The transplanting activities shall be completed prior to grubbing or grading permit issuance, unless approved in writing by the City.

Native desert plants to be transplanted shall be flagged with orange survey ribbon prior to soil disturbance (4' lath for Beavertail).



Randolph J. Coleman, AICP CEP
CDFW Scientific Collecting Permit #11586
Certified Wildlife Biologist #43090
Certified Arborist WE#8024A
& Tree Risk Assessment Qualified WE#8024A
Qualified Stormwater Developer/Planner #21595

June 7, 2019

DATE

NOTES:

NDC – Denotes Natural Drainage Course
Area shown on following Map

**SEE FOLLOWING PAGE FOR
PROTECTED PLANT LOCATION MAP**

PROJECT AREA IN WHITE CIRCLE & PROTECTED PLANT LOCATION MAP

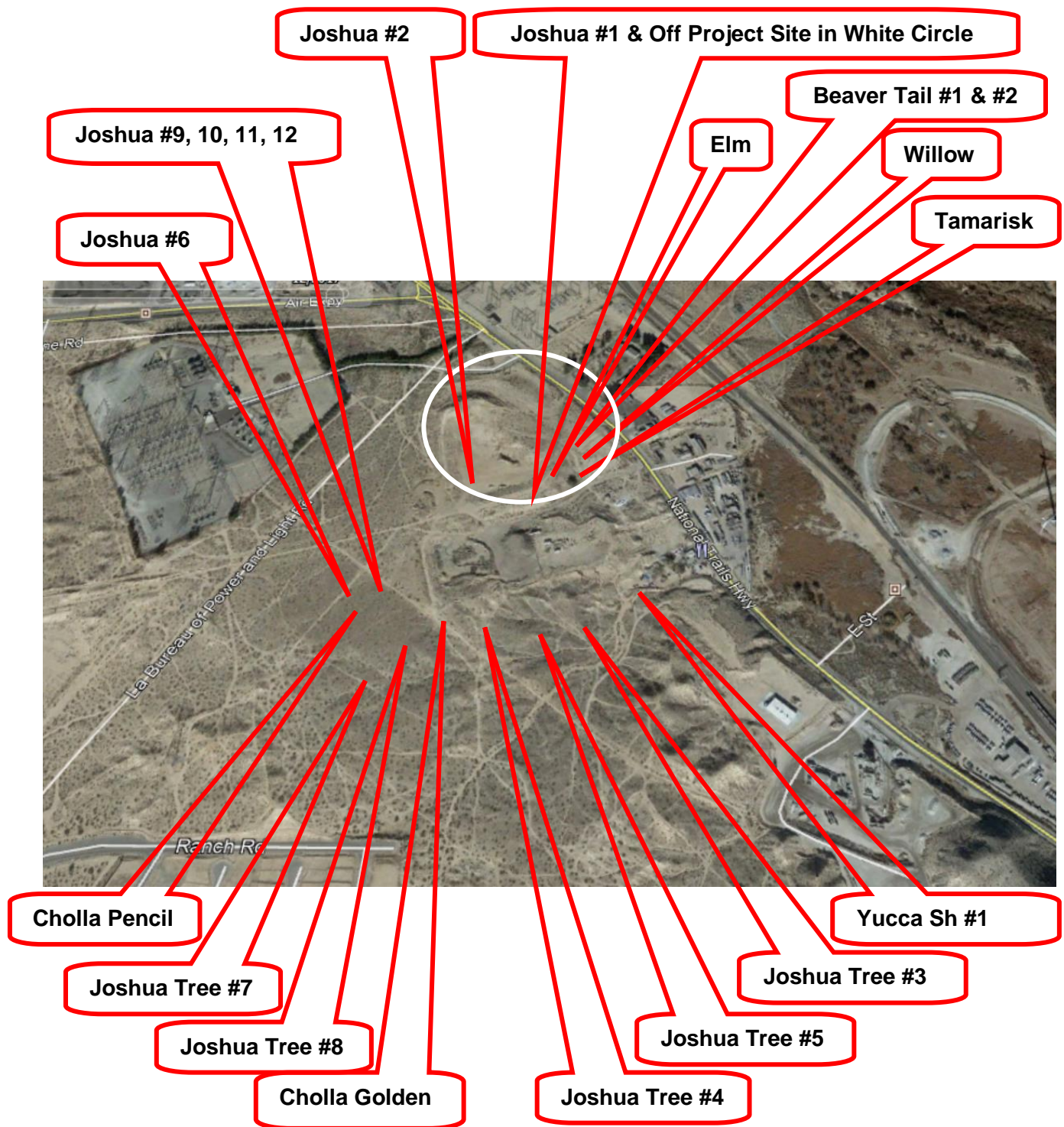


TABLE NO. 2 – Native Desert and Protected Plant List**APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16**

Desert Protected Plants and other Arborist issues and concerns (i.e. Joshua Tree and other trees and cacti) can have a variety of health issues and/or structural issues that create difficulties with relocation alternatives (Tree Spade use, backhoe use, hand replanting, etc.) hand.

The following is a list of these Common Tree issues:

AF	Annual Fern/Fern Ally	DL	Down Live	MC	Multiple Clones
AG	Annual Grass/Graminoid	Dleg	Dogleg	Mq	Mesquite var.
AH	Annual Herb	DS	Dead Standing	N	Parry Nolina
Binj	Basal Injury	Du	Dusty	OB	Over Balanced
B/I	Beetle and insect damage	F	Fungus damage	OM	Over Mature
BH	Biennial Herb	Gr	Grainery Tree	OT	Over Tall
BT	Beavertail Cactus	Gt	Girdled tree trunk	PF	Perennial Fern/Ally
CP	Century Plant var.	Hf	Health-Fair	PG	Perennial Grass
Ch	Cholla var.	Hok	Health-OK	PH	Perennial Herb
Cls	Clones	Hp	Health-Poor	PV	Perennial Vine
CoD	CoDominate Trunk(s)	IB	Included Bark	S	JT Seedling (<3')
Cr	Creosote Bush (10' Ring)	InjO	Injury - Old	Sh	Shrub
Crd	Crowded	InjN	Injury - New	ST	Smoketree var
DB	Die-Back	JT	Joshua Tree	T	Tree (2"dia/6'ht)
Dbh	Diameter at 4.5'	L	Lean/Leaning	Tcrk	Torsional Crack
DC	Dependent Clone	LB	Low Branches	YSh	Mojave Yucca

NOTE: Relocating these potential Joshua trees is planned at this time however the proposed project layout and Landscaping Plans are subject to numerous changes prior to actual development. Also, during the actual relocation process, typically fungus and beetle/insect damage will be present in some of the Joshua Trees, clones and dependent clones and these plants will not be transplanted to prevent the spread to healthier plants that will be relocated to the designated areas after review of final engineering and other development plans of the Site.

TABLE NO. 2 – Native Desert and Protected Plant List**APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16**

#	PLANT	LAT.	LONG.	ELEV.	HEALTH	PROTECT IN PLACE OR	
						RELOCATE	DISPOSE OF
1	Joshua Tree 8'	34.56181	117.31560	2771	Hp		Yes
2	Joshua Tree 5'	34.56191	117.31685	3781	Hok	Yes	
3	Joshua Tree 10'	34.56082	117.31514	3743	2-Cls & Hok		Yes
4	Joshua Tree 6'	34.56021	117.31620	2779	Hok	Yes	
5	Joshua Tree 7'	34.55978	117.31624	2782	2-Cls & Hok	Yes	
6	Joshua Tree 4'	34.56015	117.31879	2827	Cls & Hok	Yes	
7	Joshua Tree 4'	34.56056	117.31771	2763	Hok	Yes	
8	Joshua Tree 12'	34.55945	117.31771	2806	Hok	Yes	
9	Joshua Tree 1'	34.55976	117.31836	2826	Hok		Yes
10	Joshua Tree 1'	34.55979	117.31825	2825	Hok		Yes
11	Joshua Tree 2'	34.55979	117.31825	2825	Hok		Yes
12	Joshua Tree 3'	34.56000	117.31832	2824	Hp		Yes
BT1	Beaver-Tail Cactus	34.56252	117.31578	2762	Hok	Yes	
BT2	Beaver-Tail Cactus	34.56233	117.31584	2792	Hok	Yes	
YS1	Yucca Schidigra	34.56117	117.31497	3770	Hp		Yes
Ch1	Cholla "Pencil"	34.56019	117.31828	2822	Hp		Yes
Ch2	Cholla "Silver"	34.56016	117.31767	2805	Hok		Yes
<i>NON-NATIVES</i>							
1	Willow	34.56282	117.31556	2750	Hok		Yes
2	Tamarisk	34.56254	117.31556	2757	Hok		Yes

EXECUTIVE SUMMARY

MOHAVE GROUND SQUIRREL HABITAT SURVEY

PROJECT NAME:	Industrial Development
LOCATION – GENERAL:	Site is between National Trails Highway (ROUTE 66) and the Los Angeles Department of Water and Power (LADWP) LUGO Switching Station, located within the northeastern sector of the City of Victorville.
ASSESSOR'S PARCEL NUMBERS:	0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16
LAT/LONG COORDINATES OF SITE:	Supplied by Randy Coleman, PLS, PE, NWC: LAT: N34° 33'52" LONG: W117° 19'04" NEC: LAT: N34° 33'52" LONG: W117° 18'58" SWC: LAT: N34° 33'29" LONG: W117° 19'17" SEC: LAT: N34° 33'29" LONG: W117° 19'01"
LEGAL DESCRIPTION:	PORTION OF SOUTHEAST ¼ OF SECTION 32, TOWNSHIP 6 NORTH, RANGE 4 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE.
ACREAGE OF PROJECT SITE:	Northerly 17± Acres of the 52±Acres (Project Area)
ACREAGE SITE AREA SURVEYED:	52±Acres (Gross)
POTENTIAL MGS HABITAT:	0 Acres
QUAD MAP/SERIES:	VICTORVILLE
SOILS DESCRIPTION:	107 Bryman Loamy Fine Sand 5-9% slopes, 108 Bryman Loamy Find Sand 9-15% slopes, and 130 Haplargids-Calciorthids Complex 15-50% slopes - Soils consists of older alluvial fan remnants.
FLOOD (FEMA) HAZARD:	No blue line shown on USGS Quad sheet and no significant natural drainage courses affects the site. The nearest significant natural drainage course is to the east about 2000 feet and the nearest Blue-Line Stream is 2000 feet and is the Mojave River to the east.
DATE SURVEYED:	04/02 thru 06/04/2019
SURVEY CONDUCTED BY:	R. Coleman: CDFW-Scientific Collecting Permit #11586, CWB #43090, Certified Arborist & Tree Risk Assessment Qualified #8024A
ELEVATION:	2725+/- to 2856+/-
SLOPE:	Flat to 2:1± natural and manufactured slopes
ASPECT:	Varies – Easterly and drains to the Mojave River by both Natural Drainage Courses and manmade alterations to the Site.

