



November 21, 2022

Mr. Marc T. Blain

Psomas

225 South Lake Ave., Suite 1000
Pasadena, California 91101

Re: Results of a Presence/Absence Desert Tortoise Survey for the Proposed Palmdale Logistics Park, Los Angeles County, California

Dear Mr. Blain:

This letter report presents the results of a presence/absence survey for the desert tortoise (*Gopherus agassizii*) conducted by Leatherman BioConsulting, Inc. (LBC) on the proposed Palmdale Logistics Park Project (Project) in the City of Palmdale, California. The Project is located on Assessor Parcel Number (APN) 312-801-5089 and on Tentative Parcel Map No. 83915. Development of the site would include two light industrial warehouse buildings. The survey followed the current presence/absence and abundance protocol for desert tortoise (U.S. Fish and Wildlife Service [USFWS] 2009).

PROJECT LOCATION AND DESCRIPTION

The Project is located on approximately 76.97-acres in the southern portion of Antelope Valley in the City of Palmdale in Los Angeles County, California. The Project site is located at the southwest corner of Columbia Way/Avenue M and Division Street. The Project site is approximately 0.8 miles east of State Route 14 and 0.1-mile west of Sierra Highway and is located on the Lancaster West U.S. Geologic Survey 7.5 quadrangle map. The survey area included the Project boundary and a 100-foot buffer.

Topography in the vicinity of the Project site is generally flat with very little change in elevation. Elevations range from approximately 2,550 feet above mean sea level (msl) in the southern portion of the site to approximately 2,530 feet above msl in the northern portion of the property. The Project site is currently undeveloped with a large dry wash, Amargosa Creek, running along the western edge of the site. Soils on the Project site are mapped as Cajon loamy sand, 0 to 2 percent slopes; Hesperia fine sandy loam, 0 to 2 percent slopes; and Rosamond loam (USDA NRCS 2007). The vegetation on the site is comprised of various shrub communities including disturbed Nevada ephedra scrub, disturbed Nevada ephedra – Mojave cottonthorn scrub, disturbed great basin sagebrush – rubber rabbitbrush scrub, redstem filaree fields, and sandy dry wash.

The majority of the survey area has been previously disturbed by human activities. Homeless encampments were observed in multiple locations around the Project area during surveys. The

habitat surrounding these encampments showed various disturbances such as fire, soil disturbances from off-road vehicles, large amounts of trash and various household items. In addition, mechanical disturbance to vegetation is visible in patches throughout the site. Dirt access roads run around the perimeter of the site and through the center of the site in a north-south direction.

The substrate in the survey area consists mostly of stabilized sandy loams with some loose sands occurring along the west end where a large sandy wash extends along the boundary of the Project. A few small drainage features run through the site where loose soils provide suitable burrow habitat for desert tortoise. Dominant perennial plants on the Project site consist of Mormon tea scrub (*Ephedra nevadensis*), Anderson's boxthorn (*Lycium andersonii*), rabbitbrush scrub (*Ericameria nauseosa*), creosote bush scrub (*Larrea tridentata*), and scattered Joshua trees (*Yucca brevifolia*).

SPECIES BACKGROUND

The desert tortoise occurs in the Mojave and Sonoran deserts in southern California, southern Nevada, Arizona, and the southwestern tip of Utah in the U.S., as well as Sonora and northern Sinaloa in Mexico. The designated Mojave population of the desert tortoise is listed as federally and State Threatened and includes those animals living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran (Colorado) Desert in California (USFWS 1994). The Revised Recovery Plan for the Desert Tortoise (USFWS 2011) identifies six Recovery Units for the tortoise: Upper Virgin River, Northeastern Mojave, Eastern Mojave, Western Mojave, Eastern Colorado, and Northern Colorado. The survey area is located in the Western Mojave Recovery Unit.

Within the western Mojave range, tortoises typically occur in creosote bush, cactus (*Opuntia* spp.), shadscale (*Atriplex confertifolia*) scrub habitats, and Joshua tree (*Yucca brevifolia*) woodland below 4,000 feet above mean sea level (Berry 1990). Soils must be friable (easily crumbled) enough for digging burrows, but firm enough so that burrows do not collapse (USFWS 1994). During the winter, tortoises will opportunistically use burrows of various lengths, deep caves, rock and caliche crevices, or overhangs for cover (Bury et al. 1994).

Desert tortoises have unique characteristics that enable them to survive in a desert environment. Elephantine limbs and well-developed claws enable tortoises to burrow into desert soils to escape the heat of the day. Burrows may be over nine feet long, with the tortoise emerging in the morning or late afternoon to forage from March through October. By November, most tortoises have begun hibernation until the following March, only emerging during winter storms to replenish water stores. However, the desert tortoise may go for many years without drinking, ingesting most of its water from plants and then storing it in its bladder (Stebbins 2003).

Desert tortoises generally emerge from their burrows during mid-March to feed on annual plants. During a six-week period, fresh green grass and spring wildflowers are their primary nutritional source. Dry stems of grass and cactus pads provide sustenance in drier times (Stebbins 2003). Introduced plant species have greatly encroached upon native plant species in the desert tortoise's natural range, degrading the existing natural ecosystem. Desert tortoises have, however, adapted to eating filaree (*Erodium* spp.) and other non-native species (Brooks 1999).

