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WILLOW ROCK ENERGY STORAGE CENTER PROJECT DESERT TORTOISE FOCUSED SURVEY



UNINCORPORATED COMMUNITY OF ANSEL, KERN COUNTY, CALIFORNIA

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1.0 INTRODUCTION

WSP USA Environment & Infrastructure Inc. (WSP) was contracted by GEM A-CAES LLC, a subsidiary of Hydrostor Inc. (Hydrostor), to conduct biological resources surveys at the site of the proposed Willow Rock Energy Storage Center (WRESC) in the unincorporated community of Ansel, Kern County, California, to support the preparation of the California Energy Commission's Application for Certification. As part of the 2023 biological surveys, WSP was retained to conduct focused protocol-level surveys for the desert tortoise (*Gopherus agassizii*) in the WRESC project area (WSP USA 2024).

Hydrostor updated the WRESC project design to include additional project features following the 2023 field survey season. This addendum report presents the methods, results, and discussion of the surveys conducted in 2024 within additional project areas that were not included in the 2023 surveys. All figures referenced in this report are provided in Appendix A; photographs may be provided upon request.

1.1 Project Description

As part of the on-going data collection, additional focused surveys are required to document the presence of desert tortoise and their associated habitat in additional workspace areas and alternative gen-tie transmission line right-of-way alignments (gen-tie alignments). These areas are described as P2 North (47 acres) and P2 South (10 acres), as well as approximately 3.69 miles of additional gen-tie alignments (Figure 1, Regional Location). In the context of this report, "project site" specifically refers to the project footprint, including all linear transmission lines and other supporting ancillary features while "project area" refers to just the additional project areas that were added for the additional 2024 addendum.

1.2 Project Location and Topography

The project area is located on private property in the rural community of Ansel within the 7.5-minute Soledad Mountain and Rosamond, California, U.S. Geological Survey topographic quadrangle (topo quad) (USGS 1973). P2 North and P2 South are located east of State Route 14 and the additional gen-tie alignments are located west of State Route 14 (Figure 1, Regional Location). The project site is located within portions of Sections 31, 32, and 33 of Township 10 North and Range 12 West; portions of Section 4 of Township 9 North and Range 12 West; and portions of Sections 14, 15, of Township 9 North and Range 13 West (Figure 2, Historic USGS Topographic Map).

Topography in the project site slopes from northwest to southeast with flat areas in the southern portions and gently rolling hills in the central portion of the project site. Elevations range from approximately 2,400 feet (732 meters) to 2,720 feet (830 meters) along Dawn Road (Figure 3, Local Vicinity).

2.0 BACKGROUND ON THE DESERT TORTOISE

The desert tortoise is a long-lived, terrestrial turtle with a domed carapace (upper shell) and rounded, stumpy elephantine hind limbs. The front limbs are flattened and heavily scaled for digging and lack webbed toes. The carapace is oblong with rounded sides due to the joining of the carapace to the plastron (lower shell). The scutes (hard scales) are often yellowish in the middle and have grooved, parallel,

concentric growth rings that form outward with age toward the scute margins. The plastron is typically yellowish, becoming brown around the scute margins. The head is relatively small and rounded in front with reddish-tan coloring, and the iris is greenish-yellow. The front and hind feet are about equal in size, and the tail is short.

The desert tortoise generally inhabits desert scrub, desert wash, and western Joshua tree (*Yucca brevifolia*) habitats in a variety of terrain types, including alluvial fans, valleys, rocky hillsides, and washes. They require friable soil for burrow and nest construction. They are herbivores and feed on a variety of plants, including annual herbs and perennial grasses (CDFW 2024).

The desert tortoise has slow reproductive rates, reaching sexual maturity at 12 to 20 years old, and producing clutches of approximately 6 to 12 eggs per year. Mating occurs in late summer and fall, and females can mate with multiple males (Davy et al. 2011). Burrows are typically found at the base of shrubs, in the spaces between shrubs, and occasionally in caliche soil bank areas or underneath boulders/rocks.