CUMULATIVE HABITAT IMPACT EVALUATION FORM				
TABLE for CIR for Mojave Ground Squirrel Information				
LOCATION	T 6 North	R 4 West	Section 32	Portion N1/2
DATE	04/02/2019 thru 06/04/2019			
SITE	TRAPPED: <input type="checkbox"/>		NOT TRAPPED: <input checked="" type="checkbox"/>	
OVERALL CIR	38	0= No Impact - 4=heavily impacted		
CIR RANGE	0-40			
RANKING FACTORS	0-4			
Land Use Impacts	1 -2 -3 -4	COMMENTS:		
OFF HIGHWAY VEHICLE USE (OHV)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Presence of numerous tracks on site		
HORSE OR FOOT ACTIVITY	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Presence of <u>numerous recent tracks</u> on site		
DOG (COYOTE) ACTIVITY	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Presence of Dogs/Coyotes in immediate area		
ROADS THROUGH SITE	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Perimeter roads and interior road and many trails		
URBANIZATION	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Continuing suburban growth in area		
GARBAGE DUMPING	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Some dumping throughout site, but mainly perimeter with construction and yard debris		
MINING ACTIVITY	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	No recent or past activities		
UTILITIES	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	500 kV transmission lines just east of Site.		
GRAZING AND/OR AGRICULTURE	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Sheep grazing in this area until the 1980's.		
SHRUB DISTURBANCE	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Perimeter roads and altered drainage patterns		
AVERAGE TOGETHER THE FIVE MOST DISTURBED FACTORS, THEN MULTIPLY BY 10 FOR THE CUMULATIVE IMPACT RATING (CIR)				
CIR = [19/5 * 10] A CIR rating of 38 is low quality habitat for MGS and does not appear to support prime MSG habitat based upon the Cumulative Impact Rating (CIR) for MSG.		Site has habitat fragmentation from LADWP transmission corridors, US Route 66, continued cement plant use, City of Victorville continued suburban and freeway growth and the general growth of the Victor Valley. Growth in the Palmdale area from Los Angeles County to the west. The Victor Valley area is located in the extreme southeastern sector of the known MGS historical range of the species. The closest known MGS are located beyond the Federal Prison Complex at Victorville and Southern California Logistics Airport (in use since early 1940's)		

California Department of Fish & Wildlife has developed a system, which evaluates and ranks existing human disturbance on a Site and in adjacent areas. The system was developed to help standardize mitigation requirements for loss or disturbance of Mohave ground squirrel habitat (Clark, D. 1991).

Ten land use disturbances were evaluated, including OHV use, horse and foot traffic, dog activity, roads through the Site, urbanization, garbage dumping, mining activity, utilities, grazing and/or agriculture, and shrub disturbance. Each of these disturbances was ranked on a scale of 0 to 4, with 0 indicating no disturbance and 4 indicating a significant disturbance. Following evaluation of these disturbance categories, the five highest factors, which were averaged and multiplied by ten to determine the cumulative impact rating (CIR).

In addition, information was also gathered on the habitat occurring throughout the Site. Data gathered as part of the Mojave ground squirrel analysis included shrub density, species list (shrubs, grasses, and forbs), soil description, presence of desert pavement, rocks, and bounders, slope and aspect, and elevation.

GENERAL HABITAT DESCRIPTION			
TABLE for CIR for Mojave Ground Squirrel Information			
SHRUB DENSITY ESTIMATE	High: <input type="checkbox"/>	Medium: <input type="checkbox"/>	Low: <input checked="" type="checkbox"/>
	Estimate % of each per 1/4 section: _____		
SHRUB SPECIES DIVERSITY	>6: <input checked="" type="checkbox"/>	3-5: <input type="checkbox"/>	1-2: <input type="checkbox"/>
PRESENCE OF ANNUALS	A: <input checked="" type="checkbox"/>	B: <input type="checkbox"/>	C: <input type="checkbox"/>
PRESENCE OF PERENNIAL GRASSES	A: <input type="checkbox"/>	B: <input checked="" type="checkbox"/>	C: <input type="checkbox"/>
PRESENCE OF DESERT PAVEMENT	Estimate coverage: 0%		% Cover: <u>none</u>
SOILS DESCRIPTION	Sandy Loams		
PERCENT ROCKS AND BOULDERS PRESENT	None – No large rocks or boulders observed on the Site.		
PRESENCE OF WASHES	The southeast corner of the total Site has a natural drainage course. The City of Victorville & previous San Bernardino County Master Plan of Drainage is always being reviewed due to higher density development issues. Conflicts from stormwaters and a variety of issues are observed from a Civil Engineering perspective.		
PERIODIC FLOODING	Typical Sheet flows. No formal Hydrology Study has been reviewed with the preparation of the Assessment.		
SLOPE AND ASPECT	Slope flat to 2:1± natural and manufactured slopes	To the northeast and ultimately to the Mojave River	
ELEVATION	2725+/- to 2856+/-		
Other factors of consideration:			
TYPE OF GRAZING ALLOTMENT	Perennial: <input type="checkbox"/>		Ephemeral: <input checked="" type="checkbox"/> Historically Sheep & Cattle
PROXIMITY TO KNOWN MGS POPULATIONS	USGS Quad: Victorville: T6N, R4W, Section#32		
TYPE OF LOCAL ZONING	A mix of native and disturbed desert, cement dust forming a broken crust, residential, commercial and industrial uses in the general area.		
COMMENTS: 1-This was completed for informational purposes only and not for habitat assessment, a Cumulative Human Impact Evaluation (CHIE) was prepared and the Cumulative Impact Rating (CIR) number is 38 indicating an important level of human disturbance. The results are discussed in Addenda-Table 2. 2-Site has regional habitat fragmentation. 3-New roads, utilities, upstream manmade altered drainage patterns (i.e. California Aqueduct) are affecting this site with new development in the general area.			

REGIONAL LOCATION MAP



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19531 US Highway 18
Apple Valley, CA 92307

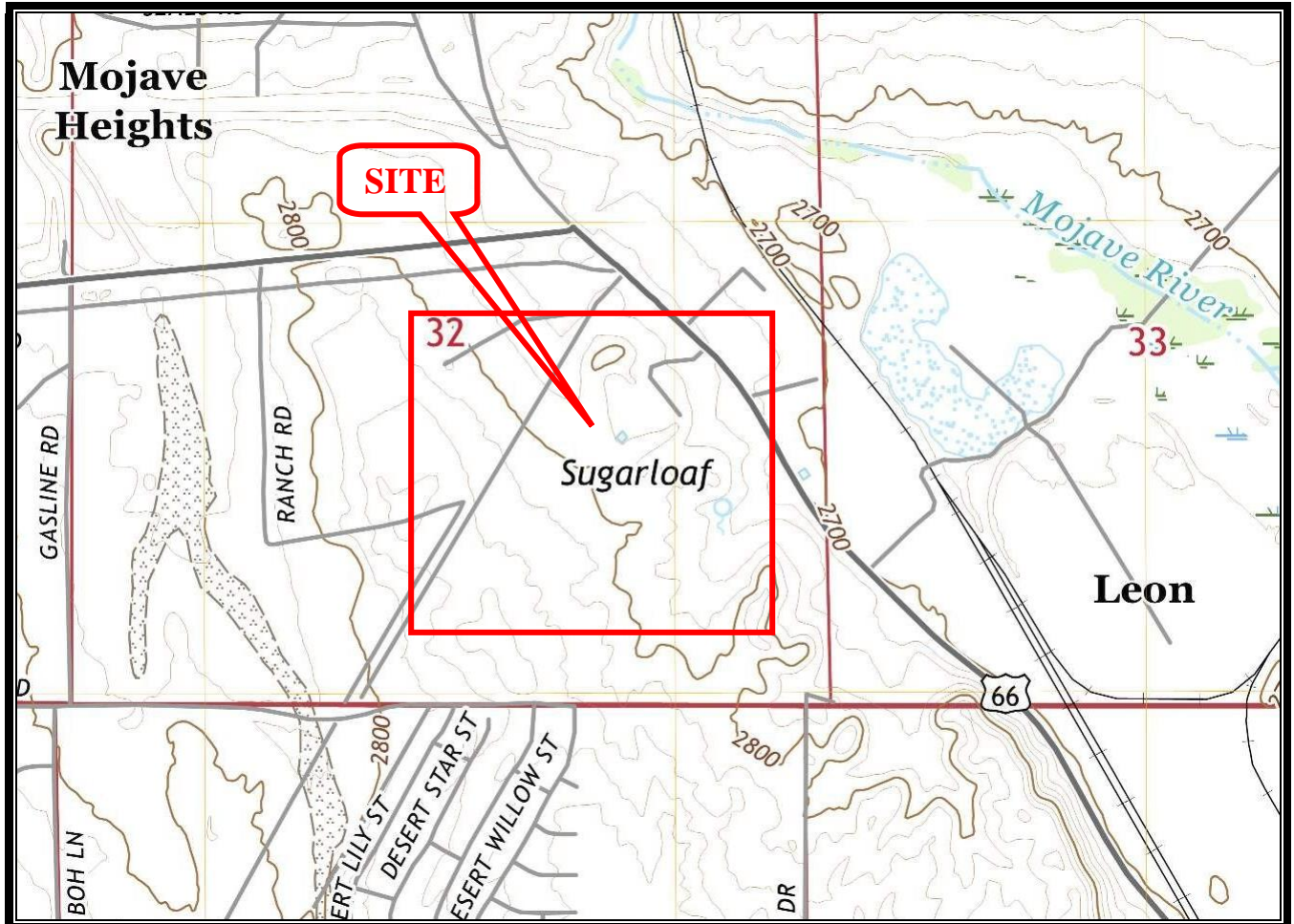
(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