Desert tortoises have delayed maturity (14–20 years) and long life spans. Their reproduction/generation cycle is 25 years, with individuals having life spans that last well over 50 years. However, desert tortoise reproductive potential is low. They lay relatively few eggs (3–14) in each clutch, and juveniles have a high mortality rate. Slow growth (one inch per year) and soft, flexible shells make them particularly vulnerable to predators at the juvenile stage of life.

The desert tortoise's range in California has been reduced by 50–60 percent since the 1920s and is now highly fragmented. Much of the tortoise's habitat is degraded by a combination of human related activities, including livestock grazing, energy and mineral development, and off highway vehicle (OHV) use. In addition, illegal shooting and collecting (for pets) directly reduced the tortoise population. The desert tortoise continues to suffer from severe population losses due to disease and predation on juvenile tortoises, particularly by ravens (*Corvus corax*) (Boarman and Kristan 1993). Upper respiratory tract disease is the most important infectious disease affecting the desert tortoise (USFWS 2011). The most severe outbreaks have occurred in California's West Mojave Desert, where long-term study plots have found population declines reaching up to 70 percent (Schumacher et al. 1993). The USFWS, the CDFW, the Biological Resources Division of the USGS, and the Bureau of Land Management are coordinating research on this disease. Other tortoise diseases have shown up in several parts of the Southern California deserts, including cutaneous dyskeratosis, urolithiasis, and shell necrosis (Homer et al. 1998).

Studies indicate that raven predation has caused serious localized reductions in the number of young tortoises surviving to adulthood (Boarman and Kristan 1993). Predation pressure by ravens is increased through elevated raven populations as a result of resource subsidies associated with human activities (USFWS 2011).

In 1994, the USFWS designated approximately 6.4 million acres as critical habitat for the Mojave population of the desert tortoise (USFWS 1994b). There are eight critical habitat units in California that total 4,754,000 acres. The Project is not located within designated critical habitat for this species.

SURVEY METHODS

The survey was conducted by LBC Principal Biologist Brian Leatherman, Project Biologist Adam DeLuna, and Staff Biologists John Simon-Parent and Taylor Beaulac. Survey methods followed the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) and the current USFWS presence/absence guidance for small projects within the range of the desert tortoise (USFWS 2019). Small project surveys can be conducted year around, although the survey was conducted within the fall activity window required for larger projects (September through October) on October 24, 2022 from approximately 8:30 a.m. to 12:30 p.m. Survey conditions consisted of clear skies and mild temperatures that ranged from 52 to 63 degrees Fahrenheit with winds that ranged from one to ten miles per hour. The survey consisted of walking 10-meter wide parallel belt transects in a north-south direction to obtain 100 percent coverage of the survey area. Transect widths were maintained at 10 meters apart with the aid of Garmin handheld GPS units which allowed for 100 percent visual coverage of the ground surface. The focus of the survey was on the detection of desert tortoise and their diagnostic sign. All natural or artificial (man-made) burrows suitable for use by the desert tortoise were investigated as the surveys were conducted, and all wildlife observed or detected incidentally were documented in field notes.

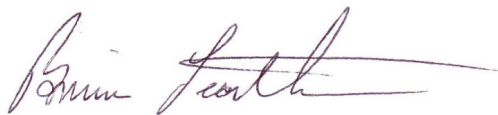
SURVEY RESULTS

A presence/absence survey for desert tortoise was conducted on approximately 96-acres, including habitat within the Project boundary plus a buffer area) for the proposed Palmdale Logistics Park in Palmdale, California. No desert tortoise or diagnostic sign (carcasses, bones, scutes, scats, shelter sites, tracks, egg shell fragments, courtship rings, drinking depressions, etc.) to indicate their presence was observed during the survey. Two class five burrows were observed within the Project boundary. Class five burrows are defined as those in a “deteriorated condition which includes collapsed burrows; possibly desert tortoise” (USFWS 2009). Neither burrow appeared to be active or currently used by any wildlife species, and neither exhibited classic desert tortoise burrow shape.

Most of the Project area represents poor quality habitat for the desert tortoise. The Project sites are highly disturbed by the development and/or operation of nearby industrial facilities and homeless camps. The proximity to well-traveled paved roads and presence of dirt roads within and along the boundary of the Project areas further contribute to the lowered quality of the habitat. Based on the negative results of the survey reported here, disturbed habitat, and lack of diagnostic tortoise sign, the desert tortoise is likely absent from the Project at this time.

The Project area is not within USFWS critical habitat. FWS designated critical habitat areas for the desert tortoise in 1994 (USFWS 1994) and prescribed management actions to aid recovery, with critical habitat providing legal protection. The closest critical habitat unit to the survey area is the Pinto Mountain Critical Habitat Unit, approximately 12 miles to the southeast.

LEATHERMAN BIOCONSULTING, INC.

A handwritten signature in dark ink, appearing to read "Brian Leatherman". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Brian Leatherman
Principal Biologist

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