Tortoise activity is greatest during the spring and early summer, and to a lesser extent during the fall; however, tortoises can be active at any time of the year during appropriate weather conditions. Although tortoises hibernate during the winter and typically emerge in late February or early March, hatchlings and juveniles can be active during the winter months. Adults will also emerge from their burrows to drink of water resources have been limited during the previous activity season and/or winter precipitation has provided standing water. Their activity is usually reduced during hot summer months, but they may be active following summer rains or if temperatures are moderate (Boarman 2003). They retreat into their horizontal burrow to avoid surface temperature extremes and to escape from predators. Desert tortoises may use an average of 7 to 12 burrows at any given time and multiple tortoises have been recorded occasionally sharing a single burrow (BLM 2006).

The Mojave population of desert tortoise includes all tortoises north and west of the Colorado River in Arizona, Utah, Nevada, and California. This species was listed as threatened by the U.S. Fish and Wildlife Service (USFWS) in 1990 and was recently uplisted as endangered by the State of California in 2024 (CFGC 2024). Critical Habitat for the species was designated in 1994 (USFWS 1994), and a Revised Recovery Plan was developed for the species in 2011 (USFWS 2011), all under purview of the federal Endangered Species Act 1973, as amended (ESA). For purposes of the ESA, desert tortoise habitat is defined as 1) areas with presence of desert tortoises or desert tortoise sign, 2) dispersal areas (i.e., habitat corridors), or 3) areas suitable for desert tortoises as identified by the USFWS or in the most recent approved recovery plan for the Mojave population of the desert tortoise (USFWS 2011).

Threats to desert tortoises include loss or degradation of habitat, vandalism, poaching, intentional killing, predation on young tortoises by the common raven (*Corvus corax*) and other predators (e.g., kit fox [*Vulpes macrotis*], snakes, etc.), and disease (e.g., Mycoplasmosis). Off-road vehicles, military training maneuvers, mining, and livestock grazing also affect tortoise habitat by collapsing burrows, eroding soils, reducing availability of food plants, and eliminating shrubs that would provide shade for tortoises and support for their burrows. These activities ultimately result in surface disturbance that promotes conditions more conducive to invasion by exotic plant species, which provide less nutritional value to

tortoises than the native species that were replaced. Human activities, including garbage dumping, landfills, roads, increased nesting opportunities, irrigation, and increased vehicle use have also led to increased numbers of common ravens in California deserts resulting in increased predation on young tortoises reducing recruitment into breeding populations (Boarman 2003).

3.0 METHODS

Information on the desert tortoise presence and habitat was obtained from a background literature review and field surveys.

3.1 Literature Review and Records Search

A literature review and record search were conducted to identify occurrences of desert tortoise, designated critical habitat for desert tortoise, and desert tortoise management areas in the project area. The review included the following:

- A report from the California Department of Fish and Wildlife's California Natural Diversity Database for the project site and a 10-mile buffer radius (CDFW 2024)
- The USFWS (2024) Environmental Conservation Online System, including critical habitat mapping and an Information for Planning and Consultation report
- Aerial photographs
- Pertinent documents from the WSP library and project files (e.g., other biological surveys from the WRESC project and general vicinity)

3.2 Focused Survey

Field survey methods were based on the USFWS General Ecology and Survey Protocol for Determining Presence/Absence and Abundance for the Desert Tortoise - Mojave Population Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (Gopherus agassizii) (USFWS 2019). The desert tortoise surveys were conducted in the additional project site work areas and additional gen-tie transmission line alignment, herein referred to as the desert tortoise "study area."

The 2024 desert tortoise surveys were conducted in concert with sensitive plant and burrowing owl (*Athene cunicularia*) surveys, which were also conducted in the additional project areas. This was considered appropriate as all surveys require 10-meter transects and are terrestrial based. Surveys were conducted by a minimum of five-person crew walking 10 meter wide transects at a pace of 0.5 miles per hour (mph), which is slower than the standard 2 mph pace typical for desert tortoise surveys. Per the USFWS (2019) protocol, WSP biologists documented and classified observed burrows, dens, scats, and shell remains associated with desert tortoise, if present. Desert tortoise sign and other pertinent field data was recorded in field notebooks, georeferenced, and photographed. Potentially suitable burrow locations were recorded using the Esri ArcGIS Collector application, if present.

Developed areas in the study area were excluded from the survey as they were determined to be unsuitable habitat. Areas that biologists could not safely survey or did not have permission to access, such as private property, were scanned from the perimeter using binoculars.