VICTOR VALLEY LOCATION MAP



USGS QUAD SHEET (VICTORVILLE 1993)



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(760) 242-9917
Fax (760) 242-9918
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NEIGHBORHOOD AERIAL MAP



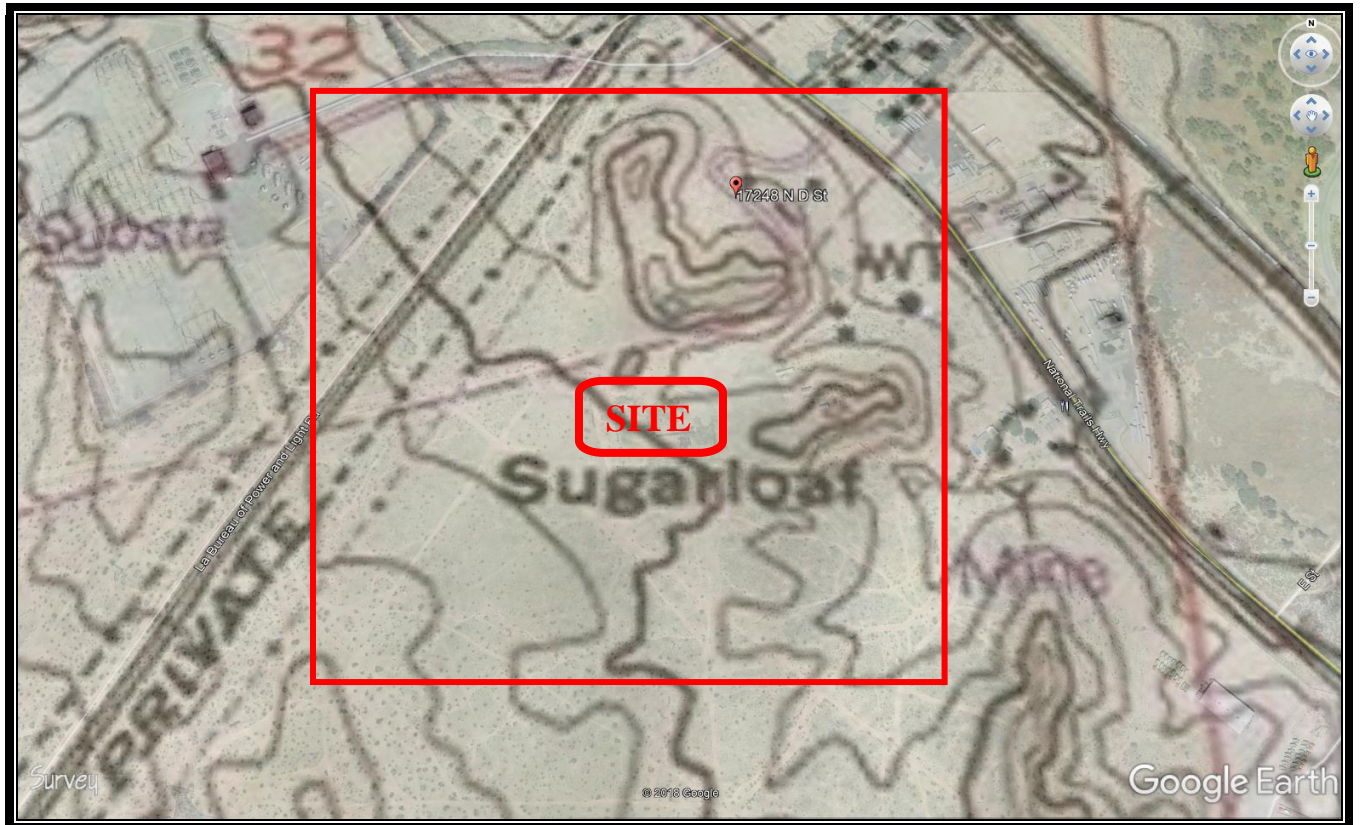
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19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
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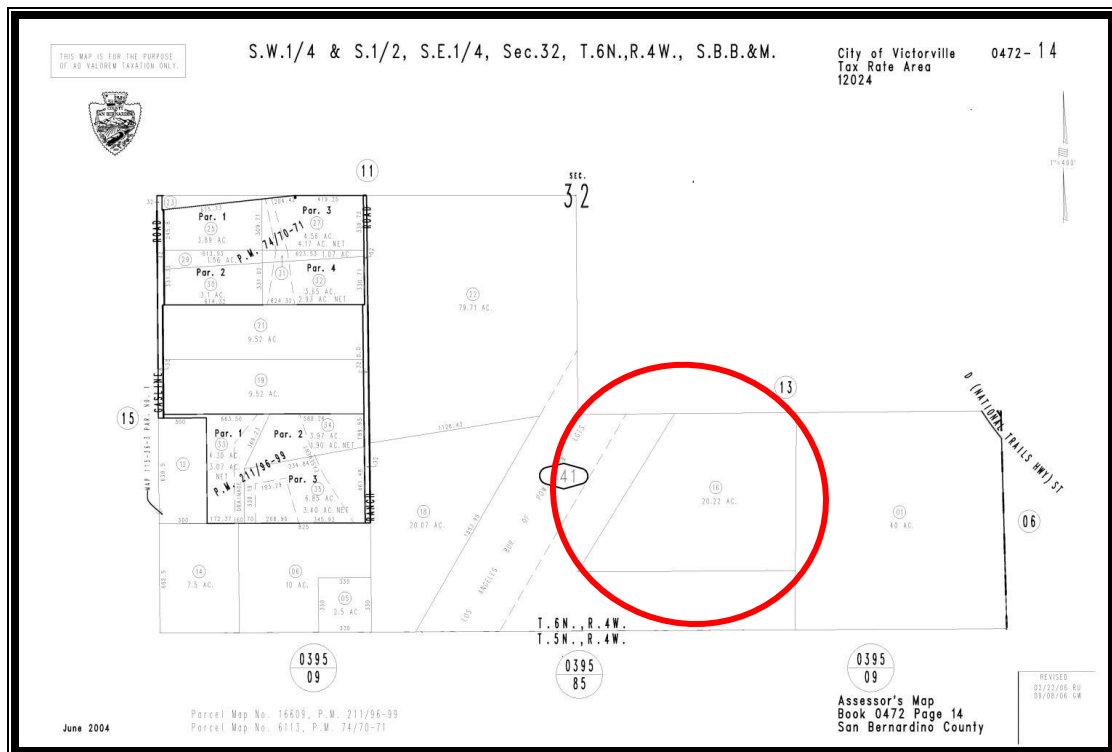
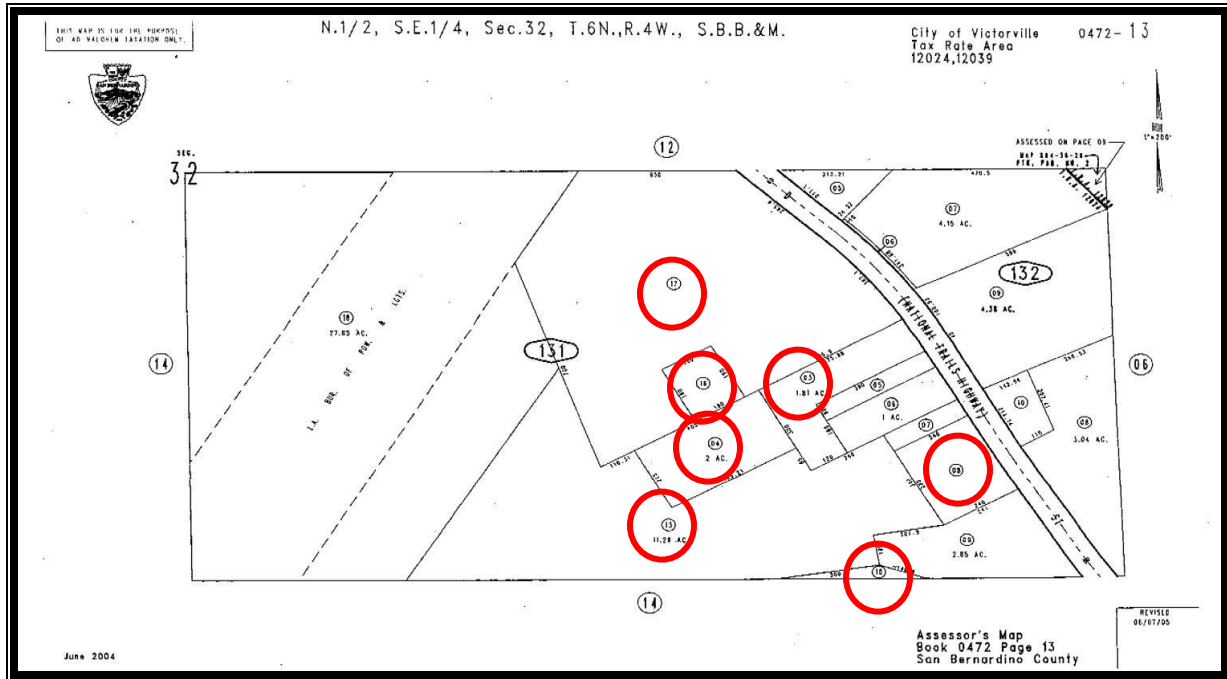
BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

HYBRID USGS WITH TOPOGRAPHY - AERIAL MAP



ASSESSOR'S PARCEL MAP

APN 0472-131-03, 04, 08, 10, 13, 16, 17 & 0472-141-16



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Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-141-16-0000

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-141-16-0000
County:	San Bernardino	APN:	0472-141-16-0000
Map Coord:	316-B2	Census Tract:	
Lot#:		Block:	
Subdivision:		Tract:	
Legal:	Sw 1/4 Se 1/4 Sec 32 Tp 6N R 4W Ex S 400 Ft Thereof And Ex Ptn Lying Nwly Of Fol Desc Li Com At Pt On Nly Li Se 1/4 Sd Sec Sd Pt Being Desc As Nly Terminus Of Li Desc As Bearing N 00 Deg 22 Min E 300.3 Ft /Rec 300.0 Ft/ In Wly Li Land Conveyed By Deed Rec In Bk 7111 Pg 933 O R Th S 00 Deg 22 Min W 300.3 Ft To True Pob Th Cont S 19 Deg 00 Min E 360 Ft M/L Alg W Li Sd Land To Pt In Li That Is Distant Sely 730 Ft Meas At R/A From Nwly Li Of 450 Ft Wide Easement Conveyed To City Of Los Angeles By Deed Rec In Bk 948 Pg 38 O R Th S 30 Deg 39 Min 07 Seconds W Alg Sd Parallel Li 2330 Ft M/L To Sly Li Sd Sec 32 20.22 Ac M/L		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/ Sq. Ft. :
Zoning:		Lot Size Ac / Sq Ft:	20.07 / 874249 # of Units:
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	2nd Mtg.:
Sale Price:	\$130,000	1st Loan:	Prior Sale Amt:
Doc No.:	000000540969	Loan Type:	Prior Sale Date:
Doc Type:	Grant Deed	Transfer Date:	12/19/2012 Prior Doc No.:
Seller:	Rajacich James M	Lender:	Prior Doc Type:
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$109,642	Tax Year / Area:	2018 / 12-024
Total Value:	\$109,642	Tax Value:	
Total Tax Amt:	\$2,178.41	Improved:	

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19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-131-03-0000

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-03-0000
County:	San Bernardino	APN:	0472-131-03-0000
Map Coord:	316-B2	Census Tract:	
Lot#:	1	Block:	
Subdivision:		Tract:	
Legal:	Pln Ne 1/4 Se 1/4 Sec 32 Tp 6N R 4W Com At 1/4 Sec Cor On E L1 Sd Sec 32 Th W 1050.8 Ft M/L To Wly L1 80 Ft State Hgwy Th S 47 Deg 24 M1n 30 Seconds E 265.9 Ft M/L To Pt Of Curvature Of Sd R/W Th Alg Sd Curve 1N A Sely D1rect1on A D1st Of 384 Ft To Pob Th S 60 Deg 41 M1n W 475.38 Ft Th S 29 Deg 19 M1n E 300 Ft Th N 60 Deg 41 M1n E 120 Ft Th N 29 Deg 19 M1n W 180 Ft Th N 60 Deg 41 M1n E 360 Ft M/L To Wly L1 Sd R/W Hgwy Th Nwly Alg Sd R/W 120.1 Ft M/L To Pob 1.81 Ac		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/ Sq. Ft. :
Zoning:		Lot Size Ac / Sq Ft:	1.81 / 78843 # of Units:
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	2nd Mtg.:
Sale Price:	\$130,000	1st Loan:	Prior Sale Amt:
Doc No.:	00000540969	Loan Type:	Prior Sale Date:
Doc Type:	Grant Deed	Transfer Date:	12/19/2012 Prior Doc No.:
Seller:	Rajacich James M	Lender:	Prior Doc Type:
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$12,175	Tax Year / Area:	2018 / 12-024
Total Value:	\$12,175	Tax Value:	
Total Tax Amt:	\$241.57	Improved:	

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19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-131-04-0000

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-04-0000
County:	San Bernardino	APN:	0472-131-04-0000
Map Coord:	316-B2	Census Tract:	
Lot#:	1	Block:	
Subdivision:		Tract:	
Legal:	Pln N 1/2 Se 1/4 Sec 32 Tp 6N R 4W Com At 1/4 Cor On E L1 Sd Sec Th N 89 Deg 38 M1n W 1053.5 Ft M/L To W L1 State Hgwy 66 Th S 47 Deg 45 M1n E Alg W L1 Sd Hgwy 265.9 Ft Th Alg W L1 Sd Hgwy On Curve To Rt Radius 1660 Ft A D1st Of 384.1 Ft Th S 60 Deg 41 M1n W 475.38 Ft To True Pob Th Cont S 60 Deg 41 M1n W 405.21 Ft To A Pt Th On An Angle Of 90 Deg To Last Desc Li In Se D1rection 215 Ft Th N 60 Deg 41 M1n E 405.21 Ft Th Nw 215 Ft To True Pob 2 Ac Ex 50 Per Cent M1n Rts		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/
Zoning:		Lot Size Ac / Sq Ft:	2 / 87120
		Sq. Ft. :	
		# of Units:	
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	2nd Mtg.:
Sale Price:	\$130,000	1st Loan:	Prior Sale Amt:
Doc No.:	000000540969	Loan Type:	Prior Sale Date:
Doc Type:	Grant Deed	Transfer Date:	12/19/2012
Seller:	Rajacich James M	Prior Doc No.:	
		Prior Doc Type:	
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$13,061	Tax Year / Area:	2018 / 12-024
Total Value:	\$13,061	Tax Value:	
Total Tax Amt:	\$249.59	Improved:	

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Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-131-08-0000

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-08-0000
County:	San Bernardino	APN:	0472-131-08-0000
Map Coord:	316-B2	Census Tract:	
Lot#:	1	Block:	
Subdivision:		Tract:	
Legal:	Com At Nw Cor Ne 1/4 Se 1/4 Sec 32 Tp 6N R. 4W Th E 265.3 Ft M/L Alg N L1 Sd Ne 1/4 Se 1/4 Sd Sec To Swly L1 State Hgwy Th Sely Alg Swly L1 Sd State Hgwy 1010 Ft M/L To True Pob Th S 60 Deg 41 M1n W 240 Ft Th S 29 Deg 19 M1n E 280 Ft Th N 60 Deg 41 M1n E 240 Ft M/L To Swly L1 State Hgwy Th Nwly Alg State Hgwy To Pob		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	1930 / Sq. Ft. : 549
Zoning:		Lot Size Ac / Sq Ft:	1.543 / 67200 # of Units:
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	\$236.79 2nd Mtg.:
Sale Price:	\$130,000	1st Loan:	Prior Sale Amt:
Doc No.:	000000540969	Loan Type:	Prior Sale Date:
Doc Type:	Grant Deed	Transfer Date:	12/19/2012 Prior Doc No.:
Seller:	Rajacich James M	Lender:	Prior Doc Type:
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$60,056	Tax Year / Area:	2018 / 12-024
Total Value:	\$60,056	Tax Value:	
Total Tax Amt:	\$905.51	Improved:	

ALTEC Land Planning

19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-131-10-0000

Property Information			
Owner(s):	Cooley Don V Tr & Terri J Tr	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-10-0000
County:	San Bernardino	APN:	0472-131-10-0000
Map Coord:	316-B2	Census Tract:	
Lot#:		Block:	
Subdivision:		Tract:	
Legal:	Com 160.8 Ft E Of Sw Cor Ne 1/4 Se 1/4 Sec 32 Tp 6N R 4W Th N 80 Deg 30 Min E 300 Ft Th S 72 Deg 51 Min E 140.6 Ft To A Pt On S Li Sd Ne 1/4 Se 1/4 Th W Alg Sd S Li To Pob		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/ Sq. Ft. :
Zoning:		Lot Size Ac / Sq Ft:	0.255 / 11125 # of Units:
Sale and Loan Information			
Sale / Rec Date:	/ 07/13/1988	*\$/Sq. Ft.:	2nd Mtg.:
Sale Price:		1st Loan:	Prior Sale Amt:
Doc No.:	0000225901	Loan Type:	Prior Sale Date:
Doc Type:	Deed	Transfer Date:	07/13/1988
Seller:	Owner Name Unavailable	Prior Doc No.:	0000225901
		Lender:	Prior Doc Type:
			Deed
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$141	Tax Year / Area:	2018 / 12-024
Total Value:	\$141	Tax Value:	
Total Tax Amt:	\$19.53	Improved:	