The field crew was overseen by senior qualified desert tortoise biologists Nathan Moorhatch, Michael Wilcox, and Scott Crawford, all with over 30 years of desert tortoise experience. Biologist Tim Chumley and Phil Clevinger both have over 15 years of desert tortoise experience. Additional field biologists (less than 5 years of experience) were included in the crew and walked between the senior biologists. Table 1 below presents the desert tortoise field survey dates and personnel.

April 2, 2024 Nathan Moorhatch, Marshall Paymard, Emily Urquidi, Melissa, Bukovac, and Phil Clevinger

April 3, 2024 Nathan Moorhatch, Marshall Paymard, Emily Urquidi, Melanie Bukovac, Melissa, Bukovac, and Phil Clevinger

April 4, 2024 Nathan Moorhatch, Marshall Paymard, Emily Urquidi, Melanie Bukovac, Melissa Bukovac, and Phil Clevinger

April 8, 2024 Michael Wilcox, Tim Chumley, Melanie Bukovac, Melissa Bukovac, and Phil Clevinger

April 9, 2024 Michael Wilcox, Scott Crawford, Marshall Paymard, Tim Chumley, Melanie Bukovac, Melissa, Bukovac, Ciera Shirey, and Phil Clevinger

Table 1. Desert Tortoise Survey Dates and Personnel

4.0 RESULTS

4.1 Literature Review

The study area is located within the Western Mojave Desert Tortoise Recovery Unit (USFWS 1994). The California Natural Diversity Database search identified three records of desert tortoise observations from 2004 within 3 miles of the study area. Designated critical habitat is not present in the study area; however, designated critical habitat identified as the Freemont Kramer Critical Habitat Unit is located approximately 16.74 miles (26.9 kilometers) to the northeast (USFWS 1994) (Figure 4, Desert Tortoise Critical Habitat).

4.2 Focused Survey

The surveys resulted in no detection of suitable burrows for mature or juvenile desert tortoises in the study area. No live tortoises or tortoise signs were recorded in the surveyed areas. A full list of plant and vertebrate wildlife species detected onsite is included in the Biological Resources Assessment Addendum Report (WSP 2024).

5.0 DISCUSSION AND CONCLUSIONS

Although potentially suitable habitat (e.g., creosote brush scrub) is present throughout the study area, no live tortoises or signs were detected. On March 7, 2024, Mr. Peter Sanzenbacher from the USFWS Mohave Desert Division indicated that protocol-level desert tortoise surveys in the project area were not

recommended "based on the location and our knowledge of tortoise occurrence in the area of Kern County" (Sanzenbacher 2024). However, per the California Department of Fish and Wildlife recommendations, Hydrostor continued with surveys for this species.

In terms of the National Environmental Policy Act documentation and analysis, Mr. Sanzenbacher stated that "we would not recommend additional surveys at this time" (Sanzenbacher 2024). Potentially suitable habitat does remain within the project area; the closest recorded occurrence of desert tortoise is within 3 miles of the project site. Desert tortoise was not recorded in the project site during protocol-level surveys conducted in 2023 and 2024. Consequently, based on survey results and recommendations from the USFWS, the likelihood of desert tortoise to occur in the project site is low.

6.0 REFERENCES

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7.0 LIMITATIONS

This document has been prepared for the exclusive use of Hydrostor Inc. and its Construction Contract(s) in support of the preparation of the California Energy Commission's Application for Certification for the Willow Rock Energy Storage Center Project. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

This report was prepared, based in part, on information obtained from historic information sources. In evaluating the subject site, WSP has relied in good faith on information provided. We accept no responsibility for any deficiency or inaccuracy contained in this report as a result of our reliance on the aforementioned information.

The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care normally exercised by environmental professionals currently practicing under similar conditions in the jurisdiction.

With respect to regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time and should be reviewed.

If new information is discovered during future work, the conclusions of this report should be re-evaluated and the report amended as required, prior to any reliance upon the information presented herein.

8.0 CERTIFICATION

We certify that the information in the survey report and attached exhibits fully and accurately represents our work.

Date: <u>08/02/2024</u>

Appendix A Figures