ASSESSOR'S PARCEL MAP INFORMATION**- APN 0472-131-13-0000**

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-13-0000
County:	San Bernardino	APN:	0472-131-13-0000
Map Coord:	316-B2	Census Tract:	
Lot#:		Block:	
Subdivision:		Tract:	
Legal:	Ptn N 1/2 Se 1/4 Sec 32 Tp 6N R 4W Com At Nw Cor Se 1/4 Sd Sec Th S 00 Deg 29 Min W Alg W Li Sd Se 1/4 450.05 Ft To True Pob Th N 89 Deg 40 Min E 869.10 Ft Th N 00 Deg 22 Min E To Pt Which Is S 00 Deg 22 Min W 300 Ft From N Li Nw 1/4 Se 1/4 Sd Sec Th S 19 Deg 38 Min E 700 Ft Th N 60 Deg 41 Min E 110.31 Ft Th S 29 Deg 19 Min E 215 Ft Th N 60 Deg 41 Min E 405.21 Ft Th S 29 Deg 19 Min E 85 Ft Th N 60 Deg 41 Min E 240 Ft Th S 29 Deg 19 Min E 340 Ft Th S 80 Deg 49 Min W 201.9 Ft Th S 9 Deg 30 Min E 100 Ft Th S 80 Deg 30 Min W 300 Ft M/L To Pt On S Li N 1/2 Sd Se 1/4 Th W To Sw Cor Sd N 1/2 Se 1/4 Th N Alg W Li Sd Se 1/4 To True Pob Ex Ptn Lying Nwly Of Fol Desc Li Com At Pt On Nly Li Se 1/4 Sd Sec Sd Pt Being Desc As Nly Terminus Of Li Desc As B		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/ Sq. Ft. :
Zoning:		Lot Size Ac / Sq Ft:	11.29 / 491792 # of Units:
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	2nd Mtg.:
Sale Price:	\$130,000	1st Loan:	Prior Sale Amt:
Doc No.:	000000540969	Loan Type:	Prior Sale Date:
Doc Type:	Grant Deed	Transfer Date:	12/19/2012 Prior Doc No.:
Seller:	Rajacich James M	Lender:	Prior Doc Type:
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$74,806	Tax Year / Area:	2018 / 12-024
Total Value:	\$74,806	Tax Value:	
Total Tax Amt:	\$1,394.59	Improved:	

ALTEC Land Planning

19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA

ASSESSOR'S PARCEL MAP INFORMATION

– APN 0472-131-16-0000

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	, , CA
Vesting Type:	N/A	Alt. APN:	0472-131-16-0000
County:	San Bernardino	APN:	0472-131-16-0000
Map Coord:	316-B2	Census Tract:	
Lot#:		Block:	
Subdivision:		Tract:	
Legal:	Pln N 1/2 Se 1/4 Sec 32 Tp 6N R 4W Com At 1/4 Cor On E Li Sec 32 Th N 89 Deg 38 Min W 1053.5 Ft M/L To W Li State Hgwy Th S 47 Deg 25 Min E Alg W Li State Hgwy 265.9 Ft Th Alg W Li Hgwy On Curve To Rt With Radius 1660 Ft 384.1 Ft Th S 60 Deg 41 Min W 520.9 Ft To True Pob Th N 29 Deg 19 Min W 190 Ft Th S 60 Deg 41 Min W 160 Ft Th S 29 Deg 19 Min E 190 Ft Th N 60 Deg 41 Min E 160 Ft To True Pob		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/
Zoning:		Lot Size Ac / Sq Ft:	0.697 / 30400
		Sq. Ft. :	
		# of Units:	
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	\$155,000
Sale Price:	\$130,000	1st Loan:	
Doc No.:	000000540969	Loan Type:	
Doc Type:	Grant Deed	Transfer Date:	12/19/2012
Seller:	Rajacich James M	Lender:	
		Prior Sale Amt:	\$155,000
		Prior Sale Date:	02/28/1992
		Prior Doc No.:	0000098477
		Prior Doc Type:	
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$11,000	Tax Year / Area:	2018 / 12-024
Total Value:	\$11,000	Tax Value:	
Total Tax Amt:	\$184.07	Improved:	

ASSESSOR'S PARCEL MAP INFORMATION**- APN 0472-131-17-0000**

Property Information			
Owner(s):	Cooley Family Trust	Mailing Address:	19987 Boothill Rd, Apple Valley, CA 92307
Owner Phone:	Unknown	Property Address:	17248 D St, Victorville, CA 92395
Vesting Type:	N/A	Alt. APN:	0472-131-17-0000
County:	San Bernardino	APN:	0472-131-17-0000
Map Coord:	316-B2	Census Tract:	009913
Lot#:		Block:	
Subdivision:		Tract:	
Legal:	Ptn N 1/2 Se 1/4 Sec 32 Tp 6N R 4W Com At 1/4 Cor On E Li Sec 32 Th N 89 Deg 38 Min W 1053.5 Ft M/L To W Li State Hgwy For Pob Th S 47 Deg 25 Min E Alg W Li State Hgwy 265.9 Ft Th Alg W Li Hgwy On Curve To Rt With Radius 1660 Ft 384.1 Ft Th S 60 Deg 41 Min W 520.9 Ft Th N 29 Deg 19 Min W 190 Ft Th S 60 Deg 41 Min W 160 Ft Th S 29 Deg 19 Min E 190 Ft Th S 60 Deg 41 Min W 310 Ft Th N 19 Deg 38 Min W 700 Ft Th N O0 Deg 22 Min E 300 Ft Th S 89 Deg 38 Min E 650 Ft To Pob Ex That Ptn Lying Within Certain R/W To City Of Los Angeles 450 Ft Wide As Per Doc Recorded Bk 948 Pg 38 O R		
Property Characteristics			
Use:	Vacant Land (Nec)	Year Built / Eff. :	/
Zoning:		Lot Size Ac / Sq Ft:	14.288 / 622400
		Sq. Ft. :	
		# of Units:	63
Sale and Loan Information			
Sale / Rec Date:	11/26/2012 / 12/19/2012	*\$/Sq. Ft.:	\$155,000
Sale Price:	\$130,000	2nd Mtg.:	
Doc No.:	00000540969	1st Loan:	
Doc Type:	Grant Deed	Prior Sale Amt:	\$155,000
Seller:	Rajacich James M	Prior Sale Date:	02/28/1992
		Prior Doc No.:	0000098477
		Prior Doc Type:	
*\$/Sq. Ft. is a calculation of Sale Price divided by Sq. Feet.			
Tax Information			
Imp Value:		Exemption Type:	
Land Value:	\$225,093	Tax Year / Area:	2018 / 12-024
Total Value:	\$225,093	Tax Value:	
Total Tax Amt:	\$3,554.90	Improved:	

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TABLE: Representative Species for each Plant Community**Joshua Tree Woodland – Juniper Woodland**

COMMON NAME	SCIENTIFIC NAME
Joshua Tree	<u>Yucca brevifolia</u>
California Juniper	<u>Juniperus occidentalis</u>
Creosote Bush	<u>Larrea tridentata</u>
Common Sagebrush	<u>Artemesia tridentata</u>
Mormon Tea	<u>Ephedra nevadensis</u>
Rabbit Brush	<u>Chrysothamus nauseosus</u>
Golden Bush	<u>Haplopappus linearifolius</u>
Cutleaf Filaree	<u>Erodium cicutarium</u>
Wild Buckwheat	<u>Erigonum fasciculatum</u>
Beaver Tail	<u>Opuntia basilaris</u>
Turpentine Broom	<u>Thamnosoma montana</u>
Purple Brush	<u>Tetracoccus hallii</u>

Joshua Tree Woodland

Joshua Tree	<u>Yucca brevifolia</u>
Mojave Yucca	<u>Yucca schidigera</u>
Creosote Bush	<u>Larrea tridentata</u>
Common Sagebrush	<u>Artemesia tridentata</u>
Wild Buckwheat	<u>Erigonum fasciculatum</u>
Cotton Torn	<u>Tetradymia axillaris</u>
Boxthorn	<u>Lycium andersonii</u>
Filaree	<u>Erodium sp.</u>
Schimus	<u>Schimus barbatus</u>

TABLE: Representative Species for each Plant Community – continued**Creosote Bush Scrub**

COMMON NAME	SCIENTIFIC NAME
Creosote Bush	<u>Larrea tridentata</u>
Bur Sage (Burrow Bush)	<u>Franseria dumosa</u>
Galleta grass	<u>Hilaria rigida</u>
Boxthorn	<u>Lycium andersonii</u>
Cheese Bush	<u>Hymenoclea salsola</u>
Ephedra	<u>Ephedra nevadensis</u>
Krameria	<u>Krameria parvifolia</u>
Indian Ricegrass	<u>Oryzopsis hymenoides</u>
Cholla	<u>Opuntia ramosissima</u>
Wild Buckwheat	<u>Erigonum fasciculatum</u>
Hedgehog cactus	<u>Echinocereus englemannii</u>

Alkali Sink

Salt Bush	<u>Atriplex polycarpa</u>
Mojave Salt Bush	<u>Atriplex spinifera</u>
Hoary Salt Bush	<u>Atriplex canescens</u>
Salt grass	<u>Distichlis spicata</u>

Desert Riparian

Willow	<u>Salix</u> Sp.
Composites	<u>Compositae</u> Sp.
Galleta Grass	<u>Hilaria rigida</u>
Golden Bush	<u>Haplopappus acradenius</u>

TABLE: Representative Wildlife Species –**Joshua Tree Woodland – Juniper Woodland****COMMON NAME****SCIENTIFIC NAME****REPTILES**

Desert Night Lizard

Xantusia vigilis

Speckled Rattlesnake

Crotalus mitchelli**BIRDS**

Red-tailed hawk

Buteo jamaicensis

Sparrow hawk

Falco sparverius

Morning Dove

Zenaidura macroura

Anna's hummingbird

Calypte anna

Scrub jay

Aphelocoma coerulescens

Common raven

Corvus corax

Pinion jay

Gymnorhinus cyanocephala

House wren

Troglodytes aedon

Sage sparrow

Amphispiza belli**MAMMALS**

Coyote

Canis latrans

Gray fox

Urocyon cinereoargenteus

California ground squirrel

Citellus beecheyi

Little pocket mouse

Perognathus longimembris

Desert kangaroo rat

Dipodomys deserti

Desert wood rat

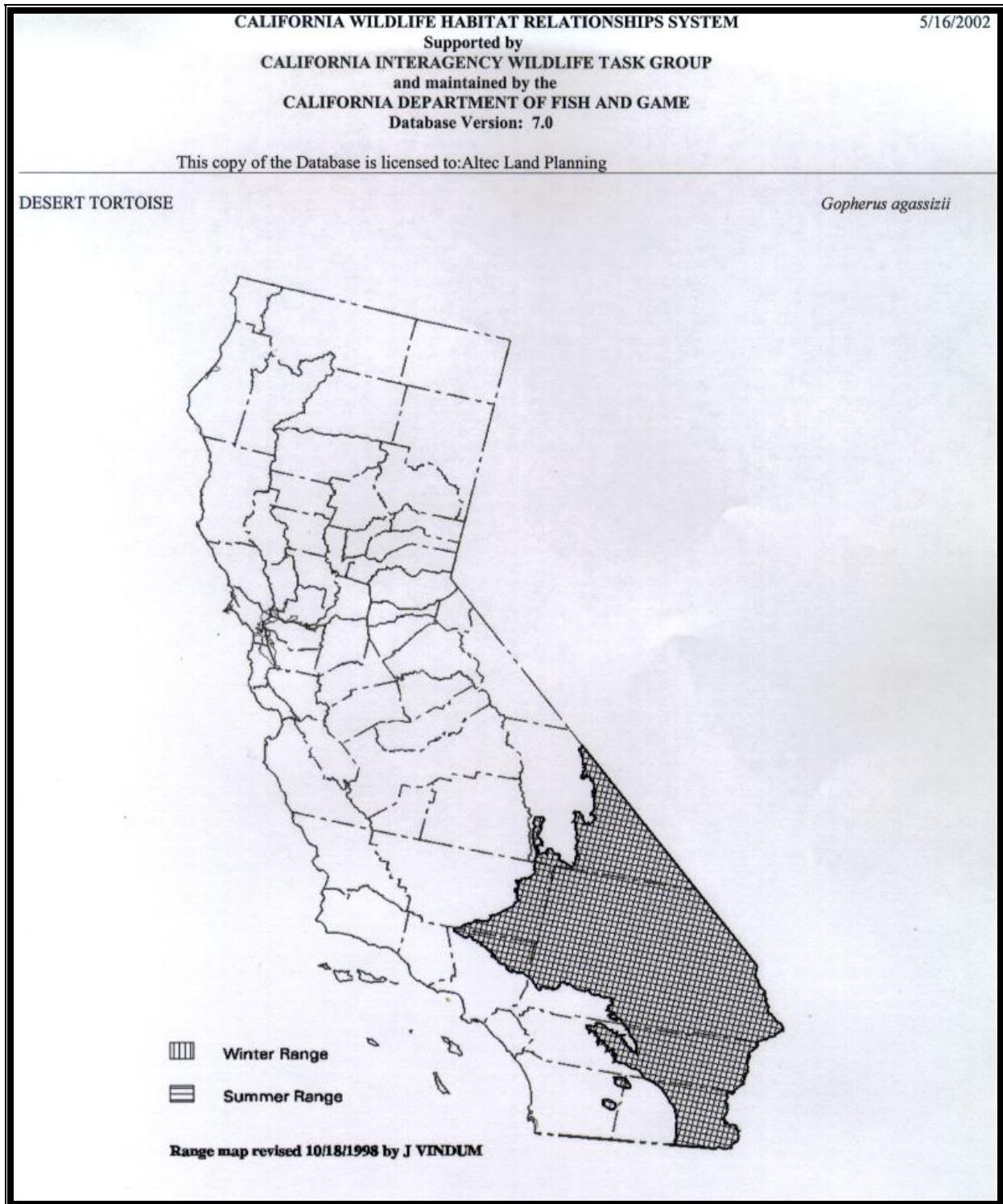
Neotoma lepida

Blacktail jackrabbit

Lepus californicus

Desert Cottontail

Sylvilagus auduboni



NOTE: Species range maps are not as often as the location database. Therefore, discrepancies may exist. If there are differences, the location data can be assumed more inclusive.

REPTILES

SPECIES ACCOUNTS

Desert tortoise*(Gopherus agassizii)*

CA: Threaten (1989)
FED: Threaten (1990)
General Habitat: Mojavean Desert Scrub & Sonoran Desert Scrub

The desert tortoise is a medium-sized tortoise with an adult carapace length of about eight to 14 inches. Males, on average, are larger than females and are distinguished by having a concave plastron, longer gular horns, and larger chin glands on each side of the lower jaw, and a longer tail. Carapace color varies from light yellow-brown (horn color) to dark gray-brown. A composite of characteristics often is necessary to distinguish the desert tortoise from the other species of gopher tortoises, but its most-unique feature is its very large hind feet.

The desert tortoise ranges from southern Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico. In California, desert tortoises occur in northeastern Los Angeles, eastern Kern, and southeastern Inyo counties, and over most of San Bernardino, Riverside, and Imperial counties. The desert tortoise inhabits river washes, rocky hillsides, and flat desert having sandy or gravelly soil. Creosote bush, burro-bush, saltbush, Joshua tree, Mojave yucca and cacti are often present in the habitat along with other shrubs, grasses, and wildflowers.

The desert tortoise's range in California has been reduced 50 to 60 percent since the 1920s and is now highly fragmented. Much of the tortoise's habitat was degraded by a combination of human-related activities including livestock grazing, energy and mineral development, and OHV use. In addition, illegal shooting and collecting directly reduced the tortoise population. The desert tortoise continues to suffer from severe population losses due to disease and predation on juvenile tortoises by ravens. A disease called upper respiratory tract disease has appeared in many parts of the desert tortoise's range; the most severe outbreaks have occurred in California's west Mojave Desert, where long-term study plots have found population declines reaching 70 percent. The DFG, USFWS, BRD, and BLM are coordinating research on this disease. Veterinarians from the DFG, UCD, the University of Florida, and private practitioners are involved in the effort. Other tortoise diseases have shown up in several parts of the Southern California deserts. The disease outbreaks are probably due, in part, to population stresses related to droughts.

Studies indicate that raven predation has caused at least localized serious reductions in the number of young tortoises surviving to adulthood. USFWS bird surveys found a 1,500 percent increase in ravens in the Mojave Desert between 1968 and 1988. Another threat to desert tortoise populations includes the proposed 250 square mile expansion of Fort Irwin. 182 square miles of this proposed expansion are designated by the USFWS as desert tortoise critical habitat.

The DFG acquired over 22,000 acres of desert tortoise habitat in 1986. Some of these lands were acquired with California Endangered Species Tax Check-Off funds, which were also used to investigate the disease and raven problems. Also, DPR has provided OHV Green Sticker funds to the DFG to solve the raven problem and provide public education.

A federal Recovery Plan was completed in 1994, and USFWS has designated about six million acres as critical habitat, most of which is in California. The Recovery Plan will be implemented in California by a series of large-scale ecosystem management plans. The DFG is participating in multi-agency teams that are drafting these plans.

The status in 1999 of the desert tortoise: *Declining.*
Threatened and Endangered Species

NOTE: The Mojave Desert Plan is now under public review until September 2003, San Bernardino County has filed a lawsuit against it, and the implementation by the various agencies will provide the potential for a multi-species conservation habitat zone depending upon the outcome of these current events.

DEPARTMENT OF AGRICULTURE

777 East Rialto Avenue • San Bernardino, CA 92415-0720 • (714) 387-2105



COUNTY OF SAN BERNARDINO
GENERAL SERVICES AGENCY

ROGER L. BIRDSALL
Commissioner
EDOUARD P. LAYAYE
Chief Deputy Commissioner

JOSHUA TREE TRANSPLANTING Yucca brevifolia

The following procedure is recommended for transplanting Joshua Trees:

1. Maintain as much of the root system as possible intact when transplanting. For trees 4' or less an area of one-half the height of the tree should be left intact to preserve the root system.
It is recommended that a transplanting shovel be used if the tree is more than 4' high.
2. Do not allow roots to dry out in the transplanting process. Plant as quickly as possible.
3. Dig a hole twice as large as the soil ball at the desired location where you wish the Joshua Tree to be located, before the plant is removed from the original location.
4. Fill the hole with water.
5. The tree being moved should be placed in the hole approximately the same direction and ground level of its original location.
6. Loose soil should be placed around the ball of the transplanted tree displacing the water.
7. Depending on the height and the need to stabilize the tree, one or two stakes may be used until the tree is able to withstand the element by itself. When staking, always allow the trunk to flex. This encourages a stronger tree that is better able to withstand the elements.
8. To prevent rotting at the base of the trunk, the soil should slope away from the base.
9. The preferred method of watering is by sprinkling from the top down. Joshua trees, like many desert plants, obtain their moisture through absorption. Weekly irrigations the first few weeks after transplanting will allow adequate root establishment. Under normal conditions, when established, watering once every 2-4 weeks will be sufficient.
10. Good luck and thank you for helping to preserve our Native Plants!

ROGER L. BIRDSALL
Agricultural Commissioner

RLB:js
2/RR

PICTURES OF PROJECT SITE



NORTHERLY PARCEL BORROW AREA: LOOKING WESTERLY AT LADWP LUGO STATION



NORTHERLY PARCEL BORROW AREA: LOOKING NORTHERLY AT LADWP LUGO STATION



NORTHERLY PARCEL BORROW AREA: LOOKING SOUTHERLY



NORTHERLY PARCEL BORROW AREA: LOOKING EASTERLY ALONG ACCESS ROAD



NEC NORTHERLY PARCEL ALONG ROUTE 66: LOOKING NORTHERLY



NEC NORTHERLY PARCEL ALONG ROUTE 66: LOOKING NORTHEASTERLY

ALTEC Land Planning

19531 US Highway 18
Apple Valley, CA 92307

(760) 242-9917
Fax (760) 242-9918
RandyAICP@gmail.com

BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA



NEC NORTHERLY PARCEL ALONG ROUTE 66: LOOKING SOUTHEASTERLY



NEC NORTHERLY PARCEL ALONG ROUTE 66: LOOKING SOUTHERLY



NWC NORTHERLY PARCEL: LOOKING SOUTHERLY



NWC NORTHERLY PARCEL: LOOKING WESTERLY



NWC NORTHERLY PARCEL: LOOKING AT LADWP LUGO STATION



NORTH LINE: LOOKING SOUTHERLY ALONG WESTERLY PROPERTY LINE



NORTH LINE: LOOKING SOUTHERLY ACROSS PROJECT SITE (BORROW PIT) AREA



LOOKING EASTERLY ACROSS PROJECT SITE FROM NORTHWESTERLY CORNER AREA



WESTERLY LINE: LOOKING SOUTHERLY ALONG WESTERLY LINE



WESTERLY LINE: LOOKING NORTHERLY ALONG WESTERLY LINE



LOOKING NORTHWESTERLY AT LUGO STATION FROM NORTHWESTERLY CORNER AREA



LOOKING NORTHERLY AT LUGO STATION FROM NORTHWESTERLY CORNER AREA



LOOKING NORTHERLY AT LUGO STATION FROM NORTHWESTERLY CORNER AREA



LOOKING EASTERLY FROM NORTHERLY LINE AREA

ALTEC Land Planning

19531 US Highway 18
Apple Valley, CA 92307

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BIOLOGICAL BASELINE ASSESSMENT & NATIVE PLANT REPORT: 52± ACRES, ROUTE 66., VICTORVILLE, CA



LOOKING NORTHERLY FROM FROM NORTHERLY LINE AREA

OTHER PICTURES OF PROJECT AREA



LOOKING EASTERLY ALONG RANCHO ROAD: OFF OF THE PROPERTY FROM SWC



LOOKING NORTHERLY FROM RANCHO ROAD: OFF OF THE PROPERTY FROM SWC



LONG-NOSED LEOPARD LIZARD (*Gambelia wislizenii*) BASKING ALONG A DIRT ROAD



OLD WELL LOCATED ON ADJACENT PROPERTY ALONG A DIRT ROAD



JOSHUA TREE #1



JOSHUA TREE #2



JOSHUA TREE #3 (2 Clones)



JOSHUA TREE #4



JOSHUA TREE #5 (2 Clones)



JOSHUA TREE # 6



JOSHUA TREE # 7



JOSHUA TREE # 8



JOSHUA TREE # 9



JOSHUA TREE # 10 and 11



JOSHUA TREE # 12



YUCCA SCHIDEGRA #1 (DEAD TO ALIVE AND INTERTWINED ROOT CORMS)



OFF-SITE SOUTH - YUCCA SCHIDEGRA (DEAD TO ALIVE INTERTWINED ROOT CORMS)



OFF-SITE TO THE WEST – 3-FOOT JOSHUA TREE NEAR LADWP 500KV LINES



OFF-SITE TO THE EAST - JOSHUA TREE WITH MULTIPLE CLONES



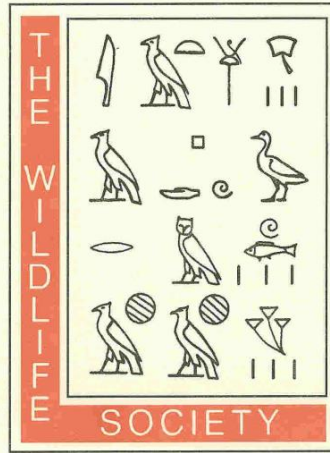
OFF-SITE WEST: DEAD STANDING JOSHUA TREE



TYPICAL EXAMPLE: CHOLLA “PENCIL” (LARGEST ON SITE)



TYPICAL EXAMPLE: CHOLLA “GOLDEN” AND SCATTERED TRASH ON SITE



The Wildlife Society

INCORPORATED IN WASHINGTON, D.C.

grants the designation

Certified Wildlife Biologist

to

Randolph J. Coleman

in recognition of fulfillment of all the professional requirements approved by The Wildlife Society and verified by the Society's Certification Review Board. This designation is valid for 5 years, beginning this 2nd day of August 2010, provided membership in the Society remains in good standing.

President, The Wildlife Society

Chairman, Certification Review Board

Executive Director, The Wildlife Society

International Society of Arboriculture Certified Arborist

Randy Coleman

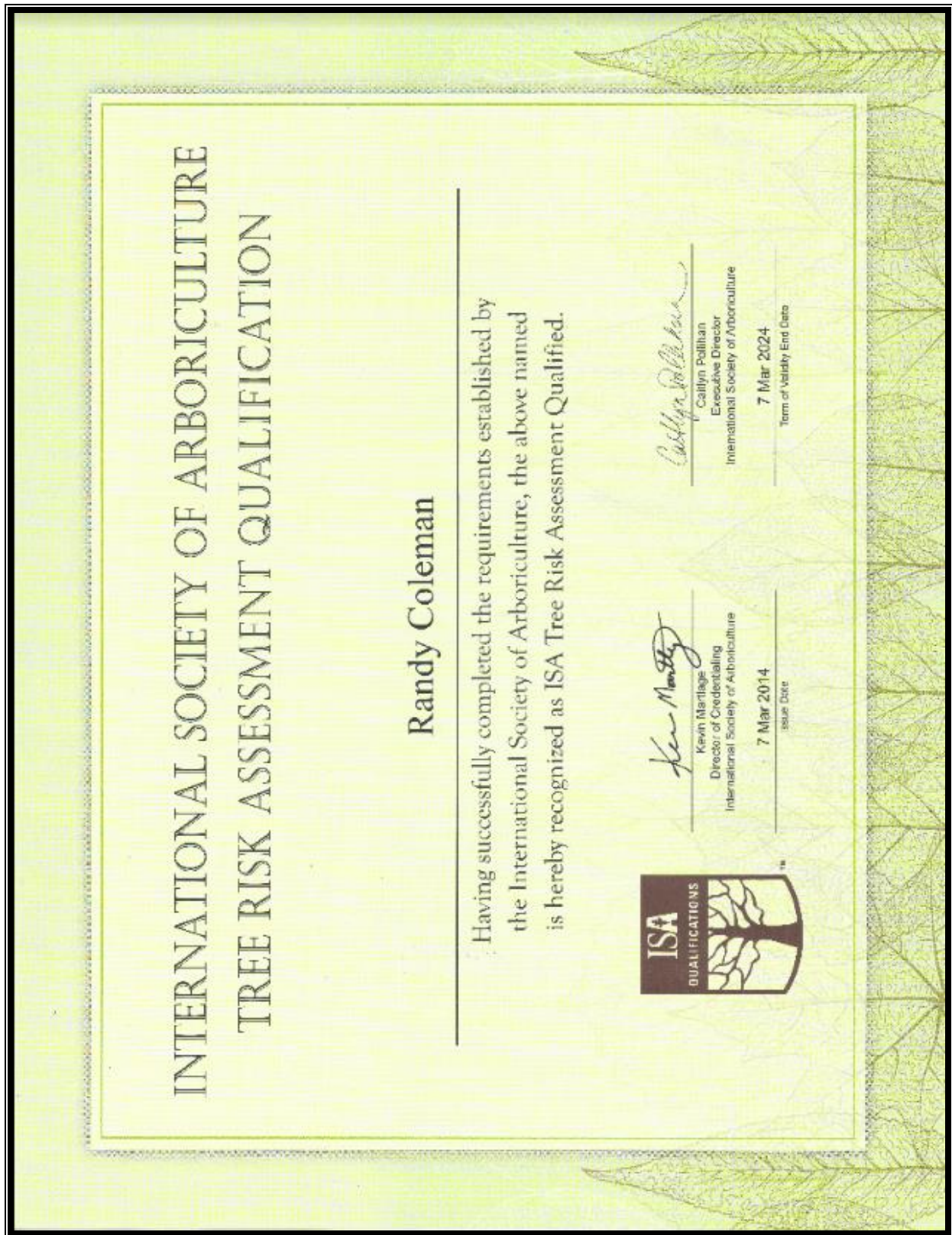
Having successfully completed the requirements set by the Arborist Certification Board of the International Society of Arboriculture, the above named is hereby recognized as an ISA Certified Arborist



A handwritten signature in black ink, appearing to read "Jim Skiera".

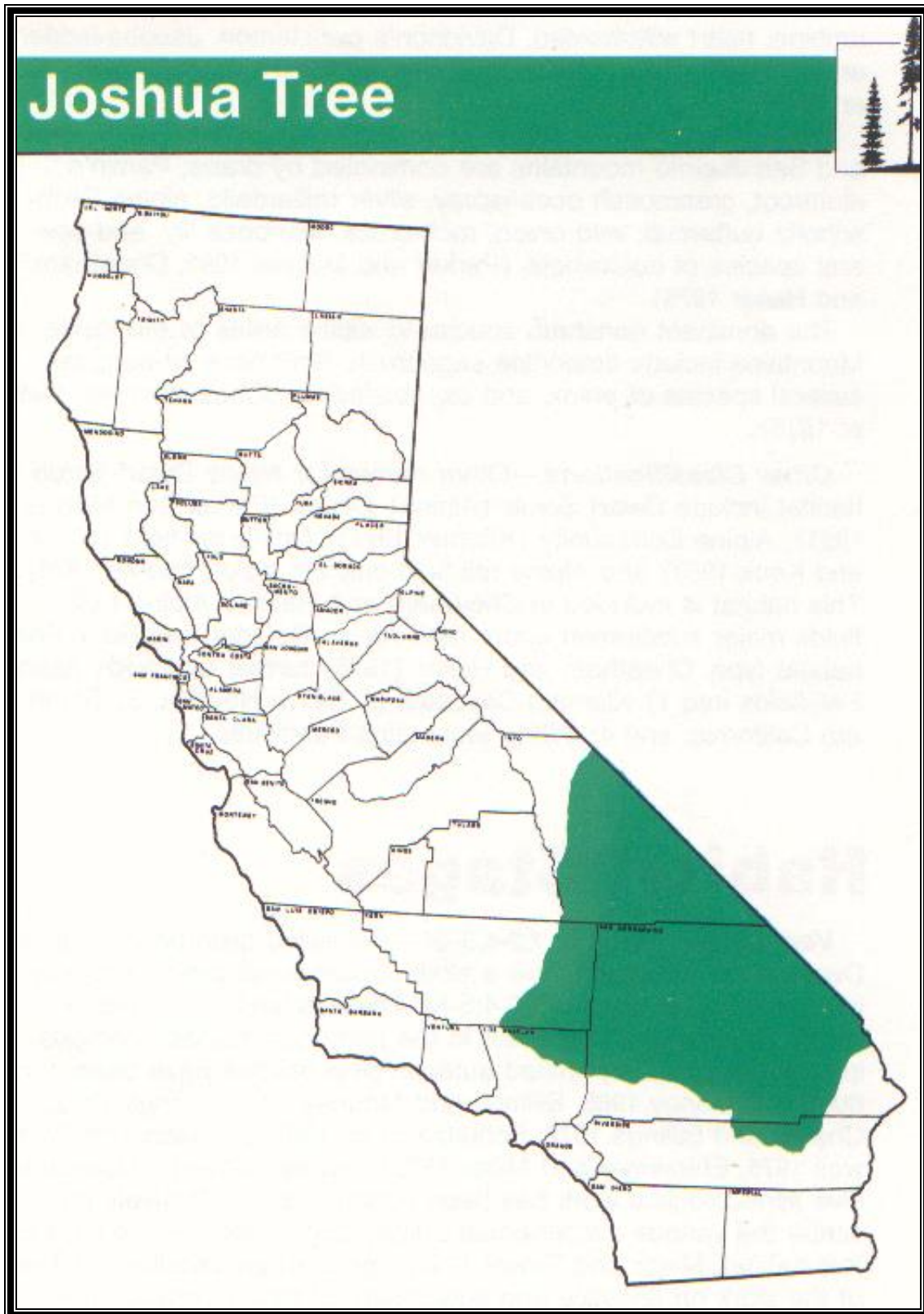
Jim Skiera, Executive Director
International Society of Arboriculture

WE-8024A	Jul 14, 2007	Dec 31, 2013
Certification Number	Certified Since	Expiration Date





JOSHUA TREE HABITAT MAP



California Wildlife Habitat Relationships System
California Department of Fish and Game
California Interagency Wildlife Task Group**JOSHUA TREE HABITAT**

By: William F. Laudenslayer Jr.

Vegetation

Structure - Joshua Tree habitats are characterized as open woodlands of widely scattered Joshua trees (Miller and Stebbins 1964, Cheatham and Haller 1975, Küchler 1977) with a low to more or less dense community of broad-leaved evergreen and deciduous shrubs (Küchler 1977) found in Desert Scrub habitats (Vasek and Barbour 1977). Joshua Tree habitats generally include little herbaceous understory (Cheatham and Haller 1975). Joshua trees usually are the only arborescent shrubs present (Cheatham and Haller 1975) however, in some areas, especially in the eastern Mojave Desert, other yuccas as well as scattered junipers and pinyons may coexist. Joshua trees, though very conspicuous, generally contribute little vegetation cover or stem density; thus, they should be regarded dominant only in terms of stature (Rowlands 1978). Large Joshua trees may exceed 6 m (20 ft) in height with maximum height ranging from 12 to 15 m (40 to 50 ft) (Jaeger 1957, Cheatham and Haller 1975, Thorne 1976, Küchler 1977).

Composition - Joshua trees are rarely found as pure stands (Parker and Matyas 1981) but generally are associated with other overstory trees and shrubs. Coexisting overstory species include California juniper, Utah juniper, singleleaf pinyon, and Mojave yucca (Munz 1974, Cheatham and Haller 1975, Paysen et al. 1980, Parker and Matyas 1981). Many plants typical to Joshua tree habitats exist in adjacent Desert Scrub or Juniper habitats which Joshua trees may also inhabit (Paysen et al. 1980). Shrub species include big sagebrush, blackbrush, Nevada ephedra, California buckwheat, Cooper goldenbush, burrobush, creosotebush, Anderson's wolfberry, Cooper wolfberry, squawthorn, spiny menodora, Opuntia, bladdersage, longspine horsebrush, and Spanish bayonet (Shelford 1963, Bradley and Deacon 1967, Munz 1974, Cheatham and Haller 1975, Küchler 1977, Parker and Matyas 1981). Grasses and forbs include red brome, big galleta, bush muhly, and desert needlegrass (Bradley and Deacon 1967, Cheatham and Haller 1975).

Other Classifications - Other names for Joshua Tree habitat include Joshua Tree Series (Paysen et al. 1980, Parker and Matyas 1981), Joshua Tree Woodland - 7.3 (Cheatham and Haller 1975), Joshua Tree Woodland - 29 (Munz and Keck 1970) (No Munz and Keck 1970 in Habitat Lit Cite. I used Munz and Keck 1973 for Lit Cite at end.), and Joshua Tree Scrub - 40 (Küchler 1977).

Habitat Stages

Vegetation Changes - 1;2-3:S-M. After disturbance or invasion, Joshua Tree habitats slowly proceed through the successional sequence. Joshua trees of "typical form" (i.e., var. Jaegeriana) (P. G. Rowlands, pers. comm.) generally do not begin to branch until they reach a height of 1.5 to 1.8 m (5 to 6 ft) (Jaeger 1957).

Duration of Stages- The time necessary for Joshua tree habitats to progress through successional stages is not known but most likely relates to precipitation, fire, soil characteristics, and livestock use.

Biological Setting

Habitat - Joshua Tree habitats generally occur at moderate elevations in the Mojave Desert between creosotebush scrub and pinyon-juniper woodlands (Vasek and Barbour 1977). At lower elevations, Joshua Trees intergrade with Desert Scrub (DSC), Alkali Scrub (ASC) (Cheatham and Haller 1975), and Desert Succulent Shrub (DSS). At higher elevations, Joshua trees interface with Pinyon-Juniper (PJN) (Cheatham and Haller 1975, Thorne 1976) and Sagebrush (SGB) (Thorne 1976). Joshua Tree habitats also may be adjacent to Desert Riparian (DRI) and Desert Wash (DSW) habitats within the elevational zone inhabited by Joshua Trees.

Wildlife Considerations. Because Joshua Trees are the only sizable trees in many Joshua Tree habitats (Jaeger 1957), this species enhances the shrublike character of Desert Scrub habitat. Joshua Trees provide song perches, lookout posts, and nest sites for birds (e.g., ladder-backed woodpecker, cactus wren, Scott's oriole). The sharp spiny leaves provide protective havens for birds and lizards (Miller and Stebbins 1964). The desert night lizard, in particular, requires fallen Joshua tree branches, dead clumps of Joshua Trees or other yucca species, or other debris for shelter (Stebbins 1966)

Physical Setting

Joshua Tree habitats occur in broad valleys where soils are deep, on alluvial or rocky slopes, and on pediments with minimal runoff surrounding desert mountains and mesas (Webber 1953, Jaeger 1957, Munz 1974, Thorne 1976, Parker and Matyas 1981, Turner 1982). Soils must be well drained but may vary considerably in other characteristics. Typical soils

may be loose, porous, loamy, sandy, or fine gravelly (Webber 1953, Jaeger 1957, Thorne 1976, Turner 1982) and are more permeable with lower salt concentrations and more organic matter than other soils, especially those at lower elevations (Bradley and Deacon 1967). Hot, dry summers and cool to cold, moist winters are characteristic of areas occupied by Joshua trees and their associates. Highest July temperatures range between 28 to 44 C (82 to 111 F) and lowest January temperatures range between 9 and 3 C (16 and 37 F) (Rowlands et al. 1982, P. G. Rowlands pers. comm.). Most precipitation is in winter, though summer rainfall occurs, especially in the eastern Mojave Desert. Total precipitation ranges from 11 to 30 cm (4 to 12 in) per year and potential evapotranspiration from 2 to 15 times as great as precipitation (Rowlands et al. 1982, P. G. Rowlands pers. comm.). Slope aspect influences the elevations at which Joshua trees grow. In Nevada, Joshua trees generally occupy north-facing slopes at elevations between 1280 and 1830 m (4200 and 6000 ft) but may be found down to 1190 m (3900 ft). In contrast, Joshua trees on south-facing slopes may be found up to 1980 m (6500 ft) (Bradley and Deacon 1967).

Distribution

The elevational distribution of Joshua Tree habitats varies from 750 to 2300 m (2500 to 7500 ft) (Munz 1974, Cheatham and Haller 1975, Thorne 1976, Rowlands et al. 1982, P. G. Rowlands pers. comm.) but maximum development occurs above 1000 m (3065+/- to 3085+/- ft) (Shelford 1963). Joshua Tree habitats generally are found at most points on the periphery of the Mojave Desert; however, these habitats do not occur where the Mojave Desert contacts Sonoran Desert scrub habitats (Turner 1982).

